BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF SOUTH DAKOTA

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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

DEUEL HARVEST WIND ENERGY SOUTH LLC'S POST-HEARING BRIEF

EL24-023

INTRODUCTION

Deuel Harvest Wind Energy South LLC ("South Deuel Wind") submits this post-hearing brief in support of its Application for Energy Facility Permits ("Application") to construct and operate an up to 260-megawatt ("MW") wind energy facility and an associated 345 kilovolt ("kV") transmission line ("Gen-Tie Line") in Deuel County (collectively, "Project").

The record demonstrates that South Deuel Wind has met its burden of proof. Importantly, South Deuel Wind and Commission Staff worked collaboratively to reach reasonable terms and conditions for the permits that satisfied Commission Staff as to all aspects of the Project. Nothing in the record provides a reason that the Application should be denied and nothing in the record shows that any additional or different permit terms or conditions are appropriate.¹ Accordingly, South Deuel Wind respectfully requests the Commission grant the requested facility permits for the Project, subject to the agreed-upon terms and conditions that are set forth <u>Attachment A</u> hereto.

¹<u>Attachment A</u> includes the terms and conditions agreed to by Commission Staff in Exhibit A18, supplemented with certain commitments made by South Deuel Wind during the evidentiary hearing, including that (i) the road use agreement(s) will be executed prior to start of construction, (ii) the Applicant will provide the Commission with updated contact information if/when it changes, (iii) turbine foundation removal depth will be not less than 48 inches; and (iv) the Applicant will provide advanced notice to Intervenor Mr. Bekaert. *See* <u>Attachment A</u>, ¶¶ 7, 49-51 (Revised Ex. A18).

BACKGROUND

I. THE APPLICANT.

South Deuel Wind, a subsidiary of Invenergy Wind Development North America LLC and an affiliate of Invenergy LLC ("Invenergy"). Invenergy has a 20-plus year track record of responsibly developing, building, owning and operating wind, solar, energy storage, and natural gas generation facilities in United States, including in South Dakota.²

II. THE PROJECT.

The Project details are well known to the Commission as a result of the thorough record. In short, the Project includes a wind energy facility with a nameplate capacity of up to 260 MW, delivering up to 250 MW to the point of interconnection³, and a transmission facility in Deuel County, South Dakota.⁴ The Project includes up to 68 wind turbines and related facilities, including the Gen-Tie Line, and other equipment and improvements (collectively, "Project Facilities").⁵

III. PROJECT DEVELOPMENT.

A brief review of the Project's development history gives a glimpse as to how the record came together as well-supported as it did. South Deuel Wind engaged landowners about 10 years ago.⁶ It then undertook a thorough suite of environmental studies, engineering analyses, and other development activities to successfully scope and refine the Project in ways that would produce substantial benefits and avoid or minimize impacts.⁷

² Ex. A1 at 1.3 (Application).

³ Ex. A1 at 1.1 (Application).

⁴ Ex. A1 at 1.1 (Application).

⁵ Ex. A1 at 1.1 (Application); Ex. A1 at 4.2.10 (Application) (discussing Gen-Tie Line).

⁶ Ex. A1 at 1.1 (Application).

⁷ Ex. A1 at 1.1 (Application); Ex. A1 at 22.3 (Application) (describing coordination and adjustments).

IV. LOCAL PERMITTING.

In July 2023, South Deuel Wind applied for a Conditional Use Permit ("CUP") from the Deuel County Board of Adjustment for the Project.⁸ In September 2023, the Deuel County Board of Adjustment unanimously granted South Deuel Wind a CUP for the Project.⁹

V. PROJECT NEED.

South Deuel Wind presented evidence of consumer demand and need for the Project.¹⁰ The output from the Project will be used to meet the needs for the region's electrical utilities and industrial, commercial, and residential customers.¹¹

LEGAL STANDARD

Pursuant to South Dakota Codified Law ("SDCL") 49-41B-22, South Deuel Wind has the burden of proof to establish:

- (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

⁸ Ex. A1 at Appendix B (Application).

⁹ Ex. A1 at Appendix B (Application).

