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

IN THE MATTER OF THE
APPLICATION BY DAKOTA RANGE
I, LLC AND DAKOTA RANGE II, LLC
FOR A PERMIT OF A WIND ENERGY
FACILITY IN GRANT COUNTY AND
CODINGTON COUNTY, SOUTH
DAKOTA, FOR THE DAKOTA RANGE
WIND PROJECT

DAKOTA RANGE I, LLC AND DAKOTA RANGE II, LLC'S PROPOSED FINDINGS OF FACT, CONCLUSIONS OF LAW AND ORDER

EL18-003

## TABLE OF CONTENTS

			<b>Page</b>
Appearances			1
Procedural H	istory .		1
Findings of F	act		3
Ī.		edural Findings	
II.	Partic	es	4
III.	Proje	ect Description	4
IV.	Facto	ors for an Energy Facility Permit	6
V.	Satisfaction of Requirements for Issuance of an Energy Facility Permit		
	A.	The proposed facility will comply with all applicable laws and	
		rules	7
	В.	The facility will not pose a threat of serious injury to the	
		environment nor to the social and economic condition of	
		inhabitants or expected inhabitants in the siting area	7
	C.	The facility will not substantially impair the health, safety or	
		welfare of the inhabitants.	15
	D.	The facility will not unduly interfere with the orderly development	
		of the region with due consideration having been given of the	
		views of governing bodies of affected local units of government	16
Conclusions	of Law	<sup>7</sup>	17
Order			18

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

\*

IN THE MATTER OF THE
APPLICATION BY DAKOTA RANGE
I, LLC AND DAKOTA RANGE II, LLC
FOR A PERMIT OF A WIND ENERGY
FACILITY IN GRANT COUNTY AND
CODINGTON COUNTY, SOUTH
DAKOTA, FOR THE DAKOTA RANGE
WIND PROJECT

DAKOTA RANGE I, LLC AND DAKOTA RANGE II, LLC'S PROPOSED FINDINGS OF FACT, CONCLUSIONS OF LAW AND ORDER

EL18-003

\_\_\_\_\_

## **APPEARANCES**

Commissioners Kristie Fiegen, Gary Hanson, and Chris Nelson.

Mollie Smith and Lisa Agrimonti, Fredrikson & Byron, P.A., 200 South Sixth Street, Minneapolis, Minnesota 55402, appeared on behalf of the Applicants, Dakota Range I, LLC and Dakota Range II, LLC (together "Dakota Range" or "Applicant").

Kristen Edwards and Amanda Reiss, 500 E. Capitol Ave., Pierre, South Dakota 57501, appeared on behalf of the South Dakota Public Utilities Commission Staff ("Staff").

Kristi Mogen appeared on behalf of herself.

Teresa Kaaz appeared on behalf of herself.

### PROCEDURAL HISTORY

On January 24, 2018, Dakota Range filed an Application for an Energy Facility Permit for an up to 302.4 megawatt ("MW") wind energy facility to be located in Grant County and Codington County, South Dakota, known as the Dakota Range Wind Project ("Project") with the South Dakota Public Utilities Commission ("Commission"). Also on January 24, 2018, Dakota Range filed the pre-filed direct testimony of Mark Mauersberger/Brenna Gunderson, Robert O'Neal, and David Phillips/Ryan Henning.

On January 25, 2018, the Commission electronically transmitted notice of the filing and the intervention deadline of March 26, 2018, to interested persons and entities on the Commission's PUC Weekly Filings electronic listsery.

On January 31, 2018, the Commission issued a Notice of Application; Order for and Notice of Public Input Hearing; Notice of Opportunity to Apply for Party Status.

-

<sup>&</sup>lt;sup>1</sup> See Ex. A1 (Application).

On January 31, 2018, Dakota Range filed a certificate of service confirming it had sent copies of the Application and Dakota Range's direct testimony to the Codington County Auditor and Grant County Auditor.

On February 15, 2018, the Commission issued an Order assessing Dakota Range a filing fee in an amount not to exceed \$390,000, with a minimum filing fee of \$8,000. In the same Order, the Commission further voted unanimously to authorize the executive director to enter into necessary consulting contracts.

On February 22, 2018, Dakota Range filed a Proof of Mailing to affected landowners demonstrating compliance with the requirements of South Dakota Codified Law 49-41B-5.2.

On March 22, 2018, an Affidavit of Publication was filed confirming that the Notice of Public Hearing was published in the *Watertown Public Opinion* on February 21, 2018 and March 14, 2018.

On March 22, 2018, an Affidavit of Publication was filed confirming that the Notice of Public Hearing was published in the *South Shore Gazette* on March 1, 2018 and March 15, 2018.

On March 22, 2018, an Affidavit of Publication was filed confirming that the Notice of Public Hearing was published in the *Grant County Review* on February 21, 2018 and March 14, 2018.

On March 21, 2018, a public input hearing was held as scheduled and the Commission received applications for party status from 16 individuals.

On March 28, 2018, Staff submitted a Motion for Adoption of Procedural Schedule.

On March 30, 2018, Dakota Range filed a Response to Applications for Party Status and Staff's Motion for Adoption of Procedural Schedule.

On April 6, 2018, the Commission issued an Order Granting Party Status and Establishing Procedural Schedule. The Commission granted party status to: Teresa Kaaz; Daniel D. Seurer; Vincent Meyer; Diane Redlin; Jared Krakow; Kevin Krakow; Matt Whitney; Timothy J. Lindgren; Linda M. Lindgren; Christian Reimche; Derek Nelson; Paul Nelson; Kelly Owen; Kristi Mogen; Wade Bauer; and Patricia Meyer.

On April 6, 2018, Dakota Range filed the pre-filed testimony of Dr. Mark Roberts and Michael MaRous.

On May 4, 2018, Staff filed the pre-filed testimony of Paige Olson, Tom Kirschenmann, David Hessler, David Lawrence, and Jon Thurber. Intervenor Kristi Mogen filed the pre-filed testimony of Kristi Mogen and Intervenor Teresa Kaaz filed the pre-filed testimony of Teresa Kaaz.

On May 2, May 4, May 7, and May 10, 2018, respectively, Dan Seurer, Christian Reimche, Paul Nelson, and Derek Nelson requested withdrawal of party status.

On May 15, 2018, the Commission issued an Order Granting Withdrawal of Party Status to those individuals who requested withdrawal.

On May 15, 2018, the Commission issued an Order for and Notice of Evidentiary Hearing.

On May 15, 2018, Dakota Range filed a Motion to Exclude Portions of Testimony and/or Exhibits of Intervenors Teresa Kaaz and Kristi Mogen and Request Regarding Hearing Participation. On May 16, 2018, Staff filed a Response to Dakota Range's Motion and a Motion for Judicial Notice.

On May 21, 2018, Dakota Range filed the pre-filed rebuttal testimony of Mark Mauersberger, Brenna Gunderson, David Phillips, Robert O'Neal, Daniel Pardo, Dr. Mark Roberts, Michael MaRous, Alice Moyer, and Wade Falk.

On May 24, 2018, the Commission issued an Order Granting Motion to Exclude Portions of Exhibits.

On June 8, 2018, Staff filed the pre-filed Surrebuttal testimony of David Lawrence.

On June 7, 2018, Dakota Range filed its exhibits for hearing. On June 8, 2018, Dakota Range filed its witness and exhibit lists and exhibits for hearing. Staff also filed its witness and exhibit lists and exhibits for hearing on June 8, 2018. Intervenor Kristi Mogen also filed her witness and exhibit lists and exhibits for hearing on June 8, 2018. Intervenor Teresa Kaaz also filed her witness and exhibit lists on June 8, 2018.

On June 11, 2018, Staff filed a Motion to Compel Discovery, which was granted on June 12, 2018, and Dakota Range filed a copy of the requested wind energy lease and easement agreement confidentially with the Commission on the same date (Exhibit A19).

On June 12, 13, and 14, 2018, Dakota Range filed exhibits A18 – A27.

On June 14, 2018, Staff filed Exhibit S7.

The evidentiary hearing was held before the Commission on June 12, 13, and 14, 2018 in Pierre, South Dakota. Only Intervenors Teresa Kaaz and Kristi Mogen participated in the evidentiary hearing (together, "Intervenors").

Having considered the evidence of record, applicable law, and the briefs and arguments of the parties, the Commission makes the following Findings of Fact, Conclusions of Law, and Order:

### **FINDINGS OF FACT**

#### I. PROCEDURAL FINDINGS.

1. The Procedural History set forth above is hereby incorporated by reference in its entirety in these Procedural Findings. The procedural findings set forth in the Procedural History

are a substantially complete and accurate description of the material documents filed in this docket and the proceedings conducted and decisions rendered by the Commission in this matter.

#### II. PARTIES.

- 2. Dakota Range I, LLC and Dakota Range II, LLC are wholly owned indirect subsidiaries of Apex Clean Energy Holdings, LLC ("Apex"). Dakota Range I, LLC and Dakota Range II, LLC will jointly own, manage, and operate the Project. <sup>3</sup>
- 3. Apex is an independent renewable energy company based in Charlottesville, Virginia. Apex has one of the nation's largest, most diversified portfolios of renewable energy resources, capable of producing more than 14,000 MW of clean electricity. Apex has brought 2,200 MW online since 2012, and operating assets under management are nearly 1 gigawatts ("GW") as of the first quarter of 2018.
  - 4. Kristi Mogen owns property approximately 9 miles from the Project area.<sup>5</sup>
  - 5. Teresa Kaaz is a landowner within the Project area.
- 6. Staff fully participated as a party in this matter, in accordance with SDCL 49-41B-17(1).

