

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

**IN THE MATTER OF THE
APPLICATION BY DEUEL HARVEST
WIND ENERGY SOUTH LLC FOR
ENERGY FACILITY PERMITS OF A
WIND ENERGY FACILITY AND A 345
KV TRANSMISSION FACILITY IN
DEUEL COUNTY, SOUTH DAKOTA,
FOR THE SOUTH DEUEL WIND
PROJECT**

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**DEUEL HARVEST WIND ENERGY
SOUTH LLC'S PROPOSED FINDINGS
OF FACT, CONCLUSIONS OF LAW
AND ORDER**

EL24-023

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APPEARANCES

Commissioners Gary Hanson, Kristie Fiegen, and Chris Nelson.

Lisa Agrimonti and Patrick Mahlberg, Fredrikson & Byron, P.A., 60 South Sixth Street, Suite 1500, Minneapolis, Minnesota 55402, appeared on behalf of the Applicant, Deuel Harvest Wind Energy South LLC (“South Deuel Wind” or “Applicant”).

Amanda Reiss and Logan Schaeffbauer, 500 E. Capitol Ave., Pierre, South Dakota 57501, appeared on behalf of the South Dakota Public Utilities Commission Staff (“Staff”).

Arla Hamann Poindexter appeared on behalf of herself.

PROCEDURAL HISTORY

On September 11, 2023, South Deuel Wind received a conditional use permit for a wind energy system from the Deuel County Board of Adjustment.

On June 28, 2024, South Deuel Wind filed an Application for Energy Facility Permits (with appendices) with the South Dakota Public Utilities Commission (“Commission”) for the up to 260 megawatt (“MW”) wind energy facility (and 345-kilovolt (“kV”) transmission facility), collectively referred to as the South Deuel Wind Project (“Project”), to be located entirely within Deuel County, South Dakota.¹ Also on June 28, 2024, South Deuel Wind filed the prefiled direct testimony of Aidan O’Connor, Monica Monterrosa, Michelle Phillips, Alexandra Thompson, Michael Hankard, JoAnne Blank, Michael MaRous, and David Loomis.

On July 1, 2024, South Deuel Wind filed a certificate of service confirming it had sent a copy of the Application and pre-filed direct testimony to the Deuel County Auditor.

¹ See generally Ex. A1 (Application).

On July 9, 2024, the Commission issued a Notice of Application; Order for and Notice of Public Input Hearing; and Notice of Opportunity to Apply for Party Status.

Also on July 9, 2024, the Commission's Attorney filed a certificate of service confirming that she had sent a copy of the Notice of Application; Order for and Notice of Public Input Meeting; Notice of Opportunity to Apply for Party Status to all governing bodies within the area where the proposed facility is to be constructed.

On July 23, 2024, Mr. Matthew Holden filed an application for party status on behalf of the Lake Cochrane Improvement Association ("LCIA"). Mr. Holden subsequently withdrew this request.

On July 24, 2024, the Commission issued an Order assessing South Deuel Wind a filing fee in an amount not to exceed \$510,500 with an initial deposit of \$20,000. In the same Order, the Commission further voted to authorize the executive director to enter into necessary consulting contracts.

Also on July 24, 2024, South Deuel Wind filed a certificate of service confirming that it had sent a copy of the Application and pre-filed testimony to the Commission on July 8, 2024.

Also on July 24, 2024, South Deuel Wind filed a proof of mailing confirming that it had sent a letter to affected landowners providing notice of public input meeting.

On July 31, 2024, Mr. Holden filed an application for party status in his individual capacity.

On August 9, 2024, South Deuel Wind filed a response to Mr. Holden's application for party status.

On August 13, 2024, South Deuel Wind filed a certificate of service confirming that it had served a copy of South Deuel Wind's response to Mr. Holden's application for party status to individuals on the Commission's service list on August 9, 2024.

On August 15, 2024, Ms. Arla Hamann Poindexter filed an application for party status. On August 16, 2024, Ms. Hamann Poindexter also filed additional comments regarding her application for party status.

Also on August 16, 2024, the Commission granted Mr. Holden's application for party status.

On August 21, 2024, LCIA filed an application for party status.

Also on August 21, 2024, South Deuel Wind filed the PowerPoint presentation that was to be presented at the public input meeting on August 22, 2024.

On August 22, 2024, a public input hearing was held as scheduled.

Also on August 22, 2024, Affidavits of Publication were filed confirming that the Notice of Public Hearing was published in *The Brookings Register* on July 17, July 31, and August 14, 2024 and in the *Clear Lake Courier* on July 17, July 31, and August 14, 2024.

On August 23, 2024, Mr. Jay Grabow filed an application for party status in his individual capacity.

On August 26, 2024, South Deuel Wind filed a letter regarding Ms. Hamann Poindexter's application for party status.

On August 27, 2024, Mr. Josh Bekaert filed an application for party status.

On August 29, 2024, South Deuel Wind filed a letter regarding the applications for party status of LCIA, Mr. Grabow, and Mr. Bekaert.

Also on August 29, 2024, the Commission granted Ms. Hamann Poindexter's application for party status.

On September 10, 2024, South Deuel Wind filed a letter containing additional information in response to questions raised during the public input meeting.

On September 11, 2024, the Commission granted the applications for party status of LCIA, Mr. Grabow, and Mr. Bekaert.

On September 13, 2024, South Deuel Wind filed a revised Appendix W (Unanticipated Discovery Plan) and a letter noting the revisions that were made.

Also on September 13, 2024, Staff filed a motion for procedural schedule.

On September 25, 2024, the Commission issued an order granting Staff's motion for procedural schedule.

On October 29, 2024, Staff filed a subpoena and admission of service directed to Mr. Chad Switzer of the South Dakota Game, Fish and Parks ("SDGFP").

On October 31, 2024, counsel representing the SDGFP filed an admission of service on behalf of Mr. Switzer.

On November 6, 2024, LICA filed a letter regarding the procedural order and provided a status update.

On November 13, 2024, Staff filed prefiled direct testimony of Mr. Jon Thurber, Mr. David Hessler, and Mr. Switzer.

Also on November 13, 2024, Intervenor Ms. Hamann Poindexter filed direct testimony of Arla Hamann Poindexter.

On December 5, 2024, South Deuel Wind filed prefiled rebuttal testimony of Ms. Monterrosa, Ms. Phillips, Ms. Thompson, Mr. Hankard, and Mr. Christopher Harrington, project manager at Capitol Airspace Group.

On December 13, 2024, the Commission issued an order for and notice of evidentiary hearing.

On January 13, 2025, Ms. Hamann Poindexter filed Exhibits P1 through P10.

On January 14, 2025, South Deuel Wind filed Exhibits A1 through A18 for hearing.² South Deuel Wind also submitted its Witness List and Exhibit List.

Also on January 14, 2025, Staff filed Exhibits S1 through S9 for hearing. Staff also submitted its Witness List and Exhibit List. On January 16, 2025, Staff filed additional Exhibit S10.

On January 16, 2025, Staff, South Deuel Wind, and Ms. Hamann Poindexter participated in a prehearing conference.

The evidentiary hearing was held before the Commission on January 21, 2025, in the Matthews Training Center located in the Foss Building, 523 East Capitol Avenue, Pierre, South Dakota.

On January 29, 2025, the Commission issued an Order for and Notice of Post-Hearing Briefing Schedule and Decision Date.

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. The Applicant is Deuel Harvest Wind Energy South LLC, a subsidiary of Invenergy Wind Development North America LLC and an affiliate of Invenergy LLC (“Invenergy”).³

3. Invenergy is a privately held company with a 20+ year track record of responsibly developing, building, owning and operating wind, solar, energy storage, and natural gas generation facilities. Invenergy has developed more than 200 projects and 32 gigawatts of generating capacity

² South Deuel Wind filed Exhibits A1 through A18.

³ Ex. A1 at 1.3 (Application).

in the Americas, Europe, and Asia. Invenergy is also developing transmission projects to build a more robust, resilient grid.⁴

4. Intervenor Matthew Holden is a landowner and resides in Deuel County.
5. Intervenor Arla Hamann Poindexter is a landowner and resides in Deuel County.
6. Intervenor LCIA is a non-profit corporation organized under the laws of South Dakota.
7. Intervenor Jay Grabow, who is a Deuel County Commissioner, appeared in his individual capacity.
8. Intervenor Josh Bekaert is a landowner and resides in Deuel County.
9. Staff fully participated as a party in this matter, in accordance with SDCL 49-41B-17.

III. PROJECT DESCRIPTION.

10. The proposed Project consists of a wind energy facility and a transmission facility located in Deuel County, South Dakota.⁵ The wind energy facility will have a nameplate capacity of up to 260 MW and deliver up to 250 MW to the point of interconnection. The Project will include up to 68 wind turbines, electrical collection and supervisory control and data acquisition (“SCADA”) systems, a 34.5 kV to 345 kV collector substation (“Collector Substation”), an approximately six-mile long 345 kV generator transmission tie line (“Gen-Tie Line”), improvements to enable the interconnection of the Project into the existing 345 kV Astoria interconnection switchyard (“Interconnection Switchyard”), an operations and maintenance facility, access roads, up to three meteorological towers, up to two aircraft detection lighting system (“ADLS”) towers, and temporary construction areas, including crane paths, public road improvements, a general construction laydown yard, staging areas, and a concrete batch plant, as needed.⁶

11. South Deuel Wind will construct, own and operate the 345 kV Gen-Tie Line between South Deuel Wind’s Collector Substation and the existing Astoria 345 kV Interconnection Switchyard owned by Otter Tail Power Company.⁷ The Gen-Tie Line meets the definition of a “transmission facility” under SDCL 49-41B-2.1. The Gen-Tie Line will be approximately six miles long, and based on the Project’s property rights, the approximately six-mile-long proposed Gen-Tie Line route is the most direct and feasible path between the Collector Substation and the Interconnection Switchyard. All landowners hosting the Gen-Tie Line have been consulted regarding the route and concur with its location.⁸ Collectively, the facilities for the wind energy and transmission facility are described hereinafter, without limitation, as the “Project Facilities.”