¹⁰ See, e.g., Ex. A1 at Ch. 2.0 (Application). South Deuel Wind does not currently have a purchase agreement or offtake agreement for the Project but is currently negotiating two power purchase agreements with utilities. At the time of hearing, those confidential negotiations were still in process. Evid. Hrg. Tr. at 69-70 (Jan. 21, 2025) (Transcript). ¹¹ Ex. A1 at Ch. 2.0 (Application).

a conditional use permit from the applicable local units of government is in compliance with this subdivision.

South Deuel Wind must establish these criteria by a preponderance of the evidence.¹²

The Commission must make complete findings regarding an energy facility permit application and must grant, deny, or grant with conditions or modifications an energy facility permit.¹³ The Commission must find that the Project meets the requirements of SDCL Ch. 49-41B.¹⁴

DISCUSSION

The record demonstrates that South Deuel Wind has met all applicable factors for granting energy facility permits. Prior to the evidentiary hearing, South Deuel Wind and Staff agreed to Exhibit 18, containing nearly 48 terms and conditions governing the Project.¹⁵ Staff witness Mr. Thurber noted that South Deuel Wind worked with Staff to "resolve all of our material concerns on this docket."¹⁶ <u>Attachment A</u> includes three additional conditions that South Deuel Wind agreed to during the evidentiary hearing that further reflect South Deuel Wind's commitment to minimize impacts.¹⁷

There were five other parties to this proceeding in addition to South Deuel Wind and Staff. Ms. Arla Hamann Poindexter was the only party to participate in the evidentiary hearing.¹⁸ Ms. Hamann Poindexter's participation in the docket was valuable.¹⁹ South Deuel Wind fully

¹² See, e.g., In re Setliff, 2002 SD 58, ¶13, 645 NW2d 601, 605.

¹³ SDCL 49-41B-25.

¹⁴ Id.

¹⁵ See, e.g., <u>Attachment A</u> (Revised Ex. A18).

¹⁶ Evid. Hrg. Tr. at 157 (Jan. 21, 2025) (Transcript).

¹⁷ <u>Attachment A</u> at ¶¶ 7, 49-51 (Revised Ex. A18).

¹⁸ See, e.g., Evid. Hrg. Tr. at 9-10 (Jan. 21, 2025) (Transcript). Intervenors Lake Cochrane Improvement Association and Matthew Holden raised concerns regarding three turbine locations, but did not submit testimony or appear at hearing to substantiate their concerns.

¹⁹ See, e.g., Ex. P1 (Hamann Poindexter Direct); S5 (Intervenors' Responses to Staff Discovery); S6 (South Deuel Wind and Intervenor Discovery).

responded to her concerns by providing explanations and information in responses to data requests, submitting direct and rebuttal testimony from qualified witnesses, and presenting witness testimony during the evidentiary hearing.²⁰ The record shows that the issues she raised have been and will be appropriately addressed. For example, Ms. Hamann Poindexter's feedback on aerial spraying led to a proposed condition that satisfied her concerns.²¹

South Deuel Harvest's satisfaction of the SDCL 49-41B-22 factors is detailed below.

I. THE PROJECT WILL COMPLY WITH ALL APPLICABLE LAWS AND RULES.

There is no dispute that the Project will comply with applicable laws and rules.²²

II. THE PROJECT DOES NOT POSE A THREAT OF SERIOUS INJURY TO THE ENVIRONMENT OR SOCIAL AND ECONOMIC CONDITION IN THE PROJECT AREA.

A. Environment.

The record establishes that the Project does not pose a threat of serious injury to the environment or wildlife in the Project Area and that South Deuel Wind has adopted reasonable avoidance and minimization measures, and made commitments to further limit potential environmental impacts.²³ 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

²⁰ See, e.g., Ex. A2 (Thompson Direct); Ex. A3 (O'Connor Direct); Ex. A4 (Monterrosa Direct); Ex. A5 (Phillips Direct); Ex. A6 (MaRous Direct); Ex. A7 (Blank Direct); Ex. A8 (Loomis Direct); Ex. A9 (Hankard Direct); Ex. A10 (Thompson Rebuttal); Ex. A11 (Monterrosa Rebuttal); Ex. A12 (Phillips Rebuttal); Ex. A13 (Hankard Rebuttal); Ex. A14 (Harrington Rebuttal); Ex. A15 (Tax Letter Update); Ex. S4 (South Deuel Wind's Response to Staff Discovery); Evid. Hrg. Tr. (Jan. 21, 2025) (Transcript).