#### III. PROJECT DESCRIPTION.

- 7. The proposed Project is an up to 302.4 MW wind energy conversion facility located in Grant and Codington counties, South Dakota. The proposed Project includes up to 72 wind turbine generators, access roads to turbines and associated facilities, underground 34.5-kilovolt ("kV") electrical collector lines connecting the turbines to the collection substation, underground fiber-optic cable for turbine communications co-located with the collector lines, a 34.5-kV to 345-kV collection substation, up to five permanent meteorological ("MET") towers, and an operations and maintenance ("O&M") facility. The Project would interconnect to the high-voltage transmission grid via the Big Stone South to Ellendale 345-kV transmission line, which crosses the Project site.
- 8. A new 345-kV interconnection switching station connecting to the Big Stone South to Ellendale line will be constructed, owned, and operated by Otter Tail Power Company and Montana Dakota Utilities. Dakota Range would construct and own a 345-kV interconnection facility connecting the Project collection substation to the interconnection switching station. Because the interconnection facility is less than 2,640-feet long, does not cross any public highways, and does not require the use of eminent domain, it falls outside the Commission's jurisdiction and has been permitted locally.<sup>7</sup>

<sup>&</sup>lt;sup>2</sup> Ex. A1 at 6-1 (Application).

<sup>&</sup>lt;sup>3</sup> Ex. A1 at 6-1 (Application).

<sup>&</sup>lt;sup>4</sup> Ex. A1 at 1-1 – 1-2 (Application).

<sup>&</sup>lt;sup>5</sup> Ex. A10 at 7 (Mauersberger).

<sup>&</sup>lt;sup>6</sup> Ex. A1 at 1-1, 9-1 – 9-2 (Application).

<sup>&</sup>lt;sup>7</sup> Ex. A1 at 1-1 (Application).

- 9. The Project is located on approximately 44,500 acres of privately owned land in Grant County and Codington County, South Dakota ("Project Area"). 8
- 10. The current estimated capital cost of the Project is approximately \$380 million based on indicative construction and wind turbine pricing cost estimates for the proposed Vestas V136-4.2 MW turbine layout. This estimate includes lease acquisition, permitting, engineering, procurement, and construction of turbines, access roads, underground electrical collector system, Project collection substation, interconnection facilities, O&M facility, supervisory control and data acquisition ("SCADA") system, and MET towers; and project financing.<sup>9</sup>
- 11. The proposed turbine that would be utilized for the Project is the Vestas V136-4.2 MW turbine at an 82-meter hub height and 136-meter rotor diameter ("RD"). 10
- 12. All turbines will be constructed within the Project Area consistent with the configuration presented in the Updated Layout Map (Exhibit A25), and subject to all commitments, conditions, and requirements of this Order. 11
- 13. Apex currently owns Dakota Range and is overseeing development of the Project. Northern States Power Company, d/b/a/ Xcel Energy ("Xcel Energy") has entered into a Purchase and Sale Agreement ("PSA") with Apex to acquire Dakota Range, which owns the Project. The PSA will be finalized after the completion of certain development milestones, including acquisition of an Energy Facility Permit from the Commission for the Project. Xcel Energy is a utility company operating in South Dakota, Minnesota, North Dakota, Colorado, Michigan, New Mexico, Texas, and Wisconsin. 12
- 14. Dakota Range presented evidence of consumer demand and need for the Project. <sup>13</sup> The Project would install up to 302.4 MW of wind generating capacity in South Dakota that would contribute to satisfying utilities', commercial and industrial customers', and consumers' demands for renewable energy, and meet utility renewable requirements or individual sustainability goals. <sup>14</sup> Though Xcel Energy will own Dakota Range (the Project entities), and therefore the electricity produced, the specific electrons generated by the Project would be utilized as needed on the Midcontinent Independent System Operator, Inc. ("MISO") regional grid and cannot be tracked to their exact delivery location or final use. The electricity generated by the Project would help MISO operators meet electricity demand in both the immediate and surrounding MISO control area. This Project would also provide zero-emission cost electricity to the grid, as well as firm price stability due to the availability of a renewable resource that would replace the need for ongoing fuel costs. <sup>15</sup>

<sup>&</sup>lt;sup>8</sup> Ex. A1 at 1-1 (Application).

<sup>&</sup>lt;sup>9</sup> Ex. A1 at 8-1 (Application).

<sup>&</sup>lt;sup>10</sup> Ex. A1 at 9-3 (Application).

<sup>&</sup>lt;sup>11</sup> See Ex. A25 (Updated Wind Turbine Map).

<sup>&</sup>lt;sup>12</sup> Ex. A1 at 7-1 (Application).

<sup>&</sup>lt;sup>13</sup> See Ex. A1 at § 7.2 (Application).

<sup>&</sup>lt;sup>14</sup> Ex. A1 at 7-3 (Application).

<sup>&</sup>lt;sup>15</sup> Ex. A1 at 7-1 (Application).

- 15. Dakota Range provided evidence to support the need for turbine and associated facility flexibility. With respect to turbine flexibility, Dakota Range and Staff agreed to the turbine flexibility and "material change" provisions set forth in Condition 22 attached hereto. <sup>17</sup> With respect to the access roads, the collector system, O&M facility, Project substation, and temporary facilities, Dakota Range and Staff agreed to Condition 23, attached hereto. <sup>18</sup>
- 16. At the evidentiary hearing, Dakota Range requested that three proposed turbine shifts be approved as part of the Project configuration, with the proposed new locations identified as Turbines 34a, 60a, and 12a in Exhibit A15-3. Dakota Range provided evidence to demonstrate that the proposed turbine shifts comply with all applicable siting requirements. With respect to the three proposed turbine shifts, Dakota Range and Staff agreed to Condition 39, attached hereto.
- 17. The record demonstrates that Dakota Range has made appropriate and reasonable plans for decommissioning.<sup>21</sup>
- 18. With respect to financial security for decommissioning, a form of security that provides assurance of available funds for decommissioning and also minimizes the cost to Xcel Energy, as a regulated utility, is preferable.<sup>22</sup> Staff and Dakota Range have agreed to Conditions 37 and 38, attached hereto, which accounts for Xcel Energy's anticipated purchase of Dakota Range, and the potential that another entity may own the Project.<sup>23</sup>
- 19. The record demonstrates that Dakota Range has provided adequate information on potential cumulative impacts and that the Project will not have a significant impact.<sup>24</sup>

#### IV. FACTORS FOR AN ENERGY FACILITY PERMIT.

- 20. Under the SDCL 49-41B-22, the Commission must find:
  - (1) The proposed facility will comply with all applicable laws and rules;
  - (2) The facility will not pose a threat of serious injury to the environment nor to the social and economic condition of inhabitants or expected inhabitants in the siting area;

<sup>&</sup>lt;sup>16</sup> See Ex. A1 at 9-2 (Application); Ex. A15 at 3-4 (Gunderson).

<sup>&</sup>lt;sup>17</sup> Recommended Permit Condition 22; *see also* Evid. Hrg. Tr. at 299-300 (Thurber); Evid. Hrg. Tr. at 218, 226-227 (Gunderson).

<sup>&</sup>lt;sup>18</sup> Recommended Permit Condition 23; Evid. Hrg. Tr. at 299 (Thurber).

<sup>&</sup>lt;sup>19</sup> Evid. Hrg. Tr. at 214, 216-218 (Gunderson).

<sup>&</sup>lt;sup>20</sup> See Evid. Hrg. Tr. at 401-402 (O'Neal); Ex. A15-3 (Constraints Map); Ex. A24; Ex. A25 (Updated Wind Turbine Map - Public) and Ex. A25-C (Updated Wind Turbine Map (CONFIDENTIAL)).

<sup>&</sup>lt;sup>21</sup> See Ex. A1 at Ch. 24.0 (Application); Ex. A4-2 (Decommissioning Cost Estimate Technical Memorandum).

<sup>&</sup>lt;sup>22</sup> *See* Evid. Hrg. Tr. at 318-319 (Thurber).

<sup>&</sup>lt;sup>23</sup> See Recommended Permit Conditions 37 and 38; see also Ex. A21 (Proposed Decommissioning Conditions); Evid. Hrg. Tr. at 221 (Gunderson).

<sup>&</sup>lt;sup>24</sup> See, e.g., Ex. A1 at Ch. 11.0 (Application); Evid. Hrg. Tr. at 187 (Phillips).

- (3) The facility will not substantially impair the health, safety or welfare of the inhabitants; and
- (4) The facility will not unduly interfere with the orderly development of the region with due consideration having been given the views of governing bodies of affected local units of government.
- 21. In addition, SDCL 49-41B-25 provides that the Commission must make a finding that the construction of the facility meets all of the requirements of Chapter 49-41B.
- 22. There is sufficient evidence on the record for the Commission to assess the proposed Project using the criteria set forth above.