⁴ Ex. A1 at 1.3 (Application).

⁵ Ex. A1 at 1.1 (Application).

⁶ Ex. A1 at 1.1 (Application).

⁷ Ex. A1 at 4.2.10 & 4.2.11 (Application).

⁸ Ex. A1 at 5.1.2 (Application).

12. South Deuel Wind will obtain a Generator Interconnection Agreement (“GIA”) for the Project. Discussions between Otter Tail Power Company and Midcontinent Independent System Operator, Inc. (“MISO”) to execute the GIA are ongoing.⁹

13. The Project is located in the townships of Blom, Brandt, Clear Lake, Norden, and Scandinavia in Deuel County. The Project will be located on privately-owned land within the 34,339-acre general Project Area (“Project Area”), of which 29,258 acres are leased for the Project.¹⁰

14. The current estimated capital cost of the Project is approximately \$621 million based on indicative construction and wind turbine pricing cost estimates. This estimate includes lease acquisition, permitting, engineering, financing, procurement, and construction of the Project Facilities.¹¹ The overall cost of developing the Project depends primarily on site selection and construction timing.

15. South Deuel Wind has identified 73 proposed turbine locations and proposes to erect up to 68 wind turbines depending on the nameplate capacity(s) of the turbine model(s) procured.¹² Final turbine model selections must account for various factors, including some factors that are beyond the ability of South Deuel Wind to control. Such factors include, among others, turbine availability, advancements in turbine technology, and permitting timelines. South Deuel Wind presented three potential turbine models for use in the Project in the Application: General Electric 3.8-154, Siemens Gamesa 4.4-164, and Vestas 163-4.5.¹³ South Deuel Wind requested that the Permits allow for the use of turbine models of comparable capacity and specifications, provided the Project complies with county siting standards and the conditions specified in the Permits.¹⁴ South Deuel Wind demonstrated that this turbine model flexibility is necessary.¹⁵ Further, South Deuel Wind has committed to the process outlined in Condition No. 22 of Applicant’s and Staff’s proposed Terms and Conditions (“Terms and Conditions”) for addressing a change in turbine model and demonstrating compliance with all of the conditions of the permits for the Project.¹⁶

16. All turbines will be constructed within the Project Area consistent with the configuration presented in Figure 2 (Project Layout Mapbook) in Appendix A to Exhibit A1 (the “Project Layout”) and subject to all commitments, conditions, and requirements of the Commission’s Order.

17. South Deuel Wind has entered into long-term, voluntary lease and easement agreements for the placement of Project Facilities with private landowners within the Project Area that provide for a total operating period of 50 years. South Deuel Wind has not requested, nor will

⁹ Ex. S4 (Applicant’s Responses to Staff’s Data Requests Set 1, 1-15(a)).

¹⁰ See Ex. A1 at 1.1; Figure A-1 (Application).

¹¹ Ex. A1 at Ch. 3.0 (Application).

¹² Ex. A1 at 4.2.1 (Application).

¹³ Ex. A1 at 4.2.1; Table 4.2.1 (Application).

¹⁴ Ex. A1 at 4.2.1 (Application).

¹⁵ See Ex. A1 at 4.2.1 (Application); Ex. A2 at 11-12 (Thompson Direct).

¹⁶ Ex. A18 at ¶ 22 (Applicant’s and Staff’s Terms and Conditions).

seek to utilize, eminent domain powers to acquire easements for the Project. Private land and public road rights-of-way (“ROW”) will be used for all Project Facilities.¹⁷

18. South Deuel Wind presented evidence of consumer demand and need for the Project.¹⁸ South Deuel Wind does not currently have a purchase agreement or off-take agreement for the Project but is currently negotiating two power purchase agreements with utilities. At the time of hearing, those negotiations were still in process and were confidential.¹⁹ The electricity generated by the Project would be used as needed on the MISO regional grid and will help MISO operators meet electricity demand.²⁰ The output from the facility will be used to meet the needs for the region’s electrical utilities and industrial, commercial, and residential customers.²¹

19. With regard to micro siting, South Deuel Wind provided evidence to support the need for Project Facility siting flexibility.²² With respect to turbine flexibility, South Deuel Wind and Staff agreed to the turbine flexibility and “material change” provisions set forth in Applicant’s and Staff’s Condition No. 22.²³ With respect to the electrical collection and SCADA systems, Collector Substation, O&M Facility, access roads, MET towers, ADLS towers, and temporary construction areas, South Deuel Wind and Staff agreed to Condition No. 24 of Applicant’s and Staff’s Terms and Conditions.²⁴ With respect to the transmission structures, South Deuel Wind and Staff agreed to siting flexibility and “material change” provisions set forth in Applicant’s and Staff’s Condition No. 23.²⁵

20. The record demonstrates that South Deuel Wind has made appropriate and reasonable plans for decommissioning.²⁶ During the evidentiary hearing, South Deuel Wind committed to decommissioning turbine foundations to a depth of 48 inches.²⁷ With respect to financial security for decommissioning, Staff and South Deuel Wind have agreed to Condition No. 40 of Applicant’s and Staff’s Terms and Conditions, which provides for a decommissioning escrow account.²⁸ South Deuel Wind and Staff also agreed to Condition No. 41 of Applicant’s and Staff’s Terms and Conditions, which provides for financial security for decommissioning in the event South Deuel Wind is purchased by a utility that is rate regulated by the Commission.²⁹

21. South Deuel Wind received a conditional use permit (“CUP”) for the Project from the Deuel County Board of Adjustment on September 11, 2023.³⁰

¹⁷ Ex. A1 at 5.3 (Application).

¹⁸ See, e.g., Ex. A1 at Ch. 2.0 (Application).

¹⁹ Evid. Hrg. Tr. at 70 (Jan. 21, 2025) (Transcript).

²⁰ Ex. A1 at Ch. 2.0 (Application).

²¹ Ex. A1 at Ch. 2.0 (Application).

²² See, e.g., Ex. A1 at 4.2 (Application), Ex. A11 at 4 (Monterrosa Rebuttal), Ex. A2 at 13 (Thompson Direct).

²³ Ex. A18 at ¶ 22 (Applicant’s and Staff’s Terms and Conditions).

²⁴ Ex. A18 at ¶ 24 (Applicant’s and Staff’s Terms and Conditions).

²⁵ Ex. A18 at ¶ 23 (Applicant’s and Staff’s Terms and Conditions).

²⁶ See Ex. A1 at Appendix X (Decommissioning Plan); Ex. S4 at 1-59; Ex. S8 at 6-1, 6-2, and 6-3; Ex. A1 at Ch. 18 (Application); Ex. A4 at 11-12 (Monterrosa Direct); Ex. A11 at 5-6 (Monterrosa Rebuttal); Ex. A18 at ¶¶ 35, 40, 41 (Applicant’s and Staff’s Terms and Conditions).

²⁷ Evid. Hrg. Tr. at 77 (Jan. 21, 2025) (Transcript).

²⁸ Ex. A18 at ¶ 40 (Applicant’s and Staff’s Terms and Conditions).

²⁹ Ex. A18 at ¶ 41 (Applicant’s and Staff’s Terms and Conditions).

³⁰ Ex. A1 at Appendix B (CUP).

22. The record demonstrates that South Deuel Wind has provided adequate information on potential cumulative impacts and that the Project will not have a significant impact.³¹

23. Prior to the evidentiary hearing, Staff and Applicant agreed to 48 Terms and Conditions regarding construction, operation, and decommissioning of the Project.³² Staff witness Mr. Thurber testified during the evidentiary hearing that Staff agrees with the Terms and Conditions, and the Terms and Conditions resolved all of Staff's material concerns in this docket.³³

IV. FACTORS FOR ENERGY FACILITY PERMITS.

24. Under 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. An applicant for an electric transmission line, a solar energy facility, or a wind energy facility that holds a conditional use permit from the applicable local units of government is determined not to threaten the social and economic condition of inhabitants or expected inhabitants in the siting area;
- (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. An applicant for an electric transmission line, a solar energy facility, or a wind energy facility that holds a conditional use permit from the applicable local units of government is in compliance with this subdivision.

25. 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.

26. There is sufficient evidence on the record for the Commission to assess the proposed Project using the criteria set forth above.

³¹ See, e.g., Ex. A1 at Chapters 6-12 (Application); Ex. A13 at 1-4 (Hankard Rebuttal).

³² See, e.g., Ex. A18 (Applicant's and Staff's Terms and Conditions).

³³ Evid. Hrg. Tr. at 157 (Jan. 21, 2025) (Transcript).

V. SATISFACTION OF REQUIREMENTS FOR ISSUANCE OF ENERGY FACILITY PERMITS.

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

27. The evidence submitted by South Deuel Wind demonstrates that the Project will comply with applicable laws and rules.³⁴ Applicant and Staff have agreed to Condition No. 1, which provides that the Applicant “will obtain all governmental permits which reasonably may be required by any township, county, state agency, or federal agency, or any other governmental unit for construction and operation activity of the Project prior to engaging in the particular activity covered by that permit.”³⁵

28. The record demonstrates that construction of the Project will meet 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. An applicant for an electric transmission line, a solar energy facility, or a wind energy facility that holds a conditional use permit from the applicable local units of government is determined not to threaten the social and economic condition of inhabitants or expected inhabitants in the siting area.**

1. *Social and economic condition of inhabitants or expected inhabitants in the siting area.*

29. Deuel County granted a CUP for the Project.³⁶ Therefore, as a matter of law, the Project is determined not to threaten the social and economic condition of inhabitants or expected inhabitants in the siting area.³⁷

2. *Environment.*

30. The evidence demonstrates that the Project does not pose a threat of serious injury to the environment in the Project Area and that South Deuel Wind has adopted reasonable avoidance and minimization measures, as well as commitments, to further limit potential environmental impacts.³⁸

³⁴ See, e.g., Ex. A1 at 1.4, 22.1 (Application), Ex. A3 at 3 (O’Connor Direct).

