BEFORE THE SOUTH DAKOTA PUBLIC UTILITIES COMMISSION

DOCKET EL24-023

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

> DIRECT TESTIMONY OF JON THURBER ON BEHALF OF THE COMMISSION STAFF NOVEMBER 13, 2024

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<u>EXHIBITS</u>

- Exhibit_JT-1 South Deuel Wind's Responses to Staff Discovery
- Exhibit_JT-2 Intervenors' Responses to Staff Discovery
- Exhibit_JT-3 South Deuel Wind and Intervenor Discovery
- Exhibit_JT-4 Aerial Imagery of Bekaert's Residence
- Exhibit_JT-5 Sample Construction Report

1 Ι. INTRODUCTION AND QUALIFICATIONS 2 3 Q. Please state your name and business address. 4 Α. Jon Thurber, Public Utilities Commission, State Capitol Building, 500 East Capitol 5 Avenue, Pierre, South Dakota, 57501. 6 7 By whom are you employed and in what capacity? Q. I am a utility analyst for the South Dakota Public Utilities Commission ("Commission"). I 8 Α. 9 am responsible for analyzing and presenting recommendations on utility dockets filed 10 with the Commission. 11 12 Q. Please describe your educational and business background. 13 Α. I graduated summa cum laude from the University of Wisconsin – Stevens Point in 14 December of 2006, with a Bachelor of Science Degree in Managerial Accounting, 15 Computer Information Systems, Business Administration, and Mathematics. My 16 regulated utility work experience began in 2008 as a utility analyst for the Commission. 17 At the Commission, my responsibilities included analyzing and testifying on ratemaking 18 matters arising in rate proceedings involving electric and natural gas utilities. In 2013, I 19 joined Black Hills Corporation as Manager of Rates. During my time at Black Hills 20 Corporation, I held various regulatory management roles and was responsible for the 21 oversight of electric and natural gas filings in Wyoming, Montana, and South Dakota. In 22 July of 2016, I returned to the Commission as a utility analyst. In addition to cost of 23 service dockets, I work on transmission siting, energy conversion facility siting, and wind 24 energy facility siting. 25 26 In my sixteen years of regulatory experience, I have either reviewed or prepared 27 approximately 200 regulatory filings. These filings include thirteen wind energy facility 28 siting dockets. I have provided written and oral testimony on the following topics: the

- appropriate test year, rate base, revenues, expenses, taxes, cost allocation, rate design,
 power cost adjustments, capital investment trackers, PURPA standards, avoided costs,
 electric generation resource decisions, and wind energy facility siting dockets.
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- 33

1		II. <u>PURPOSE OF TESTIMONY</u>
2		
3	Q.	What is the purpose of your direct testimony?
4	Α.	The purpose of my direct testimony is to discuss the review performed by Commission
5		Staff ("Staff") of the Application, identify any issues or concerns with the representations
6		made in the Application or by the Applicant, and provide Staff's recommendation on
7		whether the permit should be granted.
8		
9		III. REVIEW OF THE APPLICATION
10		
11	Q.	Have you reviewed Deuel Harvest Wind Energy South LLC's ("South Deuel Wind"
12		or "Company" or "Applicant") Application for energy facility permits of a wind
13		energy facility and a 345-kV transmission facility, Docket EL24-023?
14	Α.	Yes. I also reviewed the Company's prefiled testimony, appendixes, figures, and
15		responses to data requests produced by all parties as it pertains to the issues that I am
16		addressing.
17		
18	Q.	Were other Staff involved in the review of the Application?
19	Α.	Yes. Staff Analyst Darren Kearney and Staff Attorneys Amanda Reiss and Logan
20		Schaefbauer also assisted in reviewing the Application.
21		
22	Q.	Please explain the review process performed by Staff in Docket EL24-023.
23	Α.	After receiving the Application, Staff completed a review of the contents as it relates to
24		the Energy Facility Siting statutes, SDCL 49-41B, and Energy Facility Siting Rules,
25		ARSD 20:10:22. Staff then identified information required by statute or rule that was
26		either missing from the Application or unclear within the Application and requested South
27		Deuel Wind to provide or clarify that information. Once interested individuals were
28		granted party status, Staff also issued discovery to the intervenors in order to
29		understand what concerns they have with the project. Please see Exhibit_JT-1 South
30		Deuel Wind's Responses to Staff Discovery, and Exhibit_JT-2 for the Intervenors'
31		Responses to Staff Discovery.
32		
33		In addition, Staff subpoenaed an expert from the South Dakota Department of Game,
34		Fish, and Parks to assist Staff with our review. Chad Switzer, Wildlife Division Deputy

Director, reviewed the potential impacts to wildlife and associated habitats. Mr. Switzer
 filed direct testimony on behalf of Staff. Further, Commission Staff hired David Hessler,
 Vice President at Hessler Associates, Inc., to review the information on the noise emitted
 from the project.