## V. SATISFACTION OF REQUIREMENTS FOR ISSUANCE OF AN ENERGY FACILITY PERMIT.

## A. The proposed facility will comply with all applicable laws and rules.

- 23. The evidence submitted by Dakota Range demonstrates that the Project will comply with applicable laws and rules.<sup>25</sup> Neither Staff nor Intervenors have asserted otherwise or submitted evidence to the contrary.
  - 24. Construction of the Project meets all of the requirements of Chapter 49-41B.
  - B. The facility will not pose a threat of serious injury to the environment nor to the social and economic condition of inhabitants or expected inhabitants in the siting area.

## 1. Environment.

- 25. The evidence demonstrates that the Project does not pose a threat of serious injury to the environment in the Project Area and that Dakota Range has adopted reasonable avoidance and minimization measures, as well as commitments, to further limit potential environmental impacts. <sup>26</sup>
- 26. Construction of the Project will not result in significant impacts on geological resources. The risk of seismic activity in the vicinity of the Project Area is low according to data from the U.S. Geological Survey ("USGS").  $^{28}$
- 27. Dakota Range has demonstrated that it will minimize and/or avoid impacts to soil resources.<sup>29</sup> The majority of impacts will be temporary and related to construction activities.<sup>30</sup>

<sup>&</sup>lt;sup>25</sup> See, e.g., Ex. A1 at 9-2, 10-2, 13-6, Ch. 17.0 (Application).

<sup>&</sup>lt;sup>26</sup> See, e.g., Ex. A1 at Ch. 11.0, 12.0, 13.0, 14.0, 18.0, 19.0 (Application).

<sup>&</sup>lt;sup>27</sup> See Ex. A1 at § 12.1.2 (Application).

<sup>&</sup>lt;sup>28</sup> Ex. A1 at 12-3 (Application).

<sup>&</sup>lt;sup>29</sup> See Ex. A1 at § 12.2.2 (Application).

<sup>&</sup>lt;sup>30</sup> See Ex. A1 at 12-10 (Application).

Permanent impacts associated with operation of the Project will be up to 65 acres, which is less than 0.2 percent of the Project Area.<sup>31</sup> Dakota Range will implement various measures during construction and restoration to minimize impacts to the physical environment, including separating topsoil and subsoil, installing temporary erosion control devices, and decompacting soil after construction is complete.<sup>32</sup>

- The Project is not anticipated to have material impacts on existing air and water quality. 33
- Dakota Range has demonstrated that it will minimize and/or avoid impacts to hydrology.<sup>34</sup> The record demonstrates that Dakota Range has minimized impacts to wetlands and water bodies.<sup>35</sup> The Project is not anticipated to have long-term impacts on groundwater resources.<sup>36</sup> Any potential impacts to floodplains would be temporary in nature, and existing contours and elevations would be restored upon completion of construction.<sup>37</sup> Project impacts on hydrologic resources are anticipated to be temporary and/or minor.<sup>38</sup> No turbines are located within wetlands, and the Project is anticipated to permanently impact only approximately 0.08 acres of wetlands.<sup>39</sup>
- Dakota Range has demonstrated that it will minimize and/or avoid impacts to vegetation. 40 Permanent impacts associated with operation of the Project would be up to 65 acres, which is less than 0.2 percent of the Project Area.<sup>41</sup>
- The Project facilities have been sited to avoid native grasslands, to the extent practicable.42 In areas where impacts cannot be avoided, temporary impacts would be minimized through construction Best Management Practices ("BMPs"), such as re-vegetation and erosion control devices.<sup>43</sup>
- Dakota Range coordinated with South Dakota Game, Fish and Parks Department 32. ("GFP") to avoid and minimize impacts to grasslands. The Project will only impact approximately 9.8 acres of potentially untilled grasslands, which is less than 0.13 percent of the total grasslands in the Project Area. 44 Dakota Range will reseed potentially untilled grasslands temporarily impacted by the Project with native seed mixes following construction.<sup>45</sup> The Project is not likely to result in significant adverse effects to the species that rely on these

<sup>&</sup>lt;sup>31</sup> Ex. A1 at 3-1, 12-10; Table 11 -1 (Application).

<sup>&</sup>lt;sup>32</sup> Ex. A1 at 9-8, 12-10 – 12-11, 14-3 (Application). <sup>33</sup> Ex. A1 at 18-1, 19-1 (Application).

<sup>&</sup>lt;sup>34</sup> See Ex. A1 at Ch. 13.0 (Application).

<sup>&</sup>lt;sup>35</sup> Ex. A1 at §14.2.2 (Application).

<sup>&</sup>lt;sup>36</sup> Ex. A1 at 13-2 (Application).

<sup>&</sup>lt;sup>37</sup> Ex. A1 at 13-5 (Application).

<sup>&</sup>lt;sup>38</sup> See, e.g., Ex. A1 at 13-4, 14-5, 14-6 (Application).

<sup>&</sup>lt;sup>39</sup> Ex. A8 at 5 (Phillips).

<sup>&</sup>lt;sup>40</sup> See Ex. A1 at § 14.1.2 (Application).

<sup>&</sup>lt;sup>41</sup> Ex. A1 at 3-1, § 14.1.2 (Application).

<sup>&</sup>lt;sup>42</sup> Ex. A1 at 14-3 (Application).

<sup>&</sup>lt;sup>43</sup> Ex. A1 at 14-3 (Application).

<sup>&</sup>lt;sup>44</sup> Ex. A8 at 7 (Phillips).

<sup>&</sup>lt;sup>45</sup> Ex. A8 at 8 (Phillips).

grasslands or to the functionality of the grassland ecosystem in and near the Project.<sup>46</sup> The record also demonstrates that the Project will not have a significant adverse impact on habitat, and will not substantially increase habitat fragmentation in the area.<sup>47</sup>

- 33. Dakota Range will reseed temporarily disturbed uncultivated areas with certified weed-free seed mixes to blend in with existing vegetation. 48
- 34. The record does not support a permit condition requiring Dakota Range to provide compensatory mitigation for potential impacts to grasslands.<sup>49</sup> No evidence was introduced to support such a permit condition. As Staff witness Mr. Kirschenmann testified, South Dakota does not have such a policy, and GFP has not endorsed any particular method for calculating such impacts.<sup>50</sup> The land at issue is private property where GFP does not have a property interest.<sup>51</sup> The Project has avoided high quality grasslands and minimized impacts to lesser quality grasslands through Project design.<sup>52</sup> Additionally, the Project minimized risk to prairie grouse species through implementation of lek setbacks and construction timing stipulations.<sup>53</sup> These measures, coupled with baseline studies of the wildlife community done in coordination with U.S. Fish and Wildlife Service ("USFWS") and GFP, indicate that significant adverse impacts to the environment or to rare or protected species associated with grasslands are unlikely.<sup>54</sup>
- 35. Dakota Range has conducted numerous wildlife studies and surveys for the Project to assess existing use, identify potential impacts, and incorporate appropriate avoidance and minimization measures. Dakota Range consulted with the USFWS and GFP to seek input on wildlife resources potentially occurring within the Project Area and to seek guidance on the appropriate studies to evaluate risk and inform development of impact avoidance and minimization measures for the Project. Dakota Range followed the processes outlined in the USFWS Land-Based Wind Energy Guidelines ("WEG"), Eagle Conservation Plan Guidance ("ECPG"), and the SD Siting Guidelines for developing, construction, and operation wind energy projects. In addition, Dakota Range is preparing a Bird and Bat Conservation Strategy ("BBCS") in accordance with the WEG, which includes strategies for mitigating risks to avian and bat species during construction and operation of the Project.
- 36. Construction of the Project may have impacts on wildlife species primarily as a result of habitat disturbance.<sup>59</sup> However, following construction, all areas of temporary

<sup>&</sup>lt;sup>46</sup> Ex. A8 at 7 (Phillips).

<sup>&</sup>lt;sup>47</sup> Ex. A8 at 9 (Phillips).

<sup>&</sup>lt;sup>48</sup> Ex. A8 at 8 (Phillips); Ex. A1 at 3-3 (Application).

<sup>&</sup>lt;sup>49</sup> See Ex. A8 at 7-8 (Phillips).

<sup>&</sup>lt;sup>50</sup> Evid. Hrg. Tr. at 105 (Kirschenmann).

<sup>&</sup>lt;sup>51</sup> Evid. Hrg. Tr. at 106 (Kirschenmann).

<sup>&</sup>lt;sup>52</sup> Ex. A8 at 8 (Phillips).

<sup>&</sup>lt;sup>53</sup> Ex. A8 at 8 (Phillips); Evid. Hrg. Tr. at 196-197 (Phillips).

<sup>&</sup>lt;sup>54</sup> Ex. A8 at 8 (Phillips).

<sup>&</sup>lt;sup>55</sup> See, e.g., Ex. A1 at § 14.3.1.4 (Application).

<sup>&</sup>lt;sup>56</sup> Ex. A1 at 14-6 (Application).

<sup>&</sup>lt;sup>57</sup> Ex. A1 at 14-6 (Application).

<sup>&</sup>lt;sup>58</sup> Ex. A8 at 11 (Phillips); Ex. A1 at § 14.3.2.5 (Application).

