BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Katie J. Sieben	Chair
Hwikwon Ham	Commissioner
Valerie Means	Commissioner
Joseph K. Sullivan	Commissioner
John A. Tuma	Commissioner

In the Matter of the Application of Dodge County Wind, LLC for a Certificate of Need, a Site Permit, and a Route Permit for the up to 252 MW Large Wind Energy Conversion System and Associated 161 kV Transmission Line in Dodge, Mower, and Steele Counties, Minnesota	ISSUE DATE: June 4, 2024 DOCKET NO. IP-6981/CN-20-865 DOCKET NO. IP-6981/WS-20-866 DOCKET NO. IP-6981/TL-20-867 ORDER GRANTING CERTIFICATE OF NEED, ISSUING SITE PERMIT, AND ISSUING ROUTE PERMIT

PROCEDURAL HISTORY

On May 7, 2021, Dodge County Wind, LLC[1] (DCW) filed a notice plan under Minn. R. 7829.2550 for its Dodge County Wind Project (the Project), which is designed to generate and sell electricity to Great River Energy. The Project includes:

- a large wind energy conversion system (LWECS or wind farm) in Dodge County capable of generating up to 259 megawatts (MW), and
- an associated 27-mile, 161 kilovolt (kV) high-voltage transmission line to connect the system to the grid.

In its May 7 filing, DCW also requested an exemption from certain certificate of need (CN) requirements and submitted a notice of intent to submit a route permit application under the alternative permitting process. On July 13, 2021, the Commission issued an order approving the requested CN exemptions with conditions.

On July 21, 2021, the Commission approved DCW's proposed notice plan.

By January 14, 2022, DCW filed amended applications for a CN for the project, a site permit for the wind farm, and a route permit for the transmission line.

[1] Dodge County Wind is an indirect and wholly-owned subsidiary of NextEra Energy Resources, LLC, and is an independent power producer.

On March 8, 2022, the Commission issued an order:

- Accepting the applications as complete;
- Authorizing the use of the informal review process under Minn. R. 7829.1200 for the CN application;
- Authorizing the use of joint proceedings to evaluate the applications, including joint environmental review of the CN and route permit applications; and
- Requesting that an administrative law judge from the Office of Administrative Hearings preside over a public hearing in accordance with Minn. R. 7850.3800 and prepare a report with findings and recommendations on all three applications.

On March 24, 2022, the Commission and the Department of Commerce issued a Notice of Public Information and Environmental Assessment (EA) Scoping Meeting.

On May 10, 2022, Commission staff and the Department of Commerce, Energy Environmental Review and Analysis (EERA) held two public information and environmental assessment scoping meetings, followed by a virtual meeting on May 11, 2022.

On June 6, 2022, Dodge County requested a contested case proceeding.

On July 29, 2022, DCW filed its response to comments received during the scoping comment period, including proposed additional route segment alternatives.

On August 3, 2022, EERA requested additional information from DCW on the proposed additional route segment alternatives.

On August 22, 2022, DCW filed its response to EERA's request for additional information.

On August 31, 2022, the Commission and EERA filed a joint notice extending the public scoping comment period until September 21, 2022, to provide an opportunity for comments on the additional route segment alternatives.

By September 21, 2022, the Commission received comments from numerous commenters representing individuals,[2] trade and business associations, unions, advocacy groups, federal and state agencies, local governments, and local businesses.

On September 28, 2022, Dodge County filed supplemental comments.

On November 9, 2022, EERA filed a summary of the EA scoping processes and a preliminary draft site permit incorporating site permit conditions commenters recommended during the scoping comment period.

[2] The Commission has continued to receive written comments from members of the public throughout the pendency of these dockets.

On January 9, 2023, EERA filed comments stating that it was unable to recommend a task force charge based on unresolved issues related to DCW's proposed route and proposed segment alternatives.

On February 24, 2023, the Commission issued an order:

- issuing a preliminary draft site permit,
- requesting EERA to file a draft route permit,
- re-authorizing an advisory task force to help EERA evaluate the scope of the EA, and
- asking DCW to propose language identifying the issues to be addressed by the administrative law judge if the Commission referred the matter for contested case proceedings.

On March 2, 2023, EERA established the advisory task force and set forth the task force objectives.

On March 6, 2023, DCW submitted proposed language identifying issues for referral to the OAH for contested case proceedings.

On March 16, 2023, EERA submitted a proposed draft route permit into the record.

On May 2, 2023, the Commission opened a comment period on the proposed draft route permit filed by EERA and the proposed contested case referral language filed by DCW.

On May 23, 2023, the advisory task force—including representatives from the townships of Ashland, Hayfield, Ripley, and Sargeant, along with representatives from Dodge and Mower Counties—filed its report identifying topics to address in the environmental assessment. These topics included potential consequences and issues of local concern, along with mitigation measures, including route alternatives.

By June 9, 2023, the Commission received comments and reply comments on the draft route permit and DCW's proposed contested case referral language.

On July 27, 2023, EERA issued its EA Scoping Decision.

On September 1, 2023, the Commission issued an order accepting EERA's draft route permit, authorizing the EA, and declining to refer the matter for contested case proceedings.

On November 30, 2023, EERA filed the completed EA and proposed draft site permit.

On December 5, 2023, EERA filed comments recommending the Commission grant the CN for the Project.

On December 12, 2023, DCW submitted its pre-filed testimony, which included a Memorandum of Understanding between DCW and Mower County regarding their shared agreement to utilize DCW's proposed Hybrid Route Alternative.

On December 19, 2023, Administrative Law Judge (ALJ) Kimberly Middendorf held public hearings on the applications in-person in Kasson, Minnesota. A virtual hearing, held via WebEx, followed on December 20, 2023.

By February 29, 2024, numerous commenters representing individuals, state agencies, local governments, trade and business associations, unions, and advocacy groups filed comments, and DCW and EERA filed reply comments.

On March 29, 2024, the ALJ filed her Report with Findings of Fact, Conclusions of Law, and Recommendations (ALJ Report).

On April 15, 2024, DCW and EERA filed exceptions to the ALJ Report.

On April 23, 2024, Mower County filed comments regarding the ALJ Report.

On April 29, 2024, EERA filed additional comments.

On May 2, 2024, the matter came before the Commission.

FINDINGS AND CONCLUSIONS

I. The Project

The Project consists of an up to 252 MW large wind energy conversion system and an associated 27-mile, 161 kV high-voltage transmission line in Dodge and Mower Counties.

The Project includes up to 77 wind turbines, a collector substation, collection lines, an operation and maintenance building, a permanent meteorological tower, and gravel access roads. The associated 161 kV transmission line will connect the wind farm to the Pleasant Valley substation in Mower County.

DCW has entered into a 30-year power purchase agreement to generate and sell electricity to Great River Energy (GRE). The electricity provided through the Project will enable GRE to maintain its Renewable Energy Standard compliance, meet state greenhouse gas reduction goals, and deliver reliable and affordable wholesale electricity to the regional electricity market and its member-owned cooperatives.

The Project will be connected under the Midcontinent Independent System Operator's (MISO) surplus interconnection service. The connection will use existing interconnection rights held by GRE's Pleasant Valley Station, which is a natural gas peaking plant. According to the applicant, this interconnection will avoid the need to fund, build, or upgrade transmission infrastructure beyond the interconnection point.

II. ALJ Report

The ALJ prepared a well-reasoned and thorough report detailing the proceedings, evidence in the record, arguments of the parties and public commenters, and various issues analyzed in the process of evaluating the need for the project and developing the site and route permits. The ALJ

Report includes specific findings, conclusions, and recommendations that are discussed in further detail below in relation to the permit applications.

A. Exceptions to the ALJ's Report

In its April 15, 2024 filing, EERA filed proposed technical corrections to the following findings and headings in the ALJ Report:

i. In Finding 8, subpart (iii), replace the phrase "…instead of a full environmental review)" with "…in lieu of an Environmental Report)" to avoid confusion about the fact that an Environmental Report is itself a thorough environmental review.

ii. In headings IV.A, IV.B, and IV.C, replace "Environmental Report" with "Environmental Assessment" to ensure consistency with the purpose of the scoping meetings.

iii. In Finding 53, replace "…Scoping Meeting to take place Tuesday, April 12, 2022, from 1:00 p.m. ***to*** 6:00 p.m. in-person…" with "…Scoping Meeting to take place Tuesday, April 12, 2022, from 1:00 p.m. ***and*** 6:00 p.m. in-person…" to clarify that there were two in-person meetings held on April 12, 2022.

iv. In Finding 904, correct a misspelling of "concludes."

EERA further recommended – and DCW agreed in its April 15, 2024 exceptions – that the Commission decline to adopt the ALJ's recommendations as to the following:

i. Modifying the standard language in route permit section 5.3.10 to define "tall growing" and "low growing" vegetation, due to the challenges of defining a standard for these terms that would be broadly applicable. EERA recommended that the language in Finding 915 be modified accordingly.

ii. Identifying in the site permit the specific local permits required, as recommended in Finding 670. EERA raised concerns that requiring specific permits in the text of the site permit could result in the need for later permit amendments. EERA also argued that Section 5.6.2 of the draft site permit requires the permittee to obtain all required permits for the project and that local governments are invited to actively participate in the pre-construction meeting.

iii. Requiring the Agricultural Impact Mitigation Plan to address stray voltage, electromagnetic fields, and aerial spraying, as recommended in Finding 767, 884, and 776. EERA noted that these issues are not part of the already in-depth requirements for Agricultural Impact Mitigation Plans.

iv. Adding a site permit condition and a route permit condition requiring DCW to post financial security for any property damage, as recommended in Findings 905-906. EERA pointed out that the kinds of claims contemplated by this recommendation are typically covered under standard insurance policies.

DCW also proposed changes to Findings 436, 847, and 941 of the ALJ's Report concerning undergrounding, arguing that undergrounding the Project – or even a segment of it – is not supported in the record. Ultimately, cost, reliability, and repair considerations favor keeping the line above ground, although some public documents supported an underground line primarily for aesthetic reasons. Therefore, DCW proposed removing paragraph 436 in its entirety and modifying Findings 847 and 941 to remove any undergrounding requirements.

DCW additionally proposed modifications to section 5.3.8 of the route permit regarding soil erosion and sediment control. DCW proposed these modifications to ensure the conditions the ALJ recommended in Findings 903 and 904 are appropriately reflected in the permit. In Findings 903 and 904, the ALJ recommended requiring DCW to request monthly review from the Minnesota Pollution Control Agency of the Project's National Pollutant Discharge Elimination System permit and Stormwater Pollution Prevention Plan. In its April 29, 2024 comments, EERA agreed with DCW's proposed changes to section 5.3.8, but with a modification to clarify which portions of the changes create a special condition.

In its comments regarding the ALJ's Report, Mower County raised concerns about pole placements in roadway clear zones. Mower County previously requested that DCW perform a clear zone analysis to confirm that pole locations were not in roadway clear zones, and when the analysis showed that some locations were inside the roadway clear zone, Mower County proposed mitigation measures. DCW acknowledged that the proposed mitigation measures were reasonable and agreed to reslope both sides of two roadways – CSAH 1 in Mower County and CSAH 9 in Dodge County – before Project construction begins to ensure that poles are not placed in the clear zone. To reflect this information and the current agreement between parties, Mower County argued changes were needed to Finding 737 in the ALJ's Report.

B. Commission Action

Having examined the record and considered the ALJ's Report, the Commission concurs with the ALJ's findings, conclusions, and recommendations, and the Commission will therefore accept, adopt, and incorporate the attached Report, with the following modifications:

i. The Commission will adopt EERA's technical corrections to:

   1. Findings 8, 53, and 904; and

   2. Headings IV.A, IV.B, and IV.C.

ii. The Commission concurs with DCW's analysis that it is reasonable to keep the entire line above ground and will therefore modify Findings 436, 847, and 941 concerning undergrounding, as proposed in DCW's April 15, 2024 exceptions.

iii. The Commission will modify Finding 737 to read:

> 737. The Federal Highway Administration defines a clear zone as "an unobstructed, traversable roadside area that allows a driver to stop safely or regain control of a vehicle that has left the roadway." Clear zone widths are location-specific and vary depending upon various risk factors including traffic volume, speed, and slope. DCW proposes to place transmission structures within the outer five feet of public road ROW along portions of the route located within public road ROW. There is some dispute whether transmission structures would be outside the clear zone. DCW has agreed to reslope both sides of the roadway along CSAH 1 in Mower County and CSAH 9 in Dodge County to ensure that poles are not placed within the clear zone.

iv. The Commission also concurs with EERA's analysis of the following permit conditions and will decline to adopt the ALJ's recommendations in:

1. Finding 670, to identify in the site permit the specific local permits required;

2. Findings 905 and 906, to add a site permit condition and a route permit condition requiring DCW to post financial security for private property damage;

3. Findings 767, 884, and 776, regarding a requirement for the Agricultural Impact Mitigation Plan to address stray voltage, electromagnetic fields, and aerial spraying; and

4. Finding 915, to modify route permit section 5.3.10 to define "tall growing" and "low growing" vegetation. Accordingly, the Commission will modify Finding 915 as shown in EERA's April 15, 2024 exceptions.

v. The Commission will modify section 5.3.8 of the route permit to include DCW's proposed changes, as modified and shown in EERA's April 29, 2024 comments.

III. Environmental Assessment

Minn. R. 7850.3700 requires the Department of Commerce to prepare an EA for each proposed project reviewed under the alternative permitting process. The rule specifies that the EA must include information on the human and environmental impacts of the proposed project and any alternative sites or routes, along with information about mitigative measures that could be reasonably implemented to eliminate or minimize adverse impacts. The EA is developed after the Department of Commerce issues a scoping decision identifying issues to be addressed, including any alternative sites or routes to be evaluated.

The review of a CN application requires the Department of Commerce to prepare an environmental report under Minn. R. 7849.1200. Alternatively, if a site or route permit application is concurrently pending for the same project, the environmental review requirement may be satisfied using the EA prepared under Minn. R. Ch. 7850. In this case, the Commission authorized an EA instead of an environmental report.

The Commission concurs with the ALJ and the parties that the EA and the record created in this matter address the issues identified in EERA's Scoping Decision and satisfy applicable statutory and rule requirements.

IV. Certificate of Need

Based on the record and the ALJ's Report – which includes a full accounting and discussion of the comments submitted concerning the CN and the need for the project – the Commission concurs that DCW has met the requirements for a CN. The Commission will therefore grant a CN for the Project, finding that:

A. the factors set forth in Minn. R. 7849.0120(A), have been met and the probable result of denying the application would likely be an adverse effect upon the future adequacy, reliability, or efficiency of energy supply to the applicant, to the applicant's customers, or to the people of Minnesota and neighboring states;

B. the factors set forth in Minn. R. 7849.0120(B), have been met and a more reasonable and prudent alternative to the Project has not been demonstrated by a preponderance of the evidence in the record;

C. the factors set forth in Minn. R. 7849.0120(C), have been met and the preponderance of the evidence in the record demonstrates that the Project will provide benefits to society in a manner compatible with protecting the natural and socioeconomic environments, including human health; and

D. the factors set forth in Minn. R. 7849.0120(D), have been met and the record does not demonstrate that the design, construction, or operation of the proposed facility, or a suitable modification of the proposed facility, will fail to comply with relevant policies, rules, and regulations of other state and federal agencies and local governments.

V. Site Permit

The ALJ recommended that the Commission issue a site permit for the 252-megawatt LWECS, along with permit conditions, finding that DCW has met all applicable site permitting requirements. The ALJ also recommended the Commission adopt a special condition requiring DCW to adopt an Agricultural Impact Mitigation Plan (AIMP).

Having reviewed the ALJ's Report and the record, the Commission concurs with the ALJ that DCW has satisfied all applicable permitting requirements. Therefore, the Commission will adopt the ALJ's Report, as modified herein and with the addition of the following language:

6.11 Agricultural Impact Mitigation Plan

The Permittee shall develop an agricultural impact mitigation plan (AIMP) in coordination with the Minnesota Department of Agriculture (MDA). The Permittee shall provide landowners within the Project Boundary with a copy of the AIMP. The Permittee shall file with the Commission the AIMP and an affidavit of the AIMP distribution to landowners at least 14 days prior to the pre-construction meeting.

The Commission will issue a site permit for the project, as attached.

VI. Route Permit

The ALJ recommended that the Commission issue a route permit for the 161-kilovolt high-voltage transmission line along DCW's Hybrid Route Alternative, finding that DCW has satisfied all applicable route permitting requirements. The ALJ also recommended six special permit conditions.

Having reviewed the ALJ's Report and the record, the Commission concurs with the ALJ that DCW has satisfied the relevant procedural criteria and the decision criteria set forth in Minn. Stat. § 216E and Minn. R. Ch. 7850. The Commission further agrees that a route permit should be issued for the proposed route with the conditions recommended by the ALJ, as modified herein and including the following amendments:

A. Amend sections 9.1 and 9.2 of the Route Permit so that the local and state road authority having jurisdiction over roads where powerline posts are proposed to be placed in the road right-of-way shall be included in the pre-construction meeting and receive the plan and profile as required in the permit.

B. Amend the special conditions of the Route Permit to add a new paragraph:

> **Community Electric Consultation**
>
> The Permittee shall attempt in good faith to meet with the owners of the dairy and hog farms adjacent to the Route for the purpose of explaining the energy and electrical standard effects addressed in sections 5.4.1 and 5.4.2. The Permittee shall demonstrate compliance with the consultation obligation in its pre-construction filing.

The Commission will issue the attached route permit for the Project.

ORDER

1. The Commission adopts the ALJ Report to the extent it is consistent with the Commission's decisions herein.

2. The Commission adopts the technical corrections to the ALJ Report identified in EERA's April 15, 2024 exceptions, relating to the following findings:

    a. Finding 8

    b. Headings IV.A, IV.B, and IV.C

    c. Finding 53

    d. Finding 904

3. The Commission modifies findings 436, 847, and 941 of the ALJ Report concerning undergrounding as proposed in DCW's April 15, 2024 exceptions.

4. The Commission modifies ALJ Finding of Fact 737 to read:

    737. The Federal Highway Administration defines a clear zone as "an unobstructed, traversable roadside area that allows a driver to stop safely or regain control of a vehicle that has left the roadway." Clear zone widths are location-specific and vary depending upon various risk factors including traffic volume, speed, and slope. DCW proposes to place transmission structures within the outer five feet of public road ROW along portions of the route located within public road ROW. There is some dispute whether transmission structures would be outside the clear zone. DCW has agreed to reslope both sides of the roadway along CSAH 1 in Mower County and CSAH 9 in Dodge County to ensure that poles are not placed within the clear zone.

5. The Commission finds that the environmental assessment and the record address the issues identified in the scoping decision.

6. The Commission issues a certificate of need for the 252-megawatt Dodge County large wind energy conversion system and associated 161-kilovolt high-voltage transmission line.

7. The Commission issues a site permit for the 252-megawatt Dodge County large wind energy conversion system with the conditions recommended in the ALJ report, except as modified below.

8. The Commission declines to adopt the ALJ's recommendation in finding 670 to identify in the site permit the specific local permits required.

9. The Commission declines to adopt the ALJ's recommendation in findings 905–906 to add a site permit condition requiring DCW to post financial security for private property damage.

10. The Commission declines to adopt the ALJ's recommendations in findings 767, 884, and 776, that the Agricultural Impact Mitigation Plan address stray voltage, electromagnetic fields, and aerial spraying.

11. The Commission includes the following condition in the site permit:

Agricultural Impact Mitigation Plan
The Permittee shall develop an agricultural impact mitigation plan (AIMP) in coordination with the Minnesota Department of Agriculture (MDA). The Permittee shall provide landowners within the Project Boundary with a copy of the AIMP. The Permittee shall file with the Commission the AIMP and an affidavit of the AIMP distribution to landowners at least 14 days prior to the pre-construction meeting.

12. The Commission issues a route permit for the 161-kilovolt high-voltage transmission line along the Hybrid Route Alternative with the conditions recommended in the ALJ Report, except as modified below.

a. Amend sections 9.1 and 9.2 of the Route Permit so that the local and state road authority having jurisdiction over roads where powerline posts are proposed to be placed in the road right-of-way shall be included in the pre-construction meeting and receive the plan and profile as required in the permit.

b. Amend the special conditions of the Route Permit to add a new paragraph:

Community Electric Consultation
The Permittee shall attempt in good faith to meet with the owners of the dairy and hog farms adjacent to the Route for the purpose of explaining the energy and electrical standard effects addressed in sections 5.4.1 and 5.4.2. The Permittee shall demonstrate compliance with the consultation obligation in its pre-construction filing.

