

STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS
FOR THE PUBLIC UTILITIES COMMISSION

TABLE OF CONTENTS

In the Matter of the Application of Flying
Cow Wind, LLC for a Certificate of Need
for the up to 152 MW Bitter Root Wind
Project and Associated Facilities in
Yellow Medicine County, Minnesota

In the Matter of the Application of Flying
Cow Wind, LLC for a Site Permit for the
up to 152 MW Bitter Root Wind Project
and Associated Facilities in Yellow
Medicine County, Minnesota

STATEMENT OF THE ISSUE..... 2

SUMMARY OF CONCLUSIONS AND RECOMMENDATION 2

FINDINGS OF FACT..... 2

 I. Applicant..... 2

 II. Certificate of Need Application and Related Procedural Background..... 3

 III. Site Permit Application and Procedural Background 5

 IV. General Description of the Project..... 13

 V. Site Location and Characteristics 15

 VI. Wind Resource Considerations 16

 VII. Wind Rights and Easement/Lease Agreements 17

 VIII. Project Schedule..... 17

 IX. Summary of Public and Agency Comments..... 17

 A. Public Information and Environmental Scoping Meeting..... 17

 B. Written Comments in Environmental Scoping Comment
 Period19

 C. Joint Public Hearing 21

 D. Written Comments in Joint Public Hearing Comment Period 25

X.	Site Permit Criteria.....	28
XI.	Application of the Statutory Siting Criteria to the Proposed Project	29
A.	Human Settlement	29
B.	Zoning and Land Use.....	30
C.	Property Values.....	31
D.	Noise.....	33
E.	Shadow Flicker.....	33
F.	Visual Impacts.....	35
G.	Local Economy.....	37
H.	Public Health.....	37
I.	Public Safety	38
J.	Public Services and Infrastructure.....	39
	i. Roads.....	39
	ii. Communications Systems	40
	iii. Underground Infrastructure	41
K.	Recreational Resources and Tourism	41
L.	Effects on Agriculture and other Land-Based Economies	42
	i. Agriculture	42
	ii. Mining.....	43
M.	Archaeological and Historical Resources.....	44
N.	Airports and Aviation	45
O.	Wildlife	45
P.	Rare and Unique Natural Resources	49
Q.	Vegetation.....	50
R.	Soils and Topography	51
S.	Groundwater Resources	52
T.	Surface Water and Wetlands	52
U.	Air and Water Emissions.....	55
V.	Solid and Hazardous Wastes.....	55
W.	Future Development and Expansion.....	56
X.	Maintenance.....	56
Y.	Decommissioning, Turbine Abandonment and Restoration	57
Z.	Permit Conditions.....	58

CONCLUSIONS OF LAW	62
RECOMMENDATION	63
NOTICE.....	63

STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS
FOR THE PUBLIC UTILITIES COMMISSION

In the Matter of the Application of Flying Cow Wind, LLC for a Certificate of Need for the up to 152 MW Bitter Root Wind Project and Associated Facilities in Yellow Medicine County, Minnesota

**SUMMARY OF PUBLIC TESTIMONY,
FINDINGS OF FACT,
CONCLUSIONS OF LAW,
AND RECOMMENDATION**

In the Matter of the Application of Flying Cow Wind, LLC for a Site Permit for the up to 152 MW Bitter Root Wind Project and Associated Facilities in Yellow Medicine County, Minnesota

This matter was assigned to Administrative Law Judge James E. LaFave to conduct a public hearing and provide a summary of public testimony on the Certificate of Need (MPUC Docket No. 17-676) and Site Permit (MPUC Docket No. 17-749) Applications of Flying Cow Wind, LLC (Applicant) for an up to 152 megawatts (MW) wind energy conversion system in Yellow Medicine County, Minnesota (the Project). The Minnesota Public Utilities Commission (Commission or MPUC) also asked the Administrative Law Judge to prepare Findings of Fact, Conclusions of Law, and Recommendations on the merits of the Site Permit Application and provide recommendations, if any, on conditions and provisions for the proposed site permit.

A joint public hearing on the Certificate of Need and Site Permit Applications for the Project was held on June 28, 2018, at the Canby Elementary School in Canby, Minnesota. The record on both applications remained open until July 18, 2018, for the receipt of written public comments. The hearing record closed on August 6, 2018, the due date for reply comments.

Andrew Gibbons, Stinson Leonard Street LLP, Sean Flannery, Director of Permitting with Renewable Energy Systems Americas, Inc. (RES), Michelle Matthews, Development Manager at RES, Brian Lammers, Regional Vice President Business Development for RES, Nick Berzins, Senior Project Manager for RES, and Kristjan Varnik, Project Engineer at DNV GL appeared on Applicant's behalf.

William Storm, Environmental Review Manager, appeared on behalf of the Department of Commerce, Energy Environmental Review and Analysis division (DOC-EERA).

Cezar Panait, staff engineer, participated on behalf of the Commission's staff.

Kevin Pranis appeared on behalf of the Laborers District Council of Minnesota and North Dakota (LDC).

STATEMENT OF THE ISSUE

Has Applicant satisfied the criteria established in Minn. Stat., ch. 216F (2018) and Minn. R., ch. 7854 (2017) for a site permit for its proposed wind energy conversion system of up to 152 MW in Yellow Medicine County, Minnesota?

SUMMARY OF CONCLUSIONS AND RECOMMENDATION

The Administrative Law Judge concludes that Applicant has satisfied the applicable legal requirements and, accordingly, recommends that the Commission grant a site permit for the Project, subject to the conditions discussed below.

Based on the evidence in the hearing record, the Administrative Law Judge makes the following:

FINDINGS OF FACT

I. Applicant

1. Applicant, Flying Cow Wind LLC, is an affiliate of Renewable Energy Systems Americas, Inc. (RES).¹ Applicant is attempting to develop the up to 152 MW Bitter Root Wind Project in Yellow Medicine County, Minnesota.²

2. RES, through its affiliates, develops renewable energy projects throughout the United States and Canada.³ The RES group of companies has constructed over 160 renewable energy projects with a global portfolio that exceeds 12 gigawatts.⁴ RES developed and constructed the 200 MW Pleasant Valley Wind Farm in Dodge and Mower counties, Minnesota, which was substantially complete by 2015.⁵

¹ Ex. 202 at 1 (Site Permit Application).

² *Id.*

³ *Id.* at 2.

⁴ *Id.*

⁵ *Id.*

3. The Bitter Root Wind Project is a large wind energy conversion system (LWECS), with a Project boundary of approximately 22,888 acres in Yellow Medicine County.⁶ Applicant will develop, design, permit, and construct the Project.⁷

4. The Project abuts the South Dakota border and is located within one-half mile of Lake Cochrane, a spring-fed lake and recreation district in Deuel County, South Dakota.⁸

5. The Project was initially proposed in 2008 by a different applicant and was permitted by the Commission in 2010 as a 138 MW LWECS in Yellow Medicine and Lincoln counties.⁹ However, because no power purchase agreement was secured at that time, the Project was never constructed, and the LWECS site permit was revoked by the Commission at the request of the previous applicant on May 1, 2013.¹⁰

II. Certificate of Need Application and Related Procedural Background

6. A Certificate of Need is necessary for all large energy facilities, which are defined to include generators greater than 50 MW in size.¹¹ Because Flying Cow Wind is proposing a project of up to 152 MW, Flying Cow Wind is required to obtain a Certificate of Need from the Commission for this Project.¹²

7. On September 11, 2017, Flying Cow Wind filed a Petitioner for a Variance and Exemption from Certain Certificate of Need Application Requirements with the Commission.¹³

8. On September 20, 2017, the Commission issued a Notice of Comment Period on Certificate of Need Exemption Requests, which opened an initial comment period until October 2, 2017, and a reply comment period until October 9, 2017.¹⁴

9. On September 20, 2017, the staff of the Department of Commerce-Division of Energy Resources (DOC-DER) filed comments recommending the Commission approve Flying Cow Wind's exemption and variance requests.¹⁵

⁶ *Id.* at 1.

⁷ *Id.*

⁸ See Canby Public Hearing Transcript (Canby Tr.) at 32 (June 28, 2018) (Ruud).

⁹ Ex. 202 at 1 (Site Permit Application).

¹⁰ *Id.*

¹¹ See Minn. Stat. §§ 216B.2421, subd. 2(1), .243, subd. 2 (2018).

¹² See Minn. Stat. § 216B.243, subd. 2.

¹³ Petition of Flying Cow Wind, LLC for a Variance and Exemption from Certain Certificate of Need Application Requirements (Sept. 8, 2017) (eDocket No. 20179-135372-01).

¹⁴ Notice of Comment Period on Certificate of Need Exemption Requests (Sept. 20, 2017) (eDocket No. 20179-135691-01).

¹⁵ Comments of the Minn. Dep't of Commerce, Div. of Energy Res. (Sept. 19, 2017) (20179-135689-01). DOC-DER filed corrected comments on October 6, 2017. Corrected Comments of the Minn. Dep't of Commerce, Div. of Energy Res. (Oct. 6, 2017) (eDocket No. 201710-136208-01).

10. On October 6, 2017, the Commission issued a notice indicating that it would consider whether to grant Flying Cow Wind's exemption requests during a regularly scheduled meeting.¹⁶

11. On October 19, 2017, the Commission convened and voted to approve Flying Cow Wind's exemption and variance requests.¹⁷

12. On October 19, 2017, Applicant filed a Certificate of Need Application for the Project with the Commission.¹⁸ Flying Cow Wind is seeking a Certificate of Need under Minn. Stat. § 216B.243 (2018), because the Project is a large energy facility as defined by Minn. Stat. § 216B.2421 (2018).¹⁹

13. On October 26, 2017, DOC-EERA filed comments recommending that the Commission accept the Certificate of Need Application as complete and evaluate the Petition using its comment process, rather than a contested-case proceeding.²⁰

14. On November 1, 2017, the Commission issued an Order approving Flying Cow Wind's exemption and variance requests.²¹

15. On November 2, 2017, the Commission issued a Notice of Comment Period regarding the Certificate of Need, accepting written comments through November 22, 2017, and reply comments through December 4, 2017.²²

16. On December 8, 2017, the Commission issued a notice scheduling a meeting to consider: (1) whether to accept the Certificate of Need Application as complete; (2) whether to direct that the Certificate of Need Application be evaluated using the informal review process or refer it to Office of Administrative Hearings for contested case proceedings; and (3) whether the Commission should vary the time limits of its rules related to application completeness.²³

17. On December 21, 2017, the Commission voted to accept the Certificate of Need Application as substantially complete; use the informal review process; delegate its administrative authority to its executive secretary; ask DOC to state its position on the reasonableness of granting the Certificate of Need; direct Applicant to post its application and provide notice of the hearings; and extend the time frame for a decision on application completeness.²⁴

¹⁶ Notice of Comm'n Meeting (Oct. 6, 2017) (eDocket No. 201710-136184-04).

¹⁷ See Order of the Minn. Pub. Utils. Comm'n (Nov. 1, 2017) (eDocket No. 201711-137049-01).

¹⁸ Application for a Certificate of Need for a Large Wind Energy Conversion System (Oct. 19, 2017) (eDocket No. 201710-136649-02).

¹⁹ *Id.*

²⁰ Comments of the Dep't of Commerce, Div. of Energy Res. (Oct. 26, 2017) (eDocket No. 201710-136885-01).

²¹ Order of the Minn. Pub. Utils. Comm'n (Nov. 1, 2017) (eDocket No. 201711-137049-01).

²² Notice of Comment Period (Nov. 2, 2017) (eDocket No. 201711-137138-01).

²³ Notice of Comm'n Meeting (Dec. 8, 2017) (eDocket No. 201712-138036-04).

²⁴ Minutes (Dec. 21, 2017) (eDocket No. 20188-146019-01).

18. On January 12, 2018, the Commission incorporated its December 21, 2017, decision regarding the Certificate of Need Application into its Order Accepting Application as Substantially Complete and Directing the Use of Informal Review Process.²⁵

19. On March 12, 2018, DOC-EERA filed comments recommending that the Commission issue the Certificate of Need.²⁶

20. On March 14, 2018, the Laborers District Council of Minnesota and North Dakota (LDC) filed a Request for Contested Case Hearing and Petition for Intervention seeking to intervene as a party to the proceedings and requesting that a contested case be held for the proceedings.²⁷

21. On April 5, 2018, the Commission staff requested permission to file a letter to provide background material and comments regarding the informal contested case review process and consideration of requests for a contested case hearing as applied to Flying Cow Wind's Certificate of Need proceeding.²⁸ The Administrative Law Judge granted the Commission staff's request, setting a deadline of April 6, 2018 for the Commission staff to file its comments.²⁹

22. On April 6, 2018, the Commission staff filed a comment letter with the Administrative Law Judge addressing procedural matters and providing background information and context regarding the informal review process and the appropriate timing of requests for contested cases during the examination of the merits of a certificate of need application in connection with LDC's contested case request.³⁰ The Commission's staff's comment letter did not address the merits of LDC's contested case request.³¹

III. Site Permit Application and Procedural Background

23. On November 9, 2017, Flying Cow Wind filed a Site Permit Application for the Project with the Commission.³²

24. On November 28, 2017, the Commission issued a Notice of Comment Period requesting comments on: (1) whether the Commission should find the site permit application complete under Minnesota Rules, chapter 7854; (2) whether there were any contested issues of fact with respect to representations made in the Application; and (3) whether the Application should be referred to the Office of Administrative Hearings.³³ The

²⁵ Order of the Minn. Pub. Utils. Comm'n (Jan. 12, 2018) (eDocket No. 20181-138845-01).

²⁶ Public Comments of the Minn. Dep't of Commerce, Div. of Energy Res. (Mar. 12, 2018) (eDocket No. 20183-140957-02).

²⁷ Request for Contested Case Hr'g and Pet. for Intervention (Mar. 14, 2018) (eDocket No. 20183-141004-01).

²⁸ See Order Granting Commission Staff Permission to Make Out-of-Time Filing (Apr. 5, 2018) (eDocket No. 20184-141725-01).

²⁹ *Id.*

³⁰ Letter from the Commission to Administrative Law Judge (Apr. 6, 2018) (eDocket No. 21084-141761-01).

³¹ See *id.*

³² Site Permit Application (Nov. 9, 2017) (eDocket No. 201711-137275-01).

³³ Notice of Comment Period (Nov. 28, 2017) (eDocket No. 201711-137714-01).

Notice established an initial comment deadline of December 19, 2017, and a reply comment deadline of December 26, 2017.³⁴

25. On December 19, 2017, DOC-EERA filed comments recommending that the Commission accept the Site Permit as complete and issue a variance to Minn. R. 7854.0800, establishing the timeline for rendering a preliminary determination on issuing a site permit.³⁵

26. The Commission also received comments opposed to the Project from people living close to the proposed location.³⁶

27. On December 22, 2017, the Commission issued a Notice of Commission Meeting scheduling a meeting for January 4, 2018, to address whether to accept the Site Permit Application as substantially complete; what procedural process to authorize for evaluation of the Site Permit Application; and whether to vary the time limits of Commission rules relating to application completeness and draft site permit issuance.³⁷

28. On December 26, 2017, the Applicant filed reply comments concurring with DOC-EERA's recommendation that the Commission accept the Site Permit application as complete and issue a variance and requesting variances from particular administrative rules.³⁸

29. On January 4, 2018, the Commission met to consider the items identified in the Notice of Commission Meeting.³⁹ The Commission voted, in part, to accept the Site Permit as substantially complete; refer the Site Permit Application to an Administrative Law Judge to preside over a public hearing and prepare a summary of public comments; request that the Administrative Law Judge issue findings of fact, conclusions of law, and recommendations on the merits of the Site Permit Application; and extend the certain time frames contained in the administrative rules.⁴⁰

30. On January 30, 2018, the Commission incorporated its December 21, 2017, decision regarding the Site Permit Application into its Order Accepting Application, establishing Procedural Framework, and Varying Rules.⁴¹

31. On February 2, 2018, the Commission and DOC-EERA issued a Notice of Public Information and Scoping Meeting scheduling a public meeting for February 27,

³⁴ *Id.*

³⁵ Comments and Recommendations of the Minn. Dep't of Commerce Energy Environmental Review and Analysis (Dec. 19, 2017) (eDocket No. 201712-138270-01).

³⁶ Comment by Mark, Roberta, and Kelton King (Dec. 21, 2017) (eDocket No. 201712-138328-02); Comment by Shirley Holt (Dec. 20, 2017) (eDocket No. 201712-138432-01).

³⁷ Notice of Comm'n Meeting (Dec. 22, 2017) (eDocket No. 201712-138388-06).

³⁸ Reply Comments (Dec. 26, 2017) (eDocket No. 201712-138431-01).

³⁹ See Order of the Minn. Pub. Utils. Comm'n (Jan. 30, 2018) (eDocket No. 20181-139534-01).

⁴⁰ See *id.*

⁴¹ *Id.*

2018.⁴² The Notice solicited comments on: (1) the potential human and environmental impacts of the Project that should be considered in the environmental document and draft site permit for the Project; (2) the possible methods to minimize, mitigate, or avoid potential impacts of the Project; (3) unique characteristics of the proposed site or the Project that should be considered; and (4) missing or mischaracterized items in the Site Permit Application or the Certificate of Need Application.⁴³ The Notice established a March 19, 2018 deadline for written comments.⁴⁴

32. On February 7 and 14, 2018, Flying Cow Wind published notice of the Public Information and Scoping Meeting in the *Canby News*.⁴⁵

33. On February 8 and 9, 2018, Flying Cow Wind sent affected landowners, local units of government, and persons listed on the service list a letter and attachments containing information about the Project, including the text of the Site Permit Application and instructions on how to obtain electronically the appendices to the Site Permit Application.⁴⁶

34. On February 9, 2018, Flying Cow Wind sent copies of its Certificate of Need Application, Site Permit Application, and Notice of Public Meeting to applicable local government units.⁴⁷

35. On February 27, 2018, the Commission and Department held a public information meeting at the Canby Elementary School at 6:00 p.m.⁴⁸ The Commission, DOC-EERA, and Flying Cow Wind made presentations at the meeting.⁴⁹ Fifteen members of the public commented during the meeting and forty-two written comments were received during the comment period.⁵⁰ Four state agencies also submitted written comments: the DOC-DER, the Minnesota Pollution Control Agency (MPCA), Minnesota Department of Transportation (MnDOT), and Minnesota Department of Natural Resources (MnDNR).⁵¹

⁴² Notice of Pub. Information and Environmental Report Scoping Meeting (Feb. 2, 2018) (eDocket No. 20182-139712-02).

⁴³ *Id.*

⁴⁴ *Id.*

⁴⁵ See Aff. of Publ'n (Feb. 7, 2018) (eDocket No. 20183-140681-01); Aff. of Publ'n (Feb. 14, 2018) (eDocket No. 20183-140683-01).

⁴⁶ See Ex. 205 (Mailings) (eDocket Nos. 20183-140723-01, 20183-140723-02, 20183-140723-03, 20183-140723-04, 20183-140723-05, 20183-140723-06, 20183-140723-07, 20183-140723-08, 20183-140723-09, 20183-140723-10, 20183-140724-01, 20183-140724-02, 20183-140724-03, 20183-140724-04, 2018-140724-05, 20183-140724-06).

⁴⁷ See *id.*

⁴⁸ See Scoping and Information Meeting Transcript (Scoping Tr.) (Feb. 27, 2018).

⁴⁹ See *id.* at 2.

⁵⁰ See *id.*; Ex. 108 at 4 (Comments and Recommendations of the Minn. Dep't of Commerce Energy Environmental Review and Analysis).

⁵¹ Comment by DOC-DER (Mar. 12, 2018) (eDocket No. 20183-140957-02); Comment by MnDNR (Mar. 19, 2018) (eDocket No. 20183-141199-05); Comment by MnDOT (Mar. 19, 2018) (eDocket No. 20183-141199-07); Comment by MPCA (Feb. 5, 2018) (eDocket No. 20183-141199-03)

36. On March 5, 2018, the Administrative Law Judge issued a Notice of Prehearing Conference scheduling a prehearing conference for March 16, 2018.⁵²

37. On March 14, 2018, the Laborers District Council of Minnesota and North Dakota (LDC) filed a Request for Contested Case Hearing and Petition for Intervention seeking to intervene as a party to the proceedings and requesting that a contested case be held for the proceedings.⁵³

38. On March 15, 2018, Flying Cow Wind filed a proposed procedural schedule for the joint proceeding with the Administrative Law Judge on the Site Permit Application and Certificate of Need Application.⁵⁴

39. On March 20, 2018, Flying Cow Wind filed a Notice of Addendum to Site Permit Application to inform the Commission of its plans to file an addendum to the Site Permit Application (Site Permit Addendum) with a revised project layout and associated information.⁵⁵

40. On March 21, 2018, Flying Cow Wind filed a response in opposition to LDC's Contested Case Request.⁵⁶ Flying Cow Wind did not object to LDC's participation in the matters, but noted that formal intervention is unnecessary in light of the procedural devices already available under the specific review process ordered by the Commission.⁵⁷

41. DOC-DER also responded to LDC's Contested Case Request.⁵⁸ DOC-DER opposed the request for a contested case, but took no position on LDC's Petition to Intervene.⁵⁹ DOC-DER noted that even without a contested case proceeding, LDC's participation is readily allowed.⁶⁰

42. On March 28, 2018, LDC filed a reply brief regarding its Contested Case Request.⁶¹

43. On March 28, 2018, the Administrative Law Judge issued a Scheduling Order setting the date for a joint public hearing on the Site Permit Application and Certificate of Need Application for May 31, 2018, and establishing the procedural

⁵² Notice of Prehearing Conference (Mar. 5, 2018) (eDocket No. 20183-140764-01).