<sup>&</sup>lt;sup>59</sup> Ex. A1 at 14-12 – 14-13 (Application).

disturbance will be reclaimed with vegetation consistent with the surrounding vegetation types. The Project was designed to avoid and minimize displacement of wildlife by minimizing the Project's footprint in undisturbed areas. Permanent wildlife habitat loss and functionality due to construction and operation of the Project would be minimal across the Project Area. Project Area.

- 37. The record demonstrates that, while the Project may directly impact birds and bats, avian fatalities due to the Project are anticipated to be low and to not have significant population-level impacts. The Project has been sited in an area and designed in a manner to avoid and minimize impacts to birds and bats. <sup>64</sup>
- 38. Dakota Range conducted two years of pre-construction avian surveys. <sup>65</sup> Those surveys indicate that avian impacts from the Project are anticipated to be low. <sup>66</sup> Further, Dakota Range has committed to one year of post-construction avian mortality monitoring, with a second year of monitoring contingent on USFWS and GFP review of the first year results. <sup>67</sup>
- 39. Dakota Range has demonstrated that it will minimize and/or avoid impacts to federally- and state-listed species. Based on coordination with the USFWS and GFP, the only federally-listed species with the potential to occur in the Project Area are the northern long-eared bat, Dakota skipper, and Poweshiek skipperling. Impacts on federally-listed species due to Project construction and operations are anticipated to be minimal due to the low likelihood or frequency of species' presence in the Project Area and implementation of appropriate species-specific conservation measures. The only state-listed species documented to occur during site-specific studies completed for the Project was the peregrine falcon (state-endangered), and only one individual was observed, suggesting that use of the Project site by this species and associated risk of impact is very low.
- 40. Overall, there is a low level of risk for potential bald eagle impacts at the site.<sup>72</sup> Dakota Range conducted eagle nest surveys in April 2016 and April 2017. No eagle nests were identified within the Project Area, and the closest eagle nest is approximately 1.8 miles from the Project Area.<sup>73</sup> In addition, Dakota Range has agreed to a number of avian-related impact minimization and avoidance measures, including: conducting post-construction avian mortality monitoring for at least 1 year; and preparing a BBCS in accordance with the USFWS WEG that

<sup>&</sup>lt;sup>60</sup> Ex. A1 at 14-13 (Application).

<sup>&</sup>lt;sup>61</sup> See Evid. Hrg. Tr. at 194 (Phillips).

<sup>&</sup>lt;sup>62</sup> Ex. A1 at 14-13 (Application).

<sup>&</sup>lt;sup>63</sup> See Ex. A1 at 14-13 – 14-14 (Application).

<sup>&</sup>lt;sup>64</sup> Ex. A8 at 10 (Phillips).

<sup>&</sup>lt;sup>65</sup> See Ex. A1 at 2-1-2-2 (Application).

<sup>&</sup>lt;sup>66</sup> Ex. A1 at 14-14 (Application); Ex. A8 at 10 (Phillips).

<sup>&</sup>lt;sup>67</sup> Ex. A8 at 10 (Phillips).

<sup>&</sup>lt;sup>68</sup> See Ex. A1 at § 14.3.2 (Application).

<sup>&</sup>lt;sup>69</sup> Ex. A1 at 14-7, 14-13 (Application).

<sup>&</sup>lt;sup>70</sup> See Ex. A1 at 14-7, 14-13 (Application); Ex. A8 at 10-11 (Phillips).

<sup>&</sup>lt;sup>71</sup> Ex. A1 at 14-13 (Application).

<sup>&</sup>lt;sup>72</sup> Ex. A7 at 15 (Phillips).

<sup>&</sup>lt;sup>73</sup> Ex. A1 at 14-10 (Application); Ex. A7 at 15 (Phillips).

will be implemented to minimize impacts to avian and bat species during construction and operation of the Project.<sup>74</sup>

- Dakota Range has demonstrated that it will minimize and/or avoid impacts to aquatic ecosystems.<sup>75</sup> Dakota Range consulted with USFWS and GFP regarding the federallyand state-listed aquatic species with potential to occur in or near the Project, and both agencies agree that the species are not anticipated to be affected by the Project. <sup>76</sup>
- Dakota Range has demonstrated that it will minimize and/or avoid impacts to land use.<sup>77</sup> The Project will not displace existing residences or businesses.<sup>78</sup> In all areas proposed for ground disturbance, Dakota Range will coordinate with the landowners to minimize impacts to the extent practicable so as to maintain opportunities to continue current land uses. <sup>79</sup> Areas disturbed due to construction that would not host Project facilities would be re-vegetated with vegetation types matching the surrounding agricultural landscape. 80 Agricultural uses may continue within the Project Area during construction and operation.<sup>8</sup>
- Dakota Range has demonstrated that it will minimize and/or avoid impacts to recreation. 82 Only five turbines and associated infrastructure will be located on three of the Walk-In Area parcels.<sup>83</sup> To address concerns related to potential viewshed impacts at Punished Woman's Lake, Dakota Range voluntarily agreed to a turbine setback of two miles from the shoreline of Punished Woman's Lake.<sup>84</sup>
- 44. Dakota Range has demonstrated that it will minimize and/or avoid impacts to conservation easements and publicly-managed lands. Bakota Range coordinated with the USFWS to identify and avoid areas held as conservation easements by the USFWS within the Waubay National Wildlife Refuge Complex (i.e., grassland easements, wetland easements, and waterfowl production area easements). 86 The Project has been designed such that no Project facilities (e.g., turbines, collector lines, access roads) would be placed on these USFWS Wetland, Conservation, or Grassland Easements, and thus, no direct impacts to these easement areas would occur. 87 The Project will also avoid direct impacts to all Game Production Areas and Waterfowl Production Areas.88

<sup>&</sup>lt;sup>74</sup> See Ex. A7 at 16 (Phillips) and Ex. A8 at 10-11 (Phillips); Ex. A1 at § 14.3.2.5 (Application).

<sup>&</sup>lt;sup>75</sup> See Ex. A1 at § 15.2 (Application); Ex. A7 at 13 (Phillips).

<sup>&</sup>lt;sup>76</sup> See Ex. A1 at § 15.2 (Application); Ex. A7 at 13 (Phillips).

<sup>&</sup>lt;sup>77</sup> See Ex. A1 at §§ 16.1.2, 16.2.2 (Application).

<sup>&</sup>lt;sup>78</sup> Ex. A1 at 16-3 (Application).

<sup>&</sup>lt;sup>79</sup> Ex. A7 at 7 (Phillips).

<sup>&</sup>lt;sup>80</sup> Ex. A1 at 16-3 (Application); Ex. A7 at 14 (Phillips).

<sup>81</sup> Ex. A1 at 16-3 (Application).
82 See, e.g., Ex. A1 at §§ 13.3.2, 16.2.2, 16.6.2 (Application).

<sup>&</sup>lt;sup>83</sup> Ex. A7 at 7 (Phillips).

<sup>&</sup>lt;sup>84</sup> Ex. A9 at 6 (Mauersberger); Ex. A1 at 10-3 (Application).

<sup>&</sup>lt;sup>85</sup> See Ex. A1 at § 16.2.2 (Application).

<sup>&</sup>lt;sup>86</sup> Ex. A8 at 6 (Phillips).

<sup>&</sup>lt;sup>87</sup> Ex. A1 at 16-4 (Application).

<sup>&</sup>lt;sup>88</sup> Ex. A1 at 16-4 (Application); Ex. A8 at 6 (Phillips).

- Dakota Range has demonstrated that it will minimize and/or avoid impacts to visual resources.<sup>89</sup> In accordance with Federal Aviation Administration ("FAA") regulations, the turbine towers would be painted off-white to reduce potential glare and minimize visual impact. 90 No scenic resources with sensitive viewsheds are located within the Project Area or within viewing distance of the Project; therefore, no impacts to scenic resources would result from construction or operation of the Project.<sup>91</sup>
- With respect to cultural and historical architectural resources, the State Historic 46. Preservation Office ("SHPO") made four recommendations. 92 First, the SHPO recommended that an official record search be conducted for the Project. Dakota Range satisfied this recommendation when it conducted the Level I cultural resources records search in June 2017. 93 Second, SHPO recommended that a Level III Intensive Survey be completed for the Project Area. Dakota Range completed Level III intensive cultural resource surveys in December 2017 in areas of potential ground disturbance determined to have high probability of sensitive cultural resources. 94 The Level III survey results were provided to the SHPO, and the SHPO issued a letter stating that the Project would not encroach upon, damage or destroy any properties listed in the State or National Register of Historic Places ("NRHP") or the environs of such property. 95 Third, SHPO recommended that Dakota Range analyze the visual effects to architectural resources located within one mile of the Project, which Dakota Range completed. 96 No historic architectural resources were identified within the proposed Project footprint or direct area of potential effects.<sup>97</sup> Within the visual area of potential effects, there are three structures recommended eligible for listing on the NRHP; however, the Project will have no adverse effect on the resources. <sup>98</sup> Fourth, SHPO recommended that Dakota Range contact the Tribal Historic Preservation Officers ("THPO") in South Dakota. Dakota Range has engaged in ongoing voluntary coordination with the Sisseton-Wahpeton Oyate ("SWO") to seek input on cultural resources in the Project Area, the Cultural Resources Monitoring and Management Plan ("CRMMP"), and proposed the cultural resource surveys for the Project. 99 Dakota Range completed tribal resource surveys with SWO in May 2018. 100 Staff witness Ms. Olson stated that SHPO's recommendation that Dakota Range reach out to Native American tribes and consult on tribal resources has been satisfied. 101
- Dakota Range has demonstrated that it will minimize and/or avoid impacts to cultural resources. 102 Dakota Range conducted multiple cultural resource surveys to identify

<sup>89</sup> See Ex. A1 at § 16.6.2 (Application).90 Ex. A1 at 16-13 (Application).