³⁵ Ex. A18 at ¶ 1 (Applicant’s and Staff’s Terms and Conditions).

³⁶ Ex. A1 at Appendix B (CUP).

³⁷ SDCL 49-41B-22(2).

³⁸ See, e.g., Ex. A1 at Ch. 6.0, 7.0, 8.0, 9.0, 10.0, 11.0, 12.0, 13.0, 14.0 (Application); Ex. A4 at 6 (Monterrosa Direct), Ex. A5 at 3-8 (Phillips Direct).

31. Construction of the Project will not result in significant impacts on geological resources.³⁹ The risk of seismic activity in the vicinity of the Project Area is “extremely low to negligible” according to data from the U.S. Geological Survey.⁴⁰

32. South Deuel Wind demonstrated that it will minimize and/or avoid impacts to soil resources.⁴¹ The majority of impacts will be temporary and related to construction activities.⁴² Permanent impacts to soils associated with operation of the Project will be approximately 51 acres, which is approximately 0.1 percent of the total land within the Project Area.⁴³ South Deuel Wind will implement various measures during construction and restoration to minimize impacts to the physical environment, including decompacting the subsoil, replacing stored topsoil, reseeding with an appropriate seed mix, installing slope breakers, noxious weed control, and utilizing erosion control measures in accordance with the Project’s Storm Water Pollution Prevention Plan (“SWPPP”), applicable permit conditions, and best management practices (“BMPs”).⁴⁴ South Deuel Wind confirmed it will comply with the SWPPP for the Project.⁴⁵

33. The Project is not anticipated to have material impacts on existing air and water quality.⁴⁶

34. South Deuel Wind demonstrated that it will minimize and/or avoid impacts to hydrology.⁴⁷ The record demonstrates that South Deuel Wind has minimized impacts to wetlands and water bodies.⁴⁸ The Project is not anticipated to have long-term impacts on groundwater resources.⁴⁹ There are portions of Deuel County that have not been mapped for FEMA floodplains. However, the area surrounding Brandt, South Dakota was mapped for floodplains in 2022, of which a portion crosses into the Project Area. There are 98 acres of FEMA Flood Zone A within the Project Area.⁵⁰ Based on the Project Layout, any potential impacts to floodplains will be temporary in nature, and existing contours and elevations would be restored upon completion of construction.⁵¹ Furthermore, routine operation and maintenance activities are not expected to affect groundwater resources. Project Facilities have been designed to minimize impacts on surface water resources.⁵²

35. South Deuel Wind has demonstrated that it will minimize and/or avoid impacts to wetlands and streams. To the extent practicable, Project Facilities have been sited in upland areas, avoiding low-lying wetlands and streams. No proposed turbine locations are located in wetland basins. Impacts to wetlands will be avoided or minimized through limiting disturbance of

³⁹ See Ex. A1 at 7.1.2 (Application).

⁴⁰ Ex. A1 at 7.1.1.5 (Application).

⁴¹ See Ex. A1 at 7.2.2 (Application).

⁴² See Ex. A1 at 7.2.2 (Application).

⁴³ See Ex. A1 at Ch. 6; Table 6 (Application); Ex. A4 at 10 (Monterrosa Direct).

⁴⁴ See Ex. A1 at 4.4.2, 4.4.10, 4.5.2, 4.5.3, 9.1.2 (Application), Ex. A2 at 4-5 (Thompson Direct).

⁴⁵ Evid. Hrg. Tr. at 80 (Jan. 21, 2025) (Transcript).

⁴⁶ See Ex. A1 at 8.1.2, 8.2.2, 9.2.2, 10.2.1, Ch. 13, 14.2 (Application).

⁴⁷ See Ex. A1 at 8.1.2, 8.2.2 (Application).

⁴⁸ See Ex. A1 at 8.2.2 (Application).

⁴⁹ See Ex. A1 at 8.1.2 (Application).

⁵⁰ See Ex. A1 at 8.2.1.4 (Application).

⁵¹ Ex. A1 at 8.2.2.6 (Application).

⁵² Ex. A2 at 5 (Thompson Direct).

individual wetlands during project construction as well as identifying wetland boundaries by delineating them prior to construction.⁵³ Staff witness Mr. Switzer of the SDGFP testified that these are appropriate measures.⁵⁴

36. Wetland areas and streams will generally be avoided when routing access roads and collector circuits. Collector circuits that cross delineated wetlands and streams will be constructed by directionally boring beneath water features to the extent practicable.⁵⁵ Furthermore, the Gen-Tie Line will span any wetlands or streams, no impacts to surface waters are anticipated from the Gen-Tie Line.⁵⁶

37. The record demonstrates that South Deuel Wind has minimized impacts to vegetation.⁵⁷ The Project will result in approximately 1,058 acres of temporary ground disturbance impact and approximately 51 acres of long-term ground disturbance impact to vegetation (predominantly cropland and grassland/pasture). Impacts that occur to cultivated lands are not considered ecologically significant, because these lands are frequently disturbed by tilling, planting, and harvesting activities associated with crop production.⁵⁸ Moreover, the Project is compatible with existing land uses, which are primarily agricultural. Wind energy facilities are particularly compatible with agricultural land because crops can be grown, and livestock can graze, up to the turbines.⁵⁹

38. South Deuel Wind conducted a desktop review to identify the location and quality of grassland within the Project Area, which included reviewing material from South Dakota State University, the National Land Cover Database, National Agriculture Imagery Program aerial photography, U.S. Fish and Wildlife Service (“USFWS”) National Wetland Inventory maps, multiple years of Google Earth imagery, and USFWS conservation, grassland, and wetland easement locations obtained from the USFWS National Realty Tract data.⁶⁰ South Deuel Wind then conducted further analysis through field verification, which revealed that much of the Project Area has previously been highly impacted due to land conversion to row crop agriculture and the introduction of non-native, cool-season grass species, both of which has led the Project Area to contain a lower amount of potential unbroken grasslands than what was identified during the desktop review. Overall, field verification identified approximately 335 acres of potential unbroken grassland, and 4,788 acres of broken grasslands.⁶¹

39. South Deuel Wind will site turbines outside of native habitat including unbroken grasslands, forested habitat, and wetlands.⁶² As noted in the testimony of Ms. Phillips, there are

⁵³ Ex. A12 at 3 (Phillips Rebuttal).

⁵⁴ Ex. S2 at 13 (Switzer Direct) (“The application mentions under mitigation measures for wildlife that wetlands will be avoided or minimize disturbance of individual wetlands during project construction as well as identifying wetland boundaries by delineating them prior to construction. These are appropriate measures.”).

⁵⁵ See Ex. A1 at 9.2.2 (Application). See also Ex. S2 at 13 (Switzer Direct).

⁵⁶ Ex. A1 at 8.2.2 (Application).

⁵⁷ See Ex. A1 at 9.1.2 (Application).

⁵⁸ Ex. A1 at 9.1.2 (Application).

⁵⁹ Ex. A1 at 11.1.1 (Application); Ex. A4 at 9-10 (Monterrosa Direct).

⁶⁰ Ex. A1 at 9.1.1.2 (Application), Ex. A5 at 5 (Phillips Direct).

⁶¹ Ex. A1 at 9.1.1.2 (Application), Appendix F (Grassland Assessment).

⁶² Ex. A1 at 9.4.2 (Application).

no proposed turbine locations or access roads located in unbroken grasslands.⁶³ South Deuel Wind conducted grassland studies between 2022 and 2023 to identify broken and unbroken grasslands within the Project area, and used those assessments to avoid siting any permanent infrastructure on unbroken grasslands.⁶⁴ Permanent habitat loss due to construction of wind turbines would be minimal across the Project Area and localized.⁶⁵

40. Mr. Switzer recognized the efforts of South Deuel Wind’s siting process to avoid or mitigate fragmentation of grassland.⁶⁶ In direct testimony, Mr. Switzer noted that, “[f]rom reviewing the maps, resources, and other information available there were efforts to avoid placement of turbines on untilled native prairie,” and that, “[p]lacement of turbines in cultivated land (disturbed) is a positive siting approach.”⁶⁷

41. To the extent practicable, Project Facilities have been sited to avoid crossing tree rows and woodlots. For the Gen-Tie Line, the ROW will be cleared prior to construction, and will be maintained free of woody vegetation that would interfere with safe and reliable operation. Overall, South Deuel Wind has demonstrated that tree-clearing activities and vegetation removal for the Project will be minimized to the extent practicable.⁶⁸

42. South Deuel Wind will reseed uncultivated areas temporarily disturbed during construction to blend with existing vegetation.⁶⁹

43. South Deuel Wind has conducted appropriate wildlife studies and surveys for the Project to assess existing use, identify potential impacts, and incorporate appropriate avoidance and minimization measures.⁷⁰ South Deuel Wind provided the testimony of Ms. Phillips, Manager of Environmental Compliance and Strategy at Invenergy.⁷¹ Ms. Phillips has a Master of Science in environmental management, and nearly a decade of experience in evaluation of potential environmental impacts of renewable energy projects.⁷² Moreover, Staff’s witness Mr. Switzer reviewed the wildlife studies and surveys and determined that the studies were complete and identified the potential impacts to the terrestrial environment.⁷³

44. South Deuel Wind has been, and will continue to be, engaged in ongoing coordination with the USFWS and SDGFP to seek input on wildlife resources potentially occurring within the Project Area, to seek guidance on the appropriate studies, and to inform development of avoidance and minimization.⁷⁴ South Deuel Wind followed the processes outlined in the USFWS Land-Based Wind Energy Guidelines (“WEG”), the USFWS Eagle Conservation Plan

⁶³ Ex. A12 at 2 (Phillips Rebuttal).

⁶⁴ Evid. Hrg. Tr. at 85 (Jan. 21, 2025) (Transcript).