6 Finally, Staff assisted the intervenors and affected landowners by providing responses to 7 questions on the wind energy facility, the siting process established by South Dakota 8 law, and the opportunities available for these individuals to be heard by the Commission. 9 If the landowners had specific concerns with the wind energy facility, Staff often 10 recommended that those individuals file comments in the docket for the Commission's 11 review. Where appropriate, Staff also included some of the landowners' questions or 12 concerns in Staff's data requests sent to South Deuel Wind to have them address the 13 issue.

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15 Q. What is the purpose of Commission Staff's expert witnesses in this proceeding?

A. Commission Staff sought experts within their respective fields to assess the merits and
 deficiencies of the Application and supporting studies. Commission Staff requested that
 the experts address whether the information submitted by South Deuel Wind aligns with
 industry best practices, and if they agreed with the conclusion South Deuel Wind made
 regarding the potential impacts from the project.

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25

Q. Did Staff request assistance from any other State Agencies in review of the Application?

24 A. Yes. Staff consulted with the State Historic Preservation Office ("SHPO").

Q. Did SHPO communicate concerns to Staff specific to the South Deuel Wind Project?

- A. At the time of writing this testimony, no concerns specific to the South Deuel WindProject were raised by the SHPO.
- 30

31 Q. Why did Staff not request testimony from the SHPO in this proceeding?

A. Staff is unaware of any unique issues or concerns with historic properties that would
 need to be addressed through the state permitting process. Should any issues arise that
 fall in their area of expertise, Staff may present the SHPO as a rebuttal witness.

1	Q.	Was South Deuel Wind's Application considered complete at the time of filing?
2	Α.	At the time of the filing, the application was substantially complete. However, as
3		identified above, Staff requested further information, or clarification, from South Deuel
4		Wind which Staff believed was necessary in order to satisfy the requirements of SDCL
5		49-41B and ARSD 20:10:22. It is Staff's position that ARSD 20:10:22:04(5) allows for
6		the applicant to provide additional information throughout the Commission's review
7		period. Finally, I would also note that an applicant supplementing its original application
8		with additional information as requested by Staff is not unusual for siting dockets.
9		
10	Q.	What is the status of South Deuel Wind's Conditional Use Permit ("CUP")
11		application in Deuel County?
12	Α.	South Deuel Wind was granted a CUP from Deuel County in 2023.
13		
14	Q.	Please explain how obtaining the CUPs impact the Commission's statutory
15		authority in the wind energy facility siting process.
16	Α.	Pursuant to SDCL 49-41B-22, a wind energy facility that holds a conditional use permit
17		is determined not to threaten the social and economic condition of inhabitants or
18		expected inhabitants in the siting area; and determined not to unduly interfere with the
19		orderly development of the region. The granting of a CUP from the applicable local unit
20		of government demonstrates the Applicant met its burden of proof with part of SDCL 49-
21		41B-22(2) and SDCL 49-41B-22(4), and the associated administrative rules.
22		
23		IV. <u>TURBINE MODEL FLEXIBILITY</u>
24		
25	Q.	Please summarize South Deuel Wind's request for turbine model flexibility.
26	Α.	According to Section 4.2.1 of the Application, the Applicant is considering three different
27		turbine models: General Electric 3.8-154, Siemens Gamesa 4.4-165, and Vestas 163-
28		4.5. The specifications of each turbine model are identified in Table 4.2.1. South Deuel
29		Wind requests that the Permit allow for the use of turbine models of comparable capacity
30		and specifications, provided county siting standards are complied with and the
31		conditions specified in the Permit can be complied with.
32		
33		
34		

1	Q.	Has the Commission allowed turbine model flexibility in past dockets?
2	Α.	Yes, the Commission has allowed turbine model flexibility in previous dockets.
3		However, I believe the flexibility has been limited to a maximum of two different turbine
4		models.
5		
6	Q.	Is it possible for the Applicant to identify the specific turbine model prior to the
7		hearing in this permit proceeding?
8	Α.	South Deuel Wind indicated no. In response to Staff data request 1-18, Ms. Monterrosa
9		stated the turbine models are "relatively similar", and "limiting a project to install a
10		singular turbine model significantly reduces a project's ability to negotiate cost-effective
11		turbine supply agreements."
12		
13	Q.	Does the turbine model selected impact the number of turbine locations that get
14		constructed?
15	Α.	Yes. On Page 21 of the Application, South Deuel Wind identified that up to 68 of the 73
16		proposed turbine locations will be constructed. In response to Staff data request 1-19,
17		the Company further clarified that while they likely will install turbines from one supplier,
18		they may elect to install turbines from multiple suppliers. Depending on the turbine
19		model or models selected by South Deuel Wind, between 57 and 68 turbine locations
20		will be constructed.
21		
22	Q.	Has South Deuel Wind indicated a preference on turbine model?
23	Α.	On Page 119 of the Application, South Deuel Wind stated that the decommissioning
24		analysis assumed fifty-seven Vestas 163-4.5 turbines because the turbine model is
25		anticipated to be the most optimal turbine for the site.
26		
27	Q.	How does South Deuel Wind's request for turbine flexibility impact the public's
28		participation in the docket?
29	A.	If the Company selects the Vestas turbine model as indicated, South Deuel Wind would
30		construct 57 of the 73 proposed turbine locations, resulting in 16 alternate locations.
31		Overstating the actual number of turbine locations by 16, or roughly 20% of the
32		proposed locations, also overstates the project impacts and the number of impacted
33		residences. Some of the intervenors' concerns may be addressed if the Company
34		discloses the optimal site locations for the Vestas turbine model and reduces the number