<sup>&</sup>lt;sup>91</sup> Ex. A1 at 16-14 (Application).

<sup>&</sup>lt;sup>92</sup> Ex. S3 at 3-4 (Olson).

<sup>&</sup>lt;sup>93</sup> See Ex. A7 at 17 (Phillips); Ex. A1 at Appendix M (Application); see also Ex. S3 at 4 (Olson).

<sup>&</sup>lt;sup>94</sup> See Ex. A7 at 17 (Phillips).

<sup>95</sup> Ex. A8-1 at 2 (SHPO Letter, dated February 14, 2018). 96 See Ex. A7 at 18 (Phillips); see also Ex. S3 at 4 (Olson).

<sup>&</sup>lt;sup>97</sup> Ex. A7 at 18 (Phillips).

<sup>&</sup>lt;sup>98</sup> Ex. A7 at 18 (Phillips).

<sup>&</sup>lt;sup>99</sup> Ex. A1 at 21-16 (Application); Ex. A7 at 5 (Phillips).

<sup>&</sup>lt;sup>100</sup> Ex. A15 at 3 (Gunderson).

<sup>&</sup>lt;sup>101</sup> Evid. Hrg. Tr. at 293 (Olson); Ex. S3 at 4 (Olson).

<sup>&</sup>lt;sup>102</sup> See Ex. A1 at § 21.5.2 (Application); Ex. A7 at 19 (Phillips); Ex. A8 at 3-4 (Phillips).

cultural resources within the Project Area. Dakota Range would avoid direct impacts to identified cultural resources as defined in the CRMMP and in coordination with the SWO. Both SHPO and SWO have agreed that the measures outlined in the CRMMP are appropriate to avoid negatively impacting landmarks and cultural resources of historic, religious, archaeological, scenic, natural, or other cultural significance. Further, Dakota Range's CRMMP provides a plan for unanticipated discovery of sensitive cultural resources, should any be unearthed during construction.

48. Staff and Dakota Range have agreed upon Conditions 11 through 13 regarding cultural resources, which are attached.

### 2. Social and Economic.

- 49. Apex acquired the Dakota Range Project from a small local developer, Wahpeton Wind, in March 2015. The Project was acquired after initial site selection and a specific area was offered for sale; therefore, Apex was not involved in considering broader alternative locations. The identification of the final Project site was primarily driven by: (1) the site's strong wind speeds; (2) direct access to transmission interconnection; (3) land use and environmental compatibility with wind development; (4) landowner support for wind energy development; and (5) the Project's ability to avoid or minimize potential adverse impacts to cultural resources, wetlands, grasslands, and wildlife species of concern. 109
- 50. Participating landowners Mr. Falk and Ms. Moyer testified regarding their support for the Project. The Project will provide an additional stable source of income for landowners. Mr. Falk and Ms. Moyer also testified to their good working relationships with Dakota Range and their belief that Dakota Range has shown itself to be responsive and thoughtful. Further, the Project uses a community compensation formula that does not limit compensation to only those landowner participants who host Project facilities. 113
- 51. Dakota Range has demonstrated that construction and operation of the Project will result in substantial benefits to South Dakota and local economies. The Project will create temporary job opportunities during construction, and permanent operations and maintenance job opportunities. Additionally, local industrial businesses would also likely benefit from construction-related expenditures for the Project. The Project will make lease

<sup>&</sup>lt;sup>103</sup> See Ex. A1 at § 21.5.1, Appendix M, Appendix N, Appendix O (Application); Ex. A7 at 17-18 (Phillips).

<sup>104</sup> See Ex. A1 at 3-2 (Application).

<sup>&</sup>lt;sup>105</sup> See Ex. A1 at 21-16 (Application); Ex. A7 at 19 (Phillips).

<sup>106</sup> Ex. A8 at 3 (Phillips).

<sup>&</sup>lt;sup>107</sup> Ex. A1 at 2-1 (Application).

<sup>&</sup>lt;sup>108</sup> Ex. A1 at 10-1 (Application).

 $<sup>^{109}</sup>$  Ex. A1 at 10-1-10-2 (Application).

<sup>&</sup>lt;sup>110</sup> See Ex. A11 (Moyer) and Ex. A12 (Falk); Evid. Hrg. Tr. at 138 – 158 (Falk) and 159 – 168 (Moyer).

<sup>&</sup>lt;sup>111</sup> See Ex. A11 at 2 (Moyer); Ex. A12 at 2 (Falk).

<sup>&</sup>lt;sup>112</sup> See Ex. A12 at 2 (Falk); Ex. A11 at 2 (Moyer); Evid. Hrg. Tr. at 140-141 (Falk).

<sup>&</sup>lt;sup>113</sup> Evid. Hrg. Tr. at 92-93, 97 (Mauersberger).

<sup>&</sup>lt;sup>114</sup> See Ex. A1 at § 21.1.2.1 (Application).

<sup>&</sup>lt;sup>115</sup> Ex. A1 at 21-3 (Application).

<sup>&</sup>lt;sup>116</sup> Ex. A1 at 21-3 (Application); Ex. A9 at 18 (Mauersberger).

payments to participating landowners and will provide long-term benefits to the state and local tax base. 117

- 52. Dakota Range has demonstrated that the Project will not adversely impact property values. 118 Mr. MaRous, a South Dakota State Certified General Appraiser and a certified Member Appraisal Institute appraiser with extensive experience evaluating the impact of wind turbines on property values, conducted a Market Analysis to analyze the potential impact of the Project on the value of the surrounding properties and found no credible data indicating property values will be adversely impacted due to proximity to the Project. 119
- 53. Staff's witness, Mr. Lawrence, also a South Dakota State Certified General Appraiser and a certified Member Appraisal Institute appraiser conducted his own analysis of the sales of six Brookings County residential properties in proximity to wind turbines and testified that based on his research, "the evidence supports the presumption there have been no adverse effects on the selling price of rural residential properties in proximity to a wind tower, turbine or wind project." <sup>120</sup>
- 54. There is no basis in the record to require a property value guarantee. There is no record evidence that property values will be adversely affected. 121
- 55. The record demonstrates that the Project is not anticipated to adversely impact communications systems. 122 If, after construction, Dakota Range receives information relative to communication systems interference potentially caused by operation of the wind turbines in areas where reception is presently good, Dakota Range has committed to resolve such problems on a case-by-case basis. 123
- 56. The record demonstrates that Dakota Range has avoided and/or minimized impacts to transportation. Dakota Range will coordinate with applicable local road authorities to establish road use agreements, as needed, to minimize and mitigate Project impacts to haul roads. For example, Dakota Range has entered into a road use agreement with Grant County. The Project will utilize the One-Call program to locate underground infrastructure prior to construction. In addition, once construction is completed, the Project will register its facilities with the One-Call program.

<sup>&</sup>lt;sup>117</sup> Ex. A9 at 19 (Mauersberger); Ex. A1 at 21-4 – 21-5 (Application).

<sup>&</sup>lt;sup>118</sup> See Ex. A1 at § 21.1.2.3 (Application); Ex. A13 at 5, 6 (MaRous); Ex. A13-1 at 3, 35 (Market Impact Analysis); Ex. A14 at 2, 11, 13 (MaRous); Evid. Hrg. Tr. at 171-172 (MaRous).

<sup>&</sup>lt;sup>119</sup> See Ex. A13 at 2, 6 (MaRous); Ex. A13-1 at 3, 35 (Market Impact Analysis); Evid. Hrg. Tr. at 169 (MaRous).

<sup>&</sup>lt;sup>120</sup> Ex. S6 at 4 (Lawrence); see also Evid. Hrg. Tr. at 289-290 (Lawrence).

<sup>&</sup>lt;sup>121</sup> See Ex. A1 at § 21.1.2.3 (Application); Ex. A13 at 5, 6 (MaRous); Ex. A13-1 at 3, 35 (Market Impact Analysis); Ex. A14 at 2, 11, 13 (MaRous); Evid. Hrg. Tr. at 171-172 (MaRous) and 289-290 (Lawrence).

<sup>&</sup>lt;sup>122</sup> See Ex. A1 at § 16.5 (Application).

<sup>&</sup>lt;sup>123</sup> Ex. A1 at 16-11 (Application).

<sup>&</sup>lt;sup>124</sup> See Ex. A1 at § 21.4.2 (Application).

Ex. A9 at 16 (Mauersberger); Ex. A1 at 21-12 (Application).