⁶⁵ Ex. A1 at 9.3.3(Application).

⁶⁶ Ex. S2 at 11-12 (Switzer Direct).

⁶⁷ Ex. S2 at 8 (Switzer Direct).

⁶⁸ Ex. A1 at 9.1.2 (Application).

⁶⁹ Ex. A1 at 1.2, 9.1.2 (Application).

⁷⁰ See Ex. A1 at 9.3.1, 9.3.2, 9.4, Appendices G, H, I, J, K, and L (Application).

⁷¹ See Ex. A5 (Phillips Direct); Ex. A12 (Phillips Rebuttal).

⁷² Ex. A5 at 1, Ex. 1 (Phillips Direct).

⁷³ Ex. S2 at 4-5 (Switzer Direct).

⁷⁴ See Ex. A1 at 9.3, Appendix D (Application), Ex. A4 at 6 (Monterrosa Direct).

Guidance and the South Dakota Siting Guidelines for Wind Projects.⁷⁵ In addition, South Deuel Wind prepared a Bird and Bat Conservation Strategy (“BBCS”) in accordance with the USFWS WEG that will be implemented to minimize impacts to avian and bat species during construction and operation of the Project.⁷⁶ Ms. Phillips also notes that Project Facilities have been sited to avoid protected lands, potential habitat, and other environmental resources identified and mapped within the Project Area.⁷⁷

45. Construction of the Project may have impacts on wildlife species primarily as a result of habitat disturbance. However, following construction, all disturbed areas will be restored to surrounding grade, reclaimed with soils of similar physical and chemical properties, and seeded with vegetation consistent with the surrounding land use.⁷⁸ Permanent habitat loss due to construction of wind turbines and other facilities would be minimal across the Project Area and localized.⁷⁹

46. 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 similar to the average mortality rates in the U.S. at wind facilities within similar environments.⁸⁰ To prevent potential bird strikes with collector circuits, the electrical collection system will be buried underground.⁸¹

47. To minimize any potential avian impacts with the Gen-Tie Line, the Gen-Tie Line will be designed in accordance with Avian Power Line Interaction Committee standards and was sited with the minimum length necessary to connect the Collector Substation and Interconnection Switchyard.⁸²

48. The record demonstrates that the Project was designed to avoid and/or minimize impacts to bats. Project turbines will be feathered below cut-in, 3.0 meters per second (m/s; 6.7 miles per hour [“mph”]) from sunset to sunrise April 1 to July 14 and October 16 to October 31 and 5.0 m per second (m/s; 11.2 mph) from sunset to sunrise July 15 to October 15 to minimize impacts to bat species and avoid impacts to the Northern Long-Eared Bat (“NLEB”) and tricolored bat. This feathering will reduce the speed that blades will rotate when the turbines are not generating electricity in order to minimize the risk of bat-blade collisions.⁸³ Additionally, while NLEB have the potential to migrate through the Project Area during the fall, South Deuel Wind sited turbines at least 1,000 feet away from the edge of connected patches of forested habitat to avoid potential impacts to bats, including NLEBs and tricolored bats, during the summer.⁸⁴ The Project has been sited in an area and designed in a manner to avoid and minimize impacts to birds and bats.⁸⁵

⁷⁵ Ex. A5 at 4 (Phillips Direct).

⁷⁶ See Ex. A1 at 9.4.2, Appendix K (Application).

⁷⁷ Ex. A12 at 6-7 (Phillips Rebuttal).

⁷⁸ Ex. A1 at 9.4.2 (Application).

⁷⁹ Ex. A1 at 9.3.3 (Application).

⁸⁰ Ex. A1 at 9.3.3, 9.4.1 (Application).

⁸¹ Ex. A1 at 9.4.2 (Application).

⁸² Ex. A1 at 9.3.3 (Application).

⁸³ Ex. A1 at 9.4.2 (Application).

⁸⁴ Ex. A1 at 9.3.1.3 (Application).

⁸⁵ Ex. A1 at 9.4.2 (Application).

49. Several wildlife surveys and analyses were performed in and around the Project Area, including a Large Bird Use Survey (Appendix G), a Raptor Nest Survey (Appendix H), a Bat Acoustic Study (Appendix I), a Bat Habitat Assessment for NLEB (Appendix J), and a Protected Butterfly Species Habitat Assessment (Appendix L). These reports and surveys were used to inform siting and routing for the Project.⁸⁶ The bird surveys in the Project Area were conducted as prescribed by the USFWS and SDGFP, and those survey methods and results were shared with those agencies.⁸⁷ It was determined that there are no unique land features, habitat types, or seasonal differences known to occur in the Project Area relative to the overall landscape of the region that could concentrate prey and potential use by raptors.⁸⁸

50. South Deuel Wind has demonstrated that it will minimize and/or avoid impacts to federal- and State-listed species.⁸⁹ There is a potential for the following federally-listed species to occur within the Project Area, but the likelihood is low: whooping crane, NLEB, rufa red knot, Dakota skipper, Poweshiek skipperling, and Topeka shiner.⁹⁰ Four State-listed species may occur in Deuel County: whooping crane, osprey, banded killifish, and northern redbelly dace.⁹¹ The whooping crane, osprey, banded killifish, and northern redbelly dace are not likely to occur within the Project Area due to limited suitable habitat and lack of historical records.⁹²

51. The whooping crane corridor area accounts for 95% of whooping crane sightings and is located approximately 85 miles west of the Project Area. No whooping cranes were observed during any of the site visits or throughout the multiple years of avian surveys. Due to being outside of the migratory corridor, whooping cranes are unlikely to occur in the Project Area.⁹³ In the unlikely event that a whooping crane may occur in the Project Area, South Deuel Wind and Staff agreed to Condition No. 37 to develop a monitoring plan for whooping cranes during spring and fall migration periods.⁹⁴

52. South Deuel Wind has demonstrated that it will avoid impacts to whooping cranes.⁹⁵ South Deuel Wind committed to a very similar condition for whooping cranes as was approved for the Crowned Ridge wind facility.⁹⁶

53. No osprey were observed during any of the site visits or throughout the multiple years of avian surveys; therefore, osprey are unlikely to occur within the Project Area.⁹⁷

⁸⁶ See Ex. A1 at 9.3, Appendix G (Large Bird Use Survey), Appendix H (Raptor Nest Survey), Appendix I (Bat Acoustic Survey), Appendix J (Bat Habitat Assessment for NLEB), Appendix L (Protected Butterfly Species Habitat Assessment); Ex. A5 at 5-6 (Phillips Direct).

⁸⁷ Ex. A12 at 6-7 (Phillips Rebuttal).

⁸⁸ Ex. A1 at 9.3.1.2 (Application).

⁸⁹ See Ex. A1 at 9.3.1.3, 9.3.2, 9.4.2 (Application).

⁹⁰ See Ex. A1 at 9.4, 10.2.2 (Application).

⁹¹ See Ex. A1 at 9.3.2.2 (Application).

⁹² See Ex. A1 at 9.4, 10.1.2 (Application).

⁹³ Ex. A1 at 9.3.2.1 (Application).

⁹⁴ Ex. A18 at ¶ 37 (Applicant's and Staff's Terms and Conditions).

⁹⁵ See Ex. A1 at 9.3.1.3, 9.3.2, 9.4.2 (Application); Ex. A18 at ¶ 37 (Applicant's and Staff's Terms and Conditions).

⁹⁶ Evid. Hrg. Tr. at 166 (Jan. 21, 2025) (Transcript).

⁹⁷ Ex. A1 at 9.3.2.2 (Application).

54. South Deuel Wind also conducted a habitat assessment for the Dakota skipper and the Poweshiek skipperling to identify areas of potential habitat within the Project Area. No Poweshiek skipperlings or Dakota skippers were observed during any of the site visits or the butterfly habitat assessment surveys. Based on historical records of occurrence, presence of grasslands, the location of designated critical habitat relative to the Project Area, and grassland conversions reducing the amount of suitable habitat for both butterfly species, and grazing/haying activities, a low potential exists for these protected species to occur in the Project Area.⁹⁸

55. South Deuel Wind also conducted a Protected Butterfly Species Habitat Assessment. The study was developed in coordination with USFWS and evaluated whether there was any habitat potentially suitable for federally-protected butterfly species within the Project Area. The assessment concluded that a low potential exists for these protected species to occur in the Project Area. This assessment was based on historical records of occurrence, presence of grasslands, the location of designated critical habitat relative to the Project Area, and grassland conversions reducing the amount of suitable habitat for both butterfly species, and grazing/haying activities.⁹⁹

56. 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.¹⁰⁰ During each year of the large bird survey, for example, no federally threatened or endangered species were observed during the surveys.¹⁰¹ Mr. Switzer confirmed during the evidentiary hearing that no federally threatened or endangered species or pending species would be potentially impacted by the Project.¹⁰² The Project Facilities have been sited to avoid protected lands, potential habitat, and other environmental resources identified and mapped within the Project Area. For example, no Project Facilities have been sited on USFWS critical habitat or USFWS easements. Likewise, to the extent practicable, Project Facilities are sited in upland areas, avoiding low-lying wetlands and streams.¹⁰³

57. South Deuel Wind demonstrated that it will minimize and/or avoid impacts to eagles. South Deuel Wind has conducted a large bird use survey to assess species composition, identify the temporal and spatial use of large birds within the Project Area; document any threatened, endangered, and other species of concern; and to document eagle observations within the Project Area as defined at the time of survey.¹⁰⁴ South Deuel Wind also conducted multiple years of nest surveys to locate and assess the status of bald eagle nests in and around the Project Area.¹⁰⁵

⁹⁸ Ex. A1 at 9.3.2.1 (Application).

⁹⁹ Ex. A5 at 8 (Phillips Direct); Ex. A1 at 9.3.2.1; Appendix L (Protected Butterfly Species Habitat Assessment) (Application).