1		of alternate locations. While the Commission has supported flexibility in the past, the
2		number of alternate locations in this Application may be excessive and lead to an
3		inefficient permitting process.
4		
5	Q.	How many non-participating residences are within ³ / ₄ of mile of a proposed turbine
6		location assuming all 73 turbine locations are constructed?
7	A.	In response to Staff data request 2-1, South Deuel Wind indicated 50 non-participating
8		residences are within $\frac{3}{4}$ of a mile from a proposed turbine location, and 20 non-
9		participating residences are within a $\frac{1}{2}$ mile from a proposed turbine location. The
10		number of non-participants near turbines for South Deuel Wind seems high in
11		comparison to other recently sited wind facility in the Deuel County area. For example,
12		the Tatanka Ridge Wind project had 14 non-participating residences within $\frac{3}{4}$ of a mile
13		from a proposed turbine location, and 3 non-participating residences within a $\frac{1}{2}$ mile
14		from a proposed turbine location with approximately 56 turbines. The number of
15		impacted non-participants for South Deuel Wind may be lower, depending on how many
16		and which turbine locations are constructed.
17		
17		
18		V. <u>SETBACK MEASUREMENTS</u>
		V. <u>SETBACK MEASUREMENTS</u>
18	Q.	V. <u>SETBACK MEASUREMENTS</u> What is Deuel County's setback from non-participating residences?
18 19	Q. A.	
18 19 20		What is Deuel County's setback from non-participating residences?
18 19 20 21		What is Deuel County's setback from non-participating residences? According to Table 5.2 of the Application, distances from existing non-participating
18 19 20 21 22		What is Deuel County's setback from non-participating residences? According to Table 5.2 of the Application, distances from existing non-participating residences and businesses shall be not less than four times the height of the wind
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18 19 20 21 22 23 24 25 26	Α.	What is Deuel County's setback from non-participating residences? According to Table 5.2 of the Application, distances from existing non-participating residences and businesses shall be not less than four times the height of the wind turbine. Non-participating property owners shall have the right to waive the respective setback requirements.
18 19 20 21 22 23 24 25 26 27	А. Q .	What is Deuel County's setback from non-participating residences? According to Table 5.2 of the Application, distances from existing non-participating residences and businesses shall be not less than four times the height of the wind turbine. Non-participating property owners shall have the right to waive the respective setback requirements. For the wind turbine models under consideration, what is the setback in feet from non-participating residences?
 18 19 20 21 22 23 24 25 26 27 28 	А. Q .	 What is Deuel County's setback from non-participating residences? According to Table 5.2 of the Application, distances from existing non-participating residences and businesses shall be not less than four times the height of the wind turbine. Non-participating property owners shall have the right to waive the respective setback requirements. For the wind turbine models under consideration, what is the setback in feet from non-participating residences? In response to Staff data request 1-35, South Deuel Wind stated "for the GE 3.8-154
18 19 20 21 22 23 24 25 26 27 28 29	А. Q .	 What is Deuel County's setback from non-participating residences? According to Table 5.2 of the Application, distances from existing non-participating residences and businesses shall be not less than four times the height of the wind turbine. Non-participating property owners shall have the right to waive the respective setback requirements. For the wind turbine models under consideration, what is the setback in feet from non-participating residences? In response to Staff data request 1-35, South Deuel Wind stated "for the GE 3.8-154 turbine model which has a tip height of 574 feet, the Deuel County non-participating
 18 19 20 21 22 23 24 25 26 27 28 29 30 	А. Q .	 What is Deuel County's setback from non-participating residences? According to Table 5.2 of the Application, distances from existing non-participating residences and businesses shall be not less than four times the height of the wind turbine. Non-participating property owners shall have the right to waive the respective setback requirements. For the wind turbine models under consideration, what is the setback in feet from non-participating residences? In response to Staff data request 1-35, South Deuel Wind stated "for the GE 3.8-154 turbine model which has a tip height of 574 feet, the Deuel County non-participating residence and business setback is 2,296 feet For the SG 4.4-164 and V163-4.5