⁵³ Request for Contested Case Hr'g and Pet. for Intervention (Mar. 14, 2018) (eDocket No. 20183-141004-01).

⁵⁴ Proposed Procedural Schedule (Mar. 15, 2018) (eDocket No. 20183-141083-01).

⁵⁵ Notice of Addendum to Site Permit Appl. (Mar. 20, 2018) (eDocket No. 20183-141215-01).

⁵⁶ Flying Cow Wind LLC's Resp. to the Laborers District Council of Minn. and N.D.'s Req. for Contested Case Hr'g and Pet. to Intervene (Mar. 21, 2018) (eDocket No. 20183-141254-01).

⁵⁷ *Id.* at 7.

⁵⁸ See Dep't of Commerce, Div. of Energy Res. Resp. Regarding Request for Contested Case Proceedings (Mar. 28, 2018).

⁵⁹ *Id.* at 1.

⁶⁰ *Id.*

⁶¹ Reply to Flying Cloud, LLC Regarding Req. for Contested Case Hr'g and Pet. for Intervention (Mar. 28, 2018) (eDocket No. 20183-141494-02).

schedule for various filings, notices, and comment periods.⁶² Under this schedule, the Administrative Law Judge's final report was due August 1, 2018.⁶³

44. On March 28, 2018, Flying Cow Wind filed a Site Permit Addendum with a revised layout for the Project.⁶⁴ The Site Permit Addendum proposed eliminating the use of the Vestas V136 4.2MW turbines, increasing the number of proposed turbine locations to forty-four, increasing the number of alternate turbine locations to eight, and adjusting the original turbines locations based on the new turbine locations and land availability.⁶⁵

45. On March 29, 2018, Flying Cow Wind filed corrected noise and shadow flicker reports, replacing the reports filed on March 28, 2018.⁶⁶

46. On April 3, 2018, the Commission issued a Notice of Additional Comment Period extending the comment period to provide comments on the Project in response to the Site Permit Addendum.⁶⁷ The Notice of Additional Comment Period solicited comments on (1) the potential human and environmental impacts of the proposed revised Project scope that should be considered in the environmental document and draft site permit for the Project; (2) the possible methods to minimize, mitigate, or avoid potential impacts of the proposed revised Project; (3) unique characteristics of the proposed changes to the Project that should be considered; and (4) missing or mischaracterized items in the Site Permit Addendum.⁶⁸ The Notice established an April 13, 2018 deadline for written comments.⁶⁹ Sixteen additional written comments were received during the extended comment period, including a supplemental comment letter from the MnDNR.⁷⁰

47. On April 6, 2018 Flying Cow Wind sent affected landowners, local units of government, and persons listed on the service list a letter, the Site Permit Addendum, and associated attachments.⁷¹

48. On April 18, 2018, DOC-EERA issued its Environmental Report Scoping Decision setting forth matters to be addressed in the Environmental Report to be issued for the Project.⁷²

49. On April 19, 2018, DOC-EERA issued its comments and recommendations on the Site Permit Application, recommending that that Commission issue a Draft Site

⁶² Scheduling Order (Mar. 28, 2018) (eDocket No. 20183-140764-01).

⁶³ *Id.*

⁶⁴ Site Permit Addendum (Mar. 28, 2018) (eDocket No. 20183-141493-01).

⁶⁵ *Id.*

⁶⁶ Revised Sound and Shadow Flicker Study Reports (Mar. 29, 2018) (eDocket No. 20183-141518-01).

⁶⁷ Notice of Additional Comment Period (Apr. 3, 2018) (eDocket No. 20184-141655-01).

⁶⁸ *Id.*

⁶⁹ *Id.*

⁷⁰ Ex. 106 (Comments) (eDocket Nos. 20184-142055-02, 20184-142055-04, 20184-142055-06, 20184-142055-08, 20184-142055-10, 20184-142055-12, 20184-142055-14, 20184-142055-16, 20184-142055-18, 20184-142055-20, 20184-142056-01, 20184-142056-03, 20184-142056-05, 20184-142056-07, 20184-142056-09, 20184-142056-11).

⁷¹ Ex. 212 (Mailings) (eDocket Nos. 20184-141999-01, 20184-141999-02, 20184-141999-03, 20184-141999-04, 20184-141999-05, 20184-141999-06, 20184-141999-07, 20184-141999-08).

⁷² Environmental Report Scoping Decision (Apr. 18, 2018) (eDocket No. 20184-142097-02).

Permit, recommending a special condition to address the use of an Aircraft Detection Lighting System (ADLS) by the Project, and attaching a preliminary Draft Site Permit.⁷³

50. On May 4, 2018, DOC-EERA filed the Environmental Report and attachments for the Project and issued a Notice of Availability of Environmental Report.⁷⁴

51. On May 4, 2018, the Commission issued a Notice of Commission Meeting to be held on May 17, 2018 to determine whether the Commission should issue a Draft Site Permit for the Project.⁷⁵

52. On May 7, 2018, the Administrative Law Judge issued an Order on the Contested Case Request by LDC, denying LDC's request for a contested case hearing, and granting LDC's petition for intervention.⁷⁶

53. On May 17, 2018, the Commission met to consider whether it should issue a Draft Site Permit for the Project.⁷⁷ The Commission voted to issue the preliminary Draft Site Permit proposed by DOC-EERA without modifications.⁷⁸

54. On May 24, 2018, Flying Cow Wind filed a Motion to Amend the Scheduling Order.⁷⁹

55. On May 25, 2018, the Administrative Law Judge issued an Order Granting Flying Cow Wind's Motion to Amend the Scheduling Order, which cancelled the public hearing scheduled for May 31, 2018, and adopted an amended procedural schedule with a joint public hearing date of June 28, 2018.⁸⁰

56. On June 12, 2018, the Commission issued a Notice of Joint Public Hearing and a Notice of Draft Site Permit Availability.⁸¹ The Notice provided that a public hearing would be held before the Administrative Law Judge on June 28, 2018, and solicited written comments on (1) whether the Commission should issue a Certificate of Need and a Site Permit for the Project; (2) whether the Project is needed and in the public interest; (3) the costs and benefits of the Project; (4) the environmental and human impacts of the Project and how those impacts can be addressed; and (5) whether there are other Project-related issues or concerns.⁸² The Notice established a July 18, 2018, deadline for written

⁷³ Comments and Recommendations of the Minn. Dep't of Commerce Energy Environmental Review and Analysis (Apr. 19, 2018) (eDocket No. 20184-142109-02).

⁷⁴ Environmental Report (May 4, 2018) (eDocket No. 20185-142751-01); Notice of Availability of Environmental Report (May 4, 2018) (eDocket No. 20185-142755-01).

⁷⁵ Notice of Comm'n Meeting (May 4, 2018) (eDocket No. 20185-142761-12).

⁷⁶ Order on the Request for Contested Case Hearing and Pet. for Intervention by Laborers District Council of Minn. and N.D. (May 7, 2018) (eDocket No. 20185-142798-01).

⁷⁷ See Order from the Minn. Pub. Utils. Comm'n (May 17, 2018) (eDocket No. 20185-143330-01).

⁷⁸ *Id.*

⁷⁹ Mot. to Amend Scheduling Order (May 24, 2018) (eDocket No. 20185-143304-01).

⁸⁰ Order Granting Flying Cow Wind LLC's Mot. to Amend the Scheduling Order (May 25, 2018) (eDocket No. 20185-143340-01).

⁸¹ Notice of Joint Public Hr'g and Draft Site Permit Availability (June 12, 2018) (eDocket No. 20185-143330-01).

⁸² *Id.*

comments.⁸³ The Notice was published in the Minnesota Environmental Quality Board *EQB Monitor* on June 18, 2018.⁸⁴

57. On June 22, 2018, Flying Cow Wind filed visual simulations of the Project from three different locations near Lake Cochrane at the request of DOC-EERA.⁸⁵

58. On June 26, 2018, Flying Cow Wind filed a letter responding to comments from MnDNR and proposing to eliminate turbine locations T1, T20, and A10.⁸⁶

59. On June 28, 2018, the Administrative Law Judge presided over a joint public hearing on the Site Permit Application and Certificate of Need Application in Canby, Minnesota.⁸⁷ Approximately 68 members of the public attended the public hearing.⁸⁸ Commission staff, DOC-EERA staff, representatives from Flying Cow Wind, and a representative of LDC attended the public hearing.⁸⁹ Approximately 19 members of the public spoke at the hearing.⁹⁰ Additional written comments from the public were received before the end of the comment period.

60. On July 6, 2018, Flying Cow Wind filed a Motion to Amend Scheduling order.⁹¹

61. On July 10, 2018, LDC filed written comments requesting information from Flying Cow Wind regarding local labor practices of RES on two other wind projects.⁹²

62. On July 18, 2018, the Administrative Law Judge granted the Motion to Amend Scheduling Order.⁹³ The due date for the Administrative Law Judge's final report was moved to September 5, 2018.⁹⁴

63. On July 18, 2018, LDC filed a second Request for Contested Case Hearing, requesting that a contested case be held for the proceedings.⁹⁵

64. On July 18, 2018, the Lake Cochrane Improvement Association (Association) filed a Petition to Intervene and a Request for Contested Case Hearing,

⁸³ *Id.*

⁸⁴ *EQB Monitor* (June 18, 2018) (eDocket No. 20186-144120-01).

⁸⁵ Ex. 214 (Visual Simulations) (eDocket Nos. 20186-144071-01, 20186-144071-02, 20186-144071-03, 20186-144071-04, 20186-144071-05).

⁸⁶ Letter from Flying Cow Wind to MnDNR (June 26, 2018) (eDocket No. 20186-144183-01).

⁸⁷ See Canby Tr. at 4.

⁸⁸ See Public Hearing Sign-In Sheet (June 28, 2018) (eDocket No. 20187-144798-17).

⁸⁹ See Canby Tr. 2-3.

⁹⁰ See *id.*

⁹¹ Motion to Amend Scheduling Order (July 6, 2018) (eDocket No. 20187-144579-01).

⁹² Request for Information from Flying Cow, LLC (July 10, 2018) (eDocket No. 20187-144641-01).

⁹³ Order Granting Second Motion to Amend Scheduling Order (July 18, 2018) (eDocket No. 20187-144984-01).

⁹⁴ *Id.*

⁹⁵ Request for Contested Case Hearing (July 18, 2018) (eDocket No. 20187-145016-04).

seeking to intervene as a party to the proceedings and requesting that a contested case be held for the proceedings.⁹⁶

65. On July 18, 2018, Flying Cow Wind submitted comments on proposed permit conditions along with its proposed findings of fact, conclusions of law, and recommendation.⁹⁷

66. On July 25, 2018, Flying Cow Wind filed a consolidated response in opposition to the Association's Petition to Intervene and the Association's Contested Case Request.⁹⁸ Flying Cow Wind opposed both intervention and a contested case request, noting in part that neither is necessary in light of the procedural devices available to the Association under the specific review process ordered by the Commission.⁹⁹

67. On July 27, 2018, Flying Cow Wind filed a response in opposition to LDC's Second Contested Case Request, noting that Intervenor failed to show that a contested case hearing is warranted.¹⁰⁰

68. On July 27, 2018, the Association replied in support of the Association's Petition to Intervene and Contested Case Request.¹⁰¹

69. On August 6, 2018, LDC filed its Proposed Findings.¹⁰²

70. On August 6, 2018, the Association filed its Proposed Findings.¹⁰³

71. On August 6, 2018, DOC-EERA filed Comments and Recommendations addressing substantive public comments, edits, or other responses to Flying Cow Wind's proposed findings of fact, conclusions of law, and recommendations.¹⁰⁴ DOC-EERA recommended that the site permit include additional conditions requiring Flying Cow Wind to: (1) report the amount of local labor used on the Project, (2) take specific actions should calcareous fends be identified within the Project area, and (3) incorporate a Threatened and Endangered Species Avoidance Plan into the Project's Prairie Protection and Management Plan.¹⁰⁵ DOC-EERA also recommended an additional condition allowing

⁹⁶ Petition to Intervene (July 18, 2018) (eDocket No. 20187-145010-01); Request for Contested Case Hearing (July 18, 2018) (eDocket No. 20187-145011-01).

⁹⁷ Comments of Flying Cow Wind and Proposed Findings of Fact, Conclusions of Law, and Recommendations (July 18, 2018) (eDocket No. 20187-145014-01).

⁹⁸ Flying Cow Wind LLC's Consolidated Response to Lake Cochrane Improvement Association's Pet. to Intervene and Request for Contested Case Hearing (July 25, 2018) (eDocket No. 20187-145226-01).

⁹⁹ *Id.*

¹⁰⁰ Flying Cow Wind, LLC's Response to the Request for Contested Case Hearing of the Laborers District Council of Minn. and N.D. (July 27, 2018) (eDocket No. 20187-145300-01).

¹⁰¹ Lake Cochrane Improvement Association Reply (July 27, 2018) (eDocket No. 20187-145288-01).

¹⁰² Laborers District Council of Minn. & N.D. Proposed Findings (Aug. 6, 2018) (eDocket No. 20188-145571-03).

¹⁰³ Lake Cochrane Improvement Association Proposed Findings (Aug. 6, 2018) (eDocket No. 20188-145563-01).

¹⁰⁴ Energy Environmental Review and Analysis Comments and Recommendations (Aug. 6, 2018) (eDocket No. 20188-145537-02).

¹⁰⁵ *Id.*

Flying Cow Wind to install an FAA approved lighting system without ADLS, provided the FAA does not approve the ADLS application or FAA approval is not timely.¹⁰⁶ Lastly, DOC-EERA stated that it does not support the Association's proposal that the Project be required to comply with the three-mile setback ordinance of neighboring Deuel County, South Dakota.¹⁰⁷ DOC-EERA recommended issuing a site permit with its proposed conditions.¹⁰⁸

72. On August 10, 2018, the Administrative Law Judge denied the Association's Petition to Intervene and a Request for Contested Case Hearing.¹⁰⁹

73. On August 14, 2018, the Administrative Law Judge denied LDC's second request for a contested case hearing.¹¹⁰

74. On August 21, 2018, the Association and LDC filed a Joint Motion for Certification of Request for Contested Case Hearing and Intervention to Public Utilities Commission.¹¹¹ The Administrative Law Judge denied that motion on August 30, 2018.¹¹²

IV. General Description of the Project

75. The Project is proposed to be located in Yellow Medicine County, on the border of Minnesota and South Dakota.¹¹³

76. The Project consists of 44 turbines (52 proposed turbine locations to allow for 8 alternate turbine locations) yielding a total nameplate capacity of up to 152 MW.¹¹⁴ The Project also includes associated facilities, including a new collection substation (to be located in Deuel County, South Dakota), an approximately 10-mile long 345 kilovolt (kV) high-voltage transmission line, underground electrical collection lines, up to two permanent meteorological towers, gravel access roads, and an operations and maintenance facility.¹¹⁵

¹⁰⁶ *Id.*

¹⁰⁷ *Id.*

¹⁰⁸ *Id.*

¹⁰⁹ Order on the Request for Contested Case Hearing and Petition for Intervention by the Lake Cochrane Improvement Association (Aug. 10, 2018) (eDocket No. 20188-145705-01.)

¹¹⁰ Amended Order Denying the Second Request for Contested Case Hearing by the Laborers District Council of Minn. and N.D. (Aug. 14, 2018) (eDocket No. 20188-145761-01). Due to a clerical error, an order was mistakenly filed regarding LDC's second request for a contested case hearing. On August 10, 2018 that order was vacated and stricken from the record. See First Post-Hearing Order (Aug. 10, 2018) (eDocket No. 20188-145691-01).

¹¹¹ Joint Mot. for Certification of Request for Contested Case Hearing and Intervention to Pub. Utils. Comm'n (Aug. 21, 2018) (eDocket No. 20188-145912-01).

¹¹² Order Denying the Joint Mot. for Certification of Request for Contested Case Hearing and Intervention to Pub. Utils. Comm'n (Aug. 30, 2018) (eDocket No. 20188-146109-01).

¹¹³ See Ex. 202 at 2 (Site Permit Application); Ex. 210 at 1-2 (Site Permit Addendum).

¹¹⁴ *Id.*

¹¹⁵ *Id.* at 1, 4; see also Ex. 210 at 1 (Site Permit Addendum).

77. Flying Cow Wind plans to use the Vestas V136 3.45 MW turbines.¹¹⁶ This turbine model has an anticipated hub height of 345 feet (105 meters) and will measure 568 feet (173 meters) from the base of the tower to the tip of the upright blade.¹¹⁷ The rotor diameter is 446 feet (135 meters).¹¹⁸

78. The wind turbines consist of a nacelle, rotor and blades, tower, and foundation.¹¹⁹ The rotor consists of three blades mounted to a rotor hub.¹²⁰ The hub is attached to the nacelle, which houses the gearbox, generator, brake, cooling system, and other electrical and mechanical systems.¹²¹ The turbine towers, on which the nacelle is mounted, consist of four sections manufactured from certified steel plates.¹²² The wind turbines' freestanding 345-foot tubular towers will be connected by anchor bolts to an underground concrete foundation.¹²³ A control panel inside the base of each turbine tower houses communication and electronic circuitry.¹²⁴ Each wind turbine will be accessible via all-weather, aggregate-surfaced roads that will connect with public roads.¹²⁵ The roads will be low-profile to allow farm equipment to cross.¹²⁶

79. The electricity generated by each turbine is raised (stepped up) to power collection line voltage of 34.5 kV.¹²⁷ The electricity is collected by a system of underground power collection lines within the Project Area.¹²⁸ A fiber optic communication system will also be installed between each turbine site and the Project Substation.¹²⁹ The fiber optic lines will provide communication between the wind turbines, Project Substation, and the O&M facility.¹³⁰ All the collection system and fiber optic cables will terminate at the proposed Project Substation, where additional substation equipment will be installed to accommodate the proposed Project.¹³¹

80. The Project Substation will collect and interconnect approximately seven underground cable feeders in a straight bus configuration.¹³² The Project Substation will consist of switch gear, metering, transformers, electrical control and communications systems, and other high voltage equipment needed to transform the electricity generated by the Project from 34.5 kV to 345 kV.¹³³

¹¹⁶ Ex. 210 at 1-2 (Site Permit Addendum).

¹¹⁷ Ex. 202 at 3 (Site Permit Application).

¹¹⁸ *Id.* at 5.

¹¹⁹ *See id.* at 9-10.

¹²⁰ *Id.* at 9.

¹²¹ *Id.*

¹²² *Id.*

¹²³ *Id.* at 10.

¹²⁴ *Id.* at 9.

¹²⁵ *Id.* at 12.

¹²⁶ *Id.*

¹²⁷ *Id.* at 10.

¹²⁸ *Id.*

¹²⁹ *Id.*

¹³⁰ *Id.*

¹³¹ *Id.* at 11.

¹³² *Id.*

¹³³ *Id.* at 10-11.

81. The point of interconnection is Otter Tail Power's proposed Astoria Substation in Deuel County, South Dakota.¹³⁴ The Project includes a proposed aboveground 345 kV transmission line, approximately 10 miles in length to connect the Project Substation to the point of interconnection.¹³⁵

82. The Project Substation and transmission line will be permitted through South Dakota Public Utilities Commission and Deuel County, as applicable.¹³⁶

83. The turbines will have supervisor control and data acquisition (SCADA) communication technology to allow control and monitoring of the wind farm.¹³⁷ The SCADA communications system permits automatic, independent operation and remote supervision, thus allowing the simultaneous control of many wind turbines.¹³⁸

84. The Project is scheduled for construction in the first quarter of 2019, with an anticipated in-service and commercial operation date in fourth quarter of 2019, pending Commission and related approvals, completion of the interconnection process, and other development activities.¹³⁹

V. Site Location and Characteristics

85. The Project is located in southwestern Minnesota in Yellow Medicine County.¹⁴⁰ The county is predominantly rural with an agricultural economic base.¹⁴¹ The Project includes portions of Florida, Fortier, and Norman townships and is situated in the southwestern corner of Yellow Medicine County.¹⁴² There are approximately 108 homes located within the Project Area.¹⁴³

86. The Project Area is approximately 22,888 acres.¹⁴⁴ Flying Cow Wind initially reviewed an area of approximately 41,000 acres for critical issues and sensitive resources within which to site the Project.¹⁴⁵ The initial footprint of the Project Area was revised numerous times, taking into account landowner participation, regulatory agency and public comments, airport needs and airspace concerns, efficient and effective use of wind energy, minimization of environmental impacts, and applicable setback requirements.¹⁴⁶

87. Because the Project is located in a predominately agricultural area of southwestern Minnesota, wind turbines and associated facilities are primarily sited on

¹³⁴ *Id.* at 10-11.