¹⁰⁰ See Ex. A1 at 9.3.2.1, 9.4.2 (Application).

¹⁰¹ Ex. A1 at Appendix G (Large Bird Use Survey), Ex. A5 at 6-7 (Phillips Direct).

¹⁰² Evid. Hrg. Tr. at 153 (Jan. 21, 2025) (Transcript).

¹⁰³ Ex. A1 at 9.4.2, A5 at 8 (Phillips Direct).

¹⁰⁴ Ex. A1 at 9.3.1.1 (Application), Appendix G (Large Bird Use Survey), Ex. A5 at 6 (Phillips Direct).

¹⁰⁵ Ex. A1 at 9.3.1.2 (Application), Appendix H (Raptor Nest Survey).

58. In addition, South Deuel Wind has agreed to avian-related impact minimization and avoidance measures, including conducting post-construction avian and bat mortality monitoring for two years, with submission of reports to USFWS and SDGFP,¹⁰⁶ and implementing the BBCS developed in accordance with the USFWS WEG to minimize impacts to avian and bat species during construction and operation of the Project.¹⁰⁷

59. South Deuel Wind demonstrated that it will minimize and/or avoid impacts to aquatic ecosystems.¹⁰⁸ The federally- and State-listed aquatic species with potential to occur in or near the Project are not anticipated to be affected by the Project.¹⁰⁹ South Deuel Wind will avoid direct impacts to streams and BMPs will be implemented to control sedimentation and erosion during construction to prevent downstream water quality impacts. Moreover, the Gen-Tie Line will span any wetlands or waterways in its route. During construction, BMPs will be implemented to help avoid impacts to drainageways and streams from sediment runoff from exposed soils during precipitation events. Because erosion and sediment control BMPs will be implemented for construction and operation of the Project, no impacts to aquatic ecosystems are expected.¹¹⁰

60. In addition, Staff witness Mr. Switzer testified that the Project does not have potential to impact any State threatened or endangered species.¹¹¹

61. South Deuel Wind demonstrated that it will minimize and/or avoid impacts to land use.¹¹² Land use within the Project Area is predominantly agricultural, with land cover consisting of a mix of cultivated crops and herbaceous vegetation.¹¹³ The Project will not displace existing residences or businesses.¹¹⁴ Following completion of construction, all temporary construction workspaces will be cleaned up and restored to pre-construction conditions pursuant to the lease and easement agreements, which primarily consist of cultivated croplands and pastureland/grassland.¹¹⁵ Agricultural uses may continue within the Project Area during construction and operation.¹¹⁶

62. South Deuel Wind demonstrated that it will minimize and/or avoid impacts to recreation.¹¹⁷ In addition, no Project Facilities are sited within the USFWS waterfowl production areas or SDGFP game production areas.¹¹⁸

63. South Deuel Wind demonstrated that it will minimize and/or avoid impacts to conservation easements and publicly-managed lands.¹¹⁹ South Deuel Wind coordinated with the

¹⁰⁶ Ex. A12 at 4 (Phillips Rebuttal), Ex. S2 at 16-17 (Switzer Direct); Ex. A18 at ¶ 46 (Applicant's and Staff's Terms and Conditions).

¹⁰⁷ Ex. A1 at 9.4.2 (Application).

¹⁰⁸ See Ex. A1 at 10.2.2 (Application).

¹⁰⁹ See Ex. A1 at 10.2.2 (Application).

¹¹⁰ Ex. A1 at 10.2.1 (Application).

¹¹¹ Ex. S2 at 14 (Switzer Direct).

¹¹² See Ex. A1 at 11.1 (Application).

¹¹³ Ex. A1 at 11.1.1 (Application).

¹¹⁴ Ex. A1 at 11.1.2 (Application).

¹¹⁵ Ex. A1 at 11.1.2 (Application).

¹¹⁶ See Ex. A1 at 2.1.3 (Application).

¹¹⁷ See Ex. A1 at 8.2.2, 8.3.2 (Application).

¹¹⁸ Ex. A1 at 11.2.1 (Application).

¹¹⁹ See Ex. A1 at 11.2.1.1 (Application).

USFWS to identify the exact boundaries of the USFWS wetland, grassland, and conservation easements within the Project Area.¹²⁰ Project Facilities have been sited to avoid federal conservation easements and state owned lands, and thus, no direct impacts to these easement areas will occur.

64. South Deuel Wind demonstrated that it will minimize and/or avoid impacts to visual resources.¹²¹ The nearest scenic resources to the Project Area are the Dakota Tallgrass Prairie Wildlife Management Area 145, the Deuel County Waterfowl Production Area, the Singaas State Conservation Area, and the Fox Lake State Recreation Area.¹²² Small portions of the Fox Lake State Recreation Area and Singaas State Conservation Area are located within the Project Area. Due to their limited extent within the Project Area, the Project Area scale of the map, and the order in which the layers are displayed in the map, the Project Area line covers the portions of the Fox Lake State Recreation Area and Singaas State Conservation Area that are located within the Project Area.¹²³

65. Turbines will be painted a non-glare white, off-white, or gray to comply with Federal Aviation Administration (“FAA”) regulations and reduce potential glare and minimize visual impact.¹²⁴

66. In addition, marker lighting could cause some visual impacts at night, though these impacts will be mitigated by the installation of an ADLS, if approved by the FAA.¹²⁵

67. The Gen-Tie Line transmission structures have been sited to minimize potential visual impacts of the Gen-Tie Line within the Project Area. Based on the Project’s property rights, the Gen-Tie Line route is the most direct route and feasible path between the Collector Substation and Interconnection Switchyard and has been sited to minimize length, number of structures, and impacts. The conductor used for the Gen-Tie Line will be composed of non-reflective material, making the conductor less visible to viewers in the area.¹²⁶

68. South Deuel Wind has demonstrated that it will minimize and/or avoid impacts to cultural resources.¹²⁷ South Deuel Wind has consulted with the State Historical Preservation Office (“SHPO”), and has had multiple meetings with SHPO staff regarding the Project.¹²⁸ South Deuel Wind conducted multiple cultural resource surveys to identify cultural resources within the Project Area and will continue to conduct additional cultural resource surveys as necessary.¹²⁹ South Deuel Wind conducted a Cultural Resource Level I Records Review to identify both archaeological and historic resources previously recorded in the vicinity of the Project. Building

¹²⁰ Ex. A1 at 11.2.1.1(Application).

¹²¹ See Ex. A1 at 11.4 (Application).

¹²² Ex. A1 at 11.4.1 (Application).

¹²³ Ex. S4 at Exhibit 4-1 (South Deuel Wind’s Response to Staff’s Data Request).

¹²⁴ Ex. A1 at 11.4.2 (Application).

¹²⁵ Ex. A1 at 11.4.2 (Application); Ex. A2 at 10 (Thompson Direct); A18 at ¶ 36 (Applicant’s and Staff’s Terms and Conditions).

¹²⁶ Ex. A1 at 11.4.2 (Application).

¹²⁷ See Ex. A1 at 15.5.5 (Application), Ex. A1, Appendix U (Level III Intensive Cultural Resources Survey) (Confidential).

¹²⁸ Ex. A1 at 22.2.2 (Application), Ex. A4 at 6-7 (Monterrosa Direct).

¹²⁹ See, e.g., Ex. A1 at 15.5.1 (Application).

upon the findings of the Records Review, South Deuel Wind engaged its contractor to complete a Level III Intensive Archaeological Resources Survey for the Component Footprint.¹³⁰ It also conducted a Historic-Age Resource Survey within the Physical Area of Potential Effects (“Physical APE”), comprised of the Physical APE and a 1-mile buffer surrounding it (“Project APE”). This survey focused on locating standing historic-era buildings, structures, objects, districts, etc. to assess the visual impacts of the Project on their integrity of setting.¹³¹

69. The Cultural Resource Level I Records Review identified 16 previously recorded archaeological sites within the Study Area, which comprised of the Component Footprint and a 1-mile buffer. None of the previously recorded archaeological sites identified are located within the Component Footprint.¹³²

70. The Cultural Resource Level I Records Review identified two National Register of Historic Places (“NRHP”)-listed architectural resources within the Project APE. The records review also identified an additional 22 previously recorded historic-age architectural resources within the Project APE. Four of the properties were previously determined NRHP-eligible; 17 were previously determined not eligible for NRHP inclusion; and one had not been evaluated. None of the resources associated with these properties are located in the Physical APE.¹³³

71. The Level III Intensive Archaeological Resources Survey was completed for the Component Footprint in November and December 2022; June, July, and August 2023. The survey identified a total of 15 newly recorded archaeological sites, two isolated find sites, and an update to previously recorded site. All newly identified sites were fully delineated, beyond the boundaries of the Study Area if necessary, and were investigated for integrity and significance.¹³⁴

72. The Historic Architectural Resources Reconnaissance Survey was conducted in phases in August 2018 with revisits in January and June 2023. During the field survey effort, surveyors sought to document all buildings, structures, objects, districts, etc. constructed in or prior to 1978 (45 years of age or older) within the Project APE. Each resource was evaluated for both state and national designation. The method of survey naturally favored resources that maintain significance for their architectural qualities; however, the historian also tried to determine if any historic agricultural, residential, or commercial districts extended into the Project APE. No such districts were identified during the survey effort. The Survey resulted in the documentation of 322 historic-age resources on 128 properties located within the Project APE. All of the documented resources are located in Deuel County and none of the resources are located in the Physical APE.¹³⁵

73. Sites determined to be NRHP-eligible will be avoided by the Project. If a site cannot be avoided, South Deuel Wind will work with SHPO to develop appropriate minimization or mitigation measures.¹³⁶ South Deuel Wind also developed an Unanticipated Discovery Plan, which provides procedures to follow to address any unanticipated discoveries of cultural resources

¹³⁰ See Ex. A1 at 15.5.1, 15.5.2, Appendix U (Level III Intensive Cultural Resources Survey) (Confidential).