1	Q.	How did the Company state setbacks are measured?
2	Α.	On Page 37 of the Application, the Applicant stated setbacks are measured from the
3		center point of the turbine.
4		
5	Q.	Does Staff agree with measuring setbacks from the center point of the turbine?
6	A.	Staff issued data request 1-34 for an explanation and support for that method. In
7		response to Staff data request 1-34, the Applicant indicated that statement "in the
8		Application was a typographical error. Setbacks from residences, businesses, and
9		public buildings are measured from the outside wall of the turbine tower. This is the
10		measuring point identified by the county zoning officer, Jodi Theisen, relying on Deuel
11		County Zoning Ordinance, Article III Definitions:
12		
13 14 15 16 17		Setback Between Uses. Unless specifically mentioned within this ordinance, the setback or separation distance between uses is the minimum horizontal distance measured from the wall line of a neighboring principal building to the wall line of the proposed building/structure/use."
18		Staff is familiar with measuring compliance from the outside wall of the turbine tower and
19		supports this method.
20		
21		VI. <u>SHADOW FLICKER</u>
22		
23	Q.	Does Deuel County have a shadow flicker regulation?
24	A.	Yes. On Table 5.2 of the Application, South Deuel Wind states the "limit for allowable
25		shadow flicker at existing residences to no more than 30 hours annually."
26		
27	Q.	Is the proposed wind facility in compliance with this regulation?
28	A.	It is unclear to staff whether the project is compliant with Deuel County's shadow flicker
29		regulation. While the Applicant states that no receptor will experience more than 30
30		hours of shadow flicker per year from the Project on Page 98 of the Application, the
31		Applicant included a footnote on that same page indicating the following:
32		
33 34 35 36		"Prior to consideration of vegetative blocking or applied mitigation, the GE and SG turbine models indicated three participating receptors may receive over 30 hours of shadow flicker annually and the Vestas turbine model indicated the same at two participating receptors, The final turbine locations and turbine model(s) selected for

1 2 3		construction will be modeled at these residences to confirm less than 30 hours of expected shadow flicker annually."
4	Q.	Can a participating residence waive the Deuel County shadow flicker regulation?
5	Α.	The information provided in the Application did not specify whether the regulation may
6		be waived by a participating residence.
7		
8	Q.	Does the Applicant have a mitigation plan to limit shadow flicker to 30 hours at
9		each receptor?
10	Α.	In response to Staff data request 1-58(b)(i), the Applicant stated it would need to perform
11		an updated shadow flicker analysis once the turbine model is selected to remove the
12		impacts from alternate turbine locations that are not used. If the modeling still shows
13		receptors exceeding 30 annual hours of shadow flicker, South Deuel Wind will conduct
14		additional site-specific analyses considering existing screening on the receptor. If
15		modeling continues to predict more than 30 hours of shadow flicker annually, the
16		Company committed to take steps to keep the shadow flicker below 30 hours. These
17		steps may include the use of turbine control software to curtail turbines at certain times
18		of the day.
19		
20	Q.	Does Staff have concerns about the modeled shadow flicker exceedances?
21	Α.	Since the modeled exceedances occur at participating residences, Staff is less
22		concerned. South Deuel Wind should clarify whether a participating residence can
23		waive Deuel County's shadow flicker regulation.
24		
25		VII. <u>DECOMMISSIONING</u>
26		
27	Q.	Did the Applicant provide a decommissioning plan, an estimate of monetary
28		costs, and a description of the site condition after decommissioning as required
29		by ARSD 20:10:22:33:01?
30	Α.	Yes. South Deuel Wind provided the decommissioning plan and required information in
31		Appendix X of the Application and summarizes the findings in Section 18 of the
32		Application.
33		
34		
35		