13. The Commission declines to adopt the ALJ's recommendation in findings 905 and 906 to add a route permit condition requiring DCW to post financial security for property damage.

14. The Commission modifies finding 915 as shown in EERA's April 15, 2024 exceptions and declines to adopt the ALJ's recommendation to modify route permit section 5.3.10 to define "tall growing" and "low growing" vegetation.

15. The Commission modifies Section 5.3.8 of the route permit, regarding soil erosion and sediment control, to include the Permittee's proposed addition of a sentence regarding providing its NPDES permit and Stormwater Prevention Plan to MPCA for its review, but move the sentence regarding a stormwater impact financial security mechanism with Dodge County to a new Special Condition 6.10, as shown in the April 29, 2024 letter from DOC EERA.

16. The Commission delegates authority to the Executive Secretary to modify the site and route permits to correct typographic and formatting errors and to ensure consistency with the Commission's Order.

17. This order shall become effective immediately.

BY ORDER OF THE COMMISSION

Will Seuffert
Executive Secretary

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STATE OF MINNESOTA PUBLIC UTILITIES COMMISSION

SITE PERMIT FOR A
LARGE WIND ENERGY CONVERSION SYSTEM

IN
DODGE AND STEELE COUNTIES

ISSUED TO
DODGE COUNTY WIND, LLC

PUC DOCKET NO. IP-6981/WS-20-866

In accordance with the requirements of Minnesota Statutes Chapter 216F and Minnesota Rules Chapter 7854 this site permit is hereby issued to:

DODGE COUNTY WIND, LLC

The Permittee is authorized by this site permit to construct and operate a Large Wind Energy Conversion System of up to 252 megawatts (MW) consisting of up to 77 turbines. The Large Wind Energy Conversion System and associated facilities shall be built within the site identified in this permit and as portrayed on the site maps and in compliance with the conditions specified in this permit.

This site permit shall expire thirty (30) years from the date of this approval.

Approved and adopted this 4th day of June, 2024

BY ORDER OF THE COMMISSION

Will Seuffert,
Executive Secretary

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Attachment 2 – Compliance Filing Procedure for Permitted Energy Facilities
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1 SITE PERMIT

The Minnesota Public Utilities Commission (Commission) hereby issues this site permit to Dodge County Wind, LLC (Permittee). This permit authorizes the Permittee to construct and operate the Dodge County Wind Project a 252-megawatt (MW) nameplate capacity Large Wind Energy Conversion System (LWECS) and associated facilities in Dodge and Steele counties. The LWECS and associated facilities shall be built within the site identified in this permit and as identified in the attached site maps, hereby incorporated into this document.

1.1 Preemption

Pursuant to Minn. Stat. § 216F.07, this permit shall be the sole site approval required for the location, construction, and operation of this project and this permit shall supersede and preempt all zoning, building, and land use rules, regulations, and ordinances adopted by regional, county, local, and special purpose governments.

2 PROJECT DESCRIPTION

The Dodge County Wind Project will be an up to 252MW nameplate capacity LWECS in Dodge and Steele counties in Minnesota. The LWECS will consist of up to install 65 General Electric (GE) 3.4 MW wind turbines and 12 GE 2.52 MW wind turbines.

All of the turbines will utilize low-noise trailing edge (LNTE) serrations on the turbine blades to reduce sound impacts. LNTE serrations will be the same color as the turbine blades and cover approximately 20-30 percent of the trailing edge of the outboard blade length.

2.1 Associated Facilities

Associated facilities include the following: a project substation, an operation and maintenance (O&M) facility, up to 2 permanent meteorological towers, underground electrical collector lines, Aircraft Detection Lighting System (ADLS) towers, and permanent all-weather gravel access roads.

2.2 Project Location

The project is located in the following:

County	Township Name	Township	Range	Sections
Dodge	Ashland	106N	17W	7,18, 19
	Claremont	107N	18W	31-35
	Ripley	106N	18W	2-24, 29-32

County	Township Name	Township	Range	Sections
	Westfield	105N	18W	5, 8
Steele	Aurora	106N	19W	1-4, 11-13, 24, 25, 36
	Havana	107N	19W	25-28, 33-36

3 DESIGNATED SITE

The site designated by the Commission for the Dodge County Wind Project is depicted on the site maps attached to this permit. The project area encompasses approximately 28,350 acres. Upon completion, the project will occupy no more than 62 acres of land converted to wind turbines and associated facilities approved by this permit. Within the project boundary, the LWECS and associated facilities shall be located on lands for which the Permittee has obtained wind rights.

3.1 Turbine Layout

The preliminary wind turbine and associated facility layouts are shown on the site maps attached to this permit. The preliminary layout represents the approximate location of wind turbines and associated facilities within the project boundary and identifies a layout that seeks to minimize the overall potential human and environmental impacts of the project, which were evaluated in the permitting process.

The final layout depicting the location of each wind turbine and associated facility shall be located within the project boundary. The project boundary serves to provide the Permittee with the flexibility to make minor adjustments to the preliminary layout to accommodate requests by landowners, local government units, federal and state agency requirements, and unforeseen conditions encountered during the detailed engineering and design process. Any modification to the location of a wind turbine and associated facility depicted in the preliminary layout shall be done in such a manner to have comparable overall human and environmental impacts and shall be specifically identified in the site plan pursuant to Section 10.3.

4 SETBACKS AND SITE LAYOUT RESTRICTIONS

4.1 Wind Access Buffer

Wind turbine towers shall not be placed less than five rotor diameters on the prevailing wind directions and three rotor diameters on the non-prevailing wind directions from the perimeter of the property where the Permittee does not hold the wind rights, without the approval of the Commission. This section does not apply to public roads and trails.

4.2 Residences

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 (MPCA), whichever is greater.

4.3 Noise

The wind turbine towers shall be placed such that the Permittee shall, at all times, comply with noise standards established by the MPCA as of the date of this permit and at all appropriate locations. The noise standards are found in Minnesota Rules Chapter 7030. Turbine operation shall be modified, or turbines shall be removed from service if necessary to comply with these noise standards. The Permittee or its contractor may install and operate turbines as close as the minimum setback required in this permit, but in all cases shall comply with MPCA noise standards. The Permittee shall be required to comply with this condition with respect to all homes or other receptors in place as of the time of construction, but not with respect to such receptors built after construction of the towers.

4.4 Roads

Wind turbines and meteorological towers shall not be located closer than 250 feet from the edge of the nearest public road right-of-way.

4.5 Public Lands

Wind turbines and associated facilities including foundations, access roads, underground cable, and transformers, shall not be located in publicly-owned lands that have been designated for recreational or conservation purposes, including, but not limited to, Waterfowl Production Areas, State Wildlife Management Areas, Scientific and Natural Areas or county parks, except in the event that the public entity owning those lands enters into a land lease and easement with the Permittee. Wind turbines towers shall also comply with the setbacks of Section 4.1.

4.6 Wetlands

Wind turbines and associated facilities including foundations, access roads, underground cable and transformers, shall not be placed in public waters wetlands, as shown on the public water inventory maps prescribed by Minnesota Statutes Chapter 103G, except that electric collector or feeder lines may cross or be placed in public waters or public waters wetlands subject to permits and approvals by the Minnesota Department of Natural Resources (DNR) and the United States Army Corps of Engineers (USACE), and local units of government as implementers of the Minnesota Wetlands Conservation Act.

4.7 Native Prairie

Wind turbines and associated facilities including foundations, access roads, collector and feeder lines, underground cable, and transformers shall not be placed in native prairie, as defined in Minn. Stat. § 84.02, subd. 5, unless addressed in a prairie protection and management plan and shall not be located in areas enrolled in the Native Prairie Bank Program. Construction activities, as defined in Minn. Stat. § 216E.01, shall not impact native prairie unless addressed in a Prairie Protection and Management Plan.

The Permittee shall prepare a Prairie Protection and Management Plan in consultation with the DNR if native prairie, as defined in Minn. Stat. § 84.02, subd. 5, is identified within the site boundaries. The Permittee shall file the plan 30 days prior to submitting the site plan required by Section 10.3 of this permit. The plan shall address steps that will 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 are in degraded condition, by conveyance of conservation easements, or by other means agreed to by the Permittee, the DNR, and the Commission.

4.8 Sand and Gravel Operations

Wind turbines and all associated facilities, including foundations, access roads, underground cable, and transformers shall not be located within active sand and gravel operations, unless otherwise negotiated with the landowner.

4.9 Wind Turbine Towers

Structures for wind turbines shall be self-supporting tubular towers. The towers may be up to 98 meters (322 feet) above grade measured at hub height. The wind turbine specifications in the table below were provided in the Permittee's January 12, 2022, Amended Application for a Large Wind Energy Conversion System Site Permit.

Design Feature	**GE 3.4 MW 81 M**	**GE 3.4 MW 98 M**	**GE 2.52 MW 90 M**
Capacity	3.4 MW	3.4 MW	2.52 MW
Total Height (ground to fully extended blade tip)	151 meters (495 feet),	168 meters (551 feet)	148.3 meters (486.5 feet)
Hub Height	81 meters (292 feet)	98 meters (322 feet)	90 meters (295 feet)
Rotor Diameter	140 meters (459 feet)	140 meters (459 feet)	116.5 meters (382 feet)

4.10 Turbine Spacing

The turbine towers shall be constructed within the site boundary as shown on the site maps. The turbine towers shall be spaced no closer than three rotor diameters in the non-prevailing wind directions and five rotor diameters on the prevailing wind directions. If required, up to 20 percent of the towers may be sited closer than the above spacing, but the Permittee shall minimize the need to site the turbine towers closer.

4.11 Meteorological Towers

Permanent towers for meteorological equipment shall be free standing. Permanent meteorological towers shall not be placed less than 250 feet from the edge of the nearest public road right-of-way and from the boundary of the Permittee's site control, or in compliance with the county ordinance regulating meteorological towers in the county the tower is built, whichever is more restrictive. Meteorological towers shall be placed on property the Permittee holds the wind or other development rights.

Meteorological towers shall be marked as required by the Federal Aviation Administration (FAA). There shall be no lights on the meteorological towers other than what is required by the FAA. This restriction shall not apply to infrared heating devices used to protect the wind monitoring equipment.

4.12 Aviation

The Permittee shall not place wind turbines or associated facilities in a location that could create an obstruction to navigable airspace of private and public airports (as defined in Minn. R. 8800.0100, subp. 24(a) and 24(b)) in Minnesota, adjacent states, or provinces. The Permittee shall apply the minimum obstruction clearance for private airports pursuant to Minn. R. 8800.1900, subp. 5. Setbacks or other limitations shall be followed in accordance with the Minnesota Department of Transportation (MnDOT), Department of Aviation, and the FAA. The Permittee shall notify owners of all known airports within six miles of the project's anticipated construction start date at least 14 days prior to the pre-construction meeting.

4.13 Footprint Minimization

The Permittee shall design and construct the LWECS so as to minimize the amount of land that is impacted by the LWECS. Associated facilities in the vicinity of turbines such as electrical/electronic boxes, transformers, and monitoring systems shall, to the greatest extent feasible, be mounted on the foundations used for turbine towers or inside the towers unless otherwise negotiated with the affected landowner.

5 GENERAL CONDITIONS

The Permittee shall comply with the following conditions during construction and operation of the LWECS and associated facilities over the life of this permit.

5.1 Permit Distribution

Within 30 days of permit issuance, the Permittee shall send a copy of the permit and the complaint procedures to any regional development commission, county auditor and environmental office, and city and township clerk in which any part of the site is located.

Within 30 days of permit issuance, the Permittee shall provide all affected landowners with a copy of this permit and the complaint procedures. In no case shall the landowner receive this site permit and complaint procedures less than five days prior to the start of construction on their property. An affected landowner is any landowner or designee that is within or adjacent to the permitted site.

5.2 Access to Property

The Permittee shall contact landowners prior to entering private property or conducting maintenance within the site, unless otherwise negotiated with the affected landowner.

5.3 Construction and Operation Practices

The Permittee shall comply with the construction practices, operation and maintenance practices, and material specifications described in the January 12, 2022, Amended Application for a Large Wind Energy Conversion System Site Permit, and the record of the proceedings unless this permit establishes a different requirement in which case this permit shall prevail.

5.3.1 Field Representative

The Permittee shall designate a field representative responsible for overseeing compliance with the conditions of this permit during construction of the project. This person shall be accessible by telephone or other means during normal business hours throughout site preparation, construction, cleanup, and restoration.

The Permittee shall file with the Commission the name, address, email, phone number, and emergency phone number of the field representative 14 days prior to the pre-construction meeting. The Permittee shall provide the field representative's contact information to affected landowners, residents, local government units and other interested persons 14 days prior to the pre-construction meeting. The Permittee may change the field representative at any time upon notice to the Commission, affected landowners, local government units and other interested persons.

5.3.2 Site Manager

The Permittee shall designate a site manager responsible for overseeing compliance with the conditions of this permit during the commercial operation and decommissioning phases of the project. This person shall be accessible by telephone or other means during normal business hours for the life of this permit.

The Permittee shall file with the Commission the name, address, email, phone number, and emergency phone number of the site manager 14 days prior to the pre-operation meeting for the facility. The Permittee shall provide the site manager's contact information to affected landowners, residents, local government units and other interested persons 14 days prior to the pre-operation meeting for the facility. The Permittee may change the site manager at any time upon notice to the Commission, affected landowners, local government units and other interested persons.

5.3.3 Employee Training and Education of Permit Terms and Conditions

The Permittee shall inform and educate all employees, contractors, and other persons involved in the construction and ongoing operation of the LWECS of the terms and conditions of this permit.

5.3.4 Public Services and Public Utilities

During construction, the Permittee shall minimize any disruption to public services and public utilities. To the extent disruptions to public services or public utilities occur these will be temporary, and the Permittee will restore service promptly. Where any impacts to utilities have the potential to occur the Permittee will work with both landowners and local agencies to determine the most appropriate mitigation measures if not already considered as part of this permit.

5.3.5 Topsoil Protection

The Permittee shall implement measures to protect and segregate topsoil from subsoil on all lands unless otherwise negotiated with the affected landowner.

5.3.6 Soil Compaction

The Permittee shall implement measures to minimize soil compaction of all lands during all phases of the project's life and shall confine compaction to as small an area as practicable. Soil decompaction measures shall be utilized on all lands utilized for project construction and travelled on by cranes, heavy equipment, and heavy trucks, even when soil compaction minimization measures are used.

5.3.7 Soil Erosion and Sediment Control

The Permittee shall implement those erosion prevention and sediment control practices recommended by the MPCA Construction Stormwater Program. If construction of the facility disturbs more than one acre of land, or is sited in an area designated by the MPCA as having potential for impacts to water resources, the Permittee shall obtain a National Pollutant Discharge Elimination System/State Disposal System (NPDES/SDS) Construction Stormwater Permit from the MPCA that provides for the development of a Stormwater Pollution Prevention Plan (SWPPP) that describes methods to control erosion and runoff.

The Permittee shall implement reasonable measures to minimize erosion and sedimentation during construction and shall employ perimeter sediment controls, protect exposed soil by promptly planting, seeding, using erosion control blankets and turf reinforcement mats, stabilizing slopes, protecting storm drain inlets, protecting soil stockpiles, and controlling vehicle tracking. Contours shall be graded as required so that all surfaces provide for proper drainage, blend with the natural terrain, and are left in a condition that will facilitate re-vegetation and prevent erosion. All areas disturbed during construction of the facilities shall be returned to pre-construction conditions.

5.3.8 Wetlands and Water Resources

Construction in wetland areas shall occur during frozen ground conditions to minimize impacts, to the extent feasible. When construction during winter is not possible, wooden or composite mats shall be used to protect wetland vegetation. Soil excavated from the wetlands and riparian areas shall be contained and managed in accordance with all applicable wetland permits. Wetlands and riparian areas shall be accessed using the shortest route possible in order to minimize travel through wetland areas and prevent unnecessary impacts.

Wetland and water resource areas disturbed by construction activities shall be restored to pre-construction conditions in accordance with the requirements of applicable state and federal permits or laws and landowner agreements. All requirements of the U.S. Army Corps of Engineers, Minnesota Department of Natural Resources, Minnesota Board of Soil and Water Resources, and local units of government shall be met.

5.3.9 Vegetation Removal

The Permittee shall disturb or clear vegetation on the project site only to the extent necessary to assure suitable access for construction, and for safe operation and maintenance of the project. The Permittee shall minimize the number of trees removed in selecting the site layout specifically preserving to the maximum extent practicable windbreaks, shelterbelts, living snow fences, and other vegetation, to the extent that such actions do not violate sound engineering principles.

5.3.10 Application of Pesticides

The Permittee shall restrict pesticide use to those pesticides and methods of application approved by the Minnesota Department of Agriculture (MDA), DNR, and the U.S. Environmental Protection Agency (EPA). Selective foliage or basal application shall be used when practicable. All pesticides shall be applied in a safe and cautious manner so as not to damage adjacent properties including crops, orchards, tree farms, apiaries, or gardens. The Permittee shall contact the landowner or designee to obtain approval for the use of pesticide at least 14 days prior to any application on their property. The landowner may request that there be no application of pesticides on any part of the site within the landowner's property. The Permittee shall provide notice of pesticide application to affected landowners and known beekeepers operating apiaries within three miles of the project site at least 14 days prior to such application.

5.3.11 Invasive Species

The Permittee shall employ best management practices to avoid the potential introduction and spread of invasive species on lands disturbed by project construction activities. The Permittee shall develop an Invasive Species Prevention Plan to prevent the introduction and spread of invasive species on lands disturbed by project construction activities and file with the Commission 14 days prior to the pre-construction meeting.

5.3.12 Noxious Weeds

The Permittee shall take all reasonable precautions against the spread of noxious weeds during all phases of construction. When utilizing seed to establish temporary and permanent vegetative cover on exposed soil, the Permittee shall select site appropriate seed certified to be free of noxious weeds. The Permittee shall consult with landowners on the selection and use of seed for replanting. To the extent possible, the Permittee shall use native seed mixes.

5.3.13 Public Roads

At least 14 days prior to the pre-construction meeting, the Permittee shall identify all state, county, or township roads that will be used for the project and shall notify the Commission and the state, county, or township governing body having jurisdiction over the roads to determine if the governmental body needs to inspect the roads prior to use of these roads. Where practical, existing roadways shall be used for all activities associated with the project. Where practical, all-weather roads shall be used to deliver cement, turbines, towers, assembled nacelles, and all other heavy components to and from the turbine sites.

The Permittee shall, prior to the use of such roads, make satisfactory arrangements (approved permits, written authorizations, road use agreements, development agreements, etc.) with the

appropriate state, county, or township governmental body having jurisdiction over roads to be used for construction of the project, for maintenance and repair of roads that may be subject to increased impacts due to transportation of equipment and project components. The Permittee shall notify the Commission of such arrangements upon request.

5.3.14 Turbine Access Roads

The Permittee shall construct the least number of turbine access roads necessary to safely and efficiently operate the project and satisfy landowner requests. Access roads shall be low profile roads so that farming equipment can cross them and shall be covered with Class 5 gravel or similar material. Access roads shall not be constructed across streams and drainage ditches without required permits and approvals. When access roads are constructed across streams, drainage ways, or drainage ditches, the access roads shall be designed and constructed in a manner so runoff from the upper portions of the watershed can readily flow to the lower portion of the watershed.

Any access roads that are constructed across streams or drainage ditches shall be designed and constructed in a manner that maintains existing fish passage. Access roads that are constructed across grassed waterways, which provide drainage for surface waters that are ephemeral in nature, are not required to maintain or provide fish passage. Access roads shall be constructed in accordance with all necessary township, county or state road requirements and permits.

The Permittee shall provide the local soil and water conservation district (SWCD) and participating landowners an opportunity to review and comment on access road plans in order to minimize the potential to pond and divert water creating gully erosion or the potential to cause damage or failure to existing conservation practices, such as terraces, sediment control basins or diversions prior to finalization and installation. The Permittee shall file documentation that this permit condition has been complied with at least 14 days prior to the pre-construction meeting.

5.3.15 Private Roads

The Permittee shall promptly repair private roads or lanes damaged when moving equipment or when obtaining access to the site, unless otherwise negotiated with the affected landowner.