¹³⁵ *Id.* at 10.

¹³⁶ *Id.* at 10-11.

¹³⁷ *Id.* at 10, 12.

¹³⁸ *Id.* at 12.

¹³⁹ *Id.* at 1

¹⁴⁰ *Id.* at 13.

¹⁴¹ *Id.*

¹⁴² *Id.*

¹⁴³ *Id.*

¹⁴⁴ *Id.* at 1.

¹⁴⁵ *Id.* at 3.

¹⁴⁶ *Id.* at 8.

agricultural lands.¹⁴⁷ The Project Area consists of approximately 46.5% cropland and 26.2% pasture/grassland.¹⁴⁸ Approximately 82.19 acres (0.36% of the Project Area) will be permanently converted to non-agricultural land use.¹⁴⁹

88. In designing the Project layout, Flying Cow Wind incorporated the wind energy conversion facility siting criteria outlined in the Commission's Order Establishing General Wind Permit Standards, Docket No. E, G999/M-07-1102 (January 11, 2008) (MPUC General Permit Standards), DOC Site Permit Application Guidance, Yellow Medicine County Land Use and Related Resource Management Ordinance (Section XVI Renewable Energy, Setbacks Part 1.6 and Requirements and Standards Part 1.7), setback standards, and RES standards and best practices.¹⁵⁰ Where setbacks differ for the same feature, Flying Cow Wind uses the most stringent setback distance.¹⁵¹

89. The Project will include setbacks for: (1) wind access buffer of five rotor diameters in the prevailing wind direction and three rotor diameters in the non-prevailing wind direction; (2) residences; (3) MPCA noise standard compliance; (4) public lands and public lands managed as grasslands; (5) USFWS grasslands and conservation easements; (6) USFWS wetland easements; (7) uninhabited structures; (8) public roads and trails; (9) microwave beam paths; (10) pipelines and wells; (11) railroads; and (12) communication towers.¹⁵² Flying Cow Wind considered receptors in Minnesota and South Dakota in analyzing and applying identified setbacks.¹⁵³

VI. Wind Resource Considerations

90. Flying Cow Wind has collected data from three temporary meteorological monitoring stations within the Project Area.¹⁵⁴ The earliest data collected within the Project Area is from January 2008.¹⁵⁵

91. The prevailing winds are generally north/south and the non-prevailing winds are generally east/west.¹⁵⁶ Wind speeds are expected to be higher in the winter and lower in the summer.¹⁵⁷ Monthly average wind speeds for the Project Area range from 5.96 meters per second (m/s) to 11.14 m/s.¹⁵⁸

¹⁴⁷ *Id.* at 3.

¹⁴⁸ *Id.*

¹⁴⁹ Ex. 210 at 5 (Site Permit Addendum).

¹⁵⁰ Ex. 202 at 5 (Site Permit Application).

¹⁵¹ *Id.*

¹⁵² *Id.* at 6-7.

¹⁵³ *See, e.g., id.* at 24-25, 31-32.

¹⁵⁴ *Id.* at 94.

¹⁵⁵ *Id.*

¹⁵⁶ *Id.* at 98.

¹⁵⁷ *Id.* at 95.

¹⁵⁸ *Id.*

92. The internal array spacing is a minimum of three RD spacing in the non-prevailing direction and a minimum of five RD spacing in the prevailing direction, with up to 20% of the turbines spaced closer to each other.¹⁵⁹

93. The Project will have a nameplate generation capacity of up to 152 MW and a net capacity factor between 40 and 45%.¹⁶⁰ Annual energy production will depend on the final layout.¹⁶¹

VII. Wind Rights and Easement/Lease Agreements

94. Flying Cow Wind has approximately 17,196 acres of the 22,888 acres (75%) within the Project Area participating under land lease and wind easement or setback easement agreements.¹⁶² All Project facilities will be constructed on leased land.¹⁶³ The current set of land agreements is sufficient to accommodate construction and operation of proposed facilities and meet required buffers.¹⁶⁴

VIII. Project Schedule

95. Applicant anticipates that the Project will begin commercial operation by October 2019.¹⁶⁵

IX. Summary of Public and Agency Comments

A. Public Information and Environmental Scoping Meeting

96. On February 27, 2018, the Commission and Department held a public information meeting at the Canby Elementary School in Canby, Minnesota.¹⁶⁶ The Commission staff, Flying Cow Wind, and the DOC-EERA made presentations at the public information meeting.¹⁶⁷ Fifteen members of the public commented during the public information meeting.¹⁶⁸

97. Several individuals spoke in favor of the Project, noting: climate change; future renewable energy needs; resources available to landowners, townships, and the county; and employment opportunities.¹⁶⁹

98. Bob Pollock supports the Project, but also expressed concerns about preserving farmland, and referenced soil compaction, islanding of fields, the soil profile,

¹⁵⁹ *Id.* at 105.

¹⁶⁰ *Id.* at 106.

¹⁶¹ *Id.*

¹⁶² Ex. 210 at 3 (Site Permit Addendum).

¹⁶³ Ex. 202 at 13 (Site Permit Application).

¹⁶⁴ *Id.*

¹⁶⁵ *Id.* at 105.

¹⁶⁶ See Ex. 317 (Notice of Public Information and Environmental Report Scoping Meeting).

¹⁶⁷ See Public Information Meeting Transcript (Public Meeting Tr.) at 2 (Feb. 27, 2018).

¹⁶⁸ See *id.*

¹⁶⁹ *Id.* at 35 (Pollock), 38 (Hemish), 46 (Miller), 70-71 (Thomssen).

and damage to drain tile.¹⁷⁰ Finally, he stated that, given the complexity of the contracts between landowners and wind developers, landowners should be given assistance interpreting the contracts.¹⁷¹

99. Several people advocated for the use of an ADLS in conjunction with the Project.¹⁷²

100. George Holborn expressed concerns about negative impacts on property values, as well as the potential for adverse health effects.¹⁷³

101. Numerous people were concerned about the Project's impacts on nearby Lake Cochrane.¹⁷⁴ Lake Cochrane is located in Deuel County, South Dakota and is less than a half mile from the Minnesota – South Dakota boarder.¹⁷⁵ The South Dakota Department of Game Fish and Parks operates a state recreational area on the shores of Lake Cochrane.¹⁷⁶ Pat Meyer maintained that “[a] state park recreational area and an industrial wind farm cannot exist in harmony.”¹⁷⁷

102. In addition, Ron Ruud, co-president of the Lake Cochrane Improvement Association and resident of Lake Cochrane, commented on the regional visitors to Lake Cochrane, and the Lake Cochrane Recreation Area.¹⁷⁸ Mr. Ruud requested that the three mile setback adopted by Deuel County, South Dakota be applied to this Minnesota Project, noting that Deuel County decided to impose the three mile setback due to sound, site, and property values. He requested that an ALDS be utilized for the Project.¹⁷⁹ He commented that impacts on property values are a concern, and that it is common sense that property values are reduced when wind turbines are placed too close to a recreational area, and impacts increase with the uniqueness of the area.¹⁸⁰ Mr. Ruud also raised the issue of avian impacts, and inquired about the comments of MnDNR on turbine locations.¹⁸¹

103. Several individuals advocated for the use of local workers on the project.¹⁸² Mr. Kevin Pranis, who has appeared on behalf of the LDC in this matter, asked for clarification on Flying Cloud Wind and RES's practice regarding hiring local workers.¹⁸³ He noted the local workforce is highly skilled in wind farm construction, and expressed

¹⁷⁰ *Id.* at 35-38 (Pollock).

¹⁷¹ *Id.*

¹⁷² *Id.* at 46-47 (Antony), 48-50 (Mulder), 57-58 (Ruud).

¹⁷³ *Id.* at 38-43 (Holborn).

¹⁷⁴ *Id.* at 63-64 (Mulder), 53-55 (Meyer)

¹⁷⁵ Canby Tr. at 32 (Ruud).

¹⁷⁶ See Public Information Meeting Transcript (Public Meeting Tr.) at 56 (Ruud).

¹⁷⁷ *Id.* at 55 (Meyer).

¹⁷⁸ *Id.* at 55-58 (Ruud).

¹⁷⁹ *Id.* at 56.

¹⁸⁰ *Id.* at 58.

¹⁸¹ *Id.* at 57-58.

¹⁸² *Id.* at 59-60 (O'Reilly), 61-62 (Pesek), 64-65 (Krueger).

¹⁸³ *Id.* at 65-66 (Pranis).

his hope that most of the construction jobs for the Project would be filled with local workers.¹⁸⁴

104. Ms. Gabriella Snortum questioned what the construction process would look like on a day-to-day basis.¹⁸⁵

B. Written Comments in Environmental Scoping Comment Period

105. On February 2, 2018, the Commission and DOC-EERA issued a Notice of Public Information and Scoping Meeting and solicited comments on (1) potential human and environmental impacts of the Project that should be considered in the environmental document and draft site permit for the Project; (2) possible methods to minimize, mitigate, or avoid potential impacts of the Project; (3) unique characteristics of the proposed site or the Project that should be considered; and (4) missing or mischaracterized items in the Site Permit Application or the CN Application.¹⁸⁶ The Notice established a March 19, 2018 deadline for written comments.¹⁸⁷ Forty-two written comments were received during the comment period, including comments from MnDNR, MnDOT, the MPCA, and DOC- DER.¹⁸⁸

106. Multiple commenters opposed the Project based on the potential impacts to Lake Cochrane. These commenters include lake residents, property owners with seasonal homes, representatives of the Lake Cochrane Improvement Association, and other concerned individuals. These commenters expressed concern regarding visual impacts on the natural setting, impacts on wildlife and waterfowl, noise concerns, concerns with shadow flicker, the use of sea planes on the lake, the visual impacts of night-time lighting, and negative impacts to property values. These commenters also requested that the three mile setback from Lake Cochrane established by Deuel County, South Dakota be honored in Minnesota.¹⁸⁹

¹⁸⁴ *Id.*

¹⁸⁵ *Id.* at 71 (Snortum).

¹⁸⁶ Ex. 317 (Notice of Public Information and Environmental Report Scoping Meeting).

¹⁸⁷ *Id.*

¹⁸⁸ See Ex. 108 at 4 (Comments and Recommendations of the Minn. Dep't of Commerce Energy Environmental Review and Analysis); see also Comment by DOC- DER (Mar. 12, 2018) (eDocket No. 20183-140957-02); Comment by MnDNR (Mar. 19, 2018) (eDocket No. 20183-141199-05); Comment by MnDOT (Mar. 19, 2018) (eDocket No. 20183-141199-07); Comment by MPCA (Feb. 5, 2018) (eDocket No. 20183-141199-03).

¹⁸⁹ Comment by Amy Wagner (March 16, 2018) (eDocket No. 20183-141198-20); Comment by Brenda and Mike Taylor (Mar. 19, 2018) (eDocket No. 20183-141198-14); Comment by Ron Ruud (Mar. 15, 2018) (eDocket No. 20183-141198-12); Comment by Ron Ruud (Mar. 20, 2018) (eDocket No. 20183-141198-10); Comment by Paul Pedersen (Mar. 16, 2018) (eDocket No. 20183-141198-04); Comment by Patricia Meyer (Mar. 17, 2018) (eDocket No. 20183-141198-02); Comment by Jackie Otkin (Mar. 19, 2018) (eDocket No. 20183-141196-20); Comment by Vicki Oswald (Mar. 19, 2018) (eDocket No. 20183-141196-18); Comment by Lori Nosbush (Mar. 16, 2018) (eDocket No. 20183-141196-16); Comment by Travis Norgaard (Mar. 19, 2018) (eDocket No. 20183-141196-14); Comment by Susan Norgaard (Mar. 12, 2018) (eDocket No. 20183-141196-12); Comment by David Meyer (Mar. 17, 2018) (eDocket No. 20183-141196-06); Comment by Mark, Roberta and Kelton King (Mar. 20, 2018) (eDocket No. 20183-141195-15); Comment by Shirly Holt (Mar. 4, 2018) (eDocket No. 20183-141195-05); Comment by Lisa Gebhart (Mar. 19, 2018) (eDocket No. 20183-141195-01); Comment by Bradley Fairchild (Mar. 19, 2018) (eDocket No. 20183-141194-15);

107. Based on comments made at the public information meeting regarding night-time aviation lighting for the Project, Flying Cow Wind agreed to install a radar-ALDS for the Project, subject to FAA approval of its use for the Project.¹⁹⁰

108. Multiple commenters provided support for the Project, noting that the Project will have minimal impacts to the environment, create high-paying jobs, and provide significant economic benefits in the form of direct payments to participating landowners, tax revenue for the county and townships and other economic benefits to the broader community. Commenters also voiced support for renewable generation projects generally. In addition, certain commenters noted that landowners in the Project Area should be allowed to use their property without being subject to the approval of landowners in South Dakota¹⁹¹ Mr. Gary and Ms. Marsha Gabrielson, South Dakota residents and owners of land in Minnesota and South Dakota, commented on the status of Lake Cochrane development, noting the Lake is heavily-developed and can no longer be described as pristine, that the development of the Lake has affected the environment by creating noise pollution, air and water pollution, and displacing wildlife. They noted that Lake Cochrane residents had the freedom to develop the Lake area, but want the ability to control what other landowners do with their land by imposing a three mile setback from the lake. They suggested that Lake Cochrane residents should adjust to the Project just as they have adjusted to the increase in Lake development and activity.¹⁹²

109. Stacey Karels on behalf of the Mankato Building Trades Council and Mr. Burt Johnson from the North Central States Regional Council of Carpenters each commented on the use of local jobs for wind farm construction, noting that increased use of local workforce increases the benefit to the local community. Mr. Karels also requested that quarterly reporting requirements related to the use of local construction workers be required, and questioned what commitments Flying Cow Wind is willing to make regarding hiring of local workers¹⁹³

110. Ms. Katie Hatt, Executive Director of the North Star Policy Institute, recommended that the Commission include reporting requirements on the use of local and non-local construction labor during the construction phase of the Project and future wind farm projects as a Site Permit condition. She indicated the data is necessary to sufficiently assess the human and environmental impacts of wind farm projects, and that

Comment by Ashley Conner (Mar. 19, 2018) (eDocket No. 20183-141194-11); Comment by Jennifer Bauer-Fuhr (Mar. 19, 2018) (eDocket No. 20183-141194-09); Comment by Char Bauer (Mar. 17, 2018) (eDocket No. 20183-141194-07); Comment by Diane Armstrong (Mar. 18, 2018) (eDocket No. 20183-141194-05); Comment by Abbey Pederson (Mar. 16, 2018) (eDocket No. 20183-141194-03).

¹⁹⁰ Reply Comment by Flying Cow Wind (Mar. 15, 2018) (eDocket No. 20183-141198-08).

¹⁹¹ Comment by Drew Wesner (Mar. 19, 2018) (eDocket No. 20183-141199-02); Comment by Lewis Miller (Feb. 25, 2018) (eDocket No. 20183-141196-10); Comment by Jennifer Meyer (Mar. 19, 2018) (eDocket No. 20183-141196-08); Comment by Perry Lueders (Mar. 19, 2018) (eDocket No. 20183-141196-02); Comment by Richard Larsen (Mar. 20, 2018) (eDocket No. 20183-141195-19); Comment by Todd Pesek (Mar. 14, 2018) (eDocket No. 20183-141198-06); Comment by Mike and Mona Evens (Mar. 15, 2018) (eDocket No. 20183-141194-13); Comment by Paul Tol (Mar. 20, 2018) (eDocket No. 20183-141198-18).

¹⁹² Comment by Gary and Marsha Gabrielson (Mar. 12, 2018) (eDocket No. 20183-141194-19).

¹⁹³ Comment by Mankato Building Trades (Mar. 19, 2018) (eDocket No. 20183-141196-04); Comment by N. Central States Regional Council of Carpenters (Mar. 19, 2018) (eDocket No. 20183-141195-13).

often times there is insufficient data to assess the economic impacts of wind farm projects in Minnesota.¹⁹⁴

111. On April 3, 2018, the Commission issued a Notice of Additional Comment Period extending the comment period to provide comments on the Project in response to the Site Permit Addendum.¹⁹⁵ The Notice of Additional Comment Period solicited comments on: (1) potential human and environmental impacts of the proposed revised Project scope that should be considered in the environmental document and draft site permit for the Project; (2) possible methods to minimize, mitigate, or avoid potential impacts of the proposed revised Project; (3) unique characteristics of the proposed changes to the Project that should be considered; and (4) missing or mischaracterized items in the Site Permit Addendum.¹⁹⁶ The Notice established an April 13, 2018 deadline for written comments.¹⁹⁷ Sixteen additional written comments were received during the extended comment period, including a supplemental comment letter from MnDNR.¹⁹⁸

112. MnDNR provided supplemental comments expressing concern over the siting of turbines T1, T20, A8, A9, A10, and T39.¹⁹⁹ The DNR also provided comments regarding ecologically significant areas in the Project Area and on state-listed species.²⁰⁰

113. Several individuals submitted identical comments on behalf of the Minnesota Laborers District Council, promoting the hiring of local workers for construction jobs and suggesting that Flying Cow Wind be required to disclose a workforce plan and submit data on the use of local workers as a permit condition.²⁰¹

C. Joint Public Hearing

114. On June 12, 2018, the Commission issued a Notice of Joint Public Hearing and a Notice of Draft Site Permit Availability.²⁰² The Notice provided that a public hearing on the Application would be held before the Administrative Law Judge on June 28, 2018, and solicited written comments on: (1) whether the Commission should issue a Certificate

¹⁹⁴ Comment by North Star Policy Institute (Mar. 19, 2018) (eDocket No. 20183-141195-03).

¹⁹⁵ Ex. 321 (Notice of Additional Comment Period).

¹⁹⁶ *Id.*

¹⁹⁷ *Id.*

¹⁹⁸ See Ex. 106 (eDocket Nos. 20184-142055-02, 20184-142055-04, 20184-142055-06, 20184-142055-08, 20184-142055-10, 20184-142055-12, 20184-142055-14, 20184-142055-16, 20184-142055-18, 20184-142055-20, 20184-142056-01, 20184-142056-03, 20184-142056-05, 20184-142056-07, 20184-142056-09, 20184-142056-11).

¹⁹⁹ Comment by MnDNR (Apr.13, 2018) (eDocket No. 20184-142056-11).

²⁰⁰ *Id.*

²⁰¹ Comment by Dan McGowan (Apr. 10, 2018) (eDocket No. 20184-142056-04); Comment by Dave Kephart (April 10, 2018) (eDocket No. 20184-142055-19); Comment by Stacey Karels (April 10, 2018) (eDocket No. 20184-142055-17); Comment by Ryan Isham (Apr. 10, 2018) (eDocket No. 20184-142055-15); Comment by Lucas Franco (Apr. 10, 2018) (eDocket No. 20184-142055-13); Comment by Eric Engstrom (Apr. 10, 2018) (eDocket No. 20184-142055-11); Comment by Dan Brady (Apr. 10, 2018) (eDocket No. 20184-142055-09); Comment by Nicholas Slavicek (Apr. 10, 2018) (eDocket No. 20184-142055-05); Comment by Keith Petersen (Apr. 10, 2018) (eDocket No. 20184-142055-03); Comment by Chris Peltier (Apr. 10, 2018) (eDocket No. 20184-142055-01).