- 1 Q. Did Commission Staff have any concerns regarding the decommissioning plan? 2 Α. Yes. In Section 1.2 of Appendix X, the Applicant states "Project facilities will be removed 3 to a depth of 42 inches below grade, in accordance with the Deuel County Zoning 4 Ordinance B2022-01 requirements." The Commission has historically required the 5 removal of turbine foundations to a depth of 4 feet for past wind facilities to allow for 6 normal agricultural activities unless landowner agreements specify a greater depth. 7 While not our preference, the removal of all other facilities to a depth of 42 inches is 8 acceptable to staff. 9 Without additional support for 42 inches as a removal depth, Staff would recommend the 10 11 Applicant remove turbine foundations to a depth of four feet below grade. 12 13 Q. What is South Deuel Wind's estimate for the current cost of decommissioning? 14 Α. South Deuel Wind estimates the current cost of decommissioning in 2023 dollars is 15 approximately \$1,299,950 for the Project, or \$22,806 per turbine, assuming salvage and 16 no resale of project components. A summary of the decommissioning estimates for 17 activities associated with the major components of the Project is provided in Table A-1 of 18 the decommissioning plan. 19 20 Q. Does Staff have any concerns with the underlying assumptions of the 21 decommissioning plan? 22 Α. Yes. South Deuel Wind assumed 57 Vestas 163-4.5 turbines because the turbine model 23 is anticipated to be the most optimal turbine for the site. With the Company's request for 24 turbine model flexibility, South Deuel Wind may construct up to 68 turbines. Since 25 decommissioning cost is directly related to the number of turbines, staff recommends 26 assuming the maximum number of turbines that may be constructed of 68 to determine 27 a reasonable estimate. 28 29 Q. Did Staff request an updated decommissioning cost estimate to reflect 68 wind 30 turbines? 31 Yes. In response to Staff data request 1-59(a), Ms. Monterrosa stated that South Deuel Α. 32 Wind is currently in the process of preparing a Decommissioning Plan for 68 GE 3.8-154 33 turbines. The Applicant committed to supplement the response to Staff data request 1-
 - 9

1		59(a) when the analysis is complete, but South Deuel Wind has not provided an updated
2		cost estimate prior to drafting this testimony.
3		
4	Q.	Does Staff have any concerns with the decommissioning cost estimate as
5		provided in Appendix X?
6	Α.	The estimate of future decommissioning costs is based on assumptions that can lead to
7		a wide range of potential costs. Based on the decommissioning cost estimates provided
8		to the Commission for past wind facilities and the Commission's requirements for
9		decommissioning escrow funding of \$5,000 per turbine per year over 30 years for other
10		wind energy facilities, the Company's estimate of \$22,806 per turbine appears low.
11		
12	Q.	What is the Applicant proposing for the useful life of the Project?
13	Α.	On Page 120 of the Application, South Deuel Wind states it anticipates that the
14		operational life of the Project will be approximately 30 years. Staff believes this
15		assumption is reasonable.
16		
17	Q.	What is South Deuel Wind's proposal for the periodic review and update of
18		decommissioning costs?
19	Α.	The Applicant proposed no periodic review and update of decommissioning costs.
20		
21	Q.	Does Staff support the Applicant's proposal for no periodic decommissioning
22		review?
23	Α.	No. Staff recommends reviewing decommissioning costs beginning in year 10 following
24		commercial operation of the Project and each fifth year thereafter. The periodic review
25		of decommissioning costs is necessary to ensure that the amount is sufficient as factors
26		like inflation, technological advancements, and market conditions can impact
27		decommissioning costs over time. The Commission has established a precedence of
28		reviewing decommissioning costs in this manner, and Staff is unaware of any compelling
29		justification to change this practice.
30		
31	Q.	What type of financial assurance did South Deuel Wind propose in its Application
32		for the decommissioning of the Project?
33	Α.	South Deuel Wind requests that the Commission authorize the posting of a bond for
34		financial assurance for decommissioning costs of the Project. The Company sited the

- 1 Commission's recently approved bonds for wind energy facilities in 2021 and 2022 2 during those projects' ten-year review. 3 4 Q. What was the estimated decommissioning cost per turbine for the two surety 5 bonds referenced by the Applicant? 6 Α. For Docket EL09-028, the Commission approved a surety bond in the amount of 7 \$15,112,233 for PrairieWinds SD1, resulting in a per turbine cost of \$139,928 based on 8 108 turbines. In Docket EL08-031, the Commission approved a surety bond in the 9 amount of \$10,870,523 for Buffalo Ridge II, resulting in a per turbine cost of \$103,529 based on 105 turbines. South Deuel Wind's proposed decommissioning cost of \$22,806 10 11 per turbine is not close to the amounts approved by the Commission. 12 13 Q. Did the Applicant provide a detailed surety bond proposal for Commission 14 consideration? 15 No. Staff issued data request 5-8 to obtain a draft surety bond with all relevant terms for Α. 16 Commission review. The discovery request was due on November 8 and the draft was 17 not available for Staff to review prior to drafting this testimony. 18 19 Q. Please summarize your position on South Deuel Wind's decommissioning 20 proposal. 21 Α. Staff does not agree with the underlying assumption that turbine foundations be 22 removed to a depth of 42 inches, and instead recommends removal to a depth of 48 23 inches or 4 feet. The original decommissioning plan assumed only 57 turbines are 24 constructed while the Applicant requests to construct up to 68 turbines. Commission 25 Staff asked for an updated study on September 13, 2024, to reflect the maximum 26 requested turbines and has not received a revised study. If the Applicant uses similar 27 assumptions in the updated decommissioning estimate as the original decommissioning 28 plan that supported a decommissioning cost per turbine of \$22,806, staff is concerned
- that the updated estimate will not provide adequate funds to complete the reclamation
 and restoration process. Staff recommends periodically reviewing decommissioning
 plans and cost estimate during the life of the facility consistent with past Commission
 decisions and updating the financial assurance as necessary. Finally, Staff is unable to
 form an opinion on the Applicant's decommissioning bond request until a detailed draft is
 available to review.
 - 11