5.3.16 Archaeological and Historic Resources

The Permittee shall make every effort to avoid impacts to identified archaeological and historic resources when constructing the facility. In the event that a resource is encountered, the Permittee shall consult with the State Historic Preservation Office (SHPO) and the State Archaeologist. Where feasible, avoidance of the resource is required. Where not feasible, mitigation must include an effort to minimize project impacts on the resource consistent with SHPO and State Archaeologist requirements.

Prior to construction, workers shall be trained about the need to avoid cultural properties, how to identify cultural properties, and procedures to follow if undocumented cultural properties, including gravesites, are found during construction. If human remains are encountered during construction, the Permittee shall immediately halt construction at such location and promptly notify local law enforcement and the State Archaeologist. Construction at such location shall not proceed until authorized by local law enforcement and the State Archaeologist.

5.3.17 Interference

At least 14 days prior to the pre-construction meeting, the Permittee shall submit to the Commission an assessment of television and radio signal reception, microwave signal patterns, and telecommunications in the project area. The assessment shall be designed to provide data that can be used in the future to determine whether the turbines and associated facilities are the cause of disruption or interference of television or radio reception, microwave patterns, or telecommunications in the event residents should complain about such disruption or interference after the turbines are placed in operation. The Permittee shall be responsible for alleviating any disruption or interference of these services caused by the turbines or any associated facilities.

The Permittee shall not operate the project so as to cause microwave, television, radio, telecommunications, or navigation interference in violation of Federal Communications Commission (FCC) regulations or other law. In the event the project or its operations cause such interference, the Permittee shall take timely measures necessary to correct the problem.

5.3.18 Livestock Protection

The Permittee shall take precautions to protect livestock during all phases of the project's life.

5.3.19 Fences

The Permittee shall promptly replace or repair all fences and gates removed or damaged during all phases of the project's life unless otherwise negotiated with the affected landowner. When the Permittee installs a gate where electric fences are present, the Permittee shall provide for continuity in the electric fence circuit.

5.3.20 Drainage Tiles

The Permittee shall take into account, avoid, promptly repair or replace all drainage tiles broken or damaged during all phases of project’s life unless otherwise negotiated with affected landowner.

5.3.21 Equipment Storage

The Permittee shall not locate temporary equipment staging areas on lands under its control unless negotiated with affected landowner. Temporary equipment staging areas shall not be located in wetlands or native prairie as defined in Sections 4.6 and 4.7.

5.3.22 Restoration

The Permittee shall, as soon as practical following construction of each turbine, restore the areas affected by construction to the condition that existed immediately before construction began, to the extent possible. The time period to complete restoration may be no longer than 12 months after the completion of construction, unless otherwise negotiated with the affected landowner. Restoration shall be compatible with the safe operation, maintenance and inspection of the project. Within 60 days after completion of all restoration activities, the Permittee shall advise the Commission in writing of the completion of such activities.

5.3.23 Cleanup

All waste and scrap that is the product of construction shall be removed from the site and all premises on which construction activities were conducted and properly disposed of upon completion of each task. Personal litter, including bottles, cans, and paper from construction activities shall be removed on a daily basis.

5.3.24 Pollution and Hazardous Waste

All appropriate precautions to protect against pollution of the environment shall be taken by the Permittee. The Permittee shall be responsible for compliance with all laws applicable to the generation, storage, transportation, clean up and disposal of all wastes generated during construction and operation of the facility.

5.3.25 Damages

The Permittee shall fairly restore or compensate landowners for damage to crops, fences, private roads and lanes, landscaping, drain tile, or other damages sustained during construction.

5.3.26 Public Safety

The Permittee shall provide educational materials to landowners adjacent to the site and, upon request, to interested persons about the project and any restrictions or dangers associated with the project. The Permittee shall also provide any necessary safety measures such as warning signs and gates for traffic control or to restrict public access. The Permittee shall submit the

location of all underground facilities, as defined in Minn. Stat. § 216D.01, subd. 11, to Gopher State One Call following the completion of construction at the site.

5.3.27 Tower Identification

All turbine towers shall be marked with a visible identification number.

5.3.28 Federal Aviation Administration Lighting

Towers shall be marked as required by the FAA. There shall be no lights on the towers other than what is required by the FAA. This restriction shall not apply to infrared heating devices used to protect the wind monitoring equipment.

The Permittee shall install and employ an FAA- approved lighting mitigation system, such as an aircraft detection lighting system (ADLS), light intensity dimming solution (LIDS), or other FAA-approved mitigation method. The Permittee shall describe the lighting mitigation system used for the project in its site plan.

5.4 Communication Cables

The Permittee shall place all communication and supervisory control and data acquisition cables underground and within or adjacent to the land necessary for turbine access roads unless otherwise negotiated with the affected landowner.

5.5 Electrical Collector and Feeder Lines

Collector lines that carry electrical power from each individual transformer associated with a wind turbine to an internal project interconnection point shall be buried underground. Collector lines shall be placed within or adjacent to the land necessary for turbine access roads unless otherwise negotiated with the affected landowner.

Feeder lines that carry power from an internal project interconnection point to the project substation or interconnection point on the electrical grid may be overhead or underground. Feeder line locations shall be negotiated with the affected landowner. Any overhead or underground feeder lines that parallel public roads shall be placed within the public rights-of-way or on private land immediately adjacent to public roads. If overhead feeder lines are located within public rights-of-way, the Permittee shall obtain approval from the governmental unit responsible for the affected right-of-way.

Collector and feeder line locations shall be located in such a manner as to minimize interference with agricultural operations including, but not limited to, existing drainage patterns, drain tile, future tiling plans, and ditches. Safety shields shall be placed on all guy

wires associated with overhead feeder lines. The Permittee shall submit the engineering drawings of all collector and feeder lines in the site plan pursuant to Section 10.3.

5.6 Other Requirements

5.6.1 Safety Codes and Design Requirements

The LWECS and associated facilities shall be designed to meet or exceed all relevant local and state codes, Institute of Electrical and Electronics Engineers, Inc. (IEEE) standards, the National Electric Safety Code (NESC), and North American Electric Reliability Corporation (NERC) requirements. The Permittee shall report to the Commission on compliance with these standards upon request.

5.6.2 Other Permits and Regulations

The Permittee shall comply with all applicable state rules and statutes. The Permittee shall obtain all required permits for the project and comply with the conditions of those permits unless those permits conflict with or are preempted by federal or state permits and regulations. A list of the permits known to be required is included in the site permit application.

At least 14 days prior to the pre-construction meeting, the Permittee shall submit a filing with a detailed status update of all permits, authorizations, and approvals that have been applied for specific to the project. The detailed status update shall include the permitting agency or authority, the name of the permit, authorization, or approval being sought, contact person and contact information for the permitting agency or authority, brief description of why the permit, authorization, or approval is needed, application submittal date, and the date the permit, authorization, or approval was issued or is anticipated to be issued.

The Permittee shall demonstrate that it has obtained all necessary permits, authorizations, and approvals by filing an affidavit stating as such, prior to commencing project construction. The Permittee shall provide a copy of any such permits, authorizations, and approvals upon Commission request.

5.6.3 Prevailing Wages

The Permittee, its contractors, and subcontractors shall pay no less than the prevailing wage rate as defined in Minnesota Statute 177.42 and shall be subject to the requirements and enforcement provisions under Minnesota Statute sections 177.27, 177.30, 177.32, 177.41 to 177.435, and 177.45.

6 SPECIAL CONDITIONS

Special conditions shall take precedence over other conditions of this permit should there be a conflict.

6.1 Independent Third-Party Monitor

Prior to any construction, the Permittee shall propose a scope of work and identify one independent third party monitor on behalf of the Department of Commerce. The scope of work shall be developed in consultation with and approved by the Department of Commerce. This third-party monitor will report directly to and will be under the control of the Department of Commerce with costs borne by the Permittee. The Permittee shall file the scope of work, and the name, address, email, phone number, and emergency phone number of the third-party monitor with the Commission at least 14 days prior to the preconstruction meeting, and upon changes to the scope of work or third-party monitor contact information.

6.2 Wildlife-Friendly Erosion Control

The Permittee shall use only “bio-netting” or “natural netting” types of erosion control materials and mulch products without synthetic (plastic) fiber additives.

6.3 Substation Lighting

The Permittee shall use shielded and downward facing lighting and LED lighting that minimizes blue hue at the project substation. Downward facing lighting must be clearly visible on the plan and profile submitted for the project.

6.4 Dust Control

The Permittee shall minimize and avoid, if possible, the use or chloride-based dust control chemicals (i.e., calcium chloride, magnesium chloride).

6.5 Snowmobile Trails

The Permittee shall locate all turbines at least 1.1 times the total turbine height from existing snowmobile trails. The Permittee shall coordinate with local snowmobile groups regarding potential project related impacts to the snowmobile trails in Steele and Dodge counties. Coordination with local snowmobile groups shall include discussions of potential construction timing and activities that could impact the trail and potential trail rerouting needs.

6.6 Shadow Flicker Management Plan

The Permittee shall prepare a Shadow Flicker Management Plan. The Shadow Flicker Management Plan will include the results of any shadow flicker modeling, assumptions made, levels of exposure prior to implementation of planned minimization and mitigation efforts,

planned minimization and mitigation efforts, and planned communication and follow up with residence. Mutual agreements between the permittee and landowners shall be considered a mitigation measure.

The Shadow Flicker Management Plan shall be filed with the Commission at least 14 days prior to the preconstruction meeting to confirm compliance with conditions of this permit. Mutual agreements with landowners finalized after the preconstruction meeting shall be filed as amendments to the Shadow Flicker Management Plan.

Should shadow flicker modeling identify any residence that will experience in 30 hours, or more, of shadow flicker per year, the Permittee must specifically identify these residences in the Shadow Flicker Management Plan. If through minimization and mitigation efforts identified in the Shadow Flicker Management Plan the Permittee is not able to reduce a residence's anticipated shadow flicker exposure to less than 30 hours per year a shadow flicker detection systems will be utilized during project operations to monitor shadow flicker exposure at the residence. The Shadow Flicker Management Plan will detail the placement and use of any shadow flicker detection systems, how the monitoring data will be used to inform turbine operations, and a detailed plan of when and how turbine operations will be adjusted to mitigate shadow flicker exposure exceeding 30 hours per year at any one receptor. The results of any shadow flicker monitoring and mitigation implementation shall be reported by the Permittee in the Annual Project Energy Production Report identified in Section 10.9 of this Permit.

Commission staff and EERA staff will be responsible for the review and approval of the Shadow Flicker Management Plan. The Commission may require the Permittee to conduct shadow flicker monitoring at any time during the life of this Permit.

6.7 Karst Geology

At least 14 days prior to the pre-construction meeting, the Permittee shall file with the Commission a geotechnical report and engineering recommendations for turbine and substation foundations. The geotechnical report shall be prepared under the direction of a geotechnical engineer licensed in the State of Minnesota. The submittal shall also include a letter from the Permittee summarizing the geotechnical report recommendations to be implemented on the project.

6.8 Northern Long-Eared Bat

For Project construction, the Permittee shall comply with the U.S. Fish and Wildlife Service guidance and requirements in effect regarding NLEB, including tree clearing restrictions if applicable.

6.9 Loggerhead Shrike

The permittee shall avoid tree and shrub removal within suitable Loggerhead Shrike habitat during the April through July breeding season. If tree or shrub removal will occur during the breeding season, the permittee shall coordinate with DNR to identify potentially suitable habitat and ensure that a qualified surveyor inspects the trees/shrubs for active nests prior to removal.

6.10 Unanticipated Discoveries Plan

Prior to construction, the Permittee shall survey areas of construction activity within undisturbed land that have not been surveyed.

The Permittee shall develop an Unanticipated Discoveries Plan (UDP) to identify guidelines to be used in the event previously unrecorded archeological or historic properties, or human remains, are encountered during construction, or if unanticipated effects to previously identified archaeological or historic properties occur during construction. This is in addition to and not in lieu of any other obligations that may exist under law or regulation relating to these matters. The UDP shall describe how previously unrecorded, non-human burial, archaeological sites found during construction shall be marked and all construction work must stop at the discovery location. The Permittee shall file the UDP with the Commission at least 14 days prior to the preconstruction meeting.

6.11 Agricultural Impact Mitigation Plan

The Permittee shall develop an agricultural impact mitigation plan (AIMP) in coordination with the Minnesota Department of Agriculture (MDA). The Permittee shall provide landowners within the Project Boundary with a copy of the AIMP. The Permittee shall file with the Commission the AIMP and an affidavit of the AIMP distribution to landowners at least 14 days prior to the pre-construction meeting.

7 SURVEYS AND REPORTING

7.1 Biological and Natural Resource Inventories

The Permittee, in consultation with the Commission and the DNR, shall design and conduct pre-construction desktop and field inventories of existing wildlife management areas, scientific and natural areas, recreation areas, native prairies and forests, wetlands, and any other biologically sensitive areas within the project site and assess the presence of state- or federally-listed or threatened species. The results of the inventories shall be filed with the Commission at least 30 days prior to the pre-construction meeting to confirm compliance of conditions in this permit. The Permittee shall file with the Commission, any biological surveys or studies conducted on this project, including those not required under this permit.

7.2 Shadow Flicker

At least 14 days prior to the pre-construction meeting, the Permittee shall provide data on shadow flicker for each residence of non-participating landowners and participating landowners within and outside of the project boundary potentially subject to turbine shadow flicker exposure. Information shall include the results of modeling used, assumptions made, and the anticipated levels of exposure from turbine shadow flicker for each residence. The Permittee shall provide documentation on its efforts to avoid, minimize and mitigate shadow flicker exposure. The results of any modeling shall be filed with the Commission at least 14 days prior to the pre-construction meeting to confirm compliance with conditions of this permit.

7.3 Wake Loss Studies

At least 14 days prior to the pre-construction meeting, the Permittee shall file with the Commission the pre-construction micro-siting analysis leading to the final tower locations and an estimate of total project wake losses. As part of the annual report on project energy production required under Section 10.8 of the permit the Permittee shall file with the Commission any operational wake loss studies conducted on this project during the calendar year preceding the report.

7.4 Noise Studies

The Permittee shall file a proposed methodology for the conduct of a post-construction noise study at least 14 days prior to the pre-construction meeting. The Permittee shall develop the post-construction noise study methodology in consultation with the Department of Commerce. The study must incorporate the Department of Commerce Noise Study Protocol to determine the operating LWECS noise levels at different frequencies and at various distances from the turbines at various wind directions and speeds. The Permittee must conduct the post-construction noise study and file with the Commission the completed post-construction noise study within 18 months of commencing commercial operation.

7.5 Avian and Bat Protection

7.5.1 Operational Phase Fatality Monitoring

The Permittee shall utilize a qualified third party to conduct a minimum of two full years of avian and bat fatality monitoring following the commencement of the operational phase of the project. Monitoring activities and results will be coordinated directly with MN DNR, USFWS, and the Commission. Detailed monitoring protocols, agency coordination, and any avoidance and minimization measures will be detailed in the project's ABPP.

7.5.2 Avian and Bat Protection Plan

The Permittee shall comply with the provisions of the August 2021 Avian and Bat Protection Plan (ABPP) submitted for this project as Appendix M the January 12, 2022, Site Permit Application, and all necessary revisions that occur during the permit issuance process will be incorporated into a Permit Version. The Permit Version of the ABPP will be filed with the Commission 14 days before the preconstruction meeting and shall include any updates associated with final construction plans.

The ABPP must address steps to be taken to identify and mitigate impacts to avian and bat species during the construction phase and the operation phase of the project. The ABPP shall also include formal and incidental post-construction fatality monitoring, training, wildlife handling, documentation (*e.g.*, photographs), and reporting protocols for each phase of the project.

The Permittee shall, by the 15th of March following each complete or partial calendar year of operation, file with the Commission an annual report detailing findings of its annual audit of ABPP practices. The annual report shall include summarized and raw data of bird and bat fatalities and injuries and shall include bird and bat fatality estimates for the project using agreed upon estimators from the prior calendar year. The annual report shall also identify any deficiencies or recommended changes in the operation of the project or in the ABPP to reduce avian and bat fatalities and shall provide a schedule for implementing the corrective or modified actions. The Permittee shall provide a copy of the report to the Minnesota DNR, the Department of Commerce, and ~~to~~ the U.S. Fish and Wildlife Service (FWS) at the time of filing with the Commission.

7.5.3 Quarterly Incident Reports

The Permittee shall submit quarterly avian and bat reports to the Commission. Quarterly reports are due by the 15th of January, April, July, and October commencing the day following commercial operation and terminating upon the expiration of this permit. Each report shall identify any dead or injured avian and bat species, location of find by turbine number, and date of find for the reporting period in accordance with the reporting protocols. If a dead or injured avian or bat species is found, the report shall describe the potential cause of the occurrence (if known) and the steps taken to address future occurrences. The Permittee shall provide a copy of the report to the DNR, the Department of Commerce, and to the FWS at the time of filing with the Commission.

7.5.4 Immediate Incident Reports

The Permittee shall notify the Commission, the Department of Commerce, the FWS, and the DNR within 24 hours of the discovery of any of the following:

(a) five or more dead or injured birds or bats at an individual turbine location within a five day reporting period;

(b) twenty or more dead or injured birds or bats across the entire facility, within a five day reporting period;

(c) one or more dead or injured state threatened, endangered, or species of special concern;

(d) one or more dead or injured federally listed species, including species proposed for listing; or

(e) one or more dead or injured bald or golden eagle(s).

In the event that one of the four discoveries listed above should be made, the Permittee must file with the Commission within seven days, a compliance report identifying the details of what was discovered, the turbine where the discovery was made, a detailed log of agencies and individuals contacted, and current plans being undertaken to address the issue.

7.5.5 Turbine Operational Curtailment

The Permittee shall operate all facility turbines so that all turbines are locked or feathered up to the manufacturer's standard cut-in speed from one-half hour before sunset to one-half hour after sunrise of the following day from April 1 to October 31 of each year of operation. All operating turbines at the facility must be equipped with operational software that is capable of allowing for adjustment of turbine cut-in speeds.

8 AUTHORITY TO CONSTRUCT LWECS

8.1 Wind Rights

At least 14 days prior to the pre-construction meeting, the Permittee shall demonstrate that it has obtained the wind rights and any other rights necessary to construct and operate the project within the boundaries authorized by this permit. Nothing in this permit shall be construed to preclude any other person from seeking a permit to construct a wind energy conversion system in any area within the boundaries of the project covered by this permit if the Permittee does not hold exclusive wind rights for such areas.

8.2 Power Purchase Agreement

In the event the Permittee does not have a power purchase agreement or some other enforceable mechanism for sale of the electricity to be generated by the project at the time this permit is issued, the Permittee shall provide notice to the Commission when it obtains a

commitment for purchase of the power. This permit does not authorize construction of the project until the Permittee has obtained a power purchase agreement or some other enforceable mechanism for sale of the electricity to be generated by the project. In the event the Permittee does not obtain a power purchase agreement or some other enforceable mechanism for sale of the electricity to be generated by the project within two years of the issuance of this permit, the Permittee must advise the Commission of the reason for not having such commitment. In such event, the Commission may determine whether this permit should be amended or revoked. No amendment or revocation of this permit may be undertaken except in accordance with Minn. R. 7854.1300.

8.3 Failure to Commence Construction

If the Permittee has not completed the pre-construction surveys required under this permit and commenced construction of the project within two years of the issuance of this permit, the Permittee must advise the Commission of the reason construction has not commenced. In such event, the Commission shall make a determination as to whether this permit should be amended or revoked. No revocation of this permit may be undertaken except in accordance with applicable statutes and rules, including Minn. R. 7854.1300.

9 COMPLAINT PROCEDURES

Fourteen (14) days prior to pre-construction meeting, the Permittee shall submit to the Commission the procedures that will be used to receive and respond to complaints. The procedures shall be in accordance with the requirements of Minn. R. 7829.1500 or Minn. R. 7829.1700, and as set forth in the complaint procedures attached to this permit.

Upon request, the Permittee shall assist the Commission with the disposition of unresolved or longstanding complaints. This assistance shall include, but is not limited to, the submittal of complaint correspondence and complaint resolution efforts.

10 COMPLIANCE REQUIREMENTS

Failure to timely and properly make compliance filings required by this permit is a failure to comply with the conditions of this permit. Compliance filings must be electronically filed with the Commission.

10.1 Pre-Construction Meeting

Prior to the start of any construction, the Permittee shall participate in a pre-construction meeting with the Department of Commerce and Commission staff to review pre-construction filing requirements, scheduling, and to coordinate monitoring of construction and site restoration activities. Within 14 days following the pre-construction meeting, the Permittee

shall file with the Commission, a summary of the topics reviewed and discussed and a list of attendees. The Permittee shall indicate in the filing the construction start date.