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

²² See, e.g., Ex. A1 at 1.4, 22.1 (Application), Ex. A3 at 3 (O'Connor Direct); <u>Attachment A</u> at ¶ 1 (providing 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") (Revised Ex. A18).

²³ 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 3-9 (Phillips Direct).

are not considered ecologically significant, because these lands are frequently disturbed by tilling, planting, and harvesting activities associated with crop production.²⁴ 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.²⁵ South Deuel Wind also presented best management practices and implementation measures to mitigate impacts to water resources; Staff witness Mr. Switzer of the South Dakota Game, Fish and Parks ("SDGFP") testified that these are appropriate measures to mitigate impacts to water best management practices and material structures in the staff of the structures in the structure of the structures in the structure of the structures is to water resources.²⁶

Ms. Hamann Poindexter presented concerns regarding impacts to unbroken grassland.²⁷ South Deuel Wind conducted a robust desktop review to identify the location and quality of grassland within the Project Area²⁸ and sited turbines and access roads to avoid unbroken grasslands.²⁹ Mr. Switzer recognized the efforts of South Deuel Wind's siting process to avoid or mitigate fragmentation of grassland,³⁰ and explained 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."³¹

Regarding potential avian impacts, Staff's witness Mr. Switzer reviewed the wildlife studies and surveys³² and determined that the studies were complete and identified the potential

²⁴ Ex. A1 at 9.1.2 (Application).

²⁵ Ex. A4 at 10 (Monterrosa Direct).

²⁶ Ex. S2 at 13 (Switzer Direct).

²⁷ Ex. P1 at 4-5 (Hamann Poindexter Direct).

²⁸ Ex. A1 at 9.1.1.2 (Application), Ex. A5 at 5 (Phillips Direct).

²⁹ Ex. A12 at 2 (Phillips Rebuttal).

³⁰ Ex. S2 at 11-12 (Switzer Direct).

³¹ Ex. S2 at 8 (Switzer Direct).

³² Ex. A1 at Appendix G (Large Bird Use Survey), Appendix H (Raptor Nest Survey), Appendix I (Bat Acoustic Survey), Appendix J (NLEB Bat Habitat Assessment), Appendix L (Protected Butterfly Species Habitat Assessment).

impacts to the terrestrial environment.³³ South Deuel Wind also 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, and a whooping crane-related condition.³⁴

B. Social and Economic Condition.

Deuel County granted a CUP for the Project.³⁵ 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 area. Moreover, the Project will have a significant tax benefit for Deuel County and the surrounding community. The Project is expected to generate over \$9.1 million in total county property taxes for Deuel County and over \$11.9 million in total state property taxes for the State of South Dakota over the life of the Project.³⁶ Additionally, the Project is projected to recognize a combined additional revenue impact of \$3,045,000 for the Deuel School District 19-4 and the Deubrook School District 05-6 over the first ten years of Project operation.³⁷ The record demonstrates that the Project will have significant community benefits.

III. THE PROJECT WILL NOT SUBSTANTIALLY IMPAIR HEALTH, SAFETY, OR WELFARE.

A. Noise.

The issue of noise was thoroughly considered and addressed. The Project complies with the Deuel County Zoning Ordinance.³⁸

³³ Ex. S2 at 4-5 (Switzer Direct).

³⁴ Ex. A12 at 4 (Phillips Rebuttal), Ex. S2 at 16-17 (Switzer Direct); <u>Attachment A</u> at ¶¶ 37, 46 (Revised Ex. A18); Evid. Hrg. Tr. at 166 (Jan. 21, 2025) (Transcript).

³⁵ Ex. A1 at 1.1; Appendix B (CUP).

³⁶ Ex. A1 at 15.1.2.1; Appendix C (Economic Impact Analysis).

³⁷ Ex. A15 (Tax Letter Update).

³⁸ 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." The Ordinance applies to source-only, not cumulative, sound. Ex.