	VIII. INDEMNITY BOND FOR ROAD DAMAGE
Q.	Did South Deuel Wind provide a proposal for an indemnity bond for road damage
	pursuant to SDCL 49-41B-38?
Α.	Yes. In response to Staff data request 1-53, South Deuel Wind proposes to furnish an
	indemnity bond in the amount of \$1,000,000 to secure the restoration and repair of roads
	after construction. The South Deuel Wind transmission line is approximately 6 miles in
	length. For the Crocker Wind Farm in Docket EL17-055, the Commission ordered a
	\$1,000,000 road bond for a 5.2-mile transmission line. South Deuel Wind requests the
	same bond amount as the Crocker Wind Farm since the length of the transmission line
	is similar.
Q.	Does 49-41B-38 provide a method to calculate an amount of the indemnity bond?
Α.	No. The statute states the bond should be furnished in "a reasonable amount."
Q.	Does Commission Staff agree with this proposal for the indemnity bond?
Α.	Staff agrees that the bond amount ordered for the Crocker Wind Farm transmission line
	is a reasonable proxy. While there has been significant inflation since 2018 that may
	warrant an adjustment to the bond amount, Invenergy also satisfactorily fulfilled all road
	repair obligations associated with the Deuel Harvest Wind Farm in Docket EL18-053.
	Considering all factors, Staff is comfortable with the Company's proposal.
	IX. POTENTIAL IMPACTS TO WHOOPING CRANES
Q.	Did South Deuel Wind assess the wind facility's potential impacts to whooping
	cranes?
Α.	Yes. On Page 78 of the Application, South Deuel Wind stated the following:
	"The whooping crane corridor area accounts for 95% of whooping crane sightings. The Project Area is not located within the USFWS whooping crane migration corridor, which is located approximately 85 miles west of the Project Area (Appendix G). 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."
	А. Q. А. Д.

1	Q.	Did the Commission include a whooping crane condition in the permit for the
2		adjacent Tatanka Ridge Wind facility in Docket EL19-026?
3	Α.	Yes. The Commission required the condition below to minimize the potential impacts to
4		whooping cranes:
5		
6		Applicant shall establish a procedure for preventing whooping crane collisions
7		with turbines during operations by establishing and implementing formal plans for
8		monitoring the project site and surrounding area for whooping cranes during
9		spring and fall migration periods throughout the operational life of the project and
10		shutting down turbines and/or construction activities within 2 miles of whooping
11		crane sightings. The South Dakota Game, Fish, and Parks will be consulted on
12		the procedure to minimize impacts to whooping cranes.
13		
14	Q.	Is the Applicant willing to agree to this condition to minimize the risk to whooping
15		cranes?
16	Α.	No. In response to Staff data request 3-3(c), witness Michelle Phillips stated that "South
17		Deuel Wind does not believe the above permit condition is appropriate because
18		whooping cranes are unlikely to occur in the Project area and therefore would not agree
19		to the condition."
20		
21	Q.	Does Staff recommend a condition for South Deuel Wind to establish procedures
22		for preventing whooping crane collisions?
23	Α.	The Commission ordered the above whooping crane condition for the Tatanka Wind
24		Farm, which is immediately adjacent to the South Deuel Wind project area. The
25		effectiveness of these procedures will be significantly diminished if they are not uniformly
26		implemented by all wind facilities in the immediate area. Commission Staff supports the
27		consistent application of whooping crane mitigation measures in an area.
28		
29		X. <u>AERIAL SPRAYING</u>
30		
31	Q.	Has the Commission ordered any conditions to facilitate aerial spraying in the
32		vicinity of wind turbines for facilities in Deuel County?
33	Α.	Yes. In Docket EL19-027, the Commission ordered the Crowned Ridge Wind II Project
34		to coordinate with aerial applicators through the following condition:

1		
2 3 4 5		Project owner must cooperate with agricultural spray applicators in shutting down turbines as needed to facilitate safe and effective spray operation and application.
6	Q.	Did South Deuel Wind make any commitments regarding aerial spraying in the
7		Application?
8	Α.	Yes. In Section 15.4.3.2 of the Application, South Deuel Wind states it will "work with
9 10		landowners to coordinate crop dusting activities to further reduce risks to crop dusters."
11	Q.	Is South Deuel Wind willing to agree to the most recent aerial spraying condition
12		ordered by the Commission?
13	Α.	No. The Commission ordered the following condition for the North Bend Wind Project in
14		Docket EL21-018:
15		
16 17 18 19 20		Applicant will cooperate with agricultural spray applicators, who inquire, by shutting down wind turbines as needed in order to accommodate safe and effective spray operation and application when conditions allow for aerial spraying.
21		In response to Staff data request 1-54(b), South Deuel Wind offered the following
22		amendments to the proposed condition:
23		
24 25 26 27 28 29 30		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. South Deuel Wind shall accommodate reasonable requests provided the agricultural spray applicator provides notice of intent to spray 3 days prior, and subsequent notices 12 hours and 2 hours prior to spraying.
31	Q.	Did South Deuel Wind explain the need for the proposed amendments?
32	Α.	No. South Deuel Wind provided no explanation for the need of specific notice
33		requirements in the aerial spraying condition.
34		
35		
36		
37		

1	Q.	Does Staff have a position on South Deuel Wind's proposed aerial spraying
2		condition?
3	Α.	Staff recommends South Deuel Wind explain why three separate notices are necessary
4		to accommodate aerial spraying. Without explanation, three separate notices seem
5		excessive and unreasonably burdensome to aerial sprayers.
6		
7		XI. CONSTRUCTION PROGRESS REPORTS
8		
9	Q.	Are there any other conditions Staff would recommend?
10	Α.	Yes. Wind energy facilities are high profile projects in the community and Staff receives
11		many inquiries regarding wind facilities before, during, and after construction. A periodic
12		progress report that provides South Deuel Wind's current activities and tracks permit
13		compliance would help Staff monitor the project and provide interested parties with
14		timely updates.
15		
16	Q.	Has the Commission shown support for adding a periodic reporting requirement
17		as a condition for a wind energy facility?
18	Α.	The Commission required periodic progress reports for the North Bend Wind Farm in
19		Docket EL21-018.
20		
21	Q.	What information should be included in the report?
22	Α.	The report should include a summary on the work completed and the activities to be
23		completed for the project. Also, a summary of consumer contacts is helpful in tracking
24		issues of importance and making sure issues get resolved timely. Finally, a permit
25		condition checklist with all required filings provides a means to manage and review
26		compliance.
27		
28	Q.	Does Staff have a sample report that can be used as a template for the report?
29	Α.	Yes. Please see Exhibit_JT-5 for a report that can be used as a template.
30		
31	Q.	What is the proposed frequency for this reporting requirement?
32	A.	Staff requests monthly reports during construction, and quarterly reports prior to
33		construction and after the date of commercial operations until reclamation is complete.
34		

1	Q.	Are there any other key construction milestones that should be reported to the
2		Commission?
3	Α.	Yes. There are multiple permit conditions with deadlines based on the date construction
4		commences, the date of commercial operations, or the date reclamation is completed.
5		To notify the Commission of these key milestones, Staff requests the following filings:
6		 Report the date construction will commence as soon as it is known, but no later
7		than five business days prior to commencement;
8		 Report the date construction was completed within five business days of
9		completion;
10		 Report the date of commercial operation within five business days of operation;
11		and
12		 Report the date reclamation was completed within five business days of
13		completion.
14		
15		XII. INTERVENOR CONCERNS
16		
17	Q.	Did the Commission grant intervention to any interested persons in this docket?
18	Α.	Yes. The Commission granted intervention to Matthew Holden, Arla Hamann
19		Poindexter, Lake Cochrane Improvement Association ("LCIA"), Jay Grabow, and Josh
20		Bekaert.
21		
22	Q.	Did Staff receive responses to discovery from all individuals granted party status?
23	Α.	Staff did not receive responses from Jay Grabow or Josh Bekaert prior to drafting this
24		testimony.
25		
26	Q.	At the public input meeting on August 22, 2024, Mr. Bekaert stated concerns about
27		his ability to travel to and from his residence during construction on a dead-end
28		access road, and the ability of South Deuel Wind to successfully cross the culvert
29		on the access road near his residence with heavy equipment. Do you have any
30		information to provide the Commission regarding this concern?
31	Α.	In response to Staff data request 1-28, South Deuel Wind stated "they are aware of the
32		culvert near Mr. Bekaert's property. South Deuel Wind has spoken with Mr. Bekaert
33		about his concerns and received culvert specifications from Deuel County to further
34		inform the evaluation of road improvements needed, if any. South Deuel Wind's review

is currently in process." Staff recommends South Deuel Wind provide an update on their
 work on Mr. Bekaert's concerns in rebuttal testimony. Please see Exhibit_JT-4 for the
 aerial imagery of Mr. Bekaert's residence, associated access road and culvert, and
 proposed turbine location 75.