10.2 Pre-Operation Meeting

At least 14 days prior to commercial operation of the facility, the Permittee shall participate in a pre-operation meeting with the Department of Commerce and Commission staff to coordinate field monitoring of operation activities for the project. Within 14 days following the pre-operation meeting, the Permittee shall file with the Commission, a summary of the topics reviewed and discussed and a list of attendees.

10.3 Site Plan

At least 30 days prior to the pre-construction meeting, the Permittee shall provide the Commission, the Department, and Dodge County Environmental Services and Steele County Planning and Zoning with a site plan that includes specifications and drawings for site preparation and grading; specifications and locations of all turbines and other structures to be constructed including all electrical equipment, collector and feeder lines, pollution control equipment, fencing, roads, and other associated facilities; and procedures for cleanup and restoration. The documentation shall include maps depicting the site boundary and layout in relation to that approved by this permit. The Permittee shall document, through GIS mapping, compliance with the setbacks and site layout restrictions required by this permit, including compliance with the noise standards pursuant to Minnesota Rules Chapter 7030. At the same time, the Permittee shall notify affected landowners and city and town clerks that the site plan is on file with the Commission, Dodge County Environmental Services, and Steele County Planning and Zoning. The Permittee may submit a site plan and engineering drawings for only a portion of the project if the Permittee intends to commence construction on certain parts of the project before completing the site plan and engineering drawings for other parts of the project.

The Permittee may not commence construction until the 30 days has expired or until the Commission has advised the Permittee in writing that it has completed its review of the documents and determined that the planned construction is consistent with this permit. If the Permittee intends to make any significant changes to its site plan or the specifications and drawings after submission to the Commission, the Permittee shall notify the Commission, the Department, Dodge County Environmental Services, Steele County Planning and Zoning, city and town clerks, and the affected landowners at least five days before implementing the changes. No changes shall be made that would be in violation of any of the terms of this permit.

In the event that previously unidentified human and environmental conditions are discovered during construction that by law or pursuant to conditions outlined in this permit would preclude the use of that site as a turbine site, the Permittee shall have the right to move or relocate turbine site. Under these circumstances, the Permittee shall notify the Commission,

the Department, the MPCA, the DNR, Dodge County Environmental Services, Steele County Planning and Zoning, city and town clerks, and the affected landowners of any turbines that are to be relocated, and provide the previously unidentified environmental conditions and how the movement of the turbine mitigates the human and environmental impact at least five days before implementing the changes. No changes shall be made that would be in violation of any terms of this permit.

10.4 Status Reports

The Permittee shall file status reports with the Commission on progress regarding site construction. The Permittee need not report more frequently than monthly. Reports shall begin with the commencement of site construction and continue until completion of restoration. Reports shall describe construction activities and progress and activities undertaken in compliance with this permit. Reports shall include text and photographs.

10.5 Labor Statistic Reporting

The Permittee shall file quarterly reports with the Commission within 45 days of the end of the quarter regarding construction workers that participated in the construction of the project. The reports shall (a) detail the Permittee's efforts and the site contractor's efforts to hire Minnesota workers, and (b) provide an account of: (i) 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; (ii) the gross number of hours worked by or full-time equivalent workers who are residents of other states, but maintain a permanent residence within 150 miles of the project; and (iii) 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.

10.6 In-Service Date

At least three days before the facility is to be placed into service, the Permittee shall notify the Commission of the date on which the facility will be placed into service and the date on which construction was completed.

10.7 As-Builts

Within 90 days after completion of construction, the Permittee shall submit copies of all final as-built plans and specifications developed during the project.

10.8 GPS Data

Within 90 days after completion of construction, the Permittee shall submit to the Commission, in the format requested by the Commission, geo-spatial information (*e.g.*, ArcGIS compatible

map files, GPS coordinates, associated database of characteristics) for all structures associated with the LWECS.

10.9 Project Energy Production

The Permittee shall, by February 1st following each complete or partial year of project operation, file a report with the Commission on the monthly energy production of the project including:

(a) the installed nameplate capacity of the permitted project;

(b) the total monthly energy generated by the project in MW hours;

(c) the monthly capacity factor of the project;

(d) yearly energy production and capacity factor for the project;

(e) the operational status of the project and any major outages, major repairs, or turbine performance improvements occurring in the previous year; and

(f) any other information reasonably requested by the Commission.

This information shall be considered public and must be filed electronically.

10.10 Wind Resource Use

The Permittee shall, by February 1st following each complete or partial calendar year of operation, file with the Commission the average monthly and average annual wind speed collected at one permanent meteorological tower during the preceding year or partial year of operation. This information shall be considered public and must be filed electronically.

10.11 Emergency Response

The Permittee shall prepare an Emergency Response Plan in consultation with the emergency responders having jurisdiction over the facility prior to project construction. The Permittee shall submit a copy of the plan, along with any comments from emergency responders, to the Commission at least 14 days prior to the pre-construction meeting and a revised plan, if any, at least 14 days prior to the pre-operation meeting. The Permittee shall provide as a compliance filing confirmation that the Emergency Response Plan was provided to the emergency responders and Public Safety Answering Points (PSAP) with jurisdiction over the facility prior to commencement of construction. The Permittee shall obtain and register the facility address or other location indicators acceptable to the emergency responders and PSAP having jurisdiction over the facility.

10.12 Extraordinary Events

Within 24 hours of discovery of an occurrence, the Permittee shall notify the Commission of any extraordinary event. Extraordinary events include but shall not be limited to: fires, tower collapse, thrown blade, acts of sabotage, collector or feeder line failure, and injured worker or private person. The Permittee shall, within 30 days of the occurrence, file a report with the Commission describing the cause of the occurrence and the steps taken to avoid future occurrences.

11 DECOMMISSIONING, RESTORATION, AND ABANDONMENT

11.1 Decommissioning Plan

The Permittee shall comply with the provisions of the most recently filed and accepted decommissioning plan. The initial version of the decommissioning plan was submitted for this project as Appendix K of the January 12, 2022, site permit application. The Permittee shall file an updated decommissioning plan incorporating comments and information from the permit issuance process and any updates associated with the final construction plans, with ~~to~~ the Commission at least fourteen 14 days prior to the pre-construction meeting. The decommissioning plan shall be updated every five years following the commercial operation date.

The decommissioning 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. The decommissioning plan shall provide an itemized breakdown of costs of decommissioning all project components, which shall include labor and equipment. The plan shall identify cost estimates for the removal of turbines, turbine foundations, underground collection cables, access roads, crane pads, substations, and other project components. The plan may also include anticipated costs for the replacement of turbines or repowering the project by upgrading equipment.

The Permittee shall also submit the decommissioning plan to the local unit of government having direct zoning authority over the area in which the project is located. The Permittee shall ensure that it carries out its obligations to provide for the resources necessary to fulfill its requirements to properly decommission the project at the appropriate time. The Commission may at any time request the Permittee to file a report with the Commission describing how the Permittee is fulfilling this obligation.

11.2 Site Restoration

Upon expiration of this permit, or upon earlier termination of operation of the project, or any turbine within the project, the Permittee shall have the obligation to dismantle and remove

from the site all towers, turbine generators, transformers, overhead and underground cables and lines, foundations, buildings, and ancillary equipment to a depth of four feet. Any agreement for removal to a lesser depth or no removal shall be recorded with the county and shall show the locations of all such foundations. To the extent feasible, the Permittee shall restore and reclaim the site to pre-project conditions, including topography and topsoil conditions. All access roads shall be removed unless written approval is given by the affected landowner requesting that one or more roads, or portions thereof, be retained. All such agreements between the Permittee and the affected landowner shall be submitted to the Commission prior to completion of restoration activities. The site shall be restored in accordance with the requirements of this condition within 18 months of termination.

11.3 Abandoned Turbines

The Permittee shall advise the Commission of any turbines that are abandoned prior to termination of operation of the project. The project, or any turbine within the project, shall be considered abandoned after one year without energy production and the land restored pursuant to Section 11.2 unless a plan is submitted to and approved by the Commission outlining the steps and schedule for returning the project, or any turbine within the project, to service.

12 COMMISSION AUTHORITY AFTER PERMIT ISSUANCE

12.1 Final Boundaries

After completion of construction, the Commission shall determine the need to adjust the final boundaries of the site required for this project in accordance with Minn. R. 7854.1300, subp. 1.

12.2 Expansion of Site Boundaries

No expansion of the site boundaries described in this permit shall be authorized without the approval of the Commission. The Permittee may submit to the Commission a request for a change in the boundaries of the site for the project. The Commission will respond to the requested change in accordance with applicable statutes and rules.

12.3 Periodic Review

The Commission shall initiate a review of this permit and the applicable conditions at least once every five years. The purpose of the periodic review is to allow the Commission, the Permittee, and other interested persons an opportunity to consider modifications in the conditions of this permit. No modification may be made except in accordance with applicable statutes and rules.

12.4 Modification of Conditions

After notice and opportunity for hearing, this permit may be modified or amended for cause, including but not limited to the following:

(a) violation of any condition in this permit;

(b) endangerment of human health or the environment by operation of the project; or

(c) existence of other grounds established by rule.

12.5 More Stringent Rules

The issuance of this permit does not prevent the future adoption by the Commission of rules or orders more stringent than those now in existence and does not prevent the enforcement of these more stringent rules and orders against the Permittee.

12.6 Right of Entry

The Permittee shall allow Commission designated representatives to perform the following, upon reasonable notice, upon presentation of credentials and at all times in compliance with the Permittee's site safety standards:

(a) To enter upon the facilities easement of the property for the purpose of obtaining information, examining records, and conducting surveys or investigations.

(b) To bring such equipment upon the facilities easement of the property as is necessary to conduct such surveys and investigations.

(c) To sample and monitor upon the facilities easement of the property.

(d) To examine and copy any documents pertaining to compliance with the conditions of this permit.

12.7 Proprietary Information

Certain information required to be filed with the Commission under this permit may constitute trade secret information or other type of proprietary information under the Data Practices Act or other law. The Permittee must satisfy requirements of applicable law to obtain the protection afforded by the law.

13 PERMIT AMENDMENT

This permit may be amended at any time by the Commission in accordance with Minn. R. 7854.1300, subp. 2. Any person may request an amendment of the conditions of this permit by

submitting a request to the Commission in writing describing the amendment sought and the reasons for the amendment. The Commission will mail notice of receipt of the request to the Permittee. The Commission may amend the conditions after affording the Permittee and interested persons such process as is required.

14 TRANSFER OF PERMIT

The Permittee may request at any time that the Commission transfer this permit to another person or entity. The Permittee shall provide the name and description of the person or entity to whom the permit is requested to be transferred, the reasons for the transfer, a description of the facilities affected, and the proposed effective date of the transfer. The person to whom the permit is to be transferred shall provide the Commission with such information as the Commission shall require to determine whether the new permittee can comply with the conditions of the permit. The Commission may authorize transfer of the permit after affording the Permittee, the new permittee, and interested persons such process as is required. The Commission may impose additional conditions on any new permittee as part of the approval of the transfer.

Within 14 days of the commercial operation date, the Permittee shall file a notice describing its ownership structure, identifying, as applicable:

(a) the owner(s) of the financial and governance interests of the Permittee;

(b) the owner(s) of the majority financial and governance interests of the Permittee's owners; and

(c) the Permittee's ultimate parent entity (meaning the entity which is not controlled by any other entity).

The Permittee shall immediately notify the Commission of:

(a) a change in owner(s) of the majority* financial or governance interests in the Permittee;

(b) a change in owner(s) of the majority* financial or governance interests of the Permittee's owners; or

(c) a sale which changes the parent entity of the Permittee.

*When there are only co-equal 50/50 percent interests, any change shall be considered a change in majority interest.

The Permittee shall notify the Commission of:

(a) the sale of a parent entity or a majority interest in the Permittee;

(b) the sale of a majority interest of the Permittee's owners or majority interest of the owners; or

(c) a sale which changes the entity with ultimate control over the Permittee.

15 REVOCATION OR SUSPENSION OF PERMIT

The Commission may take action to suspend or revoke this permit upon the grounds that:

(a) a false statement was knowingly made in the application or in accompanying statements or studies required of the Permittee, and a true statement would have warranted a change in the Commission's findings;

(b) there has been a failure to comply with material conditions of this permit, or there has been a failure to maintain health and safety standards;

(c) there has been a material violation of a provision of an applicable statute, rule, or an order of the Commission; or

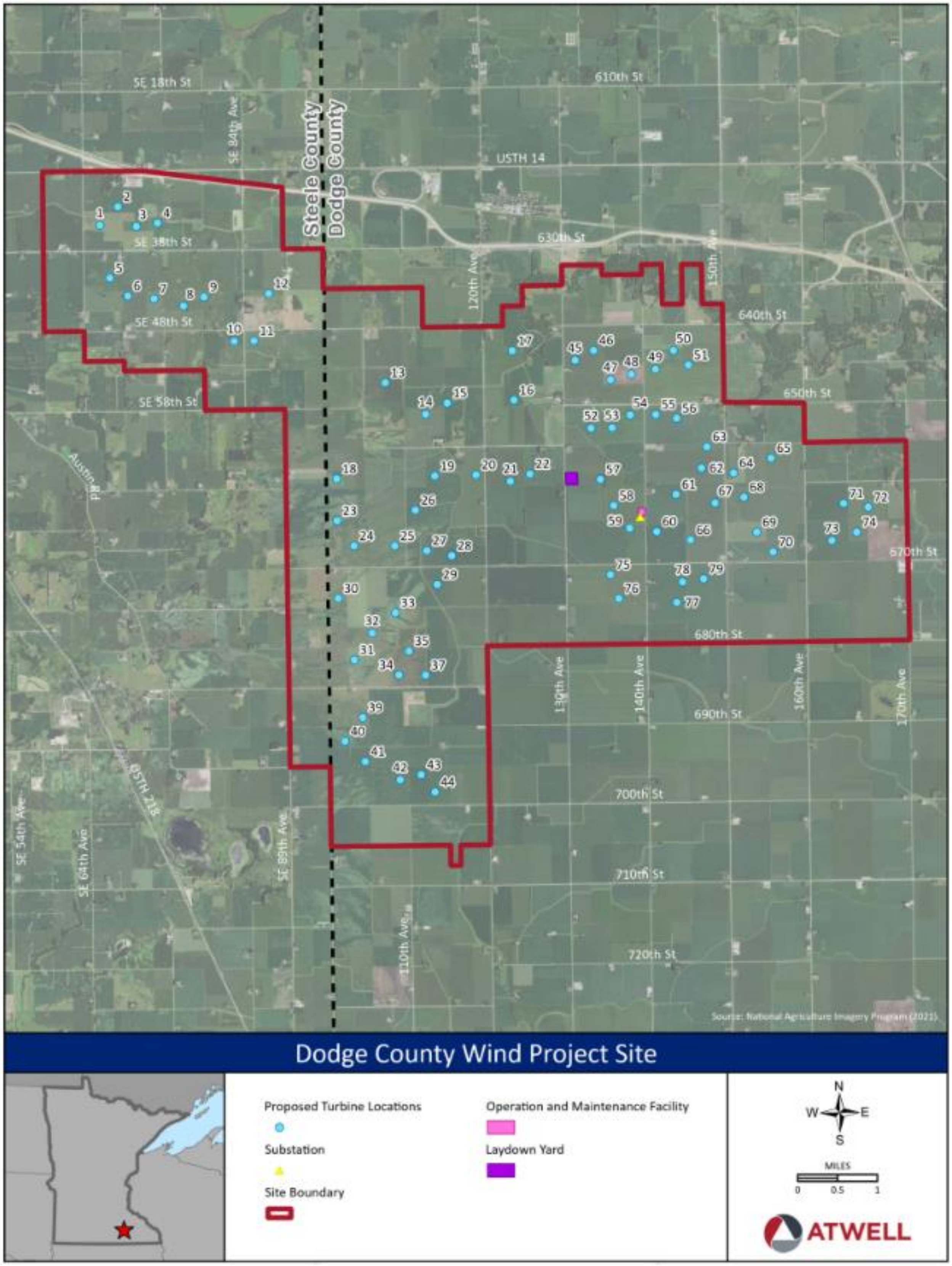
(d) the Permittee has filed a petition with the Commission requesting that the permit be revoked or terminated.

In the event the Commission determines that it is appropriate to consider revocation or suspension of this permit, the Commission shall proceed in accordance with the requirements of Minn. R. 7854.1300 to determine the appropriate action. Upon a finding of any of the above, the Commission may require the Permittee to undertake corrective measures in lieu of having this permit suspended or revoked.

16 EXPIRATION DATE

This permit shall expire 30 years after the date this permit was approved and adopted.

Attachment 3
Site Map


Steele County
Dodge County
SE 18th St
SE 84th Ave
610th St
USTH 14
SE 38th St
630th St
120th Ave
150th Ave
640th St
SE 48th St
650th St
SE 58th St
670th St
680th St
130th Ave
140th Ave
160th Ave
170th Ave
690th St
700th St
710th St
720th St
110th Ave
SE 89th Ave
SE 54th Ave
SE 64th Ave
USTH 218
Source: National Agriculture Imagery Program (2021)
Dodge County Wind Project Site
Proposed Turbine Locations
Substation
Site Boundary
Operation and Maintenance Facility
Laydown Yard
N
W
E
S
MILES
0
0.5
1
ATWELL

STATE OF MINNESOTA PUBLIC UTILITIES COMMISSION

ROUTE PERMIT FOR A
HIGH-VOLTAGE TRANSMISSION LINE AND ASSOCIATED FACILITIES

IN
DODGE AND MOWER COUNTIES

ISSUED TO
DODGE COUNTY WIND, LLC

PUC DOCKET NO. IP 6981/TL-20-867

In accordance with the requirements of Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850 this route permit is hereby issued to:

Dodge County Wind, LLC

Dodge County Wind, LLC is authorized by this route permit to construct and operate the 161 kV transmission line authorized by the Minnesota Public Utilities Commission.

The high-voltage transmission line and associated facilities shall be built within the route identified in this route permit and as portrayed on the route maps and in compliance with the conditions specified in this route permit.

Approved and adopted this 4th day of June, 2024

BY ORDER OF THE COMMISSION

Will Seuffert,
Executive Secretary

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ATTACHMENTS

Attachment 1 – Compliant Handling Procedures for Permitted Energy Facilities
Attachment 2 – Compliance Filing Procedure for Permitted Energy Facilities
Attachment 3 – Preliminary Route Alternatives Map

1 ROUTE PERMIT

The Minnesota Public Utilities Commission (Commission) hereby issues this route permit to Dodge County Wind, LLC (Permittee) pursuant to Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850. This route permit authorizes the Permittee to construct and operate an approximately 27-mile 161 kV high voltage transmission line, which will connect the proposed Dodge County Wind, LLC (DCW) Substation to Great River Energy's existing Pleasant Valley Substation, and as identified in the attached route maps, hereby incorporated into this document (Dodge County Wind 161 kV Transmission Line, henceforth known as Transmission Facility).

1.1 Preemption

Pursuant to Minn. Stat. § 216E.10, this route permit shall be the sole route approval required for construction of the Transmission Facility and this route permit shall supersede and preempt all zoning, building, or land use rules, regulations, or ordinances promulgated by regional, county, local and special purpose governments.

2 TRANSMISSION FACILITY DESCRIPTION

The Transmission Facility consists of approximately 27 miles of 161 kV transmission line between the newly constructed DCW Substation located in Section 15 of Ripley Township to the existing Pleasant Valley Substation located in Section 19 of Pleasant Valley Township.

The Transmission Facility is located in the following:

County	Township Name	Township	Range	Section
Dodge	Ripley	106N	18W	13, 14, 15, 24
	Ashland	106N	17W	16, 17, 18, 19, 20, 21, 28, 29, 32, 33, 34
	Hayfield	105N	17W	1, 2, 3, 4, 9, 10, 11, 12, 13, 24, 25, 36
	Vernon	105N	16W	7, 18, 19, 30, 31
Mower	Sargeant	104N	16W	5, 6, 7, 8, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24
	Pleasant Valley	104N	15W	18, 19

2.1 Structures

The Transmission Facility will primarily consist of single-circuit weathering steel monopole structures for the majority of the Transmission Facility's length.

The Transmission Facility will also use a smaller number of double circuit weathering steel monopole structures where the Transmission Facility will be co-located with the existing Pleasant Valley to Austin Northeast 161 kV transmission line owned by Great River Energy.