¹³¹ See Ex. A1 at 15.5.1, Appendix V (Historic-Age Resource Survey).

¹³² Ex. A1 at 15.5.1.1 (Application).

¹³³ Ex. A1 at 15.5.1.2 (Application).

¹³⁴ Ex. A1 at 15.5.2 (Application), Appendix U (Level III Intensive Cultural Resources Survey) (Confidential).

¹³⁵ Ex. A1 at 15.5.3 (Application), Appendix V (Historic-Age Resource Survey).

¹³⁶ Ex. A1 at 22.2.2 (Application), Ex. A4 at 6-7 (Monterrosa Direct).

during Project construction, including previously undiscovered archaeological sites and possible human remains.¹³⁷

74. All sites or historic architectural resources determined to be NRHP-eligible, or potentially eligible (unevaluated), are avoided by Project Facilities. Thus, no impacts are anticipated.¹³⁸

75. Staff witness Mr. Thurber testified that SHPO and Staff had consulted regarding the Project.¹³⁹ SHPO did not raise any concerns specific to the Project, and Mr. Thurber indicated that Staff is “unaware of any unique issues or concerns with historic properties that would need to be addressed through the state permitting process.”¹⁴⁰

76. South Deuel Wind notified Tribes in the vicinity of the Project Area of the Project via correspondence in November 2023. South Deuel Wind provided details of the Project and offered the opportunity to review the Project’s cultural resource survey results. South Deuel Wind has provided tribal representatives with survey results when requested and will continue to coordinate with the Tribes regarding implementation of BMPs during construction and operations.¹⁴¹

77. Staff and South Deuel Wind have agreed upon Condition Nos. 11 through 13 regarding cultural resources.¹⁴²

3. Social and Economic.

78. SDCL 49-41B-22(2) requires the applicant to establish by a preponderance of the evidence that:

[t]he 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. An applicant for an electric transmission line, a solar energy facility, or a wind energy facility that holds a conditional use permit from the applicable local units of government is determined not to threaten the social and economic condition of inhabitants or expected inhabitants in the siting area.

79. On September 11, 2023, the Deuel County Board of Adjustment (“County Board”) issued a conditional use permit for the Project.¹⁴³

¹³⁷ See Ex. A1 at Appendix W (Unanticipated Discoveries Plan), Ex. A4 at 6-7 (Monterrosa Direct); A18 at ¶ 12 (Applicant’s and Staff’s Terms and Conditions).

¹³⁸ Ex. A1 at 15.5.4 (Application).

¹³⁹ Ex. S3 at 3 (Thurber Direct).

¹⁴⁰ Ex. S3 at 3 (Thurber Direct).

¹⁴¹ Ex. A1 at 15.5.6 (Application).

¹⁴² See Ex. A18 at ¶¶ 11-13 (Applicant’s and Staff’s Terms and Conditions).

¹⁴³ Ex. A1 at Appendix B (CUP).

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

80. Section 1215.03(13)(a) of the Deuel County Zoning Ordinance provides that “[n]oise level for non-participating residences shall not exceed 45 DBA, average A-Weighted Sound pressure. The noise level is to be measured at the perimeter of existing non-participating residences.”

81. South Deuel Wind retained an independent expert, Mr. Hankard, to independently model the predicted noise levels for the Project.¹⁴⁴ Mr. Hankard has been measuring, analyzing, researching, and reporting on environmental noise levels for more than 30 years.¹⁴⁵ Noise levels from the Project are predicted to not exceed 45 A-weighted decibels (“dBA”) at all non-participating residences within 1.25 miles of the Project turbines and main power transformers.¹⁴⁶ Accordingly, the Project will comply with the requirements of Deuel County and South Deuel Wind’s commitment.

82. Noise levels from the Project were predicted using the modeling method set forth in the International Organization for Standardization Standard 9613-2:2024: Attenuation of Sound During Propagation Outdoors. The method was implemented using the SoundPLAN (v8.2) acoustical modeling program.¹⁴⁷ The modeling also applied a conservative ground factor of 0.0, which represents completely reflective ground material such as pavement or flat water, and results in a higher level of sound reaching a receptor.¹⁴⁸ Actual ground conditions could at times be 0.0 when the ground is completely frozen, or may be closer to 1.0, which represents absorptive material such as thick grass, crops, or fresh snow, and results in a lower level of sound reaching a receptor.¹⁴⁹

83. South Deuel Wind’s acoustical expert Mr. Hankard has verified the accuracy and conservativeness of the modeling method employed for the Project through field measurements at other operating wind projects; thus, the methodology for modeling noise levels has been tested and confirmed in the field.¹⁵⁰

84. Based on the conservative nature of the sound modeling for the Project, actual noise levels for the Project are expected to be lower than the modeled levels at all times.¹⁵¹

85. Mr. Hankard also performed a cumulative sound analysis that included modeling the sound expected from the Project plus the sound from the existing Tatanka Ridge wind project that is currently operational and located southwest of the Project.¹⁵² This analysis demonstrated that there are no non-participating receptors above 45 dBA for the SG 4.4-164 and V163-4.5 turbine model configurations, and there are four non-participating receptors above 45 dBA for the

¹⁴⁴ Ex. A9 at 1-2 (Hankard Direct), Ex. A1 at Appendix M (Noise Analysis).

¹⁴⁵ Ex. A9 at 1 (Hankard Direct).

¹⁴⁶ Ex. A9 at 5 (Hankard Direct).

¹⁴⁷ See Ex. A1 at Appendix M (Noise Analysis), Ex. A9 at 4-5 (Hankard Direct).

¹⁴⁸ See Ex. A1 at Appendix M (Noise Analysis).

¹⁴⁹ See Ex. A1 at Appendix M (Noise Analysis).

¹⁵⁰ See Ex. A9 at 6 (Hankard Direct).

¹⁵¹ See Ex. A9 at 6 (Hankard Direct); Ex. S1 at 2-3 (Hessler Direct).

¹⁵² Ex. A13 at 3 (Hankard Rebuttal).

GE 3.8-154 turbine model configuration. These non-participating receptors experienced cumulative sound limits for the GE 3.8-154 turbine of 45.1, 45.2, 45.3, and 45.5 dBA, respectively.¹⁵³ Such levels above 45 dBA are “intangible, negligible and probably unlikely to actually occur given the conservatism in the modeling.”¹⁵⁴

86. There is no state statute or county zoning limit for cumulative sound.¹⁵⁵ Deuel County regulates source-only sound, not cumulative sound.¹⁵⁶

87. The record demonstrates that a 45 dBA Leq limit from the Project at non-participating residences is an appropriate and reasonable noise limit. Mr. Hankard credibly testified that these limits are reasonable and that, based on his modeling, the Project will meet these limits.¹⁵⁷

88. South Deuel Wind and Staff agreed to Condition No. 27 regarding noise.¹⁵⁸ Staff witness Mr. Hessler indicated that this condition is satisfactory, and resolved any noise-related concerns Mr. Hessler expressed.¹⁵⁹

89. South Deuel Wind and Staff also agreed to Condition No. 48, which provides that South Deuel Wind will not construct at turbine locations 39 and 56 unless noise modeling demonstrates that cumulative noise from South Deuel Wind and Tatanka Ridge is 45 dBA or less at nearby non-participating residence.¹⁶⁰

90. Section 1215.03(13)(b) of the Deuel County Zoning Ordinance states the following: “[I]mit for allowable shadow flicker at existing residences to no more than 30 hours annually.”

91. South Deuel Wind retained an independent expert, JoAnne Blank, to evaluate the Project’s potential shadow flicker impact. Ms. Blank specializes in feasibility, permitting, and compliance of power and wind energy projects across the United States.¹⁶¹ Seventy-three proposed turbine locations for the GE 3.8-154 and 71 proposed turbine locations each for the V163-4.5 and SG 4.4-164 were analyzed in the Shadow Flicker Analysis prepared for the Application. South Deuel Wind will construct and operate a subset of the turbine locations described in the Shadow Flicker Analysis; therefore, expected annual shadow flicker hours will be less than the results of the analyses presented.¹⁶²

¹⁵³ Ex. A13 at 2-3 (Hankard Rebuttal).

¹⁵⁴ Ex. S1 at 7 (Hessler Direct).

¹⁵⁵ Ex. A13 at 4 (Hankard Rebuttal).

¹⁵⁶ Ex. S4 at p. 629 (Applicant’s Response to Staff’s Data Requests) (containing October 2024 email correspondence from Deuel County Zoning Officer Jodi Theisen noting, “[t]he county’s interpretation is that the ordinance is a source related ordinance.”).

¹⁵⁷ Ex. A9 at 3 (Hankard Direct), Ex. A1 at Appendix M (Application).

¹⁵⁸ Ex. A18 at ¶ 27 (Applicant’s and Staff’s Terms and Conditions).

¹⁵⁹ Evid. Hrg. Tr. at 146-47 (Jan. 21, 2025) (Transcript).

¹⁶⁰ Ex. A18 at ¶ 48 (Applicant’s and Staff’s Terms and Conditions).

¹⁶¹ Ex. A7 at 1 (Blank Direct).

¹⁶² Ex. A7 at 3 (Blank Direct), Ex. A1 at Appendix N (Shadow Flicker Analysis).