<sup>&</sup>lt;sup>126</sup> Evid. Hrg. Tr. at 67-68 (Mauersberger).

Ex. A1 at 25-2 (Application); Ex. A9 at 16 (Mauersberger).

<sup>&</sup>lt;sup>128</sup> Ex. A1 at 25-2 (Application); Ex. A9 at 16 (Mauersberger).

# C. The facility will not substantially impair the health, safety or welfare of the inhabitants.

- 57. The record demonstrates Dakota Range has minimized impacts from noise. 129 Staff and Dakota Range agreed to Condition 27, which is attached hereto.
- 58. Section 1211.04(13) of the Zoning Ordinance for Grant County imposes the following noise limit on wind energy facilities: Noise level shall not exceed 50 [A-weighted decibel ("dBA")], average A-weighted Sound pressure including constructive interference effects at the perimeter of the principal and accessory structures of existing off-site residences, businesses, and buildings owned and/or maintained by a governmental entity." <sup>130</sup>
- 59. Section 5.22.03(12) of the Comprehensive Zoning Regulations for Codington County requires the following: "Noise level shall not exceed 50 dBA, average A-weighted Sound pressure including constructive interference effects at the property line of existing off-site residences, businesses, and buildings owned and/or maintained by a governmental entity." <sup>131</sup>
- 60. Dakota Range conducted a Sound Level Modeling Report to measure the Project's anticipated sound level in order to determine whether the Project will comply with the noise limits established by Grant and Codington counties. The projected one-hour sound levels from the Project are 45 dBA or less at all participating residences and 44 dBA or less at all non-participating residences. Thus, the Project will comply with the Grant County and Codington County sound level requirements and the agreed-upon noise condition.
- 61. The record demonstrates that Dakota Range has minimized and/or avoided impacts from shadow flicker. Dakota Range has committed to limit shadow flicker to 30 hours or less per year at any existing non-participating residence, business, or building owned and/or maintained by a governmental entity, unless otherwise agreed to by the landowner. 136
- 62. There is no record evidence that the proposed Project will have any impacts on human health. Construction and placement of facilities meet or exceed industry standards established for protection of the health and welfare of residences and businesses in and around the Project. Further, the South Dakota Department of Health provided Staff with a letter stating that the Department of Health has not taken a formal position on the issue of wind turbines and human health. The South Dakota Department of Health referenced the Massachusetts Department of Public Health and Minnesota Department of Health studies and

<sup>&</sup>lt;sup>129</sup> See Ex. A1 at § 16.3.2 (Application).

<sup>&</sup>lt;sup>130</sup> See Ex. A5 at 4 (O'Neal).

<sup>&</sup>lt;sup>131</sup> See Ex. A5 at 5 (O'Neal).

<sup>&</sup>lt;sup>132</sup> See Ex. A5 at 5 (O'Neal); Ex. A1 at Appendix I (Application); see also Ex. A24 (Updated Wind Turbine Coordinates).

<sup>&</sup>lt;sup>133</sup> Ex. A6 at 7 (O'Neal).

<sup>&</sup>lt;sup>134</sup> Evid. Hrg. Tr. at 238 (June 13, 2018) (O'Neal); Ex A5 at 7 (O'Neal).

<sup>&</sup>lt;sup>135</sup> See Ex. A1 at § 16.4 (Application); Ex. A5 at 11 (O'Neal).

<sup>&</sup>lt;sup>136</sup> Ex. A1 at 16-11 (Application).

<sup>&</sup>lt;sup>137</sup> See, e.g., Ex. A2 at 13-14 (Roberts).

<sup>&</sup>lt;sup>138</sup> See, e.g., Ex. A9 at 14-15 (Mauersberger); Ex. A1 at § 25.2 (Application).

<sup>&</sup>lt;sup>139</sup> See Ex. S1 at 3 (Thurber).

noted that those studies generally conclude that there is insufficient evidence to establish significant risk to human health. Dr. Roberts' analyzed and reviewed peer reviewed, published literature and did not identify any scientific works that provide objective support for claims that wind turbines cause adverse health effects. He concluded that there is no peer-reviewed, scientific data to support a claim that wind turbines are causing disease or specific health conditions. He

- 63. The Project will utilize aviation warning lights compliant with the FAA requirements. The FAA determines lighting specifications and determines which turbines must be equipped with lights. Dakota Range testified that it does not plan to utilize the Aircraft Detection Lighting System ("ADLS") because it is a newer technology and has not been proven as safe or reliable as the FAA-approved lighting system the Project plans to utilize. No evidence contrary to Dakota Range's testimony was presented and Staff witness, Mr. Thurber, confirmed that Dakota Range's proposed lighting system meets applicable FAA regulations. 145
- 64. The record evidence does not support imposing a condition requiring the Project to use ADLS.
- 65. See Proposed Finding of Fact 65, which contains confidential information and has been filed confidentially in this docket.
  - D. The facility will not unduly interfere with the orderly development of the region with due consideration having been given the views of governing bodies of affected local units of government.
- 66. The record demonstrates that the Project will not unduly interfere with the orderly development of the region, as demonstrated by Grant County's and Codington County's granting of conditional use permits for the Project. 146
- 67. Ms. Mogen and Ms. Kaaz proposed a two-mile setback from non-participating land. Ms. Mogen and Ms. Kaaz did not present any evidence in support of the two-mile setback, and did not request a two-mile setback from the County during the County conditional use permitting process for the Project. Nothing in the record supports a proposed two-mile setback from non-participants' land.

<sup>142</sup> Ex. A2 at 12 (Roberts); *see also* Ex. A2 at 13 (Roberts) ("Despite the attribution of various health events to wind turbines, there has not been a specific health condition documented in the peer-reviewed published literature to be recognized by the medical community or professional societies as a disease caused by exposure to sound levels and frequencies generated by the operation of wind turbines.").

<sup>&</sup>lt;sup>140</sup> See Ex. S1 at 3 (Thurber); Ex. A2 at 13-14 (Roberts).

<sup>&</sup>lt;sup>141</sup> Ex. A2 at 12 (Roberts).

<sup>&</sup>lt;sup>143</sup> Ex. A1 at 9-4 (Application).

<sup>&</sup>lt;sup>144</sup> Evid. Hrg. Tr. at 68-69 (Mauersberger).

<sup>&</sup>lt;sup>145</sup> Evid. Hrg. Tr. at 309 (Thurber).

<sup>&</sup>lt;sup>146</sup> See Ex. A1 at 17-1 (Application).

<sup>&</sup>lt;sup>147</sup> See Evid. Hrg. Tr. at 331 (Mogen) and 356 (Kaaz).

<sup>&</sup>lt;sup>148</sup> See Evid. Hrg. Tr. at 332-333 (Mogen) and 355 (Kaaz); see also Evid. Hrg. Tr. at 72-73 (Mauersberger).

68. Ms. Kaaz raised concerns regarding the proximity of the turbines to her land. However, the Project complies with all state and county setback requirements. Additionally, Dakota Range committed that it will use no more than three of the four turbine locations closest to Ms. Kaaz's property (Turbines 67, 68, 69 and A26). 149

#### **CONCLUSIONS OF LAW**

From the foregoing Findings of Fact and the record in this proceeding, the Commission now makes the following Conclusions of Law:

- 1. The Commission has jurisdiction to consider the Application under South Dakota Codified Law Chapter 49-41B.
- 2. The wind energy conversion facility proposed by Applicant is a wind energy facility as defined under South Dakota Codified Law 49-41B-2(13).
- 3. The Application submitted by Applicant meets the criteria required by South Dakota Codified Law 49-41B-25, and construction of the Project meets the requirements of South Dakota Codified Law 49-41B.
- 4. The Commission satisfied the hearing and notice requirement in South Dakota Codified Law Chapter 49-41B.
- 5. Applicant satisfied the applicable notice requirements in South Dakota Codified Law Chapter 49-41B.
- 6. Applicant has demonstrated that the proposed facility will comply with all applicable laws and rules.
- 7. Applicant has demonstrated that the facility will not pose a threat of serious injury to the environment nor to the social and economic condition of inhabitants or expected inhabitants in the siting area.
- 8. Applicant has demonstrated that the facility will not substantially impair the health, safety or welfare of the inhabitants.
- 9. Applicant has demonstrated that the facility will not unduly interfere with the orderly development of the region with due consideration having been given the views of governing bodies of affected local units of government.
- 10. All other applicable procedural requirements in South Dakota Codified Law Chapter 49-41B have been satisfied.
- 11. No party has provided evidence sufficient for the Commission to impose a property value guarantee.

<sup>&</sup>lt;sup>149</sup> Evid. Hrg. Tr. at 220 (Gunderson).

- 12. No party has provided evidence sufficient for the Commission to impose mitigation for grassland impacts.
- 13. No party has provided evidence sufficient for the Commission to impose a 2-mile setback from non-participating landowners.
- 14. No party has provided evidence sufficient for the Commission to impose a condition regarding decommissioning above and beyond the condition agreed to by Staff and Dakota Range.
- 15. To the extent that any Finding of Fact set forth above is more appropriately a conclusion of law, that Finding of Fact is incorporated by reference as a Conclusion of Law.