Transmission structures will be spaced between 400 and 900 feet apart, with average spans of 500 to 800 between poles. Transmission structures may be up to 160 feet above the ground and will typically range in height from 80 to 140 feet above ground depending upon the terrain and environmental constraints (such as stream crossings and required angle structures). Angle structures may be supported by guy wires.

The table below details specifics on the various structure and conductor types as presented in the route permit application.

Transmission Line Type	Structure		Foundation	Base Diameter (feet)	Height (feet)	Span (feet)
	Type	Material				
Single Circuit 161 kV	Monopole - Tangent	Steel	Direct-embed, concrete pier,	2 – 4	80 - 130	400 - 900
	Monopole - Angle		Direct-embed with guying, concrete pier	3-6	90 - 130	
	Monopole Dead-end		Direct-embed with guying, concrete pier	2 - 7	100 - 140	
	Monopole – Tangent with underbuild		Direct-embed, concrete pier,	3 - 4	120 - 140	
Double Circuit 161 kV	Monopole - Tangent		Direct-embed, concrete pier,	3 - 4	80 - 120	
	Monopole - Angle		Direct-embed with guying, concrete pier	3 - 7	80 - 120	
	Monopole Dead-end		Direct-embed with guying, concrete pier	6 - 8	80 -100	

2.2 Conductors

Each of the single-circuit structures will include three conductors and additional shield/communication wires. Double-circuit structures will include six conductors and additional shield/communication wires. The phase wires will have a diameter of approximately 795 to 1272 kcmil.

2.3 Project Ownership

At least 14 days prior to the pre-construction meeting, the Permittee shall file a description of its ownership structure, identifying, as applicable:

(a) the owner(s) of the financial and governance interests of the Permittee;
(b) the owner(s) of the majority financial and governance interests of the Permittee's owners; and
(c) the Permittee's ultimate parent entity (meaning the entity which is not controlled by any other entity).

The Permittee shall notify the Commission of:

(a) a change in owner(s) of the majority* financial or governance interests in the Permittee; or
(b) a change in owner(s) of the majority* financial or governance interests of the Permittee's owners; or
(c) a sale which changes the ultimate parent entity of the Permittee.
*When there are only co-equal 50/50 percent interests, any change shall be considered a change in majority interest.

Also, in the event of an ownership change, the Permittee must provide the Commission with a certification that it has read, understands and is able to comply with the plans and procedures it filed and all conditions of this permit.

3 DESIGNATED ROUTE

The route designated by the Commission in this route permit is described below and shown on the route maps attached to this route permit (Designated Route). The Designated Route is generally described as follows:

Attached to this Route Permit is a map of the Designated Route. This 26.7-mile route includes a 450-foot route width for most of the route, with approximately 225 feet either side of the proposed alignment for most of the route; 450 feet around each turning structure; and a route width of 1,155 feet x 1,340 feet around the DCW substation and a route width of 1,880 feet x 2,640 feet around the Pleasant Valley substation.

The route begins at the Dodge County Wind Substation and includes use of a combination of private easements and county road right-of-way between the substation and MN 56. The route then uses MnDOT right-of-way for two miles along Highway 56, uses county road ROW along Dodge CR 4/710th Steet, before turning south using county road right-of-way along Dodge CR 9, Mower CR 20, and Mower CR 1 and finally double circuits with GRE's existing Pleasant Valley to Austin Northeast 161 kV line into the Pleasant Valley Substation.

The identified route widths on the attached route maps provide the Permittee with flexibility for minor adjustments of the alignment or right-of-way to accommodate landowner requests and unforeseen conditions. The Permittee shall locate the final right-of-way within the Designated Route unless otherwise authorized by this route permit or the Commission.

4 RIGHT-OF-WAY

This route permit authorizes the Permittee to obtain a new permanent right-of-way for the transmission line up 100 feet in width, except in order to accommodate appurtenances located at road intersections, in which case this route permit authorizes the Permittee to obtain a new permanent right-of-way up to 250 feet in width.

The transmission line's anticipated alignment is intended to minimize potential impacts relative to criteria identified in Minn. R. 7850.4100. The actual right-of-way will generally conform to the anticipated alignment identified on the route maps, unless changes are requested by individual landowners and agreed to by the Permittee or for unforeseen conditions that are encountered or as otherwise provided for by this route permit.

Any right-of-way modifications within the Designated Route shall be located so as to have comparable overall impacts relative to the factors in Minn. R. 7850.4100, as does the right-of-way identified in this route permit, and shall be specifically identified and documented in and approved as part of the plan and profile submitted pursuant to Section 9.1 of this route permit.

Where the transmission line parallels existing highway and other road rights-of-way, the transmission line right-of-way shall occupy and utilize the existing right-of-way to the maximum extent possible; consistent with the criteria in Minn. R. 7850.4100 and the other requirements of this route permit; and for highways under the jurisdiction of the Minnesota Department of Transportation, the procedures for accommodating utilities in trunk highway rights-of-way.

5 GENERAL CONDITIONS

The Permittee shall comply with the following conditions during construction and operation of the transmission line and associated facilities over the life of this route permit.

5.1 Route Permit Distribution

Within 30 days of issuance of this route permit, the Permittee shall provide all landowners, regional development commissions, county auditor and environmental offices, and city and township clerks within or adjacent to the Designated Route with a copy of this route permit and the complaint procedures. The Permittee shall file with the Commission an affidavit of its route permit and complaint procedures distribution within 30 days of issuance of this permit.

5.2 Access to Property

The Permittee shall contact landowners prior to entering or conducting maintenance within their property, unless otherwise negotiated with the landowner. The Permittee shall keep records of compliance with this section and provide them upon the request of Department of Commerce (Commerce) or Commission staff.

5.3 Construction and Operation Practices

The Permittee shall follow the specific construction practices and material specifications described in the record of the proceedings unless this route permit establishes a different requirement in which case this route permit shall prevail.

5.3.1 Field Representative

The Permittee shall designate a field representative responsible for overseeing compliance with the conditions of this route permit during construction of the Transmission Facility. This person shall be accessible by telephone or other means during normal business hours throughout site preparation, construction, cleanup, and restoration.

The Permittee shall file with the Commission and provide landowners within or adjacent to the Designated Route, local governmental units and other interested persons the name, address, email, phone number, and emergency phone number of the field representative at least 14 days prior to the pre-construction meeting. The Permittee may change the field representative at any time upon notice to the Commission, landowners within or adjacent to the Designated Route, local governmental units and other interested persons. The Permittee shall file with the

Commission an affidavit of distribution of its field representative's contact information at least 14 days prior to the pre-construction meeting and upon changes to the field representative.

5.3.2 Employee Training of Route Permit Terms and Conditions

The Permittee shall train all employees, contractors, and other persons involved in the Transmission Facility construction of the terms and conditions of this route permit. The Permittee shall keep records of compliance with this section and provide them upon the request of Commerce or Commission staff.

5.3.3 Independent Third-Party Monitoring

The Permittees shall propose a Third-Party Monitoring Scope of Work and identify one independent third party monitor in coordination with Commerce. The Third-Party Scope of Work shall be developed in consultation with and approved by Commerce. This third-party monitor will report directly to and will be under the control of Commerce with costs borne by the Permittee. The Permittee shall file with the Commission the Third-Party Monitoring Scope of Work, and the name, address, email, phone number, and emergency phone number of the third-party monitor at least 14 days prior to the pre-construction meeting, and upon changes to the Third-Party Scope of Work or third-party monitor contact information.

5.3.4 Public Services, Public Utilities, and Existing Easements

During Transmission Facility construction, the Permittee shall minimize any disruption to public services or public utilities. To the extent disruptions to public services or public utilities occur these shall be temporary, and the Permittee shall restore service promptly. Where any impacts to utilities have the potential to occur the Permittee shall work with both landowners and local entities to determine the most appropriate transmission structure placement.

The Permittee shall cooperate with road authorities to develop appropriate signage and traffic management during construction. The Permittee shall keep records of compliance with this section and provide them upon the request of Commerce or Commission staff.

5.3.5 Temporary Workspace

The Permittee shall limit temporary easements to special construction access needs and additional staging or lay-down areas required outside of the authorized right-of-way. Temporary space shall be selected to limit the removal and impacts to vegetation. The Permittee must obtain temporary easements outside of the authorized transmission line right-

of-way from affected landowners through rental agreements and are not provided for in this route permit.

The Permittee may construct temporary driveways between the roadway and the structures to minimize impact using the shortest route feasible. The Permittee shall use construction mats to minimize impacts on access paths and construction areas. The Permittee shall submit the location of temporary workspaces and driveways with the plan and profile pursuant to Section 9.1.

5.3.6 Noise

The Permittee shall comply with noise standards established under Minn. R. 7030.0010 to 7030.0080. The Permittee shall limit construction and maintenance activities to daytime working hours to the extent practicable.

5.3.7 Aesthetics

The Permittee shall consider input pertaining to visual impacts from landowners or land management agencies prior to final location of structures, rights-of-way, and other areas with the potential for visual disturbance. The Permittee shall use care to preserve the natural landscape, minimize tree removal and prevent any unnecessary destruction of the natural surroundings in the vicinity of the Transmission Facility during construction and maintenance. The Permittee shall work with landowners to locate the high-voltage transmission line to minimize the loss of agricultural land, forest, and wetlands, and to avoid homes and farmsteads. The Permittee shall place structures at a distance, consistent with sound engineering principles and system reliability criteria, from intersecting roads, highways, or trail crossings.

5.3.8 Soil Erosion and Sediment Control

The Permittee shall implement those erosion prevention and sediment control practices recommended by the Minnesota Pollution Control Agency (MPCA) Construction Stormwater Program. If construction of the Transmission Facility disturbs more than one acre of land, or is sited in an area designated by the MPCA as having potential for impacts to water resources, the Permittee shall obtain a National Pollutant Discharge Elimination System/State Disposal System Construction Stormwater Permit from the MPCA that provides for the development of a Stormwater Pollution Prevention Plan that describes methods to control erosion and runoff. The Permittee shall provide its National Pollutant Discharge Elimination System permit and

Stormwater Pollution Prevention Plan to MPCA and request MPCA's review of those documents on a monthly basis during project construction.

The Permittee shall implement reasonable measures to minimize erosion and sedimentation during construction and shall employ perimeter sediment controls, protect exposed soil by promptly planting, seeding, using erosion control blankets and turf reinforcement mats, stabilizing slopes, protecting storm drain inlets, protecting soil stockpiles, and controlling vehicle tracking. Contours shall be graded as required so that all surfaces provide for proper drainage, blend with the natural terrain, and are left in a condition that will facilitate re-vegetation and prevent erosion. The Permittee shall establish a stormwater impact financial security mechanism with Dodge County to cover potential effects of stormwater damage associated with project construction. All areas disturbed during construction of the Transmission Facility shall be returned to pre-construction conditions.

5.3.9 Wetlands and Water Resources

The Permittee shall design wetland impact avoidance measures and implement them during construction of the Transmission Facility. Measures shall include spacing and placing the power poles at variable distances to span and avoid wetlands, watercourses, and floodplains. Unavoidable wetland impacts as a result of the placement of poles shall be limited to the immediate area around the poles. To minimize impacts, the Permittee shall construction in wetland areas during frozen ground conditions where practicable and according to permit requirements by the applicable permitting authority. When construction during winter is not possible, the Permittee shall use wooden or composite mats to protect wetland vegetation. The Permittee shall contain soil excavated from the wetlands and riparian areas and not place it back into the wetland or riparian area. The Permittee shall access wetlands and riparian areas using the shortest route possible in order to minimize travel through wetland areas and prevent unnecessary impacts. The Permittee shall not place staging or stringing set up areas within or adjacent to wetlands or water resources, as practicable. The Permittee shall assemble power pole structures on upland areas before they are brought to the site for installation.

The Permittee shall restore wetland and water resource areas disturbed by construction activities to pre-construction conditions in accordance with the requirements of applicable state and federal permits or laws and landowner agreements. The Permittee shall meet all requirements of the U.S. Army Corps of Engineers, Minnesota Department of Natural Resources (DNR), and local units of government.

5.3.10 Vegetation Management

The Permittee shall minimize the number of trees to be removed in selecting the right-of-way specifically preserving to the maximum extent practicable windbreaks, shelterbelts, living snow fences, and vegetation in areas such as trail and stream crossings where vegetative screening may minimize aesthetic impacts, to the extent that such actions do not violate sound engineering principles or system reliability criteria.

The Permittee shall remove tall growing species located within the transmission line right-of-way that endanger the safe and reliable operation of the transmission line. The Permittee shall leave undisturbed, to the extent possible, existing low growing species in the right-of-way or replant such species in the right-of-way to blend the difference between the right-of-way and adjacent areas, to the extent that the low growing vegetation that will not pose a threat to the transmission line or impede construction.

5.3.11 Application of Pesticides

The Permittee shall restrict pesticide use to those pesticides and methods of application approved by the Minnesota Department of Agriculture, DNR, and the U.S. Environmental Protection Agency. Selective foliage or basal application shall be used when practicable. All pesticides shall be applied in a safe and cautious manner so as not to damage adjacent properties including crops, orchards, tree farms, apiaries, or gardens. The Permittee shall contact the landowner at least 14 days prior to pesticide application on their property. The Permittee may not apply any pesticide if the landowner request that there be no application within the landowner's property. The Permittee shall provide notice of pesticide application to landowners and beekeepers operating apiaries within three miles of the pesticide application area at least 14 days prior to such application. The Permittee shall keep pesticide communication and application records and provide them upon the request of Commerce or Commission staff.

5.3.12 Invasive Species

The Permittee shall employ best management practices to avoid the potential introduction and spread of invasive species on lands disturbed by Transmission Facility construction activities. The Permittee shall develop an Invasive Species Prevention Plan and file it with the Commission at least 14 days prior to the pre-construction meeting. The Permittee shall comply with the most recently filed Invasive Species Prevention Plan.

5.3.13 Noxious Weeds

The Permittee shall take all reasonable precautions against the spread of noxious weeds during all phases of construction. When utilizing seed to establish temporary and permanent vegetative cover on exposed soil the Permittee shall select site appropriate seed certified to be free of noxious weeds. To the extent possible, the Permittee shall use native seed mixes. The Permittee shall keep records of compliance with this section and provide them upon the request of Commerce or Commission staff.

5.3.14 Roads

Where practical, the Permittee shall use existing roadways for activities associated with the Transmission Facility and specially use all-weather roads to transport heavy components. At least 14 days prior to the pre-construction meeting, the Permittee shall file with the Commission a Public Road Use Report that:

(a) includes a map that identifies which roads are needed for the Project;

(b) identifies who has jurisdiction over the roads;

(c) indicates whether inspections of the roads are required prior to Transmission Facility construction; and

(d) provides the status of Public Road Use Agreements or Public Road Development Agreements.

The Permittee must obtain and file with the Commission Public Road Use Agreements or Public Road Development Agreements before Project construction may begin. The Public Road Use Agreements or Public Road Development Agreements shall include written authorizations from who has jurisdiction over the road, and maintenance and repair plans that may be required based on damages from Transmission Facility construction.

5.3.15 Archaeological and Historic Resources

The Permittee shall make every effort to avoid impacts to archaeological and historic resources when constructing the Transmission Facility. In the event that a resource is encountered, the Permittee shall consult with the State Historic Preservation Office (SHPO), the State Archaeologist, and the Minnesota Indian Affairs Council (MIAC). Where feasible, avoidance of the resource is required. Where not feasible, mitigation must include an effort to minimize Transmission Facility impacts on the resource consistent with SHPO and State Archaeologist requirements.

Prior to construction, the Permittee shall train workers about the need to avoid cultural properties, how to identify cultural properties, and procedures to follow if undocumented cultural properties, including gravesites, are found during construction. If human remains are encountered during construction, the Permittee shall immediately halt construction and promptly notify local law enforcement, the State Archaeologist, and MIAC. The Permittee shall not resume construction at such location until authorized by local law enforcement or the State Archaeologist. The Permittee shall keep records of compliance with this section and provide them upon the request of Commerce or Commission staff.

5.3.16 Avian Protection

The Permittee in cooperation with the DNR shall identify areas of the transmission line where bird flight diverters will be incorporated into the transmission line design to prevent large avian collisions attributed to visibility issues. Standard transmission design shall incorporate adequate spacing of conductors and grounding devices in accordance with Avian Power Line Interaction Committee standards to eliminate the risk of electrocution to raptors with larger wingspans that may simultaneously come in contact with a conductor and grounding devices. The Permittee shall submit documentation of its avian protection coordination with the DNR with the plan and profile pursuant to Section 9.1.

5.3.17 Restoration

The Permittee shall restore the right-of-way, temporary workspaces, access roads, abandoned right-of-way, and other public or private lands affected by construction of the Transmission Facility. Restoration within the right-of-way must be compatible with the safe operation, maintenance, and inspection of the transmission line. Within 60 days after completion of all restoration activities, the Permittee shall file with the Commission a Notification of Restoration Completion.

5.3.18 Cleanup

The Permittee shall remove and properly dispose of all waste and scrap from the right-of-way and all premises on which construction activities were conducted upon completion of each task. The Permittee shall remove and properly dispose of all personal litter, including bottles, cans, and paper from construction activities on a daily basis.

5.3.19 Pollution and Hazardous Wastes

The Permittee shall take all appropriate precautions to protect against pollution of the environment. The Permittee shall be 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 right-of-way.

5.3.20 Damages

The Permittee shall fairly restore or compensate landowners for damage to crops, fences, private roads and lanes, landscaping, drain tile, or other damages sustained during construction. The Permittee shall keep records of compliance with this section and provide them upon the request of Commerce or Commission staff.

5.4 Electrical Performance Standards

5.4.1 Grounding

The Permittee shall design, construct, and operate the transmission line in a manner so that the maximum induced steady-state short-circuit current shall be limited to five milliamperes root mean square (rms) alternating current between the ground and any non-stationary object within the right-of-way, including but not limited to large motor vehicles and agricultural equipment. All fixed metallic objects on or off the right-of-way, except electric fences that parallel or cross the right-of-way, shall be grounded to the extent necessary to limit the induced short-circuit current between ground and the object so as not to exceed one milliampere rms under steady state conditions of the transmission line and to comply with the ground fault conditions specified in the National Electric Safety Code. The Permittee shall address and rectify any induced current problems that arise during transmission line operation.

5.4.2 Electric Field

The Permittee shall design, construct, and operate the transmission line in such a manner that the electric field measured one meter above ground level immediately below the transmission line shall not exceed 8.0 kV/m rms.

5.4.3 Interference with Communication Devices

If interference with radio or television, satellite, wireless internet, GPS-based agriculture navigation systems or other communication devices is caused by the presence or operation of the Transmission Facility, the Permittee shall take whatever action is necessary to restore or provide reception equivalent to reception levels in the immediate area just prior to the

construction of the Transmission Facility. The Permittee shall keep records of compliance with this section and provide them upon the request of Commerce or Commission staff.

5.5 Other Requirements

5.5.1 Safety Codes and Design Requirements

The Permittee shall design the transmission line and associated facilities to meet or exceed all relevant local and state codes, the National Electric Safety Code, and North American Electric Reliability Corporation requirements. This includes standards relating to clearances to ground, clearance to crossing utilities, clearance to buildings, strength of materials, clearances over roadways, right-of-way widths, and permit requirements.

5.5.2 Other Permits and Regulations

The Permittee shall comply with all applicable state rules and statutes. The Permittee shall obtain all required permits for the Transmission Facility and comply with the conditions of those permits unless those permits conflict with or are preempted by federal or state permits and regulations. The Permittee shall submit a copy of such permits upon the request of Commerce or Commission staff.

At least 14 days prior to the pre-construction meeting, the Permittee shall file with the Commission an Other Permits and Regulations Submittal that contains a detailed status of all permits, authorizations, and approvals that have been applied for specific to the Transmission Facility. The Other Permits and Regulations Submittal shall also include the permitting agency or authority, the name of the permit, authorization, or approval being sought, contact person and contact information for the permitting agency or authority, brief description of why the permit, authorization, or approval is needed, application submittal date, and the date the permit, authorization, or approval was issued or is anticipated to be issued.

The Permittee shall demonstrate that it has obtained all necessary permits, authorizations, and approvals by filing an affidavit stating as such and an updated Other Permits and Regulations Submittal, prior to commencing Transmission Facility construction. The Permittee shall provide a copy of any such permits, authorizations, and approvals upon the request of Commerce or Commission staff.