South Deuel Wind retained an independent expert, Mr. Michael Hankard, to model the predicted noise levels for the Project.³⁹ Mr. Hankard has been measuring, analyzing, researching, and reporting on environmental noise levels for more than 30 years.⁴⁰ Following Mr. Hankard's conservative modeling, 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.⁴¹ Accordingly, the Project will comply with the Deuel County Zoning Ordinance.

Although the Deuel County Zoning Ordinance is a source-only ordinance,⁴² Mr. Hankard also performed a cumulative sound analysis that included modeling the sound expected from the Project plus the sound from the currently operational Tatanka Ridge wind project that is southwest of the Project.⁴³ The cumulative noise modeling, assuming turbines at all proposed locations, showed 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 SG 4.4-164 and V163-the 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.⁴⁴

South Deuel Wind and Staff agreed to multiple noise-related terms and conditions, including a condition to limit cumulative sound from the Project and Tatanka Ridge to 45 dBA for

A4 at 9-10 (Monterrosa Direct); Ex. S4 at p. 629 (Applicant's Responses 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."). There is no Deuel County limit for noise at participating residences.

³⁹ Ex. A9 at 1-2 (Hankard Direct), Ex. A1 at Appendix M (Noise Analysis).

⁴⁰ Ex. A9 at 1 (Hankard Direct).

⁴¹ Ex. A9 at 5 (Hankard Direct).

⁴² See fn. 38, *above*.

⁴³ Ex. A13 at 1 (Hankard Rebuttal).

⁴⁴ Ex. A13 at 3 (Hankard Rebuttal).

non-participants. Term and Condition No. 48 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 residences.⁴⁵ Staff witness Mr. Hessler testified that the proposed terms and conditions resolved any noiserelated concerns he had.⁴⁶ Thus, the record shows that sound from the Project will not substantially impair health, safety, or welfare.

B. Shadow Flicker.

Section 1215.03(13)(b) of the Deuel County Zoning Ordinance states the following: "[1]imit for allowable shadow flicker at existing residences to no more than 30 hours annually."⁴⁷ 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.⁴⁸ Ms. Blank ran a model to determine the impact of shadow flicker from the Wind Facility.⁴⁹ The shadow flicker analysis was 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.⁵⁰

Furthermore, South Deuel Wind and Staff also agreed upon Term and Condition No. 28, which provides that "[s]hadow flicker at any receptor shall not exceed 30 hours per year."⁵¹ South

⁴⁵ <u>Attachment A</u> at ¶ 48 (Revised Ex. A18).

⁴⁶ Evid. Hrg. Tr. at 146-47 (Jan. 21, 2025) (Transcript).

⁴⁷ Ex. A1 at 11.5.1 (Application).

⁴⁸ Ex. A7 at 1 (Blank Direct).

⁴⁹ See generally, Ex. A1 at Appendix N (Application); Ex. A7 (Blank Direct).

⁵⁰ Ex. A7 at 4-5 (Blank Direct).

⁵¹ <u>Attachment A</u> at ¶ 28 (Revised Ex. A18).

Deuel Wind also committed to curtail turbines if there is recorded shadow flicker over 30 hours.⁵² The record demonstrates that shadow flicker from the Project will not substantially impair health, safety, or welfare.

C. Lake Cochrane Seaplane Base.

The potential issues around the Lake Cochrane Seaplane Base ("Seaplane Base") turned out to not be material. The Seaplane Base is approximately 3.66 nautical miles from the nearest turbine location, No. 22.⁵³ While Intervenor LCIA appeared and expressed concern regarding the Project's three closest turbines to the Seaplane Base,⁵⁴ LCIA did not develop any record to substantiate that concern.⁵⁵

Despite the lack of evidence supporting LCIA's expressed concern, South Deuel Wind took it seriously. South Deuel Wind presented witness Christopher Harrington of Capitol Airspace Group, the company that conducted an Obstruction Evaluation and Airspace Analysis of the Project.⁵⁶ Mr. Harrington is an expert with substantial aviation experience and expertise.⁵⁷ Mr. Harrington discussed the Federal Aviation Administration's ("FAA") role in regulating the safety of airspace in the United States, and evaluated the Project's potential impact on the Seaplane Base, if any.⁵⁸ Mr. Harrington's unrebutted, credible testimony was that FAA airspace protections

⁵² Evid. Hrg. Tr. at 118 (Jan. 21, 2025) (Transcript).