²⁰² Ex. 333 (Notice of Joint Public Hearing and Draft Site Permit Availability).

of Need and a Site Permit for the Project; (2) whether the Project is needed and in the public interest; (3) the costs and benefits of the Project; (4) the environmental and human impacts of the Project and how those impacts can be addressed; and (5) whether there are other Project-related issues or concerns.²⁰³ The Notice established a July 18, 2018 deadline for written comments.²⁰⁴

115. Flying Cow Wind made a presentation regarding the Project and addressed certain changes that had been made since the public meeting.²⁰⁵

116. Wayne Viessman, Lake Cochrane resident and owner of the State Line Bar and Grill, the only restaurant on Lake Cochrane, opposed the Project.²⁰⁶ Mr. Viessman expressed concerns about his customers' experience, including visual and sound impacts, as well as wild game being driven from the area.²⁰⁷ Mr. Viessman stated that "[a]n artificial line dividing our two states should not be used as a line of permission to crowd in on those of us who are across that line."²⁰⁸

117. Bob Pollock, a farm owner, spoke in favor of issuing the certificate of need, referencing climate change. But Mr. Pollock also expressed concerns about preserving farmland, and referenced issues such as soil compaction, islanding of fields, the soil profile, and damage to tile. Finally, he expressed concerns regarding the contracts between landowners and wind developers and noted that, according to the contract, he would not be paid for a quarter-mile road easement on his property.²⁰⁹

118. Stacey Karels, who spoke on behalf of the Mankato Building Trades Council, commented on his experience with contractors who are required to utilize a certain percentage of local workers.²¹⁰

119. Mr. Brandon Coil, landowner and project participant, raised concerns about MnDNR labeling his property a protected area, noting that the DNR does not have any easements on his property and does not pay his taxes.²¹¹

120. Ms. Brenda Taylor, a resident near Lake Cochrane, raised concerns regarding visual impacts, the greater protections under the Deuel County ordinance, and the potential for negative impacts to property values. She stated that her home is currently for sale, and she has been questioned by prospective buyers about the status of wind energy projects in the area. She stated that it is clear to her "that [the] proximity of wind towers to residential property diminishes the value of the property for some home buyers

²⁰³ *Id.*

²⁰⁴ *Id.*

²⁰⁵ Canby Tr. at 15-19.

²⁰⁶ *See id.* at 21-23 (Viessman).

²⁰⁷ *Id.*

²⁰⁸ *Id.* at 23.

²⁰⁹ *Id.* at 23-27 (Pollock).

²¹⁰ *Id.* at 27-28 (Karels).

²¹¹ *Id.* at 28-29 (Coil).

and diminishes the population of potential home buyers.” She requested that a three mile setback from Lake Cochrane be imposed.²¹²

121. Mr. Ron Ruud, a Lake Cochrane resident and a member of the Lake Cochrane Improvement Association, commented on the unique characteristics of the lake and the recreational use of the lake. He expressed concerns regarding sound, property values, and visual impacts. Mr. Ruud raised questions about the effects of temperature inversions on sound propagation. Mr. Ruud also indicated he was disappointed in the locations selected for the visual simulations and requested further information regarding the development of the simulations. Finally, Mr. Ruud requested that a three mile setback from Lake Cochrane be imposed.²¹³

122. Mr. Dean Maeyaert, a Lake Cochrane resident, expressed concerns over impacts to property values. He noted that not everyone who lives on Lake Cochrane is wealthy with “money to burn.” He stated that he works hard, the value in his property is all he has, and he does not “want it taken away.”²¹⁴

123. Mr. Jim Ekholm, a landowner on Lake Cochrane, noted that while Minnesota has 11,842 named lakes of greater than 10 acres, South Dakota only has 131 such lakes. He stated that Lake Cochrane is one of those few lakes and is considered to be one of the top three lakes in the state. Mr. Ekholm asked to have the three mile setback from the lake honored.²¹⁵

124. Ms. Diane Armstrong, resident of Lake Cochrane, commented on the lake and requested that the three mile setback from Lake Cochrane be enforced.²¹⁶

125. Mr. Alan Armstrong introduced a letter from Nancy Marking Johnson, a Lake Cochrane resident, who commented on protecting Lake Cochrane. Mr. Armstrong, also a Lake Cochrane resident, then provided his own comments on the qualities of the lake, and requested that the Commission consider that Deuel County evaluated the impacts of wind projects on the lake and imposed a three mile setback from the lake.²¹⁷

126. Mr. John Mills, District 4 Representative in the South Dakota House of Representatives, commented on the number of lakes in South Dakota and the extensive process that Deuel County conducted in establishing the three mile setback from Lake Cochrane. He requested that the three mile setback be imposed in Minnesota as well.²¹⁸

127. Ms. Katie Willers, a Lake Cochrane resident, expressed concerns about property values and questioned whether any studies had been done specific to the lake.²¹⁹ Sean Flannery of Flying Cow Wind pointed Ms. Willers to the Environmental

²¹² *Id.* at 29-31 (Taylor).

²¹³ *Id.* at 31-38 (Ruud).

²¹⁴ *Id.* at 38-39 (Maeyaert).

²¹⁵ *Id.* at 39-42 (Ekholm).

²¹⁶ *Id.* at 42-44 (Armstrong).

²¹⁷ *Id.* at 44-45 (Johnson), 45-46 (Armstrong).

²¹⁸ *Id.* at 46-48 (Mills).

²¹⁹ *Id.* at 48 (Willers).

Report, but stated that he was “not aware of anything specific to the Lake.”²²⁰ Ms. Willers requested that research be done regarding the area. Ms. Willers also commented on the height of the turbines, noting that Crazy Horse Monument in the Black Hills of South Dakota stands 543 feet tall.²²¹ The total tip height of the turbine tower will be 568 feet.²²²

128. Ms. Susan Norgaard, Lake Cochrane landowner, spoke about her history at the lake. She expressed concerns about noise and the potential for associated health impacts, stating that she was not sure she would be able to live in her home with turbines so close. She also expressed concerns regarding property values.²²³

129. Mr. David Meyer spoke about the history of Lake Cochrane and the unique features of the lake and surrounding area.²²⁴

130. Mr. Curtis Mulder commented on his personal history in the area, and expressed concerns regarding the visual impacts of the Project, as well as the impacts to wildlife and hunting in the area.²²⁵

131. Ms. Katie Hatt, the Executive Director of the North Star Policy Institute presented on two reports recently published by the North Star Policy Institute on the impact of local and nonlocal hiring in wind farm construction. Ms. Hatt highlighted the findings of the research, noting the higher economic impacts with increased local labor as a result of direct wages and induced activity in the community. She noted that approval of the Project could displace approval of another Project that would hire more local workers, and further noted the potential for negative economic impacts from the Project due to impacts to the local resort and tourist businesses.²²⁶

132. Mr. Doug Gunderson, a Lake Cochrane resident, expressed concern regarding property values, and questioned who would be responsible for a decrease in property values.²²⁷ Mr. Gunderson asked whether the three mile setback would apply. Mr. Flannery stated that if the three-mile setback were applied “there will be landowners that lose turbines.”²²⁸ Mr. Gunderson also asked about setbacks in Minnesota around lakes.²²⁹ Mr. Panait from the Commission staff responded with a summary of applicable setbacks.²³⁰

²²⁰ *Id.* at 49 (Flannery).

²²¹ *Id.* at 48-50 (Willers).

²²² *Id.* at 50 (Flannery).

²²³ *Id.* at 51-53 (Norgaard).

²²⁴ *Id.* at 53-54 (Meyer).

²²⁵ *Id.* at 54-58 (Mulder).

²²⁶ *Id.* at 58-63 (Hatt).

²²⁷ *Id.* at 65 (Gunderson).

²²⁸ *Id.* at 68 (Flannery).

²²⁹ *Id.* at 69 (Gunderson).

²³⁰ *Id.* at 69-70 (Panait).

133. Mr. Nate O'Reilly from the Iron Workers Union spoke in support of local hiring, and suggested that the Commission establish local hiring requirements as a permit condition.²³¹

134. Mr. Will Thomssen, a union crane operator, commented on the availability of trained, skilled local workers.²³²

135. Mr. Curtis Mulder noted that Lake Cochrane residents were only questioning the placement of four to seven of the wind turbines. He stated that "[t]here is enough land in this country to put five more wind turbines somewhere elsewhere where it will benefit the people of this country. But if you put those five turbines there, it's really just going to benefit those five landowners but you're going to take away everything that all of us at Lake Cochrane have cherished and loved."²³³

136. Mr. Kevin Pranis commented on behalf of LDC. Mr. Pranis asked a series of questions regarding RES as a company and the hiring practices of RES in constructing a typical wind farm.²³⁴ Nick Berzins appeared on behalf of Flying Cow Wind and provided an overview of local hiring practices of RES.²³⁵ Mr. Pranis asked additional questions regarding specific numbers of local workers associated with other wind projects in which RES is involved in the construction. Mr. Pranis asked whether Flying Cow Wind would be willing to provide local hiring data regarding the other projects in reply comments. Mr. Pranis also requested that a special permit condition be included in the site permit requiring local reporting similar to the local reporting requirement agreed to in the Nobles 2 project.²³⁶

D. Written Comments in Joint Public Hearing Comment Period

137. On June 12, 2018, the Commission issued a Notice of Joint Public Hearing and a Notice of Draft Site Permit Availability.²³⁷ The Notice provided that a public hearing on the Application would be held before the Administrative Law Judge on June 28, 2018, and it solicited written comments on: (1) whether the Commission should issue a Certificate of Need and a Site Permit for the Project; (2) whether the Project is needed and in the public interest; (3) the costs and benefits of the Project; (4) the environmental and human impacts of the Project and how those impacts can be addressed; and (5) whether there are other Project-related issues or concerns.²³⁸ The Notice established a July 18, 2018 deadline for written comments.²³⁹

138. LDC filed comments to supplement their oral testimony at the Joint Public Hearing. LDC's requested that Flying Cow Wind agree to a special permit condition

²³¹ *Id.* at 71-73 (O'Reilly).

²³² *Id.* at 83-84 (Thomssen).

²³³ *Id.* at 85 (Mulder).

²³⁴ *Id.* at 85-87 (Pranis).

²³⁵ *Id.* at 87-94 (Berzins).

²³⁶ *Id.* at 100 (Pranis).

²³⁷ Ex. 333 (Notice of Joint Public Hearing and Draft Site Permit Availability).

²³⁸ *Id.*

²³⁹ *Id.*

regarding local labor reporting, similar to what was agreed to in the Nobles 2 project. LDC further submitted a series of 12 Information Requests asking for information from RES on various employment metrics associated with the Pleasant Valley Wind Farm and the Stoneray Wind Farm.²⁴⁰

139. Mr. Lee Doering, a Minnesota taxpayer, commented in support of wind power and the Project, noting the Project is environmentally sound.²⁴¹

140. Jim and Sheryl Irvine, Lake Cochrane residents, expressed concern regarding noise and avian fatalities, and recommended a three mile setback from Lake Cochrane.²⁴²

141. Perry and Joan Heaton, Lake Cochrane residents, expressed concern over visual and sound impacts and recommended a three mile setback from Lake Cochrane.²⁴³

142. Three sets of comments were filed by unnamed individuals for the Association. The Association expressed concern that a three mile setback was not being honored because one of the landowners is a RES employee. The Association also responded to Mr. Doering's comment, noting that Mr. Doering is not an area resident. Finally, the Association commented on the visual simulations provided by Flying Cow Wind, expressing concern about the locations that were selected. The Association commented that no input on the locations was sought from residents of Lake Cochrane, the sites chosen minimize the view of the towers, and the photo from the Public Water Access was low to the water and over a mile away from the shore closest to the Project. The Association also provided images comparing the visual simulation from the public water access on Lake Cochrane to two manipulated photos which the Association generated from the visual simulation by zooming in on turbines T35 and T2, respectively.²⁴⁴

143. Paul and Harley Westphal commented on the elimination of turbine T1. As owners of the property on which T1 was sited, they support T1 remaining in the Project. They also noted that they do not support a three mile setback from Lake Cochrane.²⁴⁵

144. On July 18, 2018, Flying Cow Wind submitted comments on proposed permit conditions along with its proposed findings of fact, conclusions of law, and recommendations.²⁴⁶

²⁴⁰ Comment by LDC (July 10, 2018) (eDocket Nos. 20187-144641-07, 20187-144641-01).

²⁴¹ Comment by Lee Doering (July 11, 2018) (eDocket No. 20187-144817-01).

²⁴² Comment by Jim and Sheryl Irvine (July 11, 2018) (eDocket No. 20187-144815-01).

²⁴³ Comment by Perry and Joan Heaton (July 12, 2018) (eDocket No. 20187-144813-01).

²⁴⁴ Comment by Lake Cochrane Improvement Association (July 16, 2018) (eDocket Nos. 20187-144949-01, 20187-144942-01, 20187-144941-01).

²⁴⁵ Comment by Paul and Harley Westphal (July 16, 2018) (eDocket No. 20187-144972-01).

²⁴⁶ Comments by Flying Cow Wind and Proposed Findings of Fact, Conclusions of Law, and Recommendations (July 18, 2018) (eDocket No. 20187-145015-01).

145. Additional written comments were filed after Flying Cow Wind submitted its proposed findings of fact, conclusions, and recommendations.

146. MnDNR commented that it had not yet received certain shape files for the most recent layout and therefore could not provide further comments on the Project layout.²⁴⁷ MnDNR noted that these shape files will help in the agency's review of the location of Turbine A9, potential impacts to the Fortier 24 Native Prairie Bank easement, potential concerns associated with the revised layout, potential calcareous fens impacts, and whether the new layout may influence the Bird and Bat Conservation Strategy ("BBCS"). MnDNR noted that further review of the BBCS is necessary, that the revised Project layout may warrant the development of a calcareous fen management plan, that Flying Cow Wind should develop a prairie protection and management plan (as specified in the draft site permit), and that the site permit include one of two conditions proposed by MnDNR to protect any threatened and endangered species.²⁴⁸

147. Fifty-four written comment forms were filed on behalf of Mankato Building Trades.²⁴⁹ These forms advocated for the use of local or Minnesota-based union labor for the Project.

148. Comments were made in opposition to the Project due to alleged potential impacts on the Lake Cochrane area.²⁵⁰ These commenters included lake residents, property owners with seasonal homes, representatives of the Lake Cochrane Improvement Association, and other concerned individuals. These commenters, many of which provided oral testimony at the public hearing, again raised concerns regarding the potential for impacts to the environment, wildlife, health, property values, and the local tourism and recreation economy. Many commenters also requested that, if the Project is approved, the three mile setback from Lake Cochrane established in Deuel County, South Dakota be honored.

149. Comments were also made in support of the Project. These Commenters included owners of property on which turbines will be located; owners of property on Lake Cochrane; residents and officials of Yellow Medicine County, Minnesota; and other individuals who supported the Project. These commenters highlighted the economic benefits, including increased tax revenues, the Project will bring to landowners and Yellow Medicine County. They also stressed the need to allow landowners to use their property as they see fit. Commenters also noted that they did not have an ability to participate in the Deuel County, South Dakota proceedings that established the three-mile setback. The Commenters also questioned the viewpoints of opponents that the Project would

²⁴⁷ Comments by MnDNR (July 18, 2018) (eDocket Nos. 20187-144986-01, 20187-144988-01).

²⁴⁸ *Id.*

²⁴⁹ See Wind Comment Forms (July 19, 2018) (eDocket Nos. 20187-145019-01, 20187-145019-02, 20187-145019-03).

²⁵⁰ See *generally* PublicComments (July 20, 2018) (SpeakUp) (eDocket No. 20187-145062-01); Public Comments Batch Two (July 19, 2018) (eDocket No. 20187-145040-02).

cause excessive noise, visual impacts, or would otherwise impact the local economy, noting the significant development that has already occurred on Lake Cochrane.²⁵¹

X. Site Permit Criteria

150. Wind energy developments are governed by Minn. Stat. ch. 216F (2018), and Minn. R., chapter 7854 (2017). Minn. Stat. § 216F.01, subd. 2, defines a large wind energy conversion system (LWECS) as any combination of wind energy conversion systems with a combined nameplate capacity of 5 megawatts (5,000 kilowatts) or more.²⁵² Minn. Stat. § 216F.03 (2018) requires that a LWECS be sited in an orderly manner compatible with environmental preservation, sustainable development, and the efficient use of resources.²⁵³

151. In addition, when deciding whether to issue a site permit for a LWECS, the Commission considers the factors set forth in Minn. Stat. § 216E.03, subd. 7 (2018), which provides, in relevant part, that the Commission “shall be guided by, but not limited to, the following considerations:

- (1) evaluation and research and investigations relating to the effects on land, water, and air resources or large electric power generating plants and high-voltage transmission lines and the effects of water and air discharges and electric and magnetic field resulting from such facilities on public health and welfare, vegetation, animals, materials and aesthetic values, including baseline studies, predictive modeling, and evaluation of new or improved methods for minimizing adverse impacts of water and air discharges and other matters pertaining to the effects of power plants on the water and air environment;
- (2) environmental evaluation of sites ... proposed for future development and expansion and their relationship to the land, water, air and human resources of the state;
- (3) evaluation of the effects of new electric power generation systems related to power plants designed to minimize adverse environmental effects;
- (4) evaluation of the potential for beneficial uses of waste energy from proposed large electric power generating plants;
- (5) analysis of the direct and indirect economic impact of proposed sites ... including, but not limited to, productive agricultural land lost or impaired;

²⁵¹ See *generally* Public Comments (July 20, 2018) (SpeakUp) (eDocket No. 20187-145062-01); Public Comments Batch Two (July 19, 2018) (eDocket No. 20187-145040-02).

²⁵² Minn. Stat. § 216F.01, subds. 2-3.

²⁵³ Minn. Stat. § 216F.03; see *also* Minn. R. 7854.1000, subp. 3.

(6) evaluation of adverse direct and indirect environmental effects that cannot be avoided should the proposed site . . . be accepted;

(7) evaluation of alternatives to the applicant's proposed site . . . ;

(9) evaluation of governmental survey lines and other natural division lines of agricultural land so as to minimize interference with agricultural operations;

(11) evaluation of irreversible and irretrievable commitments of resources should the proposed site . . . be approved; and

(12) when appropriate, consideration of problems raised by other state and federal agencies and local entities.²⁵⁴

152. The Commission must also consider whether Applicant has complied with all procedural requirements.²⁵⁵

153. The Commission's rules require an applicant to provide information regarding any potential impacts of the proposed project, potential mitigation measures, and any adverse effects that cannot be avoided as part of the application process. No separate environmental review is required for a LW ECS project.²⁵⁶

XI. Application of the Statutory Siting Criteria to the Proposed Project

A. Human Settlement

154. The Project is located in southwestern Minnesota in Yellow Medicine County.²⁵⁷ The county is predominantly rural with an agricultural economic base. In 2012, approximately 81% (395,027 acres) of the land in Yellow Medicine County was occupied by farms.²⁵⁸ The population of the county in 2015 was estimated to be 10,092, with an estimated average household size of 2.42 people.²⁵⁹ The 2015 median household income was \$53,041.²⁶⁰

²⁵⁴ Minn. Stat. § 216E.03, subd. 7.

²⁵⁵ Minn. R. 7854.1000, subp. 3.

²⁵⁶ Minn. R. 7854.0500, subp. 7.

²⁵⁷ Ex. 202 at 13 (Site Permit Application).

²⁵⁸ *Id.*

²⁵⁹ *Id.*

²⁶⁰ *Id.* at 14.

155. There are approximately 108 homes located within the Project Area.²⁶¹ No substantial effects on permanent housing in the area are anticipated.²⁶²

156. The Project will create approximately 150 temporary jobs during construction and approximately four to six permanent jobs.²⁶³ Construction and operation may also increase the local tax base.²⁶⁴

157. The Project is not expected to significantly impact local demographics except that it is expected to be beneficial to the local economy.²⁶⁵

B. Zoning and Land Use

158. The majority of the Project Area is agricultural.²⁶⁶ Cultivated land comprises approximately 10,636 acres (46.5%) of the Project Area.²⁶⁷ Pasture land comprises approximately 5,990 acres (26.2%) of the Project Area.²⁶⁸

159. Small portions of land will be removed from agricultural production at turbine locations and along proposed access roads (1-2 acres per turbine).²⁶⁹ Approximately 82.19 acres (0.36% of the Project Area) will be permanently converted to non-agricultural use.²⁷⁰

160. Lease and wind easement agreements made with landowners include payments that offset potential financial losses due to small areas of land being removed from agricultural production.²⁷¹ All participating landowners will receive compensation for Project facilities constructed on their land; landowners that signed a setback waiver will also receive compensation.²⁷² Agricultural lands surrounding turbines can continue to be farmed or grazed.²⁷³

161. None of the townships in Minnesota within or adjacent to the Project Area have adopted zoning regulations.²⁷⁴ Deuel County, South Dakota, a neighboring county which abuts the Project Area, adopted an ordinance forbidding wind turbines within three miles of Lake Cochrane.²⁷⁵

²⁶¹ *Id.* at 13.

²⁶² *Id.* at 15.

²⁶³ *See id.*

²⁶⁴ *See id.* at 14.

²⁶⁵ *See id.*

²⁶⁶ *Id.* at 52.

²⁶⁷ *Id.*

²⁶⁸ *Id.*

²⁶⁹ *Id.* at 53.

²⁷⁰ Ex. 210 at 5 (Site Permit Addendum).

²⁷¹ Ex. 202 at 14 (Site Permit Application).

²⁷² *Id.*

²⁷³ *Id.* at 15.

²⁷⁴ *Id.*

²⁷⁵ Petition to Intervene at Ex. B (eDocket No. 20187-145010-01).