6 SPECIAL CONDITIONS

The special conditions shall take precedence over other conditions of this route permit should there be a conflict.

6.1 Wildlife-Friendly Erosion Control

The Permittee shall use only "bio-netting" or "natural netting" types of erosion control materials and mulch products without synthetic (plastic) fiber additives.

6.2 Dust Control

The Permittee shall minimize and avoid, if possible, the use of chloride-based dust control chemicals (i.e. calcium chloride, magnesium chloride).

6.3 Snowmobile Trails

The Permittee shall coordinate with local snowmobile groups regarding potential project related impacts to the snowmobile trails in Dodge and Mower counties. Coordination with local snowmobile groups shall include discussions of potential construction timing and activities that could impact the trail and potential trail rerouting needs.

6.4 Karst Geology

At least 14 days prior to the pre-construction meeting, the Permittee shall file with the Commission a geotechnical report and engineering recommendation for transmission structures using concrete foundations. The geotechnical report shall be prepared under the direction of a geotechnical engineer licensed in the State of Minnesota. The submittal shall also include a letter from the Permittee summarizing the geotechnical report recommendations to be implemented on the project.

6.5 Northern Long-Eared Bat

For Project construction, the Permittee shall comply with the U.S. Fish and Wildlife Service guidance and requirements in effect regarding NLEB, including tree clearing restrictions if applicable.

6.6 Loggerhead Shrike

The permittee shall avoid tree and shrub removal within suitable Loggerhead Shrike habitat during the April through July breeding season. If tree or shrub removal will occur during the breeding season, the permittee shall coordinate with DNR to identify potentially suitable habitat and ensure that a qualified surveyor inspects the trees/shrubs for active nests prior to removal.

6.7 Road and Ditch Improvements

The Permittee shall implement, at its own expense, such road or ditch improvements required as a condition of road right-of-way permits, agreements, or authorizations that are entered into by the Permittee and MnDOT, Dodge County, or Mower County for the project.

6.8 Unanticipated Discoveries Plan

Prior to construction, the Permittee shall survey areas of construction activity within undisturbed land that have not been surveyed.

The Permittee shall develop an Unanticipated Discoveries Plan (UDP) to identify guidelines to be used in the event previously unrecorded archeological or historic properties, or human remains, are encountered during construction, or if unanticipated effects to previously identified archaeological or historic properties occur during construction. This is in addition to and not in lieu of any other obligations that may exist under law or regulation relating to these matters. The UDP shall describe how previously unrecorded, non-human burial, archaeological sites found during construction shall be marked and all construction work must stop at the discovery location. The Permittee shall file the UDP with the Commission at least 14 days prior to the preconstruction meeting.

6.9 Community Electric Consultation

The Permittee shall attempt in good faith to meet with the owners of the dairy and hog farms adjacent to the Route for the purpose of explaining the energy and electrical standard effects addressed in sections 5.4.1 and 5.4.2. The Permittee shall demonstrate compliance with the consultation obligation in its pre-construction filing.

6.10 Stormwater Financial Security

The Permittee shall establish a stormwater impact financial security mechanism with Dodge County to cover potential effects of stormwater damage associated with project construction.

6.11 Community Electric Consultation

The Permittee shall attempt in good faith to meet with the owners of the dairy and hog farms adjacent to the Route for the purpose of explaining the energy and electrical standard effects addressed in sections 5.4.1 and 5.4.2. The Permittee shall demonstrate compliance with the consultation obligation in its pre-construction filing.

7 DELAY IN CONSTRUCTION

If the Permittee has not commenced construction or improvement of the route within four years after the date of issuance of this route permit the Permittee shall file a Failure to Construct Report on the failure to construct and the Commission shall consider suspension of the route permit in accordance with Minn. R. 7850.4700.

8 COMPLAINT PROCEDURES

At least 14 days prior to the pre-construction meeting, the Permittee shall file with the Commission the Complaint Procedures that will be used to receive and respond to complaints. The Complaint Procedures shall be in accordance with the requirements of Minn. R. 7829.1500 or Minn. R. 7829.1700, and as set forth in the complaint procedures attached to this route permit.

Upon request, the Permittee shall assist Commerce or Commission staff with the disposition of unresolved or longstanding complaints. This assistance shall include, but is not limited to, the submittal of complaint correspondence and complaint resolution efforts.

9 COMPLIANCE REQUIREMENTS

Failure to timely and properly make compliance filings required by this route permit is a failure to comply with the conditions of this route permit. Compliance filings must be electronically filed with the Commission.

9.1 Pre-Construction Meeting

Prior to the start of any construction, the Permittee shall participate in a pre-construction meeting with Commerce and Commission staff, and local and state road authorities, to review pre-construction filing requirements, scheduling, and to coordinate monitoring of construction and site restoration activities. Within 14 days following the pre-construction meeting, the Permittee shall file with the Commission, a summary of the topics reviewed and discussed and a list of attendees. The Permittee shall indicate in the filing the anticipated construction start date.

9.2 Plan and Profile

At least 30 days prior to the pre-construction meeting, the Permittee shall provide the Commission and local and state road authorities with a plan and profile of the right-of-way and the specifications and drawings for right-of-way preparation, construction, structure specifications and locations, cleanup, and restoration for the transmission line. The documentation shall include maps depicting the plan and profile including the right-of-way, alignment, and structures in relation to the route and alignment approved per this route permit.

The Department of Commerce shall submit its recommendations to the Commission as to whether the documents and the planned construction are consistent with the permit within 25 days of the pre-construction meeting. The Permittee may not commence construction until the earlier of

(a) 30 days after the pre-construction meeting or

(b) until the Commission has notified the Permittee in writing that it has completed its review of the documents and determined that the planned construction is consistent with this permit.

If the Commission notifies the Permittee in writing within 30 days after the pre-construction meeting that it has completed its review of the documents and planned construction, and finds that the planned construction is not consistent with this permit, the Permittee may submit additional and/or revised documentation and may not commence construction until the Commission has notified the Permittee in writing that it has determined that the planned construction is consistent with this permit. If the Permittee intends to make any significant changes to its plan and profile or the specifications and drawings after submission to the Commission, the Permittee shall notify the Commission at least five days before implementing the changes. No changes shall be made that would be in violation of any of the terms of this permit.

9.3 Status Reports

The Permittee shall file monthly Construction Status Reports beginning with the pre-construction meting and until completion of restoration. Construction Status Reports shall describe construction activities and progress, activities undertaken in compliance with this permit, and shall include text and photographs.

If the Permittee does not commence construction of the Transmission Facility within six months of this route permit issuance, the Permittee shall file Pre-Construction Status Reports on the anticipated timing of construction every six months beginning with the issuance of this route permit until the pre-construction meeting. The Pre-Construction Status Reports shall include information on the Transmission Facility's interconnection process.

9.4 In-Service Date

At least three days before the transmission line is to be placed into service, the Permittee shall notify the Commission of the date on which the transmission line will be placed into service and the date on which construction was complete.

9.5 As-Builts

Within 90 days after completion of construction, the Permittee shall submit to the Commission copies of all final as-built plans and specifications developed during the Transmission Facility construction.

9.6 GPS Data

Within 90 days after completion of construction, the Permittee shall submit to the Commission, in the format requested by the Commission, geo-spatial information (e.g., ArcGIS compatible map files, GPS coordinates, associated database of characteristics) for all structures associated with the Transmission Facility and each substation connected.

9.7 Right of Entry

The Permittee shall allow Commission designated representatives to perform the following, upon reasonable notice, upon presentation of credentials and at all times in compliance with the Permittee's site safety standards.

(a) To enter upon the facilities easement of the property for the purpose of obtaining information, examining records, and conducting surveys or investigations.
(b) To bring such equipment upon the facilities easement of the property as is necessary to conduct such surveys and investigations.
(c) To sample and monitor upon the facilities easement of the property.
(d) To examine and copy any documents pertaining to compliance with the conditions of this route permit.

10 ROUTE PERMIT AMENDMENT

This route permit may be amended at any time by the Commission. Any person may request an amendment of the conditions of this route permit by submitting a request to the Commission in writing describing the amendment sought and the reasons for the amendment. The Commission will mail notice of receipt of the request to the Permittee. The Commission may amend the conditions after affording the Permittee and interested persons such process as is required.

11 TRANSFER OF ROUTE PERMIT

The Permittee may request at any time that the Commission transfer this route permit to another person or entity (transferee). In its request, the Permittee must provide the Commission with:

(a) the name and description of the transferee;
(b) the reasons for the transfer;
(c) a description of the facilities affected; and
(d) the proposed effective date of the transfer.

The transferee must provide the Commission with a certification that it has read, understands and is able to comply with the plans and procedures it filed, and all conditions of this route permit.

12 REVOCATION OR SUSPENSION OF THE ROUTE PERMIT

The Commission may initiate action to revoke or suspend this route permit at any time. The Commission shall act in accordance with the requirements of Minn. R. 7850.5100, to revoke or suspend this route permit.

ATTACHMENT 1
Complaint Handling Procedures for Permitted Energy Facilities

MINNESOTA PUBLIC UTILITIES COMMISSION
COMPLAINT HANDLING PROCEDURES FOR
PERMITTED ENERGY FACILITIES

a) Purpose

To establish a uniform and timely method of reporting and resolving complaints received by the permittee concerning permit conditions for site or route preparation, construction, cleanup, restoration, operation, and maintenance.

b) Scope

This document describes complaint reporting procedures and frequency.

c) Applicability

The procedures shall be used for all complaints received by the permittee and all complaints received by the Minnesota Public Utilities Commission (Commission) under Minn. R. 7829.1500 or Minn. R. 7829.1700 relevant to this permit.

d) Definitions

Complaint: A verbal or written statement presented to the permittee by a person expressing dissatisfaction or concern regarding site or route preparation, cleanup or restoration, or other permit conditions. Complaints do not include requests, inquiries, questions or general comments.

Substantial Complaint: A written complaint alleging a violation of a specific permit condition that, if substantiated, could result in permit modification or suspension pursuant to the applicable regulations.

Unresolved Complaint: A complaint which, despite the good faith efforts of the permittee and a person, remains unresolved or unsatisfactorily resolved to one or both of the parties.

Person: An individual, partnership, joint venture, private or public corporation, association, firm, public service company, cooperative, political subdivision, municipal corporation, government agency, public utility district, or any other entity, public or private; however organized.

e) Complaint Documentation and Processing

1. The permittee shall designate a representative responsible for filing complaints to the Commission's eDocket system. This person's name, phone number and email address shall accompany all complaint submittals. The name and contact information for the representative shall be kept current in eDockets.

2. A person presenting the complaint should, to the extent possible, include the following information in their communications:

    a. name, address, phone number, and email address;
    b. initial date of the complaint;
    c. tract, parcel number, or address of the complaint;
    d. a summary of the complaint; and
    e. whether the complaint relates to a permit violation, a construction practice issue, or other type of complaint.

3. The permittee shall document all complaints by maintaining a record of all applicable information concerning the complaint, including the following:

    a. docket number and project name;
    b. name of complainant, address, phone number and email address;
    c. precise description of property or parcel number;
    d. name of permittee representative receiving complaint and date of receipt;
    e. nature of complaint and the applicable permit condition(s);
    f. summary of activities undertaken to resolve the complaint; and
    g. a statement on the final disposition of the complaint.

f) Reporting Requirements

The permittee shall commence complaint reporting at the beginning of project construction and continue through the term of the permit, unless otherwise required below. The permittee shall report all complaints to the Commission according to the following schedule:

Immediate Reports: All substantial complaints shall be reported to the Commission the same day received, or on the following working day for complaints received after working hours. Such reports are to be directed to the Commission's Public Advisor at 1-800-657-3782 (voice messages are acceptable) or publicadvisor.puc@state.mn.us. For e-mail reporting, the email

subject line should read “PUC EFP Complaint” and include the appropriate project docket number.

Monthly Reports: During project construction, restoration, and operation, a summary of all complaints, including substantial complaints received or resolved during the preceding month, shall be filed by the 15th of each month to Will Seuffert, Executive Secretary, Public Utilities Commission, using the eDockets system. The eDockets system is located at: https://www.edockets.state.mn.us/EFiling/home.jsp. If no complaints were received during the preceding month, the permittee shall file a summary indicating that no complaints were received.

If a project has submitted twelve consecutive months of complaint reports with no complaints, monthly reports can terminate by a letter to eDockets notifying the Commission of such action. If a substantial complaint is received (by the company or the Commission) following termination of the monthly complaint report, as noted above, the monthly reporting should commence for a period of one year following the most recent complaint or upon resolution of all pending complaints.

If a permittee is found to be in violation of this section, the Commission may reinstate monthly complaint reporting for the remaining permit term or enact some other commensurate requirement via notification by the Executive Secretary or some other action as decided by the Commission.

g) Complaints Received by the Commission

Complaints received directly by the Commission from aggrieved persons regarding the permit or issues related to site or route preparation, construction, cleanup, restoration, or operation and maintenance will be promptly sent to the permittee.

The permittee shall notify the Commission when the issue has been resolved. The permittee will add the complaint to the monthly reports of all complaints. If the permittee is unable to find resolution, the Commission will use the process outlined in the Unresolved Complaints Section to process the issue.

h) Commission Process for Unresolved Complaints

Complaints raising substantial and unresolved permit issues will be investigated by the Commission. Staff will notify the permittee and appropriate persons if it determines that the

complaint is a substantial complaint. With respect to such complaints, the permittee and complainant shall be required to submit a written summary of the complaint and its current position on the issues to the Commission. Staff will set a deadline for comments. As necessary, the complaint will be presented to the Commission for consideration.

i) Permittee Contacts for Complaints and Complaint Reporting

Complaints may be filed by mail or email to the permittee's designated complaint representative, or to the Commission's Public Advisor at 1-800-657-3782 or publicadvisor.puc@state.mn.us. The name and contact information for the permittee's designated complaint representative shall be kept current in the Commission's eDocket system.

ATTACHMENT 2
Compliance Filing Procedures for Permitted Energy Facilities

MINNESOTA PUBLIC UTILITIES COMMISSION
COMPLIANCE FILING PROCEDURE FOR
PERMITTED ENERGY FACILITIES

A. Purpose

To establish a uniform and timely method of submitting information required by Commission energy facility permits.

B. Scope and Applicability

This procedure encompasses all known compliance filings required by permit.

C. Definitions

Compliance Filing: A filing of information to the Commission, where the information is required by a Commission site or route permit.

D. Responsibilities

1. The permittee shall file all compliance filings with Will Seuffert, Executive Secretary, Public Utilities Commission, through the eDockets system. The eDockets system is located at: https://www.edockets.state.mn.us/EFiling/home.jsp

General instructions are provided on the eDockets website. Permittees must register on the website to file documents.

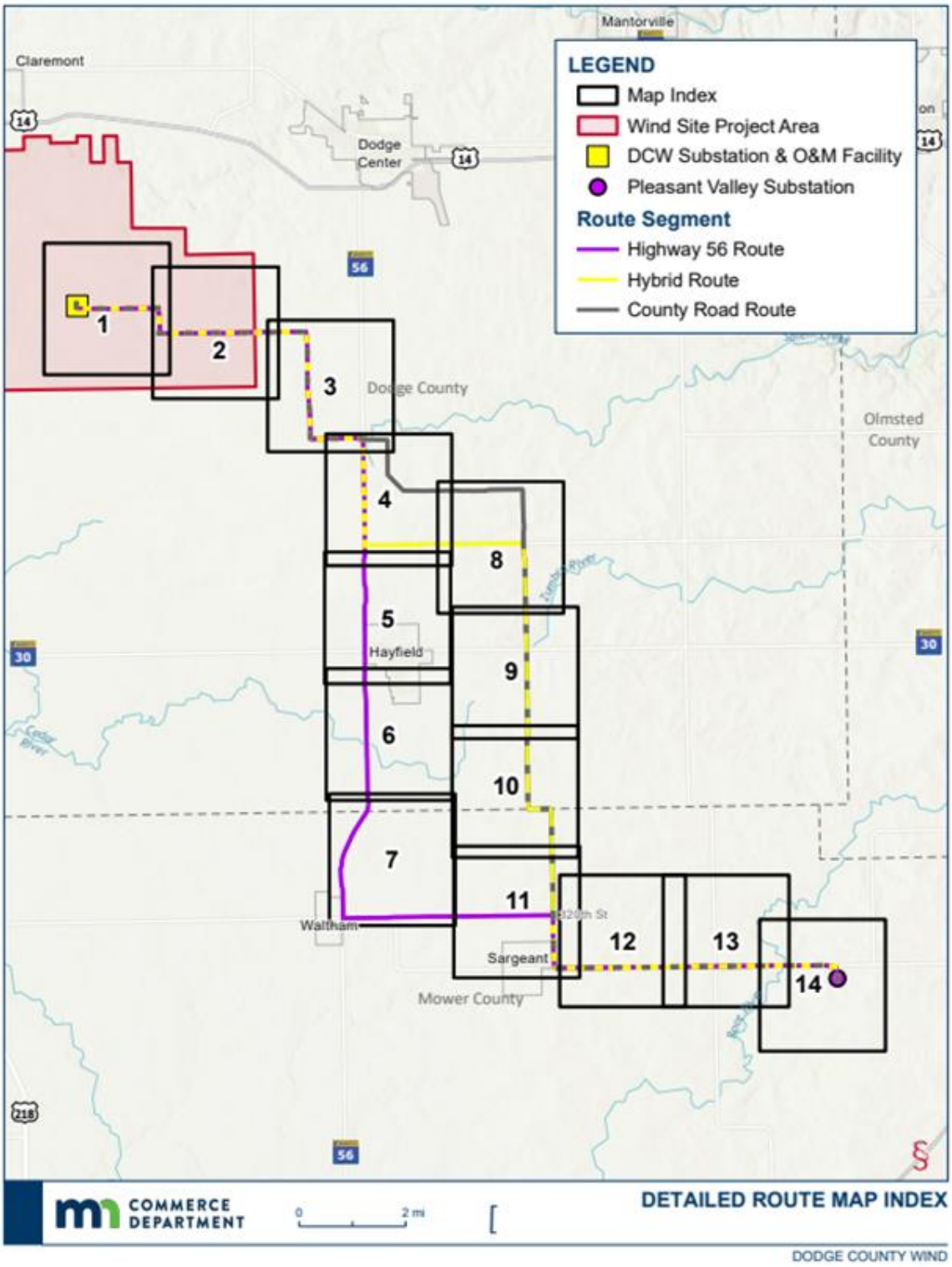
2. All filings must have a cover sheet that includes:

    a. Date
    b. Name of submitter/permittee
    c. Type of permit (site or route)
    d. Project location
    e. Project docket number
    f. Permit section under which the filing is made
    g. Short description of the filing

3. Filings that are graphic intensive (e.g., maps, engineered drawings) must, in addition to being electronically filed, be submitted as paper copies and on CD. Paper copies and CDs should be sent to: 1) Will Seuffert, Executive Secretary, Minnesota Public Utilities Commission, 121 7th Place East, Suite 350, St. Paul, MN 55101-2147, and 2) Department of Commerce, Energy Environmental Review and Analysis, 85 7th Place East, Suite 500, St. Paul, MN 55101-2198.

The Commission may request a paper copy of any electronically filed document.

ATTACHMENT 3
Hybrid Route Map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OAH 21-2500-38372
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IP-6981/WS-20-866
IP-6981/TL-20-867

STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS

FOR THE PUBLIC UTILITIES COMMISSION

In the Matter of the Application of Dodge County Wind, LLC for a Certificate of Need, a Site Permit, and a Route Permit for the up to 259 MW Large Wind Energy Conversion System and Associated 161 kV Transmission Line in Dodge, Mower and Steele Counties, Minnesota

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STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS

FOR THE PUBLIC UTILITIES COMMISSION

In the Matter of the Application of Dodge County Wind, LLC for a Certificate of Need, a Site Permit, and a Route Permit for the up to 259 MW Large Wind Energy Conversion System and Associated 161 kV Transmission Line in Dodge, Mower and Steele Counties, Minnesota

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND RECOMMENDATIONS

This matter was assigned to Administrative Law Judge Kimberly Middendorf of the Office of Administrative Hearings (OAH), to conduct a public hearing on the Certificate of Need (CON) (MPUC Docket No. CN-20-865), Site Permit (MPUC Docket No. WS-20-866) and Route Permit (MPUC Docket No. TL-20-867) Applications of Dodge County Wind, LLC (DCW or Applicant) for an up to 252 megawatt (MW)[1] large wind energy conversion system (LWECS or Wind Project) in Dodge and Steele Counties and a 161 kilovolt (kV) high-voltage transmission line (HVTL or Transmission Project) in Dodge and Mower Counties (collectively, the Project), and to prepare a full report, including findings and recommendations, on DCW's CON, Site Permit, and Route Permit Applications (Applications).