92. Ms. Blank utilized a WindPro Version 3.6 software modeling application in the assessment. WindPro is a physics-based, industry-accepted modeling program that calculates the number of hours per year that any given receptor may receive shadow flicker from the source turbines. The application considers the attributes and positions of the wind turbines in relation to receptors within the area. Shadow flicker models also consider the sun's position as it passes through the Project Area each day and seasonally in addition to regional climatological information. Climatological information was acquired from the National Climatic Data Center and regional meteorological stations. The percentage of sunshine probability was estimated from an analysis of average sunshine statistics for the Project region.¹⁶³

93. The WindPro model calculates both a "potential" and "expected" scenario. The "potential" scenario provides the periods when shadow flicker may occur on a receptor; however, it is not representative of the shadow flicker that is expected to occur. The "potential" scenario assumes no cloud cover, the sun is always shining during daylight hours, and turbines are always operating and rotated to cast maximum shadow on a receptor. The "expected" amount of annual shadow flicker considers the percentage of sunshine based on local regional sunshine statistics; the alignment of the blades in relation to the receptor due to wind direction; and the amount of time that the blades would not be rotating due to wind speeds outside of the turbine's operating parameters. The "potential" scenario, as described, could not realistically occur; however, it is useful as an indicator of the potential times within which shadow flicker may occur. The Shadow Flicker Analysis uses a conservative 90% operational time for purposes of calculating the annual hours of expected shadow flicker. The Shadow Flicker Analysis is conservative in that it included modeling of all potential turbine locations even though all locations will not be built, and does not take into account existing obstructions between the receptors and turbines, such as buildings or trees, that will limit the amount of flicker actually experienced at the receptor.¹⁶⁴

94. The record demonstrates that South Deuel Wind has minimized impacts from shadow flicker.¹⁶⁵

95. The record demonstrates that the 30 hour/year limit is an appropriate limit. This standard is commonly applied in regulatory proceedings in other jurisdictions.¹⁶⁶ Turbines are

¹⁶³ Ex. A7 at 3-4 (Blank Direct); Evid. Hrg. Tr. at 123-24 (Jan. 21, 2025) (Transcript).

¹⁶⁴ Ex. A7 at 4-5 (Blank Direct).

¹⁶⁵ See, e.g., Ex. A1 at 11.5.2 (Application), Ex. A1 at Appendix N (Shadow Flicker Analysis), Ex. A7 at 5-7 (Blank Direct).

¹⁶⁶ See, e.g., *In the Matter of the Application of Freeborn Wind Energy LLC for a Large Wind Energy Conversion System Site Permit for the up to 84 MW Freeborn Wind Farm in Freeborn County*, Minnesota Public Utilities Commission Docket WS-17-410, Minnesota Department of Commerce Energy Environmental Review and Analysis ("EERA") Comments and Recommendations on Draft Site Permit at 18 (December 5, 2017) (eDocket No. [201712-137950-01](#)) ("Some of the comments indicated that non-participants should not experience more than 30 hours of shadow flicker per year. 30 hours of flicker per year was a suggested standard in a couple sources of information reviewed by EERA, but those sources do not provide supporting scientific data that would suggest there is a link between shadow flicker in excess of 30 hours per year of exposure and negative human health impacts."); *In the Matter of the Application of Lindahl Wind Project, LLC's Application for a Certificate of Site Compatibility for the Lindahl Wind Farm Project in Williams County, North Dakota*, Docket PU-15-482, North Dakota Public Service Commission Findings of Fact, Conclusions of Law and Order, (Dec. 2, 2016) at Order ¶ 8.

located at angles and distances from residences, so that the majority of residences in the Project area will experience little to no shadow flicker from the Project.¹⁶⁷

96. South Deuel Wind and Staff also agreed upon Condition No. 28, which provides that “[s]hadow flicker at any receptor shall not exceed 30 hours per year.”¹⁶⁸ South Deuel Wind also committed to curtail turbines if there is recorded shadow flicker over 30 hours.¹⁶⁹

97. There is no record evidence that the proposed Project will have adverse impacts on human health. In a previous wind docket, 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.¹⁷⁰ The South Dakota Department of Health referenced Massachusetts Department of Public Health and Minnesota Department of Health studies and noted that those studies generally conclude that there is insufficient evidence to establish significant risk to human health.¹⁷¹

98. Regarding potential health effects from the Gen-Tie Line, considerable research has been conducted to determine if exposure to magnetic fields, such as those from high-voltage power lines, causes biological responses and health effects. Toxicological and laboratory studies have not shown a biological mechanism between electromagnetic fields and cancer or other adverse health effects.¹⁷²

99. Overall, the record shows that South Deuel Wind has met its burden to demonstrate that the Project will not substantially impair human health; indeed, there is no evidence in the record that the Project would impair human health (substantially or insubstantially).

100. The record demonstrates that South Deuel Wind has taken appropriate measures to avoid and/or minimize the risk of ice throw occurring.¹⁷³ The Project will be monitored to detect icing conditions on turbine blades by evaluating meteorological data, identifying deviations in turbine power curves, and visual inspections. If significant icing accumulation is identified, the affected turbine(s) will be shut down automatically either by the control system or manually by O&M personnel. Turbines will return to normal operation once icing is no longer a concern.¹⁷⁴ Additionally, Staff and South Deuel Wind have agreed to Condition No. 42 regarding icing.¹⁷⁵

101. The record demonstrates that South Deuel Wind has taken appropriate measures to construct and operate the Project safely.

¹⁶⁷ Ex. A1 at Appendix N (Shadow Flicker Analysis).

¹⁶⁸ Ex. A18 at ¶ 28 (Applicant’s and Staff’s Terms and Conditions).

¹⁶⁹ Evid. Hrg. Tr. at 118 (Jan. 21, 2025) (Transcript).

¹⁷⁰ See *In the Matter of the Application by Crocker Wind Farm, LLC for a Permit of a Wind Energy Facility and a 345 kV Transmission Line in Clark County, South Dakota, for Crocker Wind Farm*, Docket EL17-055 (Letter, Kim Malsam-Rysdon, Secretary of Health, South Dakota Department of Health (Oct. 13, 2017)).

¹⁷¹ See *In the Matter of the Application by Crocker Wind Farm, LLC for a Permit of a Wind Energy Facility and a 345 kV Transmission Line in Clark County, South Dakota, for Crocker Wind Farm*, Docket EL17-055 (Letter, Kim Malsam-Rysdon, Secretary of Health, South Dakota Department of Health (Oct. 13, 2017)).

¹⁷² Ex. A1 at 19.3 (Application).

¹⁷³ See Ex. A1 at 19.1 (Application).

¹⁷⁴ Ex. A1 at 19.1 (Application).

¹⁷⁵ Ex. A18 at ¶ 42 (Applicant’s and Staff’s Terms and Conditions).

102. During construction, the Project’s construction contractor will work with local emergency response agencies to develop procedures for response to emergencies, natural hazards, hazardous materials incidents, manmade problems, and potential incidents concerning construction. The construction contractor will provide site maps, haul routes, schedules, contact numbers, training, and other requested Project information to local emergency response agencies. During operation, South Deuel Wind will communicate regularly with local first response agencies and coordinate training meetings in accordance with the Project’s Emergency Response Plan. Should any aspect of the Project construction or operations present unfamiliar situations for first responders, South Deuel Wind will arrange for adequate professional training to address those concerns. South Deuel Wind will register each turbine and the O&M Facility with the rural identification/addressing (fire number) system and 911 systems.¹⁷⁶ Moreover, each turbine location and the O&M Facility will be registered with a rural address identifier (fire number) as outlined in the South Dakota Rural Addressing Procedural Handbook.¹⁷⁷

103. The record demonstrates that South Deuel Wind has avoided and/or mitigated impacts to aviation. The Project will obtain a Determination of No Hazard from the FAA for each proposed turbine site.¹⁷⁸ South Deuel Wind is currently proceeding through the FAA’s aeronautical study.¹⁷⁹ The FAA’s objective in conducting aeronautical studies is to ensure that proposed structures do not affect the safety of air navigation or the efficient utilization of navigable airspace by aircraft. The result of an aeronautical study is the issuance of a determination of ‘hazard’ or ‘no hazard’ that can be used by the proponent to obtain necessary local construction permits.¹⁸⁰ South Deuel Wind will not construct any turbine location that has received a final determination of hazard from the FAA.¹⁸¹

104. There are no public airports located within the Project Area. The nearest public use airport is the Lake Cochrane Seaplane Base (“Seaplane Base”) at 3.66 nautical miles from the nearest turbine location, No. 22. Myers Field is the next closest public use airport to the Project Area at 12.6 nautical miles from the nearest turbine.¹⁸²

105. Intervenor LCIA expressed concern regarding the Project’s three closest turbines to the Lake Cochrane Seaplane Base, turbine locations 21, 22, and 49, but did not appear at hearing.¹⁸³ LCIA believes that these turbines may be too close to the safe aircraft operation area for arriving and departing aircraft, and thus constitute obstructions to flight operations.¹⁸⁴ LCIA did not submit any pre-filed testimony or witness to support its claims. LCIA also did not conduct any technical analysis to support the removal of these turbine locations.¹⁸⁵

¹⁷⁶ Ex. A1 at 15.3.2.1 (Application).

¹⁷⁷ Ex. A1 at 19.1 (Application).

¹⁷⁸ Ex. A1 at 15.4.2.2 (Application).

¹⁷⁹ Ex. A2 at 16-17 (Thompson Direct).

¹⁸⁰ Ex. A1 at Appendix S ([Obstruction Evaluation & Airspace Analysis](#)).

¹⁸¹ Ex. S4 at 3-2(c) (South Deuel Wind’s Data Request Response).

¹⁸² Ex. A14 at 8 (Harrington Rebuttal).

¹⁸³ See, e.g., Ex. LCIA Application for Party Status (Aug. 21, 2024); LCIA Letter Regarding Procedural Order and Status Update (Nov. 6, 2024).

¹⁸⁴ Ex. S5 at 1-2 (LCIA Response to Staff Data Requests).

¹⁸⁵ Ex. S5 at 2-1(a) (LCIA Response to Staff Data Requests).

106. LCIA could not provide information regarding how many seaplanes have landed/taken off at the Seaplane Base annually over the last three years, noting that the Seaplane Base lacks “the facilities many land airports provide such as an air traffic control tower, fuel sales, aircraft maintenance, hangars and a full-time airport manager that usually gather such information.”¹⁸⁶ LCIA board member and Intervenor Mr. Holden also could not quantify the number of planes that use the Seaplane Base.¹⁸⁷ The Seaplane Base also does not have a designated or marked takeoff and landing area, nor does it offer pilot instruction or flight lesson services.¹⁸⁸

107. Section 1215 of the Deuel County Zoning Ordinance governs wind energy systems, and specifically Section 1215.03(2) governs setback distances of wind turbines from certain landmarks. Section 1215.03(2)(d) establishes a 3-mile setback from “Lake Park District located at Lake Cochrane.”