5

6 Q. Please summarize South Deuel Wind's impacts to the Bekaert's residence.

A. Please see South Deuel Wind's response to Staff data request 2-3, Exhibit 2-3 (in
Exhibit_JT-1) for a map that shows all proposed turbines within 2 miles of Mr. Bekaert's
residence. South Deuel Wind is proposing eight turbine locations within 2 miles of Mr.
Bekaert's residence, including two turbines within 2,753 ft. of his residence. The
projected sound level at the residence is 39.2 dBA, 41.4 dBA or 44.4 dBA, depending on
the turbine model. The projected annual shadow flicker amount is 12 hours 36 minutes,
12 hours 54 minutes, or 11 hours 46 minutes, depending on the turbine model.

14

15 Q. Please summarize the LCIA's concerns.

- A. In its Application for Party Status, the LCIA stated its interests include the "safe operation of, access to, and departure from the Lake Cochrane Seaplane Base." In
 response to Staff data request 1-2, LCIA stated its "concerned that the three towers closest to the Lake Cochrane Seaplane Base, at a proposed height of 594 feet, are too close to the safe aircraft operation area for arriving and departing aircraft, and thus constitute obstructions to flight operations. If turbine locations 21, 22, and 49 were removed from the project plan, those concerns would be obviated."
- 23

Q. Did the LCIA conduct any technical analysis to support the removal of turbine locations 21, 22, and 49?

- A. In response to Staff data request 2-1(a), the LCIA stated it "has not conducted any
 technical analysis to the concerns expressed."
- 28

Q. Is there a specific setback from Lake Cochrane that the LCIA would recommend that would allow a safe aircraft operation area for arriving and departing planes? A. The LCIA did not provide a recommended setback from Lake Cochrane in response to Staff data request 2-1(d).

- 33
- 34

Q. Do any members of the LCIA own and operate a seaplane?

- 2 A. The LCIA indicated no in response to Staff data request 1-5.
- 3

4	Q.	How many seaplanes have landed/taken off at the Lake Cochrane Seaplane Base
5		annually over the last three years (2022, 2023, and 2024 to date)?

- 6 In response to Staff data request 1-6, the LCIA stated "it is not possible to quantify the Α. 7 number [of] aircraft operations at Lake Cochrane Seaplane Base because we lack the 8 facilities many land airports provide ... It is only possible to say that arrivals-departures 9 have been observed in the past, and the undersigned member of LCIA board [Matt Holden] believes such traffic has transpired during the current calendar year." In 10 11 response to Staff data request 2-3, the LCIA was unable to provide an estimate, stating 12 "Mr. Holden doesn't reside on the lake year-round and is unable to give an accurate 13 estimate."
- 14

15 Q. Has the LCIA proposed any conditions for South Deuel Wind?

- A. On November 6, 2024, the LCIA filed a procedural schedule and status update with the
 Commission. In the last paragraph, the LCIA urged "that any PUC approval of sites 21,
 22, and 49 in this matter be made contingent upon any future FAA's findings that none of
 them, in fact, are deemed to be hazards to aviation."
- 20

21 Q. Does Staff support the condition recommend by the LCIA?

- A. Yes. In response to Staff data request 3-2(c), South Deuel Wind stated it "will not
 construct any turbine location that has received a final determination of hazard." Staff
 believes there is broad support the LCIA's proposed condition.
- 25

26 Q. Are Mr. Holden's concerns similar to the LCIA's concerns in this docket.

- A. Based on responses to discovery, it appears that Mr. Holden's concerns and proposed
 resolution are very similar to the LCIA.
- 29

30 Q. Did Ms. Hamann Poindexter provide responses to Staff discovery?

A. Yes. Staff included her responses to Staff discovery in Exhibit_JT-2. Staff will consider
 the evidence provided by Ms. Hamann Poindexter through pre-filed direct testimony and
 at the evidentiary hearing before offering any recommendations on her positions.

1		XIII. STAFF'S PERMIT RECOMMENDATION
2		
3	Q.	Does Staff recommend the Application be denied because of Staff's issues and
4		concerns?
5	Α.	Not at this time. Because South Deuel Wind can address outstanding issues on rebuttal
6		and, to an extent, through the evidentiary hearing, Staff reserves any position on
7		granting the permit until such time as we have a complete record upon which to base
8		Staff's position. Staff would also note that some of the outstanding issues may be
9		addressed through conditions should the Commission grant a permit.
10		
11	Q.	Does this conclude your testimony?
12	Α.	Yes, this concludes my written testimony. However, I will supplement my written
13		testimony with oral testimony at the hearing to respond to South Deuel Wind's rebuttal
14		testimony, testimony submitted by any party to the docket, and responses to discovery.