In particular, the Commission requested the Administrative Law Judge, as authorized in the Commission's March 8, 2022 order, develop the factual record on whether Dodge County Wind has demonstrated that its proposed use of the applicable rights-of-way will (1) comply with reasonable conditions required by the counties, townships, and Minnesota Department of Transportation; and (2) not interfere with the safety and convenience of ordinary travel along or over the county and township roads and state highways.[2]

Public hearings on the Applications were held on December 19 and 20, 2023. The public comment period remained open until February 1, 2024. The Applicant's proposed findings and responses to comments were filed on February 15, 2024. The Department

[1] DCW initially applied for a Site Permit for an up to 259 MW wind project. Since then, DCW removed two proposed wind turbines from the Project, reducing its generation output to approximately 252 MW.
[2] Exhibit (Ex.) PUC-185 at 12 (Order Accepting Draft Route Permit, Authorizing Environmental Assessment, Requesting Route Analysis, and Providing Further Instruction) (eDocket No. 20239-198709-03).

of Commerce, Energy Environmental Review and Analysis (DOC-EERA) filed its response on February 29, 2024, and the record closed.

Micah Revell, Stinson LLP, appeared on behalf of the Applicant. Clay Cameron, Director of Development with DCW; Tara Corbett, Senior Environmental Consultant with Atwell, LLC; Richard Lampeter, Sound and Shadow Flicker consultant with Epsilon Associates, Inc.; Thomas Koegel, Manager with Sargent & Lundy, LLC; and Charles Gauger, Project Director with DCW, were also present.

Richard Dornfeld, Assistant Attorney General, appeared on behalf of DOC-EERA, with Suzanne Steinhauer, Environmental Review Manager.

Sam Lobby and Cezar Panait, Energy Facilities Permitting Staff, appeared on behalf of the Minnesota Public Utilities Commission (Commission).

STATEMENT OF ISSUES

1. Has DCW satisfied the criteria for a site permit under Minn. Stat. Ch. 216F and Minn. R. Ch. 7854 to construct an up to 252 MW Large Wind Energy Conversion System in Dodge and Steele Counties in Minnesota?

2. Has DCW satisfied the criteria set forth in Minn. Stat. Ch. 216E and Minn. R. Ch. 7850 for a route permit for the DCW transmission Project in Dodge and Mower Counties in Minnesota?

3. Has DCW satisfied the criteria set forth in Minn. Stat. Ch. 216B and Minn. R. Ch. 7849 for a Certificate of Need for the Project?

SUMMARY OF RECOMMENDATION

The Administrative Law Judge concludes that DCW has satisfied the applicable legal requirements, and, accordingly, recommends that the Commission grant a Site Permit, Route Permit, and Certificate of Need for the Project, subject to the conditions discussed below.

Based on the Applications and other evidence in the record, the Judge makes the following:

FINDINGS OF FACT

I. PARTIES AND PARTICIPANTS

1. DCW is a wholly owned subsidiary of NextEra Energy Resources, LLC (NEER).[3] NEER is the world's largest operator of wind and solar projects. Affiliates of NEER own and operate approximately 16,000 MW of wind generation in the United States

[3] Ex. DCW-115 at 1 (Amended Certificate of Need Application) (eDocket No. 20221-181449-01); Ex. DCW-117 at 1 (Amended Site Permit Application) (eDocket No. 20221-181456-01); Ex. DCW-118 at 4 (Amended Route Permit Application) (eDocket No. 20221-181565-01).

and Canada.[4] DCW proposes to construct, own, and operate a 252-megawatt large wind energy conversion system (LWECS) and associated facilities in Dodge and Steele counties, Minnesota. DCW also proposes to construct approximately 27 miles of 161 kV high voltage transmission line (HVTL) in Dodge and Mower counties to connect the LWECS with the electric transmission grid at the Pleasant Valley Substation. DCW must obtain a certificate of need (CON), a site permit, and a route permit from the Commission to construct the proposed Project.[5]

2. DOC-EERA conducts environmental review on the Commission's behalf for proposed energy projects including power plants, transmission lines, LWECS, and pipelines. DOC-EERA is authorized by the Commission to hold public information meetings, to collect and analyze DCW's Applications, and to provide an environmental review.[6]

3. The Minnesota Department of Commerce, Division of Energy Resources (DOC-DER) is authorized to provide comments and recommendations on the CON Application.[7]

II. DCW APPLICATIONS AND RELATED PROCEDURAL BACKGROUND

A. Procedure Related to DCW's Site Permit Application

4. On September 14, 2021, DCW applied to the Commission for a site permit (Site Permit Application) to construct and operate the Wind Project. DCW proposes to locate the Project in Dodge and Steele Counties in southwestern Minnesota, immediately southwest of Dodge Center and north of Blooming Prairie, Minnesota.[8] The Site Permit Application was filed pursuant to Minn. Stat. § 216F.04 and Minn. R. ch. 7854.

5. On September 22, 2021, the Commission issued a Notice of Comment Period on Application Completeness (September 22, 2021 Notice), requesting comment on the following topics:

- Do the certificate of need, site permit, and route permit applications contain the information required under Minn. R. 7849.0220, subps. 1 and 2, Minn. R. 7854.0500, and Minn. R. 7850.3100, respectively?

- Should the certificate of need application be evaluated using the Commission's informal process or referred to OAH for a contested case hearing?

[4] Ex. DCW-138 at 1, fn. 1 (Cameron Direct) (eDocket No. 202312-201166-04).
[5] Ex. DOC-160 at 2 (Environmental Assessment) (eDocket No. 202311-200842-03).
[6] Minn. Stat. § 216E.04, subd. 5; Ex. PUC-185 at 12 (Order Accepting Draft Route Permit, Authorizing Environmental Assessment, Requesting Route Analysis, and Providing Further Instruction) (eDocket No. 20239-198709-03).
[7] Minn. Stat. §§ 216C.09; 216C.10(a)(9); 216B.243, subd. 7.
[8] Ex. DCW-106 at 5 (Application for Site Permit) (eDocket No. 20219-177951-02).

- Should the LWECS site permit application be referred to the OAH for a contested case hearing?

- Should the certificate of need, site permit, and route permit applications be processed jointly (i.e., joint public information meetings, joint environmental review, and joint public hearings)?

- Should an advisory task force (ATF) be appointed for the HVTL route permit application?

- Are there any contested issues of fact with respect to the representations made in the Applications?

- Should the environmental report required under the certificate of need process be combined with the environmental assessment required for the transmission line?

- Are there other issues or concerns related to this matter?[9]

6. The Commission set the following schedule: initial comments by October 6, 2021, reply comments by October 13, 2021, and supplemental comments by October 18, 2021.[10]

7. On September 24, 2021, Susan Mackert, Executive Director, PossAbilities of Southern Minnesota, submitted written comments supporting DCW based on the Project's contribution to clean energy generation, the creation of 400 jobs during construction and five to eight full-time operations jobs, and the Project's boost to the local economy.[11] On October 1, 2021, Nathan Dull, Field Representative, Minnesota Land & Liberty Coalition, submitted written comments supporting DCW due to it diversifying Minnesota's energy portfolio, providing affordable renewable energy, and the Project's anticipated positive impact on the local economy.[12] Also on October 1, 2021, Rajeeb Rath, Managing Director of Supporting Strategies, submitted written comments in support of the Project on the basis that it serves as a renewable energy resource that will benefit the local economy by bringing 400 construction jobs and five to eight permanent jobs.[13] On October 14, 2021, the Austin Area Chamber of Commerce filed comments in support of the Project.[14] On October 14, 2021, Lindsey Hemker, Development Director of Spark Children's Museum in Rochester, MN, filed comments in support of the Project.[15] On October 18, 2021, Clean Grid Alliance filed comments in support of the Project.[16]

[9] Ex. PUC-108 at 1 (Notice of Comment Period – On Application Completeness) (eDocket No. 20219-178184-02).
[10] Ex. PUC-108.
[11] Ex. PUC-109 (Public Comment – PossAbilities) (eDocket No. 20219-178240-01).
[12] Ex. PUC-110 at 1 (Public Comment – Dull) (eDocket No. 202110-178409-03).
[13] Ex. PUC-109 (Public Comment – Rath) (eDocket No. 202110-178408-02).
[14] Ex. PUC-113 (Public Comment – Austin Area Chamber of Commerce) (eDocket No. 202110-178786 01).
[15] Ex. PUC-114 (Public Comment – Spark Childrens Museum) (eDocket No. 202110-178787-03).
[16] Ex. PUC-115 (Public Comment – Clean Grid Alliance) (eDocket No. 202110-178906-01).

8. On October 6, 2021, DOC-EERA recommended (October 6, 2021 EERA Comments) that the Commission: (i) find DCW's Site Permit Application to be substantially complete (ii) reject DCW's Route Permit application and require it to file additional information; (iii) process the Applications jointly (with an Environmental Assessment (EA) in lieu of an Environmental Report, with joint public meetings and hearings to the extent possible; (iv) direct the Judge to prepare a full report with findings, conclusions, and recommendations; and (v) based on available information at that time, not authorize the appointment of an advisory task force for the HVTL.[17]

9. On October 6, 2021, LIUNA Minnesota & North Dakota (LIUNA) filed comments asserting that the Project has the potential to provide socioeconomic benefits to the regional economy by creating construction and maintenance jobs. LIUNA also asserted that the Project will help to meet Great River Energy's (GRE) need for a source of clean energy to power the homes of co-op customers.[18]

10. On October 13, 2021, GRE submitted comments requesting that the Commission grant a CON, site permit, and route permit for the Project. GRE has a power purchase agreement (PPA) with DCW for the full electrical output of the Project and believes the Project is beneficial to the state and GRE's member-owner cooperatives. GRE also claims that the Project would contribute to the economic and energy development of the state.[19]

11. On January 12, 2022, DCW filed an amended site permit application (Amended Site Permit Application) with the Commission. The Amended Site Permit Application contained revisions reflecting: (i) updated sound modeling based on General Electric's (GE) latest sound modeling simulations; and (ii) three turbines will utilize noise reduction operation (NRO) software to ensure compliance with sound level requirements.[20]

B. Procedure Specific to DCW's Route Permit Application

12. On May 7, 2021, DCW notified the Commission that it intended to submit a route permit application under the alternative permitting process in accordance with the requirement set forth in Minn. R. 7850.2800, subp. 2, to notify the Commission of this election at least 10 days prior to submitting an application.[21]

13. On September 14, 2021, DCW applied to the Commission for a Route Permit (Route Permit Application) to construct and operate the HVTL to be located in the eastern portion of Dodge County and the northern portion of Mower County in southeastern Minnesota. The route proposed with the Route Permit Application was

[17] Ex. DOC-100 at 11-12 (EERA Comments on Application Completeness and Review Procedure) (eDocket No. 202110-178558-01).
[18] Ex. PUC-111 at 1 (LIUNA Comments) (eDocket No. 202110-178568-01).
[19] Public Comment - GRE at 1 (Oct. 13, 2021) (eDocket No. 202110-178772-01).
[20] Ex. DCW-117 (Amended Site Permit Application) (eDocket Nos. 20221-181456-01 to 20221-181456-10).
[21] Ex. DCW-102 (Notice of Intent to Submit Route Permit Under the Alternative Process) (eDocket No. 20215-173987-01).

located within the townships of Ashland, Hayfield, Ripley, and Vernon in Dodge County and within the townships of Pleasant Valley and Sargeant in Mower County.[22]

14. On September 22, 2021, the Commission issued a Notice of Comment Period on Application Completeness.[23]

15. On October 6, 2021, DOC-EERA filed comments recommending that the Commission reject the Route Permit Application and require DCW to file the following additional information:

- Additional text specifying the required right-of-way (ROW) (using the definition of ROW defined in Minn. R. 7850.1000, subpart 15), describing the structures and spans used for the transmission line, and clarifying the relationship between transmission line ROW and existing road ROW;
- A summary of the status of voluntary easements on private land to support overhang of the proposed transmission line;
- Additions to elevation drawings to show conductor overhang of roadway during at-rest conditions and onto private property;
- An explanation of how pole spacing will need to be adjusted in cases where the transmission line is confined to road ROW because landowner participation is not obtained; and
- Additional discussion of potential roadway impacts and mitigation measures in the Route Permit Application to include detail on potential impacts and mitigation measures beyond the general discussion of National Electric Safety Code (NESC) standards and adherence to the Minnesota Department of Transportation (MnDOT) Utility Accommodation and Coordination Manual.[24]

As referenced earlier, DOC-EERA's comments also recommended against appointment of an ATF for the HVTL at that time.[25]

16. On October 6, 2021, MnDOT provided comments indicating that a contested issue existed regarding MnDOT's Utilities Accommodation and Coordination Manual and Utility Accommodation on Highway Right of Way Policy, which, according to MnDOT, did not allow private parties to place facilities longitudinally within trunk highway right-of way. MnDOT added that the HVTL served a private purpose until the point of interconnection to a regulated utility and, therefore, MnDOT would not grant permits to

[22] Ex. DCW-107 at 6 (Application for Route Permit) (eDocket No. 20219-177946-02).
[23] Ex. PUC-108 (Notice of Comment Period – On Application Completeness) (eDocket No. 20219-178184-02).
[24] Ex. DOC-100 at 9 (EERA Comments on Application Completeness and Review Procedure) (eDocket No. 202110-178558-01).
[25] *Id.* at 11-12.

DCW for the areas where the HVTL is proposed to run parallel within trunk highway ROW.[26]

17. On October 13, 2021, DCW submitted reply comments indicating it would refile its Route Permit Application to address the issues raised in DOC-EERA's comments. DCW also indicated it was in discussions with MnDOT to determine a path forward that works for DCW and MnDOT that would not require a contested case.[27]

18. On October 21, 2021, the Commission issued a Notice of Extended Comment Period indicating that the Commission would issue a new notice of comment period once DCW refiles its Route Permit Application but would also continue to accept comments during the time pending the refiling.[28]

19. During the extended comment period, comments were received in support of the Project[29], as well as from individuals from the public expressing opposition.[30] Concerns from public commenters related to environmental, farming, and health impacts associated with the Project.[31]

20. On November 10, 2021, area resident Kathryn Frett stated her opposition to the Project, reiterating her "strong objection to the Dodge County Wind, LLC project proposed to be located in Dodge and Steele Counties." She noted her earlier letter of objection on January 16, 2019 (in response to earlier DCW applications for wind farm approvals) and that her "strong objection still remains today."[32]

21. Local resident Karen Biel opposes the Project generally, and the granting of a route permit particularly. Ms. Biel's concerns include the potential for destroying agricultural tile during Project construction, decreased property values, additional burdens on farm operations, and stray voltage. She also explained:

> The land in this area yields or produces high returns of corn and soybeans. An example of this with a good growing season is corn yields up to 275 bushels per acre and soybeans yield up to 75 bushels per acre. [Recently] corn was selling for $6.00 per bushel, and soybeans were selling for $12 per bushel. [. . .] Landowners keep hearing from NextEra Energy and Atwell that the Transmission line will not impact the land because the lines and poles are installed in the ditches and follow the roads. To produce [high yields], aerial application of fungicide is [necessary]. The pilots [. . .] must

[26] Ex. PUC-112 at 1 (MnDOT Comments) (eDocket No. 202110-178574-01).
[27] Ex. DCW-112 at 1-2 (Reply Comments – Application Completeness).
[28] Ex. PUC-116 (Notice of Comment Period – Notice of Extended Comment Period).
[29] *See*, *e.g.*, Ex. PUC-117 (Public Comment – SWCE), Ex. PUC-118 (Public Comment – Austin Area Chamber of Commerce), Ex. PUC-119 (Public Comment – Power Ventures), Ex. PUC-122 (Public Comment – Owatonna Chamber of Commerce), Ex. PUC-123 (Public Comment – Rochester Comm Tech College).
[30] *See*, *e.g.*, Ex. PUC-121 (Public Comment – K. Frette) (eDocket No. 202111-179643-02), Ex. PUC-124 (Public Comment – K. Biel) (eDocket No. 202112-181093-01).
[31] *Id.*
[32] Ex. PUC-121 (Public Comment - K. Frett) (eDocket No. 202111-179643-02).

> stay at least 10 to 15 feet from these transmission lines to be safe. Installing the lines in the ditches and keeping a safe distance to fungi application loses 20 bushels per acre because no fungicide will be applied to the crop. A significant dollar is lost to the landowner regarding yield of corn and soybeans.[33]

22. On January 14, 2022, DCW filed an updated and amended route permit application (Amended Route Permit Application). The Amended Route Permit Application sought to address feedback provided by DOC-EERA and MnDOT in their October 6, 2021 comments with the following: the HVTL's required ROW and the Application's terminology used to describe it; the status of DCW's voluntary easements to support overhang; pole spacing adjustments when locating in certain ROW; elevation drawings showing conductor overhang; a description of roadway impacts; and the routing of the HVTL longitudinally in MnDOT ROW.[34]

C. Procedure Specific to DCW's CON Application

23. On May 7, 2021, DCW filed a Request for Exemption from CON Application Content Requirements with the Commission, seeking exemptions from certain CON data requirements.[35] Exemptions were requested primarily due to DCW being an independent power producer (IPP) and having already executed a PPA with GRE. The same day, DCW filed a notice plan for the Project.[36]

24. On May 20, 2021, the Commission issued a Notice of Comment Period on CON Exemption Requests, which opened an initial written comment period until May 27, 2021, and a reply comment period until June 16, 2021.[37]

25. On May 27, 2021, DOC-DER filed comments recommending that the Commission approve DCW's CON exemption requests and notice plan, subject to comments submitted by DOC-EERA.[38] On June 16, 2021, DOC-EERA submitted reply comments on the notice plan requesting that tribal councils be added to the notice.[39] On June 16, 2021, LIUNA also filed comments supporting DOC-DER's request that the Commission approve the notice plan and request for exemptions.[40]

26. On June 23, 2021, DCW filed reply comments indicating that it had previously corresponded with tribes in the vicinity of the Project but was nonetheless agreeable to including additional tribal outreach in the notice plan. DCW also provided

[33] Ex. PUC-124 (Public Comment – K. Biel) (eDocket No. 202112-181093-01).
[34] Ex. DCW-118 (Amended Route Permit Application) (eDocket Nos. 20221-181565-01 to 20221-181565-10.
[35] Ex. DCW-100 (Petition for Exemption from Certain Certificate of Need Application Requirements) (eDocket No. 20215-173982-01).
[36] Ex. DCW-101 (Initial Filing – Notice Plan) (eDocket No. 20215-173979-01).
[37] Ex. PUC-101 (Notice of Comment Period) (eDocket No. 20215-174340-01).
[38] Ex. DOC-168 (DOC-DER Comments on Exemptions) (eDocket No. 20215-174573-02); Ex. DOC-167 (DOC-DER Comments on Notice Plan) (eDocket No. 20215-174573-01).
[39] Reply Comment by DOC-EERA (June 16, 2021) (eDocket No. 20216-175120-01).
[40] Ex. PUC-102 at 1 (LIUNA Reply Comments) (eDocket No. 20216-175134-01).

its view that it is best practice to provide notice to Tribal Historic Preservation Officers (THPO) and allow the THPOs to engage the applicable tribal councils, as needed.[41]

27. On June 29, 2021, DOC-EERA filed a letter responding to DCW's comments indicating its view that the language of Minn. R. 7829.2550, subp. 3(C) requires direct notification to tribal governments. DOC-EERA also recommended that DCW be required to notify, at a minimum, the 11 federally recognized tribes sharing geography with Minnesota through each tribe's appointed executive level staff.[42]

28. On July 13, 2021, the Commission issued an Order adopting DOC-DER's filed comments recommending approval of the CON exemption requests.[43]

29. On July 14, 2021, DCW filed a letter indicating that it had reached an agreement with DOC-EERA concerning tribal notifications in the notice plan.[44]

30. On July 21, 2021, the Commission issued an Order approving the Notice Plan.[45]

31. On September 14, 2021, DCW filed its application for a CON for the Project (CON Application).[46]

32. On September 22, 2021, the Commission issued the September 22, 2021 Notice.[47]

33. On October 4, 2021, DCW filed a letter acknowledging that Dodge and Mower Counties had inadvertently been left off the mailing distribution for the notice plan letter when that notice was distributed on August 21, 2021 and that the error, when noticed by DCW, was addressed by sending out the letter to Dodge and Mower Counties on September 17, 2021.[48]

34. On October 5, 2021, DOC-DER filed comments recommending that the Commission find the CON Application complete and evaluate the CON Application using the Commission's comment process.[49]

35. On October 6, 2021 LIUNA filed a comment recommending that the CON Application be deemed complete.[50]

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[41] Ex. DCW-103 at 1-2 (Reply Comments – Notice Plan) (eDocket No. 20216-175334-01).
[42] Response to Reply Comment by DOC-EERA (June 29, 2021) (eDocket No. 20216-175580-01).
[43] Ex. PUC-105 (Order) (eDocket No. 20217-176053-01).
[44] Ex. DCW-104 (Informational Filing – Updated Notice Plan) (eDocket No. 20217-176153-01).
[45] Ex. PUC-107 (Order – Notice Plan) (eDocket No. 20217-176369-01).
[46] Ex. DCW-105 (Application for Certificate of Need) (eDocket Nos. 20219-177955-01 to 20219-177955-10).
[47] Ex. PUC-108 at 1 (Notice of Comment Period – On Application Completeness) (eDocket No. 20219-178184-02).
[48] Ex. DCW-110 at 1 (Letter – Notice Plan Update) (eDocket No. 202110-178515-01).
[49] Comment by DOC-DER (Oct. 5, 2021) (eDocket No. 202110-178538-01).
[50] Ex. PUC-111 at 1 (LIUNA Comments) (eDocket No. 02110-178568-01).