162. Applicant reviewed plans and ordinances for the Project Area, including the Yellow Medicine County Comprehensive Plan, the Yellow Medicine County Land Use and Related Resource Management Ordinance, the Lincoln County Comprehensive Land Use Plan, the Lincoln County Comprehensive Development Ordinance, the Yellow Medicine County Comprehensive Local Water Plan, the City of Canby Comprehensive Plan, and the City of Gary Comprehensive Plan.²⁷⁶

163. Section 4.2 of the Draft Site Permit requires Applicant to maintain a setback distance of at least 1,000 feet from all residences.²⁷⁷ In addition, Section 4.1 of the Draft Site Permit requires Applicant to maintain a setback of 5 rotor diameters on the prevailing wind directions and three rotor diameters on the non-prevailing wind directions from the perimeter of the property where Applicant does not hold the wind rights.²⁷⁸

C. Property Values

164. Large electric generation facilities have the potential to impact property values.²⁷⁹ Because property values are influenced by a complex interaction between factors specific to each individual piece of real estate as well as local and national market conditions, the effect of one particular project on the value of the one particular property is difficult to determine in advance.²⁸⁰

165. The placement of infrastructure near human settlements has the potential to impact property values.²⁸¹ The type and extent of impacts depends on the relative location of the infrastructure and existing land uses in the project area.²⁸²

166. The population in Yellow Medicine County has dropped between 2010-2015, continuing a decades long trend, which could be expected to depress residential values.²⁸³ Additionally, average household incomes in Yellow Medicine County are below the average household income throughout Minnesota.²⁸⁴ However, southern and southwestern Minnesota have experienced the greatest development of wind energy facilities, which could make the addition of another large wind facility in the area to be less influential on property values than it may be if the facility was placed in an area where wind energy facilities are less common on the landscape.²⁸⁵

167. Six counties in southern Minnesota (Dodge, Jackson, Lincoln, Martin, Mower and Murray counties) with large wind energy conversion systems responded to a

²⁷⁶ Ex. 202 at 16 (Site Permit Application).

²⁷⁷ Ex. 108 at 3. The Draft Site Permit states: "Wind turbine towers shall not be located closer than 1,000 feet from all residences or the distance required to comply with the noise standards pursuant to Minn. R. 7030.0040, established by the Minnesota Pollution Control Agency, whichever is greater."

²⁷⁸ *Id.* at 2.

²⁷⁹ Ex. 110 at 60 (Environmental Report).

²⁸⁰ *Id.*

²⁸¹ *Id.*

²⁸² *Id.*

²⁸³ *Id.* at 61.

²⁸⁴ *Id.*

²⁸⁵ *Id.*

Stearns County survey asking about impacts on property values as a result of wind farms.²⁸⁶ That survey showed that neither properties hosting turbines nor those adjacent to those properties in the counties listed, have been negatively impacted by the presence of wind farms.²⁸⁷

168. Similarly, a nationwide study reviewed the sale of over 50,000 home sales in nine separate states and found that sale prices/property values were not impacted by wind development actions.²⁸⁸

169. In unique situations, specific, individual property values may be negatively impacted.²⁸⁹ Such impacts can be mitigated by siting turbines away from such residences.²⁹⁰

170. Lake Cochrane may be one of those “unique situations.” It is a 355-acre spring-fed lake in Deuel County, South Dakota.²⁹¹ Lake Cochrane is one of only 103 lake in South Dakota greater than 10 acres and is considered one of the top three lakes in South Dakota.²⁹² The South Dakota Department of Game Fish and Parks operates the Lake Cochrane Recreation Area on the north shore of Lake Cochrane.²⁹³ The recreational area offers camping, cabin lodging, picnic facilities, a playground, and a swimming beach.²⁹⁴ In 2017, the recreation area had over 10,000 visitors.²⁹⁵ In addition, the Department of Game Fish and Parks also maintains a public boat landing on the lake.²⁹⁶

171. The shores of Lake Cochrane are fully developed with 208 cabins and homes; more than one-third of those are owned by families who claim Minnesota as their primary residence.²⁹⁷ The Prairie View Golf Club, which is owned by a cabin owner, is adjacent to the lake.²⁹⁸

172. The Lake Cochrane Lake Park District, contributes 9.2% of all real estate taxes collected by Deuel County South Dakota.²⁹⁹ The residents of Lake Cochrane believe the Project will lower their property values.³⁰⁰

²⁸⁶ *Id.*

²⁸⁷ *Id.*

²⁸⁸ Ex. 202 at 56 (Site Permit Application).

²⁸⁹ Ex. 110 at 62 (Environmental Report).

²⁹⁰ *Id.*

²⁹¹ Scoping Tr. at 53-55 (Meyer).

²⁹² Ex. 803.

²⁹³ Scoping Tr. at 56 (Ruud).

²⁹⁴ *Id.*

²⁹⁵ *Id.*

²⁹⁶ *Id.*

²⁹⁷ *Id.* at 55 (Ruud).

²⁹⁸ *Id.*

²⁹⁹ Ex. 802.

³⁰⁰ See, e.g., Exs. 801, 802.

D. Noise

173. Wind turbines produce noise during operation.³⁰¹ The level of noise varies with the size and speed of the turbine and the distance of the listener from the turbine.³⁰²

174. The MPCA has adopted noise standards designed to ensure that public health is protected and minimize citizen exposure to inappropriate sounds.³⁰³ The MPCA's most stringent standard is a 50 decibel (dB) limit for nighttime noise levels.³⁰⁴

175. Flying Cow Wind conducted a preliminary noise assessment of the Project.³⁰⁵ The study included all 52 turbine locations, and the results can be considered conservative because only 44 of the 52 turbine locations will be constructed.³⁰⁶

176. A total of 258 receptors were evaluated in the study: 60 receptors in Minnesota within one mile of a turbine or transformer, 28 receptors in South Dakota within one mile of a turbine or transformer, and 170 additional receptors along the shores of Lake Cochrane regardless of distance to a turbine.³⁰⁷

177. The results indicate that the calculated sound levels at all receptors included in the analysis are within the allowable limits under applicable Minnesota and South Dakota state and county level noise regulations.³⁰⁸

178. Unless other arrangements have been made with specific residents, Flying Cow Wind will site the turbines a minimum 1,500 feet from residences, plus any additional distance required to comply with the MPCA standard.³⁰⁹ Section 4.3 of the Draft Site Permit requires adherence to this standard.³¹⁰

179. In addition, Section 7.4 of the Draft Site Permit requires Flying Cow Wind to conduct a post-construction noise monitoring study and file the completed study with the Commission.³¹¹

E. Shadow Flicker

180. Shadow flicker is the modulation of light levels resulting from the periodic passage of a rotating wind turbine blade between the sun and a viewer.³¹² Shadow flicker may occur under a certain combination of circumstances with regard to the sun's position

³⁰¹ Ex. 110 at 58 (Environmental Report).

³⁰² *Id.*

³⁰³ Minn. R. 7030.0040 (2017).

³⁰⁴ *Id.*

³⁰⁵ Ex. 202 at 25.

³⁰⁶ Ex. 211 at 1 (Sound Modeling Assessment (March 27, 2018)).

³⁰⁷ *Id.* at 6.

³⁰⁸ *Id.* at 1.

³⁰⁹ Ex. 202 at 28.

³¹⁰ Ex. 108 at 3.

³¹¹ *Id.* at 15.

³¹² Ex. 202 at 30.

and wind direction: when the sun passes behind the rotating blades of a wind turbine, a moving shadow is cast in front of or behind the turbine.³¹³ When viewed from a stationary position, the moving shadows cause periodic “flickering” of the sunlight, otherwise known as the “shadow flicker” phenomenon.³¹⁴

181. Shadow flicker from wind turbines is not harmful to the health of photosensitive individuals, including those with epilepsy.³¹⁵ The expected frequency of shadow flicker based on the proposed turbines is .88 flickers per second.³¹⁶ The Epilepsy Foundation has determined that, generally, the frequency of flashing lights most likely to trigger seizures is between 5 and 30 flashes per second.³¹⁷

182. Flying Cow Wind conducted a shadow flicker assessment on the proposed Project layout.³¹⁸ Applicant included 99 potentially-affected receptors within approximately 5,676 feet of a turbine in the assessment.³¹⁹ All 52 turbine locations were included in the assessment, although only 44 will be constructed, so the assessment results can be considered conservative.³²⁰

183. The receptor in Minnesota that is predicted to experience the most hours of shadow flicker in one year is MN321. The predicted duration of shadow flicker at this receptor is 33 hours per year when taking into account long-term average monthly cloud cover and annual wind rose. The predicted duration of shadow flicker on the worst day of the year at this receptor without considering cloud cover and wind rose statistics is 66 minutes on 12 December. The receptor MN321 is a project participant.³²¹

184. The receptor with the longest duration of flicker in a single day is MN274, with 72 minutes of shadow flicker expected to occur on February 27.³²² Receptor MN274 is a project participant.³²³

185. The receptor in South Dakota that is predicted to experience the most hours of shadow flicker in one year as well as the highest number of minutes in a single day is SD335.³²⁴ The predicted duration of shadow flicker at this receptor is 9 hours per year when taking into account long-term average monthly cloud cover and annual wind rose.³²⁵ This respects the limits set forth by Deuel County Ordinance B2004-01-23B.³²⁶ The predicted duration of shadow flicker on the worst day of the year at this receptor without

³¹³ *Id.*

³¹⁴ *Id.*

³¹⁵ *Id.* at 32.

³¹⁶ *Id.*

³¹⁷ *Id.*

³¹⁸ See Ex. 211 at v (Shadow Flicker Report).

³¹⁹ *Id.*

³²⁰ *Id.*

³²¹ *Id.*

³²² *Id.*

³²³ *Id.*

³²⁴ *Id.*

³²⁵ *Id.*

³²⁶ *Id.*

consideration of cloud cover and wind rose statistics is 35 minutes on January 4. Receptor SD335 is not a participant.³²⁷

186. The Revised Shadow Flicker Assessment was completed prior to changes to the layout of the Project that eliminated turbine locations T1, T20 and A10.³²⁸ Accordingly, results for receptors for which one of these turbines was a contributing factor will likely be lower than indicated in the assessment.³²⁹ This is particularly true for receptors in South Dakota for which turbine T1 was the only contributing turbine.³³⁰

187. To avoid and minimize potential shadow flicker, Flying Cow Wind has sited the proposed turbines a minimum of 1,500 feet from inhabited residences.³³¹ Mitigation measures will be considered and implemented based on individual circumstances of residents experiencing shadow flicker and may include providing indoor or exterior screening.³³²

188. Section 7.2 of the Draft Site Permit requires Flying Cow Wind to provide the Commission with data on shadow flicker for each residence potentially subject to turbine shadow flicker exposure from the Project.³³³ The data will include modeling results, assumptions made, and the anticipated level of exposure from turbine shadow flicker for each residence.³³⁴ Flying Cow Wind will also be required to provide documentation on its efforts to avoid, minimize, and mitigate shadow flicker exposure.³³⁵

189. With the adoption of mitigating measures, the Project is not expected to result in significant impacts due to shadow flicker.

F. Visual Impacts

190. The topography of the Project Area is glaciated, gently rolling plains with elevations ranging from 1,384 feet to 1,745 feet above sea level.³³⁶ Agricultural fields, farmsteads, and gently rolling plains visually dominate the Project Area.³³⁷ The landscape can be classified as rural open space.³³⁸

191. The construction of wind turbines will impact the visual surroundings of the Project Area.³³⁹

³²⁷ *Id.*

³²⁸ See Ex. 215 (Letter from Flying Cow Wind to DNR).

³²⁹ See Ex. 211 at App. B (Receptor Locations & Shadow Flicker Results).

³³⁰ See *id.*

³³¹ Ex. 202 at 33 (Site Permit Application).

³³² *Id.*

³³³ Ex. 108 at 14 (Draft Site Permit).

³³⁴ *Id.*

³³⁵ *Id.* at 14-15.

³³⁶ Ex. 202 at 28 (Site Permit Application).

³³⁷ *Id.*

³³⁸ *Id.*

³³⁹ *Id.* at 29.

192. Visual sensitivity is a measure of viewer interest and concern for the visual quality of the landscape and potential changes to it, which is determined on a combination of viewer sensitivity and viewer exposure.³⁴⁰ Viewer sensitivity varies for individuals and groups depending on the activities viewers are engaged in, their values and expectations related to the appearance and character of the landscape, and their potential level of concern for changes to the landscape.³⁴¹ High viewer sensitivity is typically assigned to viewer groups engaged in: recreational or leisure activities; traveling on scenic routes for pleasure or to and from recreational or scenic areas; experiencing or traveling to or from protected, natural, cultural, or historic areas; or experiencing views from resort areas or their residences.³⁴² Low viewer sensitivity is typically assigned to viewer groups engaged in work activities or commuting to or from work.³⁴³

193. Because the topography in the vicinity is relatively flat, and the agricultural vegetation has a low profile, objects with comparably high profiles will be potentially viewed as visual disruptions.³⁴⁴ Visual impacts will be most evident to people who live in and near the Project and to people traveling through the Project Area.³⁴⁵ While people living in or traveling through the area are accustomed to viewing wind turbines, the Project will add to the cumulative visual impacts by adding up to 44 new turbines in the area.³⁴⁶

194. Lake Cochrane is located less than one-half mile from the Minnesota South Dakota Boarder.³⁴⁷ Several turbines will be prominently visible and dominate the horizon as viewed from the Lake Cochrane Recreation Area.³⁴⁸ Numerous residents of Lake Cochrane have expressed concerns regarding the visual disruption to this natural resource and vigorously oppose locating any turbines within 3 miles of Lake Cochrane.³⁴⁹

195. There are 33 Wildlife Management Areas (WMAs), 27 Waterfowl Production Areas (WPAs) and 1 Scientific and Natural Area (SNA) within 10 miles of the Project.³⁵⁰

196. The turbines will be lit in accordance with minimum FAA regulations.³⁵¹ On March 15, 2018, Flying Cow Wind committed to installing an ADLS, subject to FAA approval of the system.³⁵² The ADLS lighting would control the obstruction of turbine lights so that they only turn on if a plane is detected in the vicinity of the wind farm, thereby balancing safety and local residents' concerns.³⁵³

³⁴⁰ Ex. 110 at 48 (Environmental Report).

³⁴¹ *Id.*

³⁴² *Id.*

³⁴³ *Id.*

³⁴⁴ Ex. 202 at 28 (Site Permit Application).

³⁴⁵ *Id.*

³⁴⁶ *Id.*

³⁴⁷ Canby Tr. at 32 (Ruud).

³⁴⁸ Ex. 214 (Flying Cow Wind Visual Simulations); Lake Cochrane Improvement Association Ron Ruud Declaration (Aug. 6, 2018) (eDocket No. 20188-145561-02).

³⁴⁹ *See generally* Canby Tr., Public Meeting Tr.

³⁵⁰ Ex. 110 at 49 (Environmental Report).

³⁵¹ Ex. 202 at 49 (Site Permit Application).

³⁵² Comments of Flying Cow Wind (March 15, 2018) (eDockets 20183-141102-01).

³⁵³ *Id.*

197. Mitigation of impacts to aesthetic and visual resources is best accomplished through micrositing the wind turbines and maintaining designated setbacks from participating and non-participating landowners.³⁵⁴ Aesthetic impacts to public lands can be mitigated by siting wind projects outside of these areas and utilizing natural features such as topography and vegetation to reduce visual intrusions.³⁵⁵

G. Local Economy

198. The Project will result in short- and long-term benefits to the local economy.³⁵⁶ The Project will create approximately 150 temporary jobs during construction and approximately four to six permanent jobs.³⁵⁷ In addition, the Project will provide landowners and farmers an opportunity to increase land and agricultural profitability and diversify their income.³⁵⁸ Landowners involved with the Project, as well as those who have leased their wind rights to the Project, will receive a royalty or lease payment annually for the life of the Project.³⁵⁹

199. The Project will pay a wind energy production tax to local units of government.³⁶⁰ This production tax credit is \$1.20 per MWh of electricity produced, which will result in an estimated annual wind energy production tax payment of approximately \$690,000.³⁶¹

200. Local contractors and suppliers will be used for portions of the construction.³⁶² Wages and salaries paid to contractors and local workers will supplement personal income of the region.³⁶³

H. Public Health

201. Electromagnetic fields (EMF) are electric and magnetic fields present around all electrical devices.³⁶⁴ Electric field strength is proportional to the line's voltage, and magnetic fields are due to the flow of electrical current that travels along transmission lines, power collection lines, substation transformers, house wiring, electrical appliances, WiFi, cell phones, etc.³⁶⁵

³⁵⁴ Ex. 110 at 50 (Environmental Report).

³⁵⁵ *Id.*

³⁵⁶ Ex. 110 at 63 (Environmental Report).

³⁵⁷ See Ex. 202 at 15 (Site Permit Application).

³⁵⁸ Ex. 101 at 63 (Environmental Report).

³⁵⁹ *Id.*

³⁶⁰ *Id.*

³⁶¹ *Id.*

³⁶² Ex. 202 at 56 (Site Permit Application).

³⁶³ *Id.*

³⁶⁴ *Id.* at 48.

³⁶⁵ *Id.*

202. Although EMF is often raised as a concern with electrical transmission projects, the Commission has consistently found that there is insufficient evidence to demonstrate a causal relationship between EMF exposure and human health effects.³⁶⁶

203. Stray voltage is a natural phenomenon that results from low levels of electrical current flowing between two points that are not directly connected.³⁶⁷ Stray voltage is typically experienced by livestock who simultaneously come into contact with two metal objects (i.e. feeders, waterers, stalls).³⁶⁸ If there is a voltage between these objects, a small current will flow through the livestock.³⁶⁹

204. There are no dairy farms within the Project Area.³⁷⁰

205. Flying Cow Wind will design, construct, and operate all electrical equipment, including turbines, transformers, collection lines, and transmission lines in accordance with applicable codes, manufacturer specifications, and required setbacks.³⁷¹ Because no impacts due to EMF or stray voltage are anticipated, no mitigation is proposed.³⁷²

I. Public Safety

206. Section 5.2.25 of the Draft Site Permit requires Flying Cow Wind to provide education materials to landowners adjacent to the site and, upon request, to interested persons about any restrictions or dangers associated with the Project.³⁷³ Flying Cow Wind must also provide any necessary safety measures such as warning signs and gates to control traffic or restrict public access.³⁷⁴ In addition, Flying Cow Wind must submit the location of all underground facilities to Gopher State One Call after construction of the Project is completed.³⁷⁵

207. Section 10.10 of the Draft Site Permit requires Flying Cow Wind to coordinate with emergency responders to develop an Emergency Response Plan prior to construction of the Project.³⁷⁶ Flying Cow Wind will also be in contact with local first responders to offer information about the Project.³⁷⁷

208. Section 10.11 of the Draft Site Permit requires Flying Cow Wind to notify the Commission within 24 hours of the discovery of an occurrence of an extraordinary event, which is defined to include fires, tower collapse, thrown blade, sabotage, collector or feeder line failure, and an injured worker or person.³⁷⁸ Within 30 days after such an

³⁶⁶ Ex. 110 at 64 (Environmental Report).

³⁶⁷ Ex. 202 at 48 (Site Permit Application).

³⁶⁸ Ex. 110 at 65 (Environmental Report).

³⁶⁹ *Id.*

³⁷⁰ Ex. 202 at 48 (Site Permit Application).

³⁷¹ *Id.* at 48-49.

³⁷² *Id.* at 49.

³⁷³ Ex. 108 at 12 (Draft Site Permit).

³⁷⁴ *Id.*

³⁷⁵ *Id.*

³⁷⁶ *Id.* at 21.

³⁷⁷ Ex. 202 at 50 (Site Permit Application).

³⁷⁸ Ex. 101 at 21 (Draft Site Permit).

event, Flying Cow Wind must file a report describing the cause of the event and the steps taken to avoid future occurrences.³⁷⁹

209. The following security measures will be enacted to reduce personal injury or property damage:

- All Project facilities will be equipped with sufficient security measures throughout construction and during operation of the Project. These measures may include temporary or permanent fencing, warning signs, and secure locks on equipment and facilities;
- Security measures will be constructed where deemed necessary by Applicant at the request of landowners;
- Necessary safety training will be provided to construction and operation staff;
- Regular maintenance and inspections of the turbines and associated facilities will be conducted to assess potential blade failures and minimizing blade throw potential; and
- Setbacks from roads, property lines, homes, and other infrastructure have been included in Project design. The applied setback distances promote safety and mitigate potential damage from any unanticipated and unlikely tower or blade failures.³⁸⁰

210. No significant impacts to public safety are expected to result from construction and operation of the Project.³⁸¹

J. Public Services and Infrastructure

211. The closest city to the Project Area is the City of Canby, located approximately 3.5 miles northeast of the Project Area.³⁸² Canby provides sanitary sewer, water, cable television, telephone, and library services to its residents.³⁸³ Additionally, the City's emergency services include a volunteer fire department, an ambulance service, and a police department.³⁸⁴ There are no active railroad lines in the Project Area.³⁸⁵

i. Roads

212. Existing roadway infrastructure in and around the Project Area consists of county and township roads that generally follow section lines, in addition to private unpaved farmstead driveways and farming access roads.³⁸⁶ Various County State Aid Highways (CSAHs), State Trunk Highways (STHs), County Roads (CRs), and township

³⁷⁹ *Id.*

³⁸⁰ Ex. 202 at 50 (Site Permit Application).