## **ORDER**

From the foregoing Findings of Fact and Conclusions of Law, it is therefore:

ORDERED, that an energy facility permit is issued to Dakota Range I, LLC and Dakota Range II, LLC for the Dakota Range Wind Project.

ORDERED, that Applicants shall comply with the attached Permit Conditions, which are hereby incorporated into and made a part of this Order.

Dated on	
----------	--

64216752.8

## APPLICANTS' RECOMMENDED PERMIT CONDITIONS1

- The Applicant will obtain all governmental permits which reasonably may be required by any township, county, state or federal agency or any other governmental unit for construction and operation activity prior to engaging in the particular activity covered by that permit. Copies of any permits obtained by the Applicant shall be sent to the Commission.
- 2. The Applicant shall construct, operate, and maintain the Project in a manner consistent with (1) descriptions in the Application, (2) Application supplements, (3) responses to any data requests, (4) the Terms and Conditions of the Permit to Construct Facilities, (5) any applicable industry standards, and (6) any permits issued by a Federal, State, or Local agency.
- 3. Applicant agrees that the Commission's complaint process as set forth in ARSD 20:10:01 shall be available to landowners and other persons sustaining or threatened with damage as the result of Applicant's failure to abide by the conditions of the Permit or otherwise having standing to seek enforcement of the conditions of the Permit. Participating landowners are free to use the complaint process free from retribution or consequence regardless of any private easement term to the contrary.
- 4. The Applicant shall provide each landowner on whose property the Project is to be constructed with the following information:
  - a) A copy of the Commission Order Granting Permit to Construct Facilities;
  - b) Detailed safety information describing:
    - 1) Reasonable safety precautions for existing activities on or near the Project,
    - 2) Known activities or uses that are presently prohibited near the Project, and
    - 3) Other known potential dangers or limitations near the Project;
  - c) Construction/maintenance damage compensation plans and procedures;
  - d) The Commission's address, website and phone number;
  - e) Contact person for Applicant, including name, e-mail address, and phone number.

012152

<sup>&</sup>lt;sup>1</sup> All conditions in this document have been agreed to by South Dakota Public Utilities Commission Staff and Dakota Range I, LLC, and Dakota Range II, LLC.

- 5. In order to ensure compliance with the terms and conditions of this Permit pursuant to SDCL 49-41B-33, it is necessary for the enforcement of this Order that all employees, contractors, and agents of Applicant involved in this Project be made aware of the terms and conditions of this Permit.
- 6. Except as otherwise provided in the conditions, the Applicant shall comply with all mitigation measures set forth in the Application and Applicant responses to Staff data requests. Material modifications to the mitigation measures shall be subject to prior approval of the Commission.
- 7. The Applicant will negotiate road use agreements with Grant County, Codington County, and all affected townships, if required. The Applicant will follow the terms of all road use agreements. The Applicant shall take appropriate action to mitigate wind-blown particles created throughout the construction process, including but not limited to implementation of dust control measures such as road watering, covering of open haul trucks when transporting material subject to being windblown, and the removal of any soils or mud deposits by construction equipment when necessary.
- 8. The Applicant shall comply with the following conditions regarding road protection:
  - a) The Applicant shall acquire all necessary permits authorizing the crossing of federal, state, county, and township roads.
  - b) The Applicant shall coordinate road closures with federal, state, and local governments and emergency responders.
  - c) The Applicant shall implement a regular program of road maintenance and repair through the active construction period to keep paved and gravel roads in an acceptable condition for residents and the public.
  - d) After construction, the Applicant shall repair and restore deteriorated roads resulting from construction traffic, or compensate governmental entities for their repair and restoration of deteriorated roads, such that the roads are returned to their preconstruction condition.
  - e) Within 180 days of completing construction and reclamation of the Project, the Applicant shall submit documentation to the Commission identifying that the roads were repaired in accordance with condition 8 and to the satisfaction of affected townships and counties. If the townships or counties will not provide such documentation, then the Applicant shall provide a report to the Commission on the outstanding road repair issues and how those issues will be resolved.
  - f) Privately owned areas used as temporary roads during construction will be restored to their preconstruction condition, except as otherwise requested or agreed to by the landowner.
  - g) Should applicant need to widen any existing roadways during construction of the Project, the Applicant shall return the roadways back to original width after completion of the Project, unless agreed upon otherwise with the federal, state, county, or township entities, or the landowner.

- h) The Applicant shall use appropriate preventative measures to prevent damage to paved roads and to remove excess soil or mud from such roadways.
- 9. The Applicant will provide signage that identifies road closures and disturbances resulting from the Project in accordance with the most recent editions of the Manual on Uniform Traffic Control Devices as published by the Federal Highway Administration.
- 10. The Applicant shall promptly report to the Commission the presence of any critical habitat of threatened or endangered species in the Project area that the Applicant becomes aware of and that was not previously reported to the Commission.
- 11. Sites identified as potentially eligible for NRHP listing will be addressed by micrositing facilities to avoid impacts. If complete avoidance cannot be achieved, the Applicant will work with the South Dakota State Historical Society, State Historic Preservation Office (SHPO) to minimize impacts.
  - a) An example of an avoidance measure that may be implemented is rerouting a collector line road around a resource, or boring under it to avoid ground disturbance.
  - b) If sites must be impacted that are afforded regulatory protection and would require mitigation, SHPO will be engaged to ensure regulatory compliance is achieved.
- 12. The Applicant agrees to follow the unanticipated discovery plan outlined in the document entitled 'Cultural Resources Monitoring and Management Plan for the Dakota Range I Wind Project' (CRMMP), and follow South Dakota Codified Laws 34-27-25, 34-27-26, and 34-27-28.
- 13. The Applicant shall file the final cultural resources report with the Commission prior to construction. If any potential adverse impacts to National Register of Historic Places (NRHP) unevaluated, listed, or eligible cultural resources are identified in the final cultural resources report, the Applicant shall comply with the requirements of the CRMMP.
- 14. The Applicant shall provide the Stormwater Pollution Prevention Plan (SWPPP) to the Commission when Applicant has a final design for the Project. The SWPPP will outline the water and soil conservation practices that will be used during construction to prevent or minimize erosion and sedimentation. The SWPPP will be completed before submittal of an application for a National Pollutant Discharge Elimination System (NPDES) general permit for construction activities. All contractors to be engaged in ground disturbing activities will be given a copy of the SWPPP and requirements will be reviewed with them prior to the start of construction.
- 15. The Applicant will repair and restore areas disturbed by construction or maintenance of the Project. Except as otherwise agreed to by the landowner, restoration will include replacement of original pre-construction topsoil or equivalent quality topsoil to its original elevation, contour, and compaction and re-establishment of original vegetation as close

thereto as reasonably practical. In order to facilitate compliance with this Condition, the Applicant shall:

- a) Strip topsoil to the actual depth of the topsoil, or as otherwise agreed to by the landowner in writing (e-mail is sufficient), in all areas disturbed by the Project; however, with respect to access roads, the Applicant may remove less than the actual depth of topsoil to ensure roads remain low-profile and contours align with the surrounding area;
- b) Store topsoil separate from subsoil in order to prevent mixing of the soil types;
- All excess soils generated during the excavation of the WTG foundations shall remain on the same landowner's land, unless the landowner requests, and/or agrees, otherwise; and
- d) When revegetating non-cultivated grasslands, the Applicant shall use a seed mix that is recommended by the Natural Resource Conservation Service (NRCS), or other land management agency, unless otherwise agreed upon with the landowner in writing.
- 16. The Applicant shall work closely with landowners or land management agencies, such as the NRCS, to determine a plan to control noxious weeds.
- 17. The Applicant shall stage construction materials in a manner that minimizes the adverse impact to landowners and land users as agreed upon between the Applicant and landowner or the Applicant and appropriate federal, state, and/or local government agency. All excess construction materials and debris shall be removed upon completion of the Project, unless the landowner agrees otherwise.
- 18. In order to mitigate interference with agricultural operations during and after construction, the Applicant shall locate all structures, to the extent feasible and prudent, to minimize adverse impacts and interferences with agricultural operations, shelterbelts and other land uses or activities. The Applicant shall take appropriate precautions to protect livestock and crops during construction. The Applicant shall repair all fences and gates removed or damaged during construction or maintenance unless otherwise agreed with the landowner or designee. The Applicant shall be responsible for the repair of private roads damaged when moving equipment or when obtaining access to the right-of-way.
- 19. The Applicant shall bury the underground collector system at a minimum depth of three and one-half feet, or deeper if necessary, in order to ensure the current land use is not impacted.
- 20. The Applicant shall repair or replace all property removed or damaged during all phases of construction, including but not limited to, all fences, gates and utility, water supply, irrigation or drainage systems. The Applicant shall compensate the owners for damages or losses that cannot be fully remedied by repair or replacement, such as lost productivity and crop and livestock losses. All repair, replacement and/or compensation described above shall be in accordance with the terms and conditions of written

agreements between the Applicant and affected landowners where such agreements exist.