108. All proposed turbine locations, including locations 21, 22, and 49, comply with Deuel County setback requirements, including the three-mile setback from Lake Cochrane.¹⁸⁹

109. South Deuel Wind is awaiting FAA review and determination of all proposed turbine locations.¹⁹⁰ South Deuel Wind and Staff agreed to Condition No. 47, which provides, “South Deuel Wind will not construct any turbine location that has received a final determination of hazard. The Project will abide by any conditions as determined by the FAA for turbine locations that have received a final determination of no hazard with conditions.”¹⁹¹

110. In addition, South Deuel Wind engaged the expertise of witness Mr. Harrington of Capitol Airspace Group, the company that conducted an Obstruction Evaluation and Airspace Analysis of the Project.¹⁹² Mr. Harrington is a graduate of the United States Naval Academy, and has logged over 2,500 flight hours in various aircraft. Mr. Harrington also spent seven years as a Marine Corps Reserve Instructor Pilot training Navy, Marine Corps, and Coast Guard student pilots, and has a Certified Flight Instructor (Instrument rated) certification from the FAA.¹⁹³ In his testimony, Mr. Harrington discussed the FAA’s role in regulating the safety of airspace in the United States, and evaluated the Project’s potential impact on the Lake Cochrane Seaplane Base, if any.¹⁹⁴

111. Seaplane bases can have marked or unmarked runways. The FAA has a set of regulations that apply specifically to seaplane bases. Based on whether the seaplane base has marked runways, in accordance with 14 CFR Part 77, the FAA may or may not provide airspace or notice criteria protection as it would a public use, land-based airport. 14 CFR Part 77.3 states that, for the purpose of notifying the FAA of proposed construction, and determining the aeronautical effect of the proposal, a “seaplane base is considered to be an airport only if its sea lanes are outlined by visual markers.” Because 14 CFR Part 77 surfaces are tied to defined and

¹⁸⁶ Ex. S5 at 1-6 (LCIA Response to Staff Data Requests).

¹⁸⁷ Ex. S5 at 1-6(a) (Matthew Holden Response to Staff Data Requests).

¹⁸⁸ Ex. A16 at 1-7; 1-8 (LCIA Response to Applicant’s Data Requests).

¹⁸⁹ Ex. A1 at 5.2 (Application).

¹⁹⁰ Ex. S4 at 1-25(a) (Applicant’s Data Responses).

¹⁹¹ Ex. A18 at ¶ 47 (Applicant’s and Staff’s Terms and Conditions).

¹⁹² Ex. A14 at 1 (Harrington Rebuttal); Ex. A1 at Appendix S ([Obstruction Evaluation & Airspace Analysis](#)).

¹⁹³ Ex. A14 at 1 (Harrington Rebuttal).

¹⁹⁴ Ex. A14 at 1 (Harrington Rebuttal).

marked runway ends, the regulatory airspace or notice criteria protections offered by 14 CFR Part 77 only apply if the sea lanes are marked.¹⁹⁵

112. The Seaplane Base does not have any markers or buoys to identify the runway or other takeoff or landing area.¹⁹⁶ Because there are no marked runways, 14 CFR Part 77 surfaces do not exist.¹⁹⁷

113. Based on the FAA's chart supplements, the Seaplane Base is closed between 1 Dec and 1 May. It does not contain any published instrument approach procedures.¹⁹⁸ Instead, the Seaplane Base operates under visual flight rules ("VFR"), which are a set of rules that govern flights under visual meteorological conditions and navigating via ground or geographic reference points. VFR weather requirements, defined under 14 CFR Section 91.155, vary depending on the type of airspace being navigated but are designed to assist the pilot in meeting the VFR requirement to "see and avoid" other aircraft and obstacles. The Lake Cochrane Seaplane Base sits in Class G airspace, which means that for a pilot to legally fly in/out of the Seaplane Base during the daytime, the pilot must have at least 1 statute mile (5,280 feet) of flight visibility and be able to remain clear of the clouds. The Seaplane Base is not approved to be operated under instrument flight rules.¹⁹⁹

114. After conducting his analysis, Mr. Harrington concluded that under 14 CFR Part 77, there are no applicable FAA airspace protections afforded to the Seaplane Base because the sea lanes are not outlined by visual markers.²⁰⁰ Mr. Harrington confirmed the lack of runway markers through satellite imagery.²⁰¹ Additionally, correspondence from the LCIA to the South Dakota Department of Transportation on May 24, 2017, acknowledges that, "[m]arker buoys and anything permanently anchored in the water other than docks, boat lifts, and the like are not allowed on the Lake [sic]...Due to the variable direction of the wind a marked landing path would not be useful anyway."²⁰²

115. Mr. Harrington concluded, in his expert opinion, that the three turbine locations LCIA has expressed concern about do not pose an aviation risk to the Seaplane Base, and that ultimately the FAA will conduct a full aeronautical study on these locations to ensure that they do not pose a hazard to air navigation. So long as these sites receive, as Mr. Harrington expects, Determinations of No Hazard from the FAA, the sites should be deemed authorized and constructible from an airspace safety perspective.²⁰³

¹⁹⁵ Ex. A14 at 7 (Harrington Rebuttal).

¹⁹⁶ Ex. A16 at 1-7 (LCIA Response to Applicant's Data Requests).

¹⁹⁷ Ex. A14 at 8 (Harrington Rebuttal); Evid. Hrg. Tr. at 109-10 (Jan. 21, 2025) (Transcript).

¹⁹⁸ Ex. A14 at 8 (Harrington Rebuttal).

¹⁹⁹ Ex. A14 at 9 (Harrington Rebuttal).

²⁰⁰ Ex. A14 at 12-13 (Harrington Rebuttal).

²⁰¹ Ex. A14 at 12-13 (Harrington Rebuttal).

²⁰² Ex. A14 at 12-13 (Harrington Rebuttal); Ex. A16 at 1-7 (LCIA Response to Applicant's Data Requests) (acknowledging the Seaplane Base does not have a designated or marked takeoff and landing area).

²⁰³ Ex. A14 at 17 (Harrington Rebuttal).

116. Regarding the use of aerial spraying and/or pesticide application, South Deuel Wind proposed a condition whereby it agreed to cooperate with aerial applicators to temporarily shut down turbines, and provided a series of notice requirements.²⁰⁴

117. Staff witness Mr. Thurber believed this proposal was excessive and burdensome on aerial sprayers,²⁰⁵ and Intervenor Ms. Hamann Poindexter likewise expressed concern regarding aerial spraying, including the possibility of economic harm due to waiting for approval to spray.²⁰⁶ Mr. Thurber also acknowledged that Ms. Hamann Poindexter's comments were helpful at providing context as to South Deuel Wind's aerial spray notice condition.²⁰⁷

118. Staff and Applicant agreed to Condition No. 43, pursuant to which "Applicant will cooperate with agricultural spray applicators who request for South Deuel Wind to temporarily shut down wind turbines as needed to accommodate safe and effective spray operation and application when conditions allow for aerial spraying."²⁰⁸ Ms. Hamann Poindexter agreed that this condition was satisfactory.²⁰⁹

119. South Deuel Wind has demonstrated that the Project does not present a safety issue with respect to the Seaplane Base or aviation, including agricultural aerial spray operations.

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. An applicant for an electric transmission line, a solar energy facility, or a wind energy facility that holds a conditional use permit from the applicable local units of government is in compliance with this subdivision.

120. SDCL 49-41B-22(4) requires the applicant to establish by a preponderance of the evidence that:

[t]he 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. An applicant for an electric transmission line, a solar energy facility, or a wind energy facility that holds a conditional use permit from the applicable local units of government is in compliance with this subdivision.

121. Because South Deuel Wind has obtained a CUP for the Project from the applicable local unit of government, South Deuel Wind has satisfied this element as a matter of law.

²⁰⁴ Ex. S4 at 1-54(b) (South Deuel Wind Response to Data Requests).

²⁰⁵ Ex. S3 at 14-15 (Thurber Direct).

²⁰⁶ Ex. P1 at 3 (Hamann Poindexter Direct).

²⁰⁷ Evid. Hrg. Tr. At 166 (Jan. 21, 2025) (Transcript).

²⁰⁸ Ex. A18 ¶ 43 (Applicant's and Staff's Terms and Conditions).

²⁰⁹ Evid. Hrg. Tr. at 172, 178 (Jan. 21, 2025) (Transcript).

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 Laws Chapter 49-41B.
2. The Applicant proposes to construct a wind energy facility as defined under South Dakota Codified Laws 49-41B-2(13).
3. The Applicant proposes to construct a transmission facility as defined under South Dakota Codified Laws 49-41B-2.1(1).
4. The Application submitted by Applicant meets the criteria required by South Dakota Codified Laws 49-41B-22, and construction of the Project meets the requirements of South Dakota Codified Laws Chapter 49-41B.
5. The Commission satisfied the hearing and notice requirements in South Dakota Codified Laws Chapter 49-41B.
6. Applicant satisfied the applicable notice requirements in South Dakota Codified Laws Chapter 49-41B.
7. Applicant has demonstrated that the Project will comply with all applicable laws and rules.
8. Applicant has demonstrated that the Project 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.
9. Applicant has demonstrated that the Project will not substantially impair the health, safety, or welfare of the inhabitants.
10. Applicant has demonstrated that the Project 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.
11. All other applicable procedural requirements in South Dakota Codified Laws Chapter 49-41B have been satisfied.
12. 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 energy facility permits are issued to Deuel Harvest Wind Energy South LLC for the South Deuel Wind Project, including the wind energy facility and transmission facility.

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

Dated on _____