³⁸¹ *See id.*

³⁸² *Id.* at 34.

³⁸³ *Id.*

³⁸⁴ *Id.*

³⁸⁵ *Id.*

³⁸⁶ Ex. 110 at 69 (Environmental Report).

roads provide access to the Project Area, which are either two-lane paved or gravel roads.³⁸⁷

213. The highest existing Annual Average Daily Traffic (AADT) in or near the Project Area is 1,150 vehicles per day along STH 68.³⁸⁸ Along the remaining county highways, the AADT is at or below 700 vehicles per day.³⁸⁹ The maximum construction traffic is expected to be approximately 500 additional vehicle trips per day, with an estimated daily average of about 200 vehicles.³⁹⁰ The functional capacity of a two-lane paved rural highway is in excess of 5,000 vehicles per day.³⁹¹

214. Flying Cow Wind will enter into a Road Use Agreement with Fortier, Florida, and Norman Townships and Yellow Medicine County prior to construction of the Project.³⁹² All roads, bridges, culverts, approaches, and intersections will be left in as good or better condition than before construction of the Project.³⁹³

215. Section 4.4 of the Draft Site Permit requires all turbines and meteorological towers to be set back at least 250 feet from public road right-of-ways.³⁹⁴

216. Sections 5.2.12, 5.2.13, and 5.2.14 of the Draft Site Permit contain provisions related to the use of public roads, the construction of turbine access roads, and private roads.³⁹⁵ Flying Cow Wind must make satisfactory arrangements with the appropriate road authorities.³⁹⁶ In addition, Flying Cow Wind must construct the least number of turbine access roads necessary to safely and efficiently operate the Project and satisfy landowner requests; access roads will be constructed in accordance with all necessary township, county, or state road requirements and permits.³⁹⁷ Further, Flying Cow Wind will promptly repair private roads or lanes damaged when moving equipment or when obtaining access to the site, unless otherwise negotiated with the affected landowner.³⁹⁸

ii. Communications Systems

217. Large electric generation facilities have the potential to impact electronic communications (radio, television, internet, cell phone, and microwave).³⁹⁹ Section 5.2.16 of the Draft Site Permit requires that the Project not interfere with microwave, television, radio, telecommunications, or navigation systems, and establishes that Flying Cow Wind

³⁸⁷ *Id.*

³⁸⁸ *Id.*

³⁸⁹ *Id.*

³⁹⁰ *Id.* at 70.

³⁹¹ *Id.* at 69.

³⁹² Ex. 202 at 36 (Site Permit Application).

³⁹³ *Id.*

³⁹⁴ Ex. 108 at 3 (Draft Site Permit).

³⁹⁵ *Id.* at 9.

³⁹⁶ *Id.*

³⁹⁷ *Id.*

³⁹⁸ *Id.* at 10.

³⁹⁹ Ex. 110 at 72 (Environmental Report).

will be responsible for alleviating any disruption or interference of these services caused by the turbines or any associated facilities.⁴⁰⁰

218. The Project is designed to comply with the Commission's wind turbine setback and siting guidelines, which include setback requirements for communication towers, microwave beam paths, and overhead transmission lines.⁴⁰¹

219. Flying Cow Wind will operate the wind farm to avoid microwave, radio, telephone, television, or navigation interference to meet FCC regulations and other requirements.⁴⁰² To the extent Project facilities cross or otherwise affect existing telecommunications equipment or transmission, Flying Cow Wind will coordinate with applicable service providers to avoid interference with these facilities.⁴⁰³ If it is determined that the Project will negatively impact telecommunication services, Flying Cow Wind will provide a specific mitigation plan and take the necessary steps to restore all impacted services at the expense of the Project.⁴⁰⁴

iii. Underground Infrastructure

220. The Lincoln-Pipestone Rural Water System (LPRWS) operates a water treatment plant and associated water wells in the northwest corner of the Project Area, as well as associated buried water distribution lines.⁴⁰⁵ An existing water pipeline currently runs along the eastern edge of the Project Area, operated by LPRWS.⁴⁰⁶ Flying Cow Wind is working with LPRWS to understand the specific pipeline location relative to the Project.⁴⁰⁷ Flying Cow Wind will coordinate with, and obtain crossing agreements from, LPRWS for Project facilities that will be located near or cross LPRWS infrastructure and ensure the LPRWS system is not impacted by the Project.⁴⁰⁸

K. Recreational Resources and Tourism

221. Recreational opportunities in Yellow Medicine County include hiking, biking, boating, fishing, camping, swimming, horseback riding, snowmobiling, hunting, and nature viewing.⁴⁰⁹

222. Tourism in Yellow Medicine County focuses primarily on promoting the area's natural history, parks, historical sites, game and wildlife, lakes, farms, and small towns.⁴¹⁰ Yellow Medicine County also publicizes its cultural (museums, art, and antiques) and recreational activities (parks, hiking trails, camping, canoeing, horseback

⁴⁰⁰ Ex. 108 at 10 (Draft Site Permit).

⁴⁰¹ Ex. 202 at 39 (Site Permit Application).

⁴⁰² *Id.* at 40.

⁴⁰³ *Id.*

⁴⁰⁴ *Id.*

⁴⁰⁵ *Id.* at 41.

⁴⁰⁶ *Id.*

⁴⁰⁷ *Id.*

⁴⁰⁸ *Id.*

⁴⁰⁹ *Id.* at 45.

⁴¹⁰ *Id.* at 55.

riding, fishing, wildlife refuges, snowmobiling, golf courses, swimming pools, tennis courts, and skiing).⁴¹¹

223. The nearest park is Stonehill Regional Park, which is located approximately 2 miles east of the Project Area.⁴¹² There are five wildlife management areas (WMAs) and two Waterfowl Protection Areas (WPAs) within the Project Area.⁴¹³ There are 33 WMAs, 25 WPAs, and one scientific and natural area (SNA) located within 10 miles of the Project Area.⁴¹⁴

224. In addition, the Lake Cochrane Recreation Area is located one-half mile to the west of the Project in Deuel County, South Dakota.⁴¹⁵ The South Dakota Department of Game Fish and Parks operates the Lake Cochrane recreation area on the north shore of Lake Cochrane.⁴¹⁶ The recreational area offers camping, cabin lodging, picnic facilities, a playground, and a swimming beach.⁴¹⁷ There is also a well-used walking and running path that circles the lake.⁴¹⁸ There is also a public golf course adjacent to the lake.⁴¹⁹

225. Section 4.5 of the Draft Site Permit provides that wind turbines and associated facilities shall not be located in WMAs, WPAs, SNAs and county parks.⁴²⁰ The Project will avoid all WMAs and WPAs, and has been designed to maintain the three-by-five RD wind access buffer from all public lands.⁴²¹

226. In general, recreational impacts will be visual in nature, affecting individuals using public land near the Project Area for recreation.⁴²²

L. Effects on Agriculture and other Land-Based Economies

i. Agriculture

227. The majority of the Project Area is used for agricultural.⁴²³ Cultivated land comprises approximately 10,636 (46.5%) of the Project Area.⁴²⁴ Pasture land comprises approximately 5,990 acres (26.2%) of the Project Area.⁴²⁵

⁴¹¹ *Id.*

⁴¹² *Id.*

⁴¹³ *Id.* at 45-47.

⁴¹⁴ *Id.*

⁴¹⁵ Canby Tr. at 32 (Ruud).

⁴¹⁶ Public Meeting Tr. at 56 (Ruud).

⁴¹⁷ *Id.*

⁴¹⁸ *Id.*

⁴¹⁹ *Id.*

⁴²⁰ Ex. 108 at 3 (Draft Site Permit).

⁴²¹ Ex. 202 at 47 (Site Permit Application).

⁴²² *Id.*

⁴²³ *Id.* at 52.

⁴²⁴ *Id.*

⁴²⁵ *Id.*

228. Small portions of land will be removed from agricultural production at turbine locations and along proposed access roads (1-2 acres per turbine).⁴²⁶ Approximately .002% of the Project Area will be converted to non-agricultural land use as a result of the Project.⁴²⁷ Landowners may continue to plant crops and graze livestock up to the turbine pads.⁴²⁸ In addition, access roads have been designed with landowner input for minimal agricultural impact.⁴²⁹ Areas temporarily removed from agricultural crops production during construction will be restored back to farmable conditions after construction is complete.⁴³⁰

229. Flying Cow Wind has entered into agreements with landowners to address agricultural impacts such as crop damage, soil compaction, and drain tile repairs.⁴³¹ Drain tile will be repaired according to the agreement between Applicant and the owner of any damaged tile.⁴³²

230. Flying Cow Wind will minimize impacts to Conservation Reserve Program (CRP) land and avoid all impacts to Reinvest in Minnesota (RIM) lands.⁴³³ If CPR land is impacted, Flying Cow Wind will work with the landowner and the Natural Resources Conservation Service (NRCS) to remove the impacted portion of the enrolled parcel from the CRP program.⁴³⁴

231. Section 5.2.4 of the Draft Site Permit requires Flying Cow Wind to implement measures to protect and segregate topsoil from subsoil on all lands unless otherwise negotiated with landowners.⁴³⁵ Section 5.2.17 of the Draft Site Permit requires Flying Cow Wind to take precautions to protect livestock during all phases of the Project's life.⁴³⁶ Section 5.2.19 of the Draft Site Permit requires Flying Cow Wind to take into account, avoid, and promptly repair or replace all drainage tiles broken or damaged during all phases of the Project's life unless otherwise negotiated with affected landowners.⁴³⁷

232. The presence of the Project will not significantly impact the current agricultural land use or general character of the area.⁴³⁸

ii. Mining

233. There are three active gravel pits located within the Project Area.⁴³⁹ Section 4.8 of the Draft Site Permit requires that wind turbines and associated facilities not be

⁴²⁶ *Id.* at 53.

⁴²⁷ *Id.*

⁴²⁸ *Id.*

⁴²⁹ *Id.*

⁴³⁰ Ex. 110 at 79 (Environmental Report).

⁴³¹ Ex. 202 at 53 (Site Permit Application).

⁴³² *Id.*

⁴³³ *Id.*

⁴³⁴ *Id.* at 54.

⁴³⁵ Ex. 108 at 7 (Draft Site Permit).

⁴³⁶ *Id.* at 10.

⁴³⁷ *Id.* at 11

⁴³⁸ Ex. 202 at 53 (Site Permit Application).

⁴³⁹ *Id.* at 54.

located within active sand and gravel operations unless otherwise negotiated with the landowner.⁴⁴⁰ No impacts to mining are expected from the Project.⁴⁴¹

M. Archaeological and Historical Resources

234. Flying Cow Wind contacted the Minnesota State Historic Preservation Officer (SHPO) and the Office of the State Archaeologist (OSA) in March 2017 to initiate Project coordination.⁴⁴²

235. Merjent, Inc., cultural resource specialists, conducted a literature review of the Project Area and a one mile buffer.⁴⁴³ The literature review revealed the presence of eight previously reported archaeological sites within the Project Area. All eight of the sites are prehistoric.⁴⁴⁴ Five of the sites are artifact scatters, two are prehistoric stone features, and one is a single artifact find spot.⁴⁴⁵ The sites have not been evaluated for eligibility for the National Register of Historic Places (NRHP).⁴⁴⁶ Nine previously inventoried historic structures are present within the one-mile study area.⁴⁴⁷

236. Applicant recently conducted a Phase 1 Cultural Resources Reconnaissance Survey and is working cooperatively with SHPO and OSA.⁴⁴⁸ In addition, Applicant plans to conduct a Phase I Archaeological Survey.⁴⁴⁹ The goal of the archaeological investigation is to identify previously undocumented cultural resources located within the current construction footprint of the Project Area.⁴⁵⁰ If resources are identified, the Applicant will make efforts to alter the Project design to avoid impacts to both previously documented and newly recorded cultural resources.⁴⁵¹

237. Section 5.2.15 of the Draft Site Permit requires Flying Cow Wind to make every effort to avoid impacts to identified archaeological and historic resources.⁴⁵² If a resource is encountered, Flying Cow Wind shall contact and consult with SHPO and OSA.⁴⁵³ Where feasible, avoidance of the resource is required.⁴⁵⁴ Where not feasible, mitigation must include an effort to minimize Project impacts consistent with SHPO and OSA requirements.⁴⁵⁵ In addition, before construction, workers shall be trained about the need to avoid cultural properties, how to identify cultural properties, and procedures to

⁴⁴⁰ Ex. 108 at 4 (Draft Site Permit).

⁴⁴¹ Ex. 202 at 54 (Site Permit Application).

⁴⁴² *Id.* at 42.

⁴⁴³ *Id.*

⁴⁴⁴ *Id.*

⁴⁴⁵ *Id.*

⁴⁴⁶ *Id.*

⁴⁴⁷ *Id.* at 43.

⁴⁴⁸ *Id.* at 44.

⁴⁴⁹ *Id.*

⁴⁵⁰ *Id.*

⁴⁵¹ *Id.*

⁴⁵² Ex. 108 at 10 (Draft Site Permit).

⁴⁵³ *Id.*

⁴⁵⁴ *Id.*

⁴⁵⁵ *Id.*

follow if undocumented cultural properties are found.⁴⁵⁶ If human remains are found during construction, Flying Cow Wind shall immediately halt construction at the location and notify local law enforcement and OSA.⁴⁵⁷ Construction at the location shall not proceed until authorized by local law enforcement or OSA.⁴⁵⁸

N. Airports and Aviation

238. There is one airport within 10 miles of the Project Area.⁴⁵⁹ The nearest airport is the Myers Field Airport, located approximately four miles east/northeast of the Project Area in Canby, Minnesota.⁴⁶⁰

239. Applicant expects to receive a “No Hazard” review from the FAA because Applicant has prescreened the Project Area with consultant Aviation Systems Incorporated and has designed the turbine layout to receive that determination.⁴⁶¹

240. Applicant will notify local airports about the Project to reduce the risk to crop dusters.⁴⁶² The Applicant will coordinate with landowners within and proximal to the Project regarding crop dusting activities.⁴⁶³

241. In addition, in response to public comments, Flying Cow Wind has agreed to install a radar-ALDS for the Project, subject to FAA approval of its use for the Project.⁴⁶⁴

242. Section 5.2.27 requires that towers be marked as required by the FAA, and no lights be placed on the towers other than as required by the FAA, except for infrared heating devices used to protect the wind monitoring equipment.⁴⁶⁵

O. Wildlife

243. Wildlife in the Project Area includes birds, mammals, fish, reptiles, amphibians and insects, both resident and migratory, which utilize the habitat in a specific project’s environmental setting for forage, breeding, and shelter.⁴⁶⁶ The resident species are representative of game and non-game fauna in southwestern Minnesota.⁴⁶⁷ The majority of migratory wildlife species are birds, including waterfowl, raptors, and songbirds, as well as migratory bat species.⁴⁶⁸

⁴⁵⁶ *Id.*

⁴⁵⁷ *Id.*

⁴⁵⁸ *Id.*

⁴⁵⁹ Ex. 202 at 49 (Site Permit Application).

⁴⁶⁰ *Id.*

⁴⁶¹ *Id.*

⁴⁶² *Id.* at 50.

⁴⁶³ *Id.*

⁴⁶⁴ Ex. 206 (Comments Related to Aircraft Detection Lighting System).

⁴⁶⁵ Ex. 108 at 12 (Draft Site Permit).

⁴⁶⁶ Ex. 110 at 30 (Environmental Report).

⁴⁶⁷ *Id.*

⁴⁶⁸ *Id.*

244. There are wetlands, lakes, and riverine habitats in the Project area.⁴⁶⁹ Small forested areas are present on the landscape; however, small groves of trees and wooded shelterbelts are common features of farmsteads in the area.⁴⁷⁰

245. Local animal species use the grasslands, farm woodlots, wetlands, and other areas for food and cover.⁴⁷¹ Mammals common to the landscape include opossum, skunk, squirrels, rodents, rabbits, deer, fox, coyote, and raccoons.⁴⁷² Reptiles and amphibians are associated with wetlands, waterways, and forested areas and those common to the landscape include snakes, turtles, and frogs.⁴⁷³ Several species of birds and bats are also known to occur in the landscape, including grassland birds, migratory birds, raptor, and waterfowl.⁴⁷⁴

246. Studies of bird fatalities near wind farms indicate that fatalities will occur and vary by bird type, habitat availability, and other resources.⁴⁷⁵ Based on publicly available data from six wind farms in southern Minnesota, the adjusted bird fatalities per MW per study period ranged from 0.3 to 5.93.⁴⁷⁶ Studies looking at avian fatalities caused by wind turbines throughout the United States estimated a fatality range of between 134,000 to 327,000 birds per year.⁴⁷⁷

247. Baseline wildlife surveys were conducted in 2008 to support the initial site permit application.⁴⁷⁸ Based on agency coordination, the Applicant re-initiated Tier 3 studies in 2016 to support this Application without completing the Tier I/II assessment.⁴⁷⁹ These studies include avian use surveys, raptor nest surveys, avian grassland surveys, bat acoustic surveys, northern long-eared bat presence/absence acoustic surveys, and grassland condition and Dakota skipper/Poweshiek Skipperling habitat assessment.⁴⁸⁰

248. Applicant conducted raptor nest surveys in 2008, 2016, and 2017, which included identification of bald eagle and other raptor nests.⁴⁸¹ No raptor nests were identified in the 2008 survey, which only included the then Project Area.⁴⁸² The 2016 raptor nest survey, which included the Project Area plus a 10-mile buffer, did not identify any bald eagle nests in the Project Area, but identified seven within 10 miles.⁴⁸³ Two bald eagle nests were identified within approximately 1 mile of the Project: one west of the Project in adjacent Deuel County, South Dakota, south of Lake Cochrane and the South

⁴⁶⁹ *Id.*

⁴⁷⁰ *Id.*

⁴⁷¹ *Id.*

⁴⁷² *Id.*

⁴⁷³ *Id.*

⁴⁷⁴ *Id.*

⁴⁷⁵ *Id.* at 31.

⁴⁷⁶ *Id.* at 32.

⁴⁷⁷ *Id.* at 31.

⁴⁷⁸ Ex. 202 at 80 (Site Permit Application).

⁴⁷⁹ *Id.*

⁴⁸⁰ *See id.* at 82-83.

⁴⁸¹ *Id.* at 84.

⁴⁸² *Id.*

⁴⁸³ *Id.*

Slough Complex, and the other east of the Project along the Lac qui Parle River.⁴⁸⁴ The survey also identified 24 additional raptor nests, including red-tailed hawk, great-horned owl, and unidentified owl and raptor species.⁴⁸⁵ During the 2017 raptor survey, which included the Project Area plus a 5-mile buffer, no bald eagle nests were identified in the Project Area, but five active bald eagle nests were located within 5 miles of the Project, including the Lac qui Parle nest identified in 2016.⁴⁸⁶ An additional 12 raptor nests were located within the Project Area and 5-mile buffer, including red-tailed hawk, great-horned owl, and unidentified raptor.⁴⁸⁷

249. The Project has the potential to cause displacement of some bird species from the Project Area due to increased human activity or the presence of tall structures, though clearing of habitat will be minimal.⁴⁸⁸ In addition to the preconstruction avian-use surveys conducted at the Project, preconstruction avian use study results from other wind energy facilities in the region are informative for assessing regional trends in avian use and species composition.⁴⁸⁹ In general, these studies show that common, disturbance-tolerant passerine species are the most-observed species at wind energy facilities in predominantly agricultural landscapes.⁴⁹⁰

250. The potential for habitat fragmentation impacts to birds is low because the Project is sited on a previously disturbed landscape.⁴⁹¹ Furthermore, the Project has been designed to avoid placing turbines and access roads in MnDNR-mapped native prairie, native plant communities, and sites of biodiversity significance.⁴⁹²

251. One state listed endangered species – the loggerhead shrike – was observed during avian grassland surveys.⁴⁹³ Applicant will avoid impacts to loggerhead shrikes.⁴⁹⁴

252. Mammals in the Project Area use the food and cover available from agricultural fields, grasslands, farm woodlots, wetland areas, and wooded ravines.⁴⁹⁵ Grassland areas and woody vegetation are also habitat for a variety of small mammals.⁴⁹⁶ White-tailed deer, raccoons, skunks, coyotes, fox, and squirrels are all common in the Project Area.⁴⁹⁷

⁴⁸⁴ *Id.*

⁴⁸⁵ *Id.*

⁴⁸⁶ *Id.*

⁴⁸⁷ *Id.*

⁴⁸⁸ Ex. 110 at 31 (Environmental Report).