⁵³ Ex. A14 at 8 (Harrington Rebuttal).

⁵⁴See, e.g., Ex. LCIA Application for Party Status (Aug. 21, 2024); LCIA Letter Regarding Procedural Order and Status Update (Nov. 6, 2024).

 ⁵⁵ Evid. Hrg. Tr. at 114 (Jan. 21, 2025) (Transcript); Ex. S5 at 2-1(a) (LCIA Response to Staff Data Requests) (showing LCIA also did not conduct any technical analysis to support the removal of these turbine locations); Ex. S5 at 1-6 (LCIA Response to Staff Data Requests); *see also* Ex. S5 at 1-6(a) (Matthew Holden Response to Staff Data Requests).
⁵⁶ Ex. A14 at 1 (Harrington Rebuttal); Ex. A1 at Appendix S (Application).

⁵⁷ 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. Ex. A14 at 1 (Harrington Rebuttal).

⁵⁸ Ex. A14 at 1 (Harrington Rebuttal).

do not exist for the Seaplane Base and, even if there were, the three turbine locations of concern to LCIA would not affect those protections.⁵⁹

Further, the FAA will ultimately determine whether all turbine locations will create a significant adverse impact on the relevant airspace,⁶⁰ and South Deuel Wind and Staff's agreement to Term and Condition No. 47—that the Project will abide by the FAA's determinations—fully resolves any potential issue.⁶¹ Thus, the record demonstrates the Project will not adversely impact the Seaplane Base.

IV. THE PROJECT WILL NOT UNDULY INTERFERE WITH ORDERLY DEVELOPMENT IN THE REGION.

Deuel County granted a CUP for the Project.⁶² Therefore, as a matter of law, the Project is determined not to unduly interfere with orderly development in the region.

V. ADDITIONAL PROPOSED CONDITIONS.

Based on the commitments at the evidentiary hearing, South Deuel Wind proposes a slight language addition clarifying the obligation to execute road use agreement(s) prior to construction,⁶³ and adding three additional conditions memorializing South Deuel Wind's commitments regarding (i) updating contact information,⁶⁴ (ii) removing turbine foundations to not less than 48 inches in decommissioning,⁶⁵ and (iii) providing advanced notice to Intervenor Mr. Bekaert,⁶⁶ as set out in <u>Attachment A</u>. These conditions are supported by the record and will result in a Project that complies with all applicable requirements and minimizes or avoids human and environmental impacts.

⁵⁹ See Ex. A14 at 7-8 (Harrington Rebuttal); Evid. Hrg. Tr. at 109-10 (Jan. 21, 2025) (Transcript).

⁶⁰ Ex. S4 at DR 1-25(a) (Applicant's Data Responses); Ex. A14 at 3 (Harrington Rebuttal).

⁶¹ <u>Attachment A</u> at ¶ 47 (Revised Ex. A18).

⁶² Ex. A1 at 1.1; Appendix B (CUP).

⁶³ <u>Attachment A</u> at \P 7 (Revised Ex. A18).

⁶⁴ $\overline{\text{Attachment A}}$ at \P 49 (Revised Ex. A18).

⁶⁵ <u>Attachment A</u> at ¶ 50 (Revised Ex. A18).

⁶⁶ <u>Attachment A</u> at ¶ 51 (Revised Ex. A18).

<u>CONCLUSION</u>

The record demonstrates that South Deuel Wind has met its burden of proof to establish that: (1) the Project will comply with applicable laws and rules; (2) the Project does not pose a threat of serious injury to the environment or social and economic condition; (3) the Project will not substantially impair health, safety, or welfare; and (4) the Project will not unduly interfere with orderly development. The record also demonstrates that the Project will benefit local landowners and the community. Accordingly, South Deuel Wind respectfully requests that the Commission grant Energy Facility Permits for the Project on the terms and conditions set forth in the attached proposed Terms and Conditions.

Dated this 13th day of February 2025.

By /s/ Lisa Agrimonti

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