- 21. The Applicant shall, in the manner described in its written agreement with a landowner, indemnify and hold the landowner harmless for loss, damage, claim or actions resulting from the Applicant's use of the easement, including any damage resulting from any release, except to the extent such loss, damage claim or action results from the negligence or willful misconduct of the landowner or his employees, agents, contractors, invitees or other representatives.
- 22. The Applicant may make turbine adjustments of 325 feet or less from the turbine locations identified in the Application without prior Commission approval, so long as said turbine shifts comply with county and state setback requirements, comply with specified noise and shadow flicker requirements, cultural resource impacts are avoided or minimized per the CRMMP, environmental setbacks are adhered to as agreed upon with the United States Fish and Wildlife Service (USFWS) and the South Dakota Game Fish and Parks (GFP), and wetland impacts are avoided. Prior to implementing the turbine adjustment, the Applicant will file in the docket an affidavit demonstrating compliance with the limitations set forth above. Any turbine adjustment that does not comply with the aforesaid limitations would be considered a "material change," and the Applicant shall file a request for approval of the "material change" prior to making the adjustment pursuant to the following approval process:
  - The Applicant would file with the Commission and serve on the official Service List a request for approval of the adjustment that includes:
    - An affidavit describing the proposed turbine adjustment, the reason for the adjustment, the reason the adjustment does not comply with one or more turbine flexibility limitations set forth above, and information regarding compliance with all other applicable requirements; and
    - A map showing both the approved location and the proposed adjustment (in different colors);
  - Once received, the information would be reviewed by Commission Staff, and Commission Staff would have 10 calendar days within which to request further Commission review.
  - If no further review is requested, then the Applicant may proceed with the adjustment.
  - If further review is requested, the Commission would then issue a decision regarding the Applicant's request at its next available regularly scheduled Commission meeting subject to notice requirements after the request for further review is made by Commission Staff.
- 23. The Applicant may adjust access roads, the collector system, O&M facility, Project substation, and temporary facilities, so long as they are located on leased land, cultural resource impacts are avoided or minimized per the CRMMP, environmental setbacks are adhered to as agreed upon with the USFWS and the GFP, wetland impacts are avoided or are in compliance with applicable regulations and requirements, and all other applicable regulations and requirements are met.

- 24. The terms and conditions of the Permit shall be made a uniform condition of construction, subject only to an affirmative written request for an exemption addressed to the Commission. A request for an exemption shall clearly state which particular condition should not be applied to the property in question and the reason for the requested exemption. The Commission shall evaluate such requests on a case-by-case basis, which evaluation shall be completed within 60 days unless exigent circumstances require action sooner.
- 25. If the Project causes interference with radio, television, or any other licensed communication transmitting or receiving equipment, the Applicant shall take all appropriate action to minimize any such interference and shall make a good faith effort to restore or provide reception levels equivalent to reception levels in the immediate areas just prior to construction of the Project. This mitigation requirement shall not apply to any dwellings or other structures built after completion of the Project.
- 26. The Applicant will provide Global Positioning System (GPS) coordinates of structure locations to affected landowners at any time during the life of the Project. Coordinates will be provided in writing to landowners within 30 days of a request.
- 27. The Project, exclusive of all unrelated background noise, shall not generate a long-term average sound pressure level (equivalent continuous sound level, Leg), as measured over a period of at least two weeks defined by Commission staff that includes all integer wind speeds from cut in to full power, of more than 45 dBA within 25 feet of at any nonparticipating residence or more than 50 dBA within 25 feet of at any participating residence. The Applicant shall, upon Commission formal request, conduct field surveys or provide post-construction monitoring data verifying compliance with specified noise level limits using applicable American National Standards Institute (ANSI) methods. Unless operational or maintenance changes result in a reasonable assumption of higher turbine sound levels than modeled, such requests for field surveys or post-construction monitoring data shall be limited to situations where complaints have been made by landowners whose homes had a modeled sound level of 40 dBA or higher based on the Sound Level Modeling Report in Appendix I of the Applicant's Application, or any subsequent iteration thereof provided pursuant to Paragraphs 22 or 28(c). If the longterm average level exceeds 45 dBA at any non-participating residence or 50 dBA at any participating residence, then the Project Owner shall take whatever steps are reasonably necessary and in accordance with prudent operating standards to rectify the situation. Sound monitoring will not be repeated in a representative area during any five year period unless operational or maintenance changes result in a reasonable assumption of higher turbine sound levels.
- 28. The Applicant will take reasonable steps to mitigate shadow flicker concerns at the residences that could experience shadow flicker levels above 30 hours per year.
- 29. Not less than 30 days prior to commencement of construction work in the field for the Project, the Applicant will provide to Staff the following information:
  - a) the most current preconstruction design, layout and plans, including the specifications of the turbine model selected;

- b) a sound level analysis showing compliance with the applicable sound level requirements;
- a shadow flicker analysis showing the anticipated shadow flicker levels will not exceed the Applicant's voluntary commitment of 30 hours per year at any nonparticipating residence; and
- d) such additional Project preconstruction information as Staff requests.
- 30. Within 90 days of the Project's commercial operation date, the Applicant shall submit a report to the Commission that provides the following information:
  - a) as-built location of structures and facilities, including drawings clearly showing compliance with setbacks required by state and local governments and voluntary commitments set forth in Table 10-1 of the Application;
  - b) the status of remedial activities for road damage, landowner property damage, crop damage, environmental damage, or any other damage resulting from Project construction activities; and
  - c) a summary of known landowner complaints and the Applicant's plan for resolving those complaints.
- 31. For purposes of this Project and the commitments herein, "residences," "businesses," and "buildings owned and/or maintained by a governmental entity" shall include only those that are in existence and in use as of the date of the Commission's order issuing a permit.
- 32. The Applicant shall seek input from local emergency response personnel to properly and effectively coordinate an emergency response plan consistent with local resources and response abilities. Upon completion of construction, a Project operation emergency response plan shall be provided to Staff to make available to the general public in the manner they choose.
- 33. Prior to the construction of the Project, the Applicant will notify public safety agencies by providing a schedule and location of work to be performed within their jurisdiction. The agencies contacted will include the South Dakota Department of Public safety, the Sheriff of Codington County, the Sheriff of Grant County, the Codington County Office of Emergency Management, and the Grant County Office of Emergency Management.
- 34. The Applicant agrees to undertake one year of independently-conducted post-construction avian mortality monitoring for the Project, and to provide a copy of the report to the USFWS, GFP, and the Commission. Based on the results of said monitoring, the need for and scope of an additional year of independently-conducted post-construction avian mortality monitoring will be determined in coordination with USFWS and GFP.
- 35. The Applicant shall file the Bird and Bat Conservation Strategy (BBCS) prior to beginning construction of the Project. The BBCS shall be implemented during construction and operation of the Project.

- 36. The Applicant shall provide a public liaison officer, approved by the Commission, to facilitate the exchange of information between the Applicant, including its contractors, and landowners, local communities, and residents and to facilitate prompt resolution of complaints and problems that may develop for landowners, local communities, and residents as a result of the Project. The Applicant shall file with the Commission its proposed public liaison officer's credentials for approval by the Commission prior to the commencement of construction. After the public liaison officer has been approved by the Commission, the public liaison officer may not be removed by the Applicant without the approval of the Commission. The public liaison officer shall be afforded immediate access to the Applicant's on-site project manager, its executive project manager, and to contractors' on-site managers and shall be available at all times to the Staff via mobile phone to respond to complaints and concerns communicated to the Staff by concerned landowners and others. As soon as the Applicant's public liaison officer has been appointed and approved, the Applicant shall provide contact information for him/her to all landowners in the Project area and to law enforcement agencies and local governments in the vicinity of the Project. The public liaison officer's contact information shall be provided to landowners in each subsequent written communication with them. If the Commission determines that the public liaison officer has not been adequately performing the duties set forth for the position in this Order, the Commission may, upon notice to the Applicant and the public liaison officer, take action to remove the public liaison officer. The public liaison's services shall terminate ninety days after the Project commences commercial operations, unless the appointment is extended by order of the Commission.
- 37. If the Project is decommissioned, Applicant will follow Section 24 of the Application, the decommissioning plan laid out in Appendix P of the Application, as supplemented by the Applicant in Exhibit A4-2, and answers to Staff's Data Requests in Exhibit S1. The Commission shall be notified prior to any decommissioning action.
- 38. If the Applicant is purchased by Northern States Power Company, d/b/a Xcel Energy, as stated in Section 7.0 of the Application, Xcel Energy will assume financial responsibility for decommissioning and provide funding for the decommissioning and removal of the Project. As a regulated electric utility, the projected financial cost of decommissioning will be reviewed when Xcel Energy requests recovery of the Project investment and associated decommissioning cost from customers in a rate proceeding. The Commission may review and adjust the Project decommissioning cost recovered from customers in subsequent Xcel Energy rate proceedings using the most current information available regarding decommissioning. In the event that Xcel Energy does not purchase the Applicant, the Applicant shall file a decommissioning plan with a proposal for financial assurance, at least sixty days prior to construction, for Commission approval. No construction may occur until the Commission approves the decommissioning plan.
- 39. Applicant's proposed turbine shifts, identified as Turbine 34a, Turbine 60a, and Turbine A12a in Exhibit A15-3, are hereby incorporated into the approved Project configuration.
- 40. CONFIDENTIAL, filed separately.

41. Dakota Range may construct turbines on only three of the following four turbine locations: Turbines 67, 68, 69 and A26.

64177678.2