⁴⁸⁹ Ex. 202 at 85 (Site Permit Application).

⁴⁹⁰ *Id.*

⁴⁹¹ Ex. 110 at 31 (Environmental Report).

⁴⁹² *Id.*

⁴⁹³ Ex. 202 at 87 (Site Permit Application).

⁴⁹⁴ *Id.* at 87-88.

⁴⁹⁵ *Id.* at 85.

⁴⁹⁶ *Id.*

⁴⁹⁷ *Id.*

253. The Applicant conducted bat acoustic surveys in 2008 and 2016.⁴⁹⁸ Both the 2008 and 2016 surveys documented predominately low-frequency bats (e.g., big brown bat, silver-haired bat, or hoary bat).⁴⁹⁹ In 2008, across all three sampling locations, an average of 37.9 bat passes per night were detected, ranging from 5.4 to 66.8 passes per night.⁵⁰⁰ In 2016, bat passes per night averaged 9.39 amongst seven detectors. Six detectors ranged from 6.05 to 9.21 passes per night, while the seventh detector recorded an average of 21.14 passes per night.⁵⁰¹

254. Seven of the eight bat species known to occur in Minnesota may migrate through the Project Area; however, bat habitat within the Project Area is limited to small groves of trees and fencerows near homesteads and the riparian corridors along a few small streams with fringe wetlands.⁵⁰² Outbuildings and other anthropogenic structures may be used as roosting habitat by some species (e.g., little brown myotis and big brown bat).⁵⁰³ Cultivated crops also may provide marginal foraging habitat for bat species adapted to use such habitat.⁵⁰⁴

255. The Project is located within the range of the federally listed northern long-eared bat, and individuals may occur within the Project Area during spring through fall migration.⁵⁰⁵ Applicant conducted a northern long-eared bat presence/absence acoustic survey in 2016.⁵⁰⁶ No potential northern long-eared bat calls were identified.⁵⁰⁷ As such, northern long-eared bats are unlikely to occur in the habitat sampled.⁵⁰⁸

256. Section 7.5.1 of the Draft Site Permit requires Flying Cow Wind to utilize a qualified third party to conduct two full years of avian and bat fatality monitoring following the start of operations.⁵⁰⁹ Monitoring activities and results will be coordinated directly with the MnDNR, the USFWS, and the Commission.⁵¹⁰ Detailed monitoring protocols, agency coordination, and any avoidance and minimization measures will be detailed in the Project's ABPP.⁵¹¹

257. Section 7.5 of the Draft Site Permit requires Flying Cow Wind to conduct an annual audit of its ABPP and maintain an updated ABPP in coordination with the MnDNR,

⁴⁹⁸ *Id.*

⁴⁹⁹ *Id.*

⁵⁰⁰ *Id.*

⁵⁰¹ *Id.*

⁵⁰² *Id.* at 88.

⁵⁰³ *Id.*

⁵⁰⁴ *Id.*

⁵⁰⁵ *Id.* at 89.

⁵⁰⁶ *Id.*

⁵⁰⁷ *Id.*

⁵⁰⁸ *Id.*

⁵⁰⁹ Ex. 110 at 15 (Draft Site Permit).

⁵¹⁰ *Id.*

⁵¹¹ *Id.*

the USFWS, and the Commission.⁵¹² In addition, Flying Cow Wind must submit quarterly and immediate incident reports.⁵¹³

258. Applicant is committed to minimizing wildlife impacts within the Project Area and has designed the Project to minimize avian impacts by avoiding high use wildlife habitat, using monopole towers to minimize perching, placing electrical collection lines underground, and minimizing infrastructure.⁵¹⁴ Applicant will continue to work with MnDNR and USFWS to adapt the BBCS and mitigation measures to minimize potential impacts.⁵¹⁵

P. Rare and Unique Natural Resources

259. The Minnesota DNR maintains a Natural Heritage Program and Nongame Research Program, which is the most complete source of data on Minnesota's rare, endangered, or otherwise significant plant and animal species, plant communities, and other rare natural features.⁵¹⁶ Minnesota DNR Natural Heritage Information System (NHIS) data show that there are two state-listed threatened or endangered insects (butterflies, also federally listed) and one plant in the Project Area.⁵¹⁷ There are documented occurrences of one plant and two bird species within five miles of the Project Area that are state-listed endangered or threatened.⁵¹⁸ In addition, there are 17 species of special concern (three insects, one mussel, seven plants, three birds, one amphibian, two mammals, and one fungus) and two watchlist birds that do not have a legal status, but are being tracked by the MnDNR, have been documented within five miles of the Project Area.⁵¹⁹

260. The Project Area is mostly cultivated cropland, hayfields, or heavily grazed pasture.⁵²⁰ Turbines have been sited to avoid MnDNR mapped native prairie, native plant communities, and sites of biodiversity significance.⁵²¹

261. Applicant will develop a Prairie Protection and Management Land and continue to coordinate with the USFWS and MnDNR on native prairie.⁵²² Although no impacts to rare or unique natural resources are anticipated by the Project, a pre-construction inventory of existing native prairie, woodlands, and wetland will be conducted

⁵¹² *Id.* at 15-16.

⁵¹³ *Id.* at 16.

⁵¹⁴ Ex. 202 at 90 (Site Permit Application).

⁵¹⁵ *Id.*

⁵¹⁶ *Id.* at 91.

⁵¹⁷ *Id.*

⁵¹⁸ *Id.*

⁵¹⁹ *Id.*

⁵²⁰ *Id.* at 94.

⁵²¹ *Id.*

⁵²² Ex. 110 at 45 (Environmental Report).

in the vicinity of planned facilities.⁵²³ Applicant will avoid the rare and unique resources identified to the extent practicable.⁵²⁴

262. Sections 4.7 (Native Prairie), 5.5.2 (USFWS Consultation), 7.5.1 (Operational Phase Fatality Monitoring), and 7.5.2 (Avian and Bat Protection Plan) of the Draft Site Permit identify conditions to monitor and mitigate the Project's potential impacts on rare and unique natural resources.⁵²⁵

Q. Vegetation

263. The majority of the land area within the Project is cultivated, grassland, or pasture.⁵²⁶ Approximately 82.19 acres (0.36% of the Project Area) will be permanently converted to non-agricultural land use, and approximately 49.61 acres (0.2% of Project Area) of prime farmland will be permanently converted to non-agricultural use.⁵²⁷

264. The Project has been designed to avoid permanent impacts to MnDNR mapped native prairie, native plant communities, and all sites of biodiversity significance ranked outstanding, high, moderate, and below.⁵²⁸ As such, there are no turbines, access roads, or the O&M facility within these natural features.⁵²⁹

265. Temporary impacts to MnDNR-mapped native prairie areas is anticipated to be 0.43 acres.⁵³⁰ These impacts are associated with the collection lines and crane paths.⁵³¹ Flying Cow Wind will control traffic to and from the work site in such a manner as to prevent the introduction of invasive species.⁵³² Temporarily disturbed areas will be reseeded to blend with existing vegetation.⁵³³ And the placement of turbines will avoid wooded areas to maximize turbine output and reduce tree removal.⁵³⁴

266. Section 4.7 of the Draft Site Permit provides that Project facilities will not be placed in native prairie unless addressed in a Prairie Protection and Management Plan, and shall not be located in areas enrolled in the Native Prairie Bank Program.⁵³⁵ Flying Cow Wind must prepare a Prairie Protection and Management Plan in consultation with the MnDNR if native prairie is identified within the site boundaries.⁵³⁶ The plan will address steps that must be taken to avoid impacts to native prairie and mitigation to unavoidable impacts to native prairie by restoration or management of other native prairie areas that

⁵²³ Ex. 202 at 94 (Site Permit Application).

⁵²⁴ *Id.*

⁵²⁵ Ex. 108 at 4, 13-14, 15 (Draft Site Permit).

⁵²⁶ Ex. 110 at 38 (Environmental Report).

⁵²⁷ Ex. 210 at 5 (Site Permit Application Addendum).

⁵²⁸ Ex. 202 at 78 (Site Permit Application).

⁵²⁹ *Id.*

⁵³⁰ Ex. 210 at 5 (Site Permit Application Addendum).

⁵³¹ Ex. 202 at 78 (Site Permit Application).

⁵³² Ex. 100 at 40 (Environmental Report).

⁵³³ *Id.*

⁵³⁴ *Id.*

⁵³⁵ Ex. 108 at 4 (Draft Site Permit).

⁵³⁶ *Id.*

are in degraded condition, by conveyance of conservation easements, or by other means agreed to by Flying Cow Wind, the MnDNR, and the Commission.⁵³⁷

R. Soils and Topography

267. Two soil associations are found within the Project Area.⁵³⁸ A soil association has a distinctive patter of soils, relief, and drainage.⁵³⁹ Construction of the Project will increase the potential for soil erosion or compaction.⁵⁴⁰ Best Management Practices (BMPs) will be used during construction and operation of the Project to protect topsoil and adjacent resources and to minimize soil erosion.⁵⁴¹

268. Applicant will obtain a National Pollutant Discharge Elimination System (NPDES) permit from the MPCA to discharge stormwater from construction facilities.⁵⁴² In addition, a Stomwater Pollution Prevention Plan (SWPPP) will be developed prior to construction that will include BMPs such as silt fencing, revegetation plans, and management of exposed soils to prevent erosion.⁵⁴³

269. Following completion of construction, all impacted property not required for continuing operations of the Project facilities will be restored to a reasonably similar condition to its original condition.⁵⁴⁴ Reclamation efforts will include restoration actions to eliminate areas of soil compaction and to replace removed topsoil to its original location.⁵⁴⁵ Except for de minimus amounts that are removed as a consequence of construction, topsoil shall not be removed from the property without the consent of the landowner.⁵⁴⁶

270. Topography within the Project Area is gently rolling moraine.⁵⁴⁷ Steeper relief occurs in valleys along the eastern edge of the Project Area formed by Lazarus and Canby creeks.⁵⁴⁸ Siting and construction of the turbines, associated facilities, access roads, and collection/transmission lines will require some grading.⁵⁴⁹ However, significant impacts to topography are not anticipated because the layout and siting will minimize cut and fill requirements by utilizing existing topographic contours as much as possible.⁵⁵⁰

⁵³⁷ *Id.*

⁵³⁸ Ex. 202 at 58 (Site Permit Application).

⁵³⁹ *Id.*

⁵⁴⁰ *Id.*

⁵⁴¹ *Id.*

⁵⁴² *Id.*

⁵⁴³ *Id.* at 58-59.

⁵⁴⁴ *Id.* at 59.

⁵⁴⁵ *Id.*

⁵⁴⁶ *Id.*

⁵⁴⁷ *Id.* at 57.

⁵⁴⁸ *Id.*

⁵⁴⁹ *Id.*

⁵⁵⁰ *Id.*

S. Groundwater Resources

271. The Lincoln-Pipestone Rural Water System operates a water treatment plant, associated water wells, and a water pipeline within the Project Area.⁵⁵¹ Lincoln-Pipestone Rural Water System will be consulted to avoid any impacts to its system from the development of this Project.⁵⁵²

272. Wells in the area range from 2 to 724 feet deep, with most of the wells screen in buried outwash deposits which are at least 20 feet thick.⁵⁵³ Structure foundations will generally range from 7 feet to 10 feet in depth.⁵⁵⁴ This is above the typical minimum depth of the bedrock aquifers underlying the Project facilities and is generally expected to be above the water table in surficial aquifers.⁵⁵⁵ Construction dewatering may be required at certain locations of the Project and, if needed, Applicant will conduct dewatering in accordance with applicable rules and regulations and obtain necessary permits.⁵⁵⁶

273. Water supply needs for the Project are limited and relate to water needed during construction (e.g., temporary concrete batch plant, etc.) and domestic water supply for the O&M facility.⁵⁵⁷ If any new wells are necessary to support the construction activities, they will be permitted in accordance with MDH well requirements.⁵⁵⁸ Water supply for the proposed O&M facility will be satisfied with either an on-site well or rural water service (if available).⁵⁵⁹

274. Applicant does not anticipate any impacts to groundwater resources during construction or operation of the Project.⁵⁶⁰ Applicant will continue to work with the landowners to identify springs and any additional wells near the Project.⁵⁶¹ Applicant will provide water to the landowner if a well is adversely affected during construction.⁵⁶² In addition, any well that is damaged will be restored to its former quality, to the extent practicable, or replaced.⁵⁶³

T. Surface Water and Wetlands

275. The Project Area is within the greater Minnesota River Watershed, which contains the watersheds of the Lac qui Parle River, Florida Creek, Judicial Ditch No. 1,

⁵⁵¹ *Id.* at 60.

⁵⁵² *Id.* at 61.

⁵⁵³ *Id.*

⁵⁵⁴ *Id.*

⁵⁵⁵ *Id.*

⁵⁵⁶ *Id.*

⁵⁵⁷ *Id.*

⁵⁵⁸ *Id.*

⁵⁵⁹ *Id.*

⁵⁶⁰ *Id.* at 62.

⁵⁶¹ *Id.*

⁵⁶² *Id.*

⁵⁶³ *Id.*

Upper Lazarus Creek, Canby Creek, South Slough, and Twin Lake.⁵⁶⁴ Surface water within the Project Area flows northeast towards the Minnesota River.⁵⁶⁵

276. Eighteen Public Waters Inventory (PWI) watercourses and one county ditch are within the Project Area.⁵⁶⁶ The most notable watercourses include Canby, Lazarus, and Florida creeks.⁵⁶⁷ Six PWI basins are located within the Project Area, the largest being Victors Slough, located within Bohemian State WMA on the southern boundary of the Project Area.⁵⁶⁸

277. The Project has been designed to avoid impacts to waterbodies and watercourses to the extent possible.⁵⁶⁹ The wind turbines and access roads will be built on higher elevations and ridges, which will avoid impacts to lakes, streams, basins, and wetlands located in the lower elevation areas of the Project Area.⁵⁷⁰ Underground electric feeder and collector lines and crane paths will cross waterbodies.⁵⁷¹ However, these impacts will be temporary during construction of the Project and will be minimized to the extent possible.⁵⁷² Impacts are expected to be minimal.⁵⁷³ If access roads cross waterbodies, they will be designed to maintain stream flow by using culverts.⁵⁷⁴

278. Potential impacts to surface water resources from construction of access roads, turbine sites, and collection lines when the ground is disturbed by excavation, grading, and construction traffic could include erosion from increased surface water runoff, sedimentation, discharges of dewatering to groundwater, and diversion of watercourses.⁵⁷⁵

279. Access roads constructed adjacent to streams and drainageways will be designed and constructed to have a low-profile that will not impede natural drainage patterns.⁵⁷⁶ If construction occurs across drainage ways or drain tiles, it will be conducted in a manner to avoid adverse impacts.⁵⁷⁷ If necessary, culverts will be installed within access roads that are constructed in drainageways to allow cross drainage and prevent impoundment of water.⁵⁷⁸ Collection/transmission lines will be installed underground,

⁵⁶⁴ Ex. 110 at 22 (Environmental Report).

⁵⁶⁵ *Id.*

⁵⁶⁶ *Id.*

⁵⁶⁷ *Id.*

⁵⁶⁸ Ex. 202 at 67 (Site Permit Application).

⁵⁶⁹ *Id.* at 69.

⁵⁷⁰ *Id.*

⁵⁷¹ *Id.*

⁵⁷² *Id.*

⁵⁷³ *Id.*

⁵⁷⁴ *Id.*

⁵⁷⁵ *Id.*

⁵⁷⁶ *Id.* at 70.

⁵⁷⁷ *Id.*

⁵⁷⁸ *Id.*

which will not alter drainage patterns.⁵⁷⁹ If needed, drain tile lines will be located in the field and the drainage functions provided by these lines will be maintained.⁵⁸⁰

280. Eight PWI wetlands are within the Project Area, the largest being associated with Culver Lake on the northwest corner of the Project Area.⁵⁸¹ Wetland impacts associated with the Project are 8.7 acres of temporary impacts and 0.51 acres of permanent impacts.⁵⁸² To the maximum practicable extent, Applicant will continue to minimize temporary and permanent impacts with slight modifications to access roads, collection lines, and crane paths of the Project layout.⁵⁸³

281. Applicant will apply erosion control measures identified in the MPCA Stormwater BMPs Manual, such as using silt fence to minimize impacts to adjacent water resources.⁵⁸⁴ Disturbed surface soils will be stabilized at the completion of the construction process to minimize the potential for sedimentation in wetlands.⁵⁸⁵

282. MnDNR has record of seven calcareous fen features in the Project Area.⁵⁸⁶ Applicant is working in consultation with MnDNR to avoid and minimize impacts to calcareous fens to the extent practicable.⁵⁸⁷ Applicant anticipates that all impacts to identified calcareous fens can be avoided and has requested MnDNR concurrence for these areas.⁵⁸⁸

283. Section 4.6 of the Draft Site Permit requires that wind turbines and associated facilities not be placed in public waters or wetlands, except that electric collector or feeder lines may cross or be placed in public waters or wetlands subject to applicable permits and approvals.⁵⁸⁹ Section 5.2.7 of the Draft Site Permit includes additional provisions related to wetlands, including a requirement that construction in wetlands occur during frozen ground conditions to minimize impacts, to the extent feasible.⁵⁹⁰ When winter construction is not possible, wooden or composite mats shall be used to protect wetland vegetation.⁵⁹¹ Further, wetland and water resources disturbed by construction will be restored to pre-construction conditions, in accordance with applicable permits and landowner agreements.⁵⁹²

⁵⁷⁹ *Id.*

⁵⁸⁰ *Id.*

⁵⁸¹ *Id.* at 71.

⁵⁸² Ex. 210 at 5 (Site Permit Addendum).

⁵⁸³ Ex. 202 at 72 (Site Permit Application).

⁵⁸⁴ *Id.* at 74.

⁵⁸⁵ *Id.*

⁵⁸⁶ *Id.* at 72.

⁵⁸⁷ *Id.* at 73.

⁵⁸⁸ *Id.*

⁵⁸⁹ Ex. 108 at 3 (Draft Site Permit).

⁵⁹⁰ *Id.* at 8.

⁵⁹¹ *Id.*

⁵⁹² *Id.*

U. Air and Water Emissions

284. The Project will not emit criteria pollutants (sulfur dioxide, nitrogen oxides, carbon dioxide, and particulate matter) or mercury during operation.⁵⁹³ Emission impacts from construction will be minimal and localized, including dust and emissions from construction equipment.⁵⁹⁴ The Project's wind turbines will not produce ozone.⁵⁹⁵ Under certain conditions, transmission lines produce limited, minimal amounts of ozone and nitrogen oxide emissions.⁵⁹⁶

285. The Project will emit minimal hazardous air pollutants (HAPs) or volatile organic compounds (VOCs) during operation.⁵⁹⁷ Petroleum-based fluids used in the operation of wind turbines have a low vapor pressure, and any release of VOCs will be minimal.⁵⁹⁸

286. The Project will not create wastewater during the generation of electricity.⁵⁹⁹ Operation of the O&M building may create wastewater, which will likely be discharged into a septic system associated with the building.⁶⁰⁰ The potential impacts of this wastewater and septic system are anticipated to be minimal, and mitigation of the impacts, beyond a properly functioning septic system, is not anticipated.⁶⁰¹

V. Solid and Hazardous Wastes

287. Potential hazardous materials within the Project Area are associated with agricultural activities, including petroleum products, pesticides, and herbicides.⁶⁰² A Phase I Environmental Site Assessment will be conducted for the Project to identify known recognized environmental conditions or historical recognized environmental conditions.⁶⁰³

288. The Project will create solid wastes during construction, including scrap wood, plastics, cardboard, and wire.⁶⁰⁴ In addition, three types of petroleum product fluids are necessary for turbine operation: gear box oil, hydraulic fluid, and gear grease.⁶⁰⁵ These wastes will be managed and, if disposal is necessary, disposed of in compliance with the requirements of applicable laws and regulations.⁶⁰⁶

⁵⁹³ Ex. 110 at 15 (Environmental Report).

⁵⁹⁴ *Id.*

⁵⁹⁵ *Id.* at 17.

⁵⁹⁶ *Id.*

⁵⁹⁷ *Id.* at 16.

⁵⁹⁸ *Id.*

⁵⁹⁹ *Id.* at 20.

⁶⁰⁰ *Id.*

⁶⁰¹ *Id.*

⁶⁰² *Id.* at 51.

⁶⁰³ *Id.*

⁶⁰⁴ Ex. 110 at 26 (Environmental Report).

⁶⁰⁵ *Id.*

⁶⁰⁶ *Id.* at 26-27.

289. To avoid spill-related impacts, the Applicant will develop a Spill Prevention, Control and Countermeasures (SPCC) Plan that will outline measures that will be implemented to prevent accidental releases of fuels and other hazardous substances and describes response, containment, and cleanup procedures.⁶⁰⁷

290. Flying Cow Wind will avoid identified hazardous waste sites.⁶⁰⁸ If any wastes, fluids, or pollutants are generated during construction or operation of the Project, they will be handled, processed, treated, stored, and disposed of in accordance with Minnesota Rules, chapter 7045, and local requirements.⁶⁰⁹

291. Section 5.2.22 of the Draft Site Permit requires that all waste and scrap produced during construction be removed and properly disposed of upon completion of each task.⁶¹⁰ In addition, Section 5.2.23 of the Draft Site Permit requires Flying Cow Wind to take all appropriate precautions against pollution of the environment and makes Flying Cow Wind responsible for compliance with all laws applicable to the generation, storage, transportation, clean up, and disposal of all wastes generated during construction and restoration of the site.⁶¹¹

W. Future Development and Expansion

292. The Commission is responsible for siting LWECSs “in an orderly manner compatible with environmental preservation, sustainable development, and the efficient use of resources.”⁶¹²

293. Section 4.1 of the Draft Site Permit imposes a wind access buffer and provides for setbacks from properties where Flying Cow Wind does not hold wind rights.⁶¹³

294. The project is located in southwest Minnesota, where there are already many other large-scale wind energy facilities.⁶¹⁴ There is no evidence that the Project is inconsistent with any future development or expansion plans in the area.

X. Maintenance

295. Applicant estimates that four to six people will be employed on site to operate and maintain the facility.⁶¹⁵ The on-site operations staff will be responsible for the maintenance of the Project on a daily basis.⁶¹⁶

⁶⁰⁷ Ex. 202 at 51 (Site Permit Application).

⁶⁰⁸ *Id.* at 52.

⁶⁰⁹ *Id.*

⁶¹⁰ Ex. 108 at 11 (Draft Site Permit).

⁶¹¹ *Id.*

⁶¹² Minn. Stat. § 216F.03.

⁶¹³ Ex. 108 at 2 (Draft Site Permit).

⁶¹⁴ See Ex. 202 at 98-99 (Site Permit Application).

⁶¹⁵ *Id.* at 102.

⁶¹⁶ *Id.* at 103.

Y. Decommissioning, Turbine Abandonment and Restoration

296. The anticipated life of the Project is approximately 30 years beyond the start date of commercial operations.⁶¹⁷ The Draft Site Permit states that Applicant's permit will expire 30 years after the date the permit was approved and adopted.⁶¹⁸

297. Applicant will develop a decommissioning plan in accordance with the requirements of Minn. R. 7836.0500, subp. 13.⁶¹⁹ Sufficient funds will be set aside to fund Project decommissioning and site restoration, which will include the removal of all above-ground wind facilities.⁶²⁰ Additionally, Applicant notes that it has a contractual obligation to the participating landowners to remove the above surface grade wind facilities, including foundations to a depth of 42 inches below ground, when the wind easement expires.⁶²¹

298. Applicant has reserved the right to extend operations instead of decommissioning at the end of the site permit term.⁶²² As necessary, Flying Cow Wind may apply for an extension of the LW ECS Site Permit to continue Project operations.⁶²³ In this case, a decision may be made on whether to continue operation with existing equipment or to retrofit the turbines and power system with upgrades based on newer technologies.⁶²⁴

299. Section 11.1 of the Draft Site Permit requires Applicant to submit a decommissioning plan to the Commission prior to the pre-operation meeting.⁶²⁵ The plan shall provide information identifying all surety and financial securities established for decommissioning and site restoration of the Project in accordance with the requirements of Minn. R. 7854.0500, subp. 13.⁶²⁶ The decommissioning plan shall provide an itemized breakdown of costs of decommissioning all project components, which shall include labor and equipment.⁶²⁷

300. Section 11.2 of the Draft Site Permit requires Flying Cow Wind to dismantle and remove all towers, turbine generators, transformers, overhead and underground cables and lines, foundations, buildings, and ancillary equipment to a depth of four feet.⁶²⁸ Any agreement for removal to a lesser depth or no removal shall be recorded with the county and show the locations of all such foundations.⁶²⁹ Further, to the extent feasible,

⁶¹⁷ *Id.* at 106.

⁶¹⁸ Ex. 108 at 25 (Site Permit).

⁶¹⁹ Ex. 202 at 106 (Site Permit Application).

⁶²⁰ *Id.*

⁶²¹ *Id.*

⁶²² *Id.*

⁶²³ *Id.*

⁶²⁴ *Id.*

⁶²⁵ Ex. 108 at 21 (Site Permit).

⁶²⁶ *Id.*

⁶²⁷ *Id.*

⁶²⁸ *Id.* at 22.

⁶²⁹ *Id.*

Applicant must restore the site to its pre-Project topography and topsoil quality within 18 months of the Project's termination.⁶³⁰

301. The Site Permit contains appropriate conditions to ensure proper decommissioning of the Project.

Z. Permit Conditions

302. The Draft Site Permit issued on May 25, 2018, includes a number of proposed permit conditions, many of which have been discussed above. Many of these conditions were established as part of the site permit proceedings for the Project or other wind turbine projects permitted by the Commission. The Commission considered comments it received from the public when developing the Draft Site Permit for this Project.

303. The Draft Site Permit includes one Special Condition related to Obstruction Marking and Lighting.

304. LDC requested that Flying Cow Wind also agree to a special permit condition regarding local labor reporting, similar to what was agreed to in the Nobles 2 project. LDC's proposed condition states:

The Permittee shall file quarterly reports with the Commission within 45 days of the end of the quarter regarding construction workers that participated in construction of the project. Reports shall include (a) the gross number of hours worked by or full-time equivalent workers who are Minnesota residents, as defined in Minn. Stat. 290.01, subd. 7, during the quarter in which they participated in construction of the project; (b) the gross number of hours worked by or full-time equivalent workers of people who live in other states but are within 150 miles of the project; and (c) total gross hours or full-time equivalent workers. Permittee shall work with its contractor to determine suitable reporting metrics. Reports shall begin with the commencement of site construction and continue until completion of site restoration.

305. On July 18, 2018, Flying Cow Wind provided its suggested changes to the Draft Site Permit.

306. Flying Cow Wind proposed modifications to Draft Site Permit Special Condition 6.1 regarding Obstruction Marking and Lighting. Flying Cow Wind proposed the modifications because the FAA has not yet completed the project-specific review and approval to utilize ADLS for the Project. If the FAA does not grant approval, Flying Cloud Wind agreed to install an alternative system approved by applicable agencies. Flying Cow Wind's proposed modified Special Condition 6.1 was as follows:

To mitigate potential effects of night-time aviation lighting, the Permittee shall, subject to applicable state and federal approvals or determinations, install an

⁶³⁰ *Id.*

~~Aircraft Detection Lighting System (ADLS), which provides coverage for the Bitter Root Wind Project to mitigate the aesthetic and visual effects of the FAA's night-time aviation lighting requirements. In the event ADLS is not approved for the Project, Permittee shall install such alternative night-time aviation lighting design as may be approved for the Project by applicable state and federal agencies.~~

307. Flying Cow Wind also proposed modifications to LDC's suggested permit condition regarding local labor reporting. Flying Cow Wind stated that it is willing to provide information regarding hiring of local labor, but objects to quarterly reporting of multiple metrics as unnecessary and onerous. Flying Cow Wind proposed modification to LDC's suggested special condition on local labor reporting was as follows:

~~The Permittee shall file quarterly a report with the Commission at the time of the pre-operation meeting within 45 days of the end of the quarter regarding construction workers that participated in construction of the project. The report Reports shall include a summary of the Permittees efforts to hire local construction workers and the percentage of construction workers that participated in construction of the project (a) the gross number of hours worked by or full-time equivalent workers who were Minnesota residents, as defined in Minn. Stat. 290.01, Subd. 7, during the quarter in which they participated in construction of the project or whose permanent residence is; (b) the gross number of hours worked by or full-time equivalent workers of people who live in other states but are within 150 miles of the project during construction of the project.; and (c) total gross hours or full-time equivalent workers. Permittee shall work with its contractor to determine suitable reporting metrics. Reports shall begin with the commencement of site construction and continue until completion of site restoration.~~

308. On August 6, 2018, EERA proposed modifications and additions to the Draft Site Permit conditions. EERA agreed that a condition should be included that requires Flying Cow Wind to track the use of local labor for the Project, but recommended a statistical report at the end of construction rather than the quarterly status reports proposed by LDC. EERA recommended replacing LDC's proposed language and replacing it with the following, inserted as Section 10.4.1 to the Site Permit:

10.4.1 Labor Statistics Report.

The Permittee shall file a post-construction Labor Statistics Report within 60 days of commencement of operation. The Report shall (a) detail the Permittee's efforts and the site contractor's efforts to hire Minnesota workers, and (b) provide an account of 1) the gross number of hours worked by or full-time equivalent workers who are Minnesota residents, as defined in Minn. Stat. 290.01, subd. 7; 2) the gross number of hours worked by or full-time equivalent workers who are residents of other states, but live within 150 miles of the project; and 3) the total gross hours worked or total full-time equivalent workers. Permittee shall work with its contractor to determine the suitable reporting metric. The Report may not include personally identifiable data.

309. EERA also recommended including the following site permit condition, inserted as Section 4.1, regarding potential impacts to calcareous fens:

4.6.1 Calcareous Fens

Should any calcareous Fens be identified within the project area, the Permittee must work with MN DNR to determine if any impacts will occur during any phase of the Project. If the project is anticipated to impact any calcareous fens, the Permittee must develop a Calcareous Fen Management Plan in coordination with MN DNR, as specified in Minn. Stat. 103G.223. Should a Calcareous Fend Management Plan be required, the approved plan must be submitted to the Commission 30 days prior to the submittal of the site plan required in Section 10.3 of this Permit.

310. EERA also recommended including a condition requiring Flying Cow Wind to incorporate a Threatened and Endangered Species Avoidance Plan into its Prairie Protection and Management Plan required by Section 4.7 of the Draft Site Permit. EERA recommended including the following language at the end of Section 4.7:

A Threatened and Endangered Species Avoidance Plan shall be incorporated into the Prairie Protection and Management Plan outlining the steps that will be taken to avoid impacts to these species and mitigation for any unavoidable impacts.

311. EERA recognized that the Site Permit should also take into consideration the regulatory uncertainty associated with FAA approval of an ADLS system. Accordingly, EERA recommended editing the existing Draft Site Permit language in Section 6.1 as follows:

6.1 Obstruction Marking and Lighting

The Permittee shall install an Aircraft Detection Lighting System (ADLS) to mitigate the aesthetic and visual effects of the FAA's aviation lighting requirements. Permittee may install an FAA approved lighting system without ADLS if the Permittee demonstrates that, despite its reasonable efforts to secure FAA approval for an ADLS, one of the following conditions exists:

- 1) The FAA denies the Permittee's application for an ADLS system, or
- 2) Permittee is unable to secure FAA approval in a timely manner.

If either of these two conditions occur, the permittee's reasonable efforts to secure FAA approval of the ADLS must be described and filed with the Commission 14 days before the pre-construction meeting.

312. Flying Cow Wind consents to DOC-EERA's additional proposed conditions and revisions to conditions for inclusion in the Draft Site Permit.

The Administrative Law Judge's suggested changes

313. As noted above, an LWECS must be sited in an orderly manner compatible with environmental preservation, sustainable development, and efficient use of resources.⁶³¹ The law requires the Commission to consider, among other things, the following environmental impacts of the Project: (1) visual impacts,⁶³² (2) recreational resources,⁶³³ (3) tourism and community benefits,⁶³⁴ and (4) rare and unique natural resources.⁶³⁵

314. There is nothing in the law that limits consideration of these impacts to just Minnesota.⁶³⁶ The record demonstrates that several of the proposed turbines in the Project would dominate the landscape and create an immense visual impact for all viewers near Lake Cochrane.⁶³⁷ This visual impairment would damage Lake Cochrane's recreational resources, arguably lower property values around the lake, and impact tourism, the benefits it provides to the community, and Lake Cochrane's status as a unique natural resource.

315. In the Environmental Report, DOC-EERA noted that in situations where property values may be negatively impacted, such impacts can be mitigated by siting turbines away from such residences.⁶³⁸ DOC-EERA also noted that aesthetic impacts can be mitigated by siting the wind turbines outside of these areas to reduce the visual intrusions.⁶³⁹ Given the number of homes and cabins surrounding Lake Cochrane, and the high number of annual visitors, mitigation seems appropriate here.⁶⁴⁰

316. The Administrative Law Judge, therefore, recommends the Commission require the removal of turbines, A2, T35, T2, and T3.⁶⁴¹ These four turbines are significantly closer to Lake Cochrane than any other turbines in the Project.⁶⁴² Flying Cow Wind may use the alternative locations to relocate these four turbines.

317. Any of the above Findings of Fact more properly designated as Conclusions of Law are hereby adopted as such.

Based on these Findings of Fact, the Administrative Law Judge makes the following:

⁶³¹ Minn. Stat. § 216B.03.

⁶³² Minn. R. 7854.0500, subp. 7(C).

⁶³³ *Id.*, subp. 7(F).

⁶³⁴ *Id.*, subp. 7(J).

⁶³⁵ *Id.*, subp. 7(R).

⁶³⁶ DOC-EERA in the EA considered the effect of sound on the Lake Cochrane area. See Ex. 211 at 6 (Sound Modeling Assessment).

⁶³⁷ Ex. 214 (Flying Cow Wind Visual Simulations); Lake Cochrane Improvement Association Ron Ruud Declaration (Aug. 6, 2018) (eDocket No. 20188-145561-02).

⁶³⁸ Ex. 110 at 62 (Environmental Report).

⁶³⁹ *Id.* at 50.

⁶⁴⁰ See Canby Tr. at 55-56 (Ruud) (208 cabins/houses and 10,000 annual visitors).

⁶⁴¹ Flying Cow Wind has eight alternative turbine locations. See Ex. 210 at 1-2 (Site Permit Addendum).

⁶⁴² See Ex. 110 at Figures 2, 4 (Environmental Report).


CONCLUSIONS OF LAW

1. The Commission and the Administrative Law Judge have jurisdiction over the site permit applied for by Applicant for the up to 152 MW Project pursuant to Minn. Stat. § 216F.04.
2. Flying Cow Wind has complied with the procedural requirements of Minnesota Statutes chapter 216F and Minnesota Rules chapter 7854.
3. The Commission has complied with all procedural requirements of Minn. Stat. ch. 216F and Minn. R. ch. 7854.
4. A public hearing was conducted in Canby, a community near the Project. Proper notice of the public hearing was provided, and the public was given the opportunity to speak at the hearing and submit written comments.
5. The Commission has the authority under Minn. Stat. § 216F.04 to place conditions in a LWECs site permit.
6. It is reasonable and appropriate to amend the Draft Site Permit to include the changes agreed to between Applicant and DOC-EERA regarding conditions 6.1 (Obstruction Marking and Lighting), 4.6.1 (Calcareous Fens), 4.7 (Threatened and Endangered Species Avoidance Plan), and 10.4.1 (Labor Statistics Report).
7. The Draft Site Permit contains a number of important mitigation measures and other reasonable conditions.
8. Removal of Turbines A2, T35, T2, and T3 is necessary for the Project to be compatible with environmental preservation and the efficient use of resources.
9. The Project, with the Draft Site Permit conditions revised as set forth above and removal of turbines A2, T35, T2, and T3, satisfies the site permit criteria for a LWECs contained in Minn. Stat. § 216F.03 and meets all other applicable legal requirements.
10. The Project, with the permit conditions discussed above and removal of turbines A2, T35, T2, and T3, is compatible with environmental preservation, sustainable development, and the efficient use of resources.
11. The Project, with the permit conditions discussed above and removal of turbines A2, T35, T2, and T3, does not present a potential for significant adverse environmental effects pursuant to the Minnesota Environmental Rights Act and the Minnesota Environmental Policy Act.
12. Any of the above Conclusions of Law more properly designated as Findings of Fact are hereby adopted as such.

RECOMMENDATION

Based on these Findings of Fact and Conclusions of Law, the Administrative Law Judge recommends that the Commission issue a site permit to Flying Cow Wind to construct and operate the up to 152 MW Project in Yellow Medicine County, subject to the conditions set forth in the Conclusions of Law above.

Dated: September 5, 2018



JAMES E. LAFAVE
Administrative Law Judge

NOTICE

Notice is hereby given that exceptions to this Report, if any, by any party adversely affected must be filed under the time frames established in the Commission's rules of practice and procedure, Minn. R. 7829.2700, .3100 (2017), unless otherwise directed by the Commission. Exceptions should be specific and stated and numbered separately. Oral argument before a majority of the Commission will be permitted pursuant to Minn. R. 7829.2700, subp. 3. The Commission will make the final determination of the matter after the expiration of the period for filing exceptions, or after oral argument, if an oral argument is held.

The Commission may, at its own discretion, accept, modify, or reject the Administrative Law Judge's recommendations. The recommendations of the Administrative Law Judge have no legal effect unless expressly adopted by the Commission as its final order.

September 5, 2018

See Attached Service List

Re: In the Matter of the Application of Flying Cow Wind, LLC for a Certificate of Need for the up to 152 MW Bitter Root Wind Project and Associated Facilities in Yellow Medicine County, Minnesota

In the Matter of the Application of Flying Cow Wind, LLC for a Site Permit for the up to 152 MW Bitter Root Wind Project and Associated Facilities in Yellow Medicine County, Minnesota


**OAH 60-2500-35035
MPUC No. IP6984/CN-17-676
MPUC No. IP6984/WS-17-749**

To All Persons on the Attached Service List:

Enclosed and served upon you is the Administrative Law Judge's **SUMMARY OF PUBLIC TESTIMONY, FINDINGS OF FACT, CONCLUSIONS OF LAW, AND RECOMMENDATION** in the above-entitled matter.

If you have any questions, please contact me at (651) 361-7881, sheena.denny@state.mn.us, or via facsimile at (651) 539-0310.

Sincerely,



SHEENA DENNY
Legal Assistant

Enclosure

STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS
PO BOX 64620
600 NORTH ROBERT STREET
ST. PAUL, MINNESOTA 55164

CERTIFICATE OF SERVICE

<p>In the Matter of the Application of Flying Cow Wind, LLC for a Certificate of Need for the up to 152 MW Bitter Root Wind Project and Associated Facilities in Yellow Medicine County, Minnesota</p> <p>In the Matter of the Application of Flying Cow Wind, LLC for a Site Permit for the up to 152 MW Bitter Root Wind Project and Associated Facilities in Yellow Medicine County, Minnesota</p>	<p>OAH Docket No.: 60-2500-35035 MPUC No. IP6984/CN-17-676 MPUC No. IP6984/WS-17-749</p>
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Sheena Denny, certifies that on September 5, 2018 she served the true and correct **SUMMARY OF PUBLIC TESTIMONY, FINDINGS OF FACT, CONCLUSIONS OF LAW, AND RECOMMENDATION** by eService, and U.S. Mail, (in the manner indicated below) to the following individuals:

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret
Generic Notice	Commerce Attorneys	commerce.attorneys@ag.state.mn.us	Office of the Attorney General-DOC	445 Minnesota Street Suite 1800 St. Paul, MN 55101	Electronic Service	Yes
Ian	Dobson	residential.utilities@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St. St. Paul, MN 551012130	Electronic Service	Yes
Sharon	Ferguson	sharon.ferguson@state.mn.us	Department of Commerce	85 7th Place E Ste 280 Saint Paul, MN 551012198	Electronic Service	No
Sean	Flannery	sean.flannery@res-americas.com	Renewable Energy Systems Americas Inc.	12 South 6th Street Suite 530 Minneapolis, MN 55402	Electronic Service	No
Andrew	Gibbons	andrew.gibbons@stinson.com	Stinson Leonard Street	50 S 6th St Ste 2600 Minneapolis, MN 55402	Electronic Service	No
Anne Marie	Griger	anne-marie.griger@res-group.com	Flying Cow Wind, LLC	11101 W 120th Ave Broomfield, Colorado 80021	Electronic Service	No
James	LaFave	james.lafave@state.mn.us	Office of Administrative Hearings	600 N Robert Street St. Paul, MINNESOTA 55164	Electronic Service	Yes
Michelle	Matthews	Michelle.Matthews@res-group.com	Renewable Energy Systems	330 2nd Ave S Ste 820 Minneapolis, MN 55401	Electronic Service	No
Janet	Shaddix Elling	jshaddix@janetshaddix.com	Shaddix And Associates	7400 Lyndale Ave S Ste 190 Richfield, MN 55423	Paper Service	Yes
Daniel P	Wolf	dan.wolf@state.mn.us	Public Utilities Commission	121 7th Place East Suite 350 St. Paul, MN 551012147	Electronic Service	Yes