36. On October 11, 2021, DCW submitted a letter from Mower County indicating Mower's confirmation that it was not prejudiced by receiving formal Project notice after the Applications were filed with the Commission on September 14, 2021. Mower County's letter added that DCW is aware of Mower County's Utility Ordinance, which requires utility poles located outside of the ROW to be pre-approved by the County Engineer and that if poles are placed immediately outside of a ROW it is DCW's responsibility to relocate the poles at DCW's expense, should the road or its ROW need to be expanded.[51]

37. DCW filed reply comments on October 13, 2021, stating that there is agreement among all commenters that the CON Application is complete.[52]

38. On January 12, 2022, DCW filed an Amended CON Application that, to the extent applicable, reflected the adjustments made to DCW's Site and Route Permit Applications.[53]

D. Joint Processing and Procedure for DCW's Applications

39. On January 24, 2022, the Commission issued a Notice of Comment Period on Application Completeness, requesting comment on the following topics:

- Does the CON application contain the information required under Minn. R. 7849.0240, 7849.0250, and 7849.0700 to 7849.0340?
- Are there contested issues of fact with respect to the representations made in the applications?
- What procedural processes should be applied to the applications (e.g., informal process or contested case hearing, summary proceeding or summary report, and joint review)?
- Should an ATF be appointed for the route permit application?

The Commission set the following schedule: initial comments by February 7, 2022, reply comments by February 14, 2022, and supplemental comment by February 22, 2022.[54]

40. On January 31, 2022, the Minnesota AgriGrowth Council (AgriGrowth) filed comments urging the Commission's "support and prompt permitting" of the Project. AgriGrowth contended that the Project will provide renewable energy to the region and will benefit agricultural landowners by allowing them to diversify their income with revenue outside of what is gained growing crops and raising livestock.[55]

41. On February 7, 2022, Mark Pruel filed comments expressing concern regarding the Project's impacts on roads, health, environment, farming, and soils, as well

[51] Ex. DCW-111 (Compliance Filing – Updated Notice Plan) (eDocket No. 202110-178702-01).
[52] Ex. DCW-112 at 1 (Reply Comments – Application Completeness) (eDocket No. 202110-178769-01).
[53] Ex. DCW-115 (Amended Certificate of Need Application) (eDocket No. 20221-181449-01).
[54] Ex. PUC-125 (Notice of Comment Period on Application Acceptance) (eDocket No. .
[55] Ex. PUC-126 (Public Comment – MN AgriGrowth Council).

as the Project's receipt of government subsidies.[56] Mr. Pruel submitted additional objections to the Project two days later. [57]

42. Similar concerns were reflected by other commenters from the public.[58] Thomas Walerak, a landowner along the proposed transmission line, oppposes the Project, based upon "the devaluation and degradation" of the area's "highly valuable farmland."

43. On February 7, 2022, DOC-EERA submitted comments recommending that the Commission accept DCW's Applications as substantially complete pending submission of the signature of the preparer of the Amended Site Permit Application and the current land acquisition status for the Wind Project.[59]

44. On February 7, 2022, MnDOT filed comments indicating that the Amended Route Permit Application appeared to be permittable by MnDOT and stating its expectation that DCW would continue to work with MnDOT to ensure safe and permittable placement of the HVTL.[60]

45. On February 10, 2022, Karen Biel submitted comments expressing concern about the HVTL's usage of narrow ROW and the potential for drainage issues. Ms. Biel also shared her concern that the power from the Project would be delivered out-of-state.[61]

46. On February 14, 2022, DCW replied to comments filed by DOC-EERA indicating that DCW would file an update on the status of land acquisition efforts by February 18, 2022.[62] That same day, DCW filed an update indicating it had site control agreements for approximately 10,811 acres (95.1 percent) of the 11,366 acres of land required for successful construction and operation of the Wind Project, and that DCW was working with landowners to obtain overhang easements.[63]

47. On February 18, 2022, DOC-EERA submitted comments recommending the Commission find DCW's Applications complete.[64]

48. On February 22, 2022, the International Union of Operating Engineers Local 49 (IUOE Local 49) submitted comments supporting a finding of application completeness and recommending a joint processing of the Applications going forward without a contested case hearing.[65]

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[56] Ex. PUC-128 (Public Comment – Mark Pruel).
[57] Ex. PUC-129 (Public Comment – Mark Pruel).
[58] Ex. PUC-130 (Public Comments – Batch 1).
[59] Ex. DOC-101 at 11 (EERA Comments on Application Completeness).
[60] Ex. PUC-127 at 1 (MnDOT Comments).
[61] Ex. DOC-102 (Public Comment – K. Biel).
[62] Ex. DCW-119 at 1 (Reply Comments – Application Completeness).
[63] Ex. DCW-120 at 1 (Supplement to Reply Comments – Application Completeness).
[64] Ex. DOC-103 at 1 (EERA Supplemental Comments on Application Completeness).
[65] Ex. PUC-131 at 1 (IUOE Local 49 and North Central States Regional Council (NCSRC) of Carpenters Comments).

49. On February 23, 2022, LIUNA filed comments reiterating the Project's potential to provide significant socioeconomic benefits to the regional economy and recommending that the DCW Applications be considered jointly through the informal review process.[66]

50. On March 8, 2022, Aaron, James, Nathan, and Benjamin Tempel submitted comments expressing concern regarding the Project's potential impacts on soils, farmland, wildlife, public ROW, and water resources.[67] The Tempels submitted comments expressing similar concerns on April 14, 2022.[68]

51. On March 8, 2022, the Commission issued an Order (March 8 Order) accepting the Applications as complete and directing: (1) a joint public hearing for the Applications; (2) the preparation of an EA in lieu of an ER; and (3) that an ALJ from the OAH preside over the joint proceeding and prepare a report setting forth findings of fact, conclusions of law, and recommendations regarding the Applications.[69]

52. On March 11, 2022, Clean Energy Economy Minnesota (CEEM) filed comments in support of the Project and the renewable energy it will provide the state.[70]

53. On March 24, 2022, the Commission issued a Notice of Public Information and Environmental Assessment Scoping Meeting to take place Tuesday, April 12, 2022 from 1:00 p.m. and 6:00 p.m. in-person and on Wednesday April 13, 2022 at 6:00 p.m. via remote access.[71] On April 8, 2022, to ensure adequate notice to potentially affected landowners the Commission issued a notice of cancellation[72] and on April 14, 2022, the Commission issued a Notice of Rescheduled Public Information and Environmental Assessment Scoping Meetings, including to recipients that did not receive the initial March 24, 2022 Notice.[73] On April 19, 2022, the Commission issued a Corrected Notice of Rescheduled Public Information and Environmental Assessment Scoping Meetings notifying the public that in-person meetings would be held on Tuesday, May 10, 2022 at 1:00 p.m. and 6:00 p.m. at Kasson State Theater, 221 West Main Street, Kasson, Minnesota 55944, and a remote access meeting would take place on Wednesday, May 11, 2022 at 6:00 p.m.[74] A copy of the letter distributed with the notice was filed on April 19, 2022.[75] In the Notice, the Commission sought comments at the meeting or in writing by May 25, 2022 on the following questions: (1) What potential human and

[66] Ex. PUC-132 at 1 (LIUNA Comments).
[67] Ex. DOC-104 (Public Comment – Aaron, Benjamin, James, and Nathan Tempel).
[68] Ex. DOC-110 (Public Comment – Aaron, Benjamin, James, and Nathan Tempel).
[69] Ex. PUC-134 (Order – PUC).
[70] Ex. PUC-135 (Clean Energy Economy MN Comments).
[71] Exs. PUC-136 & DOC-106 (Notice of Public Information Meeting and Environmental Assessment and Scoping Meeting).
[72] Exs. PUC-138 & DOC-107 (Notice of Cancellation Public Information and Scoping Meetings, to be Rescheduled).
[73] Exs. PUC-140 & DOC-108 (Notice of Rescheduled Public Information and Environmental Assessment Scoping Meetings).
[74] Exs. PUC-142 & DOC-111 (Notice – Correction – Notice of Rescheduled Public Information and Environmental Assessment Scoping Meeting and Comment Period for Dodge County Wind Project).
[75] Ex. PUC-141 (Notice – Letter to Landowners).

environmental impacts of the proposed Project should be considered in the EA and the draft site permit (DSP)? (2) What are possible methods to minimize, mitigate, or avoid potential impacts of the proposed Project that should be considered in the EA and the DSP? (3) Are there any alternative routes or route segments that should be considered to address potential impacts associated with the 161 kV HVTL? (4) Are there any unique characteristics of the proposed site or the Project that should be considered? (5) Are there other ways to meet the stated need for the Project, for example, a different size project or a different type of facility? If so, what alternatives to the Project should be studied in the EA? (6) Are there any items missing or mischaracterized in any of the applications, or issues that need further development?

54. On April 13, 2022, Carol Overland filed a letter objecting to the use of a consent agenda and informal process that led to the March 8 Order.[76]

55. On May 10, 2022, the noticed in-person Public Information and EA Scoping Meetings were held and on May 11, 2022, the noticed remote access Public Information and EA Scoping meeting was held. At these meetings, presentations were made by the Staff of the Commission, DOC-EERA, and DCW, which provided detail on the Project, the EA to be prepared, and the procedure for reviewing DCW's applications. As discussed in detail below, oral comments were received at the meeting from the public and written comments were submitted after the meeting.

56. On May 13, 2022, DCW confirmed that pursuant to the Commission's March 8 Order and Minn. R. 7854.0600, it had completed the applicable notice requirements.[77]

57. On June 13, 2022, DCW filed affidavits of publication verifying that Notice of the May 10 and 11, 2022 Public Information and EA Scoping Meetings had occurred.[78]

58. On July 12, 2022, DCW submitted a response to comments and proposed alternative route segments, indicating that it did not oppose a contested case proceeding and requested denial of the appointment of an ATF. DCW also proposed several alternative route segments for consideration. DCW's filing also addressed concerns about wildlife, shadow flicker and visual impacts, potential impacts to soils and agriculture, and sound, among others, submitted by commenters.[79]

59. On August 3, 2022, DOC-EERA submitted a request for additional information on the proposed route segment alternatives, the status of landowner agreements, whether DCW has authority to use eminent domain for the HVTL, and potential ROW requirements for the alternative route segments. DOC-EERA also recommended that DCW respond to the suggestions of commenters to route the HVTL

[76] Ex. PUC-139 (Overland Letter Objection to Use of Consent Agenda).
[77] Ex. DCW-124 (Compliance Filing – Post Completeness Notification).
[78] Ex. DCW-126 (Affidavits of Publication).
[79] Ex. DCW-128 (Update Regarding Filing Route Alternatives).

underground.[80] On August 5, 2022, the Commission issued a letter in support of DOC-EERA's request for additional information.[81]

60. On August 22, 2022, DCW submitted a response to DOC-EERA's request for additional information, addressing DOC-EERA's questions concerning alternative route segments and the status of landowner agreements, and clarifying that DCW is not seeking the authority to use eminent domain and is, for a variety of reasons, not proposing to underground the HVTL.[82]

61. On August 31, 2022, DOC-EERA issued a Notice of Extended Comment Period on EA Scoping, extending the comment period until September 21, 2022 at 4:30 p.m.[83]

62. On November 9, 2022, DOC-EERA issued its Scoping Comments and Recommendations, recommending the Commission refer the issue of the optimal route to the OAH for a contested case hearing. DOC-EERA also included a summary of the EA scoping process with its comments, as well as a preliminary DSP incorporating site permit conditions recommended during the scoping comment period.[84] Conditions of the Site Permit are addressed in Section XII of these Findings.

63. On November 18, 2022, Sargeant Township filed a letter indicating it would not allow HVTL poles in its ROW and suggested Mower County take a similar stance.[85]

64. Other public comments submitted in November of 2022 expressed support for the Project and the economic benefits it would bring.[86]

65. On December 7, 2022, correspondence was filed indicating MnDOT's position that DCW could not parallel state trunk highway ROW.[87]

66. Other public comments submitted in December of 2022 offered support for the Project and the economic benefits it would bring.[88]

67. On December 30, 2022, MnDOT filed comment indicating that, currently, state law, federal law, and/or MnDOT policy authorized by law does not allow private entities or citizens to place infrastructure, utility or otherwise, longitudinally within rights

[80] Ex. DOC-137 (EERA Letter Requesting Additional Information on DCW Proposed Route Segment Alternatives).
[81] Letter from the Commission (Aug. 5, 2022) (eDocket No. 20228-188159-01).
[82] Ex. DCW-130 (Response to EERA Request for Additional Information Regarding Route Alternatives).
[83] Ex. DOC-138 (Notice of Extended Comment Period, Including Certificate of Service).
[84] Ex. DOC-145 (EERA Scoping Comments and Recommendation to Commission, Including Preliminary Draft Site Permit).
[85] Ex. PUC-144 (Sargent Township – Public Comment).
[86] Ex. PUC-145 (Public Comment – Batch 5 Comment).
[87] Ex. PUC-146 (Comments – Dodge County-MnDOT Correspondence).
[88] Ex. PUC-147 (Public Comment – Rev. Dr. Donna Dempewolf); Ex. PUC-148 (Public Comment – J. Kubat); Ex. PUC-149 (Public Comment – S. McMartin).

of way in MnDOT's control.[89] MnDOT also attached to its comments the MnDOT Utility Accommodation on Trunk Highway ROW Policy.[90]

68. On December 30, 3022, the Commission issued a notice for its January 11, 2023 Agenda Meeting that included the following issues for the Commission's consideration:

(1) What action should the Commission take concerning route alternatives to be evaluated in the EA?

(2) Should the Commission issue a DSP for the proposed LWECS?

(3) Should an ATF be appointed?

(4) Should the Applications be referred to the OAH for a contested case proceeding?[91]

69. On January 4, 2023, briefing papers were issued by Commission staff recommending that the Commission:

(1) Request DOC-EERA examine the proposed route and alignment in the DCW's Amended Route Permit Application, the route segments as proposed by DCW in its July 29, 2022 response comments and examine the additional two route segments as proposed by the Minnesota Department of Natural Resources (MnDNR).

(2) Issue the Preliminary DSP as proposed by DOC-EERA with Commission staff's suggested changes incorporated as the DSP.

(3) Authorize the Department of Commerce to establish an ATF for the HVTL route, require the Department to file the composition and charge of the ATF within 15 days of the January 11 Commission meeting, and delegate the authority to the Executive Secretary to approve the composition and charge of the ATF.

(4) Refer the applications to the OAH for contested case proceedings; request that an administrative law judge prepare a report setting forth findings, conclusions, and recommendations on the merits of the proposed Project, alternatives to the proposed project, and a preferred route alternative(s); and provide comments and recommendations, if any, on the conditions and provisions of the proposed permits.

(5) Request the judge examine that the following issues:

[89] Ex. PUC-151 at 4 (Comments – MnDOT).
[90] *Id*. at Attachment 1.
[91] Ex. PUC-150 (Notice of Commission Meeting – January 11, 2023 Agenda).

a. Whether DCW is authorized to place the HVTL in the state, county and/or township road ROW.

b. Whether the HVTL can be placed in the road ROW that is consistent with public safety and convenience, does not unreasonably interfere with proper functioning of the ditch, and does not place an undue burden on local government and landowners.

c. The extent of impacts of the wind and HVTL project components to agriculture practices, including aerial applicators, in the area and mitigation options available.

(6) Vary Minn. R. 7854.0800 to allow for issuance of a DSP after 45 days from determination of application completeness.[92]

The staff of the Commission also recommended two minor modifications to the language of the DSP conditions.[93]

70. On January 9, 2023, DOC-EERA filed comments stating that, based on the information available at the time, DOC-EERA was unable recommend a task force charge because DOC-EERA believed the unresolved legal and technical issues related to the Applicant's proposed route and route alternatives created too much uncertainty for an ATF to identify viable route alternatives or additional mitigation measures.[94]

71. On January 10, 2023, Commissioner Tuma filed new and revised decision options. Commissioner Tuma adjusted the decision option to issue the DSP to include minor site permit condition modifications recommended by Commission staff. Commissioner Tuma also added language to the decision option concerning the authorization to create an ATF to ensure that it included reference to deadlines and that a scoping decision would be delayed until the Commission considers the transmission line routing issue upon completion of the ATF's charge. Commissioner Tuma also added two new decision options. The first was to request that DOC-EERA submit into the record a proposed draft route permit (DRP) within 10 days of the Commission's order. The second was to require the Applicant to, within 10 days of the Commission's order, submit proposed wording for a referral of the legal, land use, engineering and safety issues related to siting transmission facilities within road ROW to the state (MnDOT), counties and townships.[95]

72. On January 11, 2023, the Commission approved at its Agenda Meeting the decision options reflected in its Order issued February 24, 2023, discussed below.

[92] Ex. PUC-152 at 38-40 (Briefing Papers – January 11, 2023 Agenda).
[93] *Id.* at 33-34.
[94] Ex. DOC-146 at 1 (EERA Comments on ATF).
[95] Ex. PUC-153 (Briefing Papers – Commission Tuma Decision Options).

73. On January 26, 2023, DOC-EERA issued comments recommending a two-part charge to the ATF. The first charge was that that ATF assist in identifying impacts and issues of local concern that should be analyzed in the EA. The second recommended charge was that the ATF assist in identifying mitigation measures, including route alternatives, which should be analyzed in the EA.[96] DOC-EERA's comments indicated it was intending to solicit task force nominations from the following governmental units:

- Dodge County: Environmental Services and Highway Department Ripley Township, Hayfield Township, Vernon Township, and
- Mower County: Public Works (Environmental Services and Highways), Sargeant Township, Pleasant Valley Township.[97]

DOC-EERA also offered an anticipated schedule for the ATF, with meetings of the ATF to take place in March of 2023 and a final report of the ATF to be issued in April or May of 2023.[98]

74. On February 13, 2023, DOC-EERA submitted a letter adding Ashland Township to the Dodge County task force nominations and Waltham Township to the Mower County nominations.[99]

75. On February 24, 2023, the Commission issued its Order Issuing Preliminary DSP, Authorizing ATF, and Varying Rule (February 24 Order): (i) issuing a DSP for the Project; (ii) requesting that DOC-EERA file a proposed DRP within 20 days that includes all alternative routes proposed by parties to date, along with applicable ROW, widths, and alignments for each route segment; (iii) establishing an ATF for the HVTL route and delegating authority to the Commissioner of Commerce to approve the deadlines, composition, and charge of the ATF; (iv) requiring the Applicant to file, within 10 days, proposed language for a referral of the legal, land use, engineering and safety issues related to siting transmission facilities within road ROW of the state (MnDOT), counties and townships; and (v) varying Minn. R. 7854.0800 to allow for issuance of a DSP after 45 days from determination of application completeness.[100]

76. On February 27, 2023, Hayfield Township filed a letter indicating it would not allow the HVTL to utilize Hayfield Township's ROW.[101]

77. On March 2, 2023, the Commissioner of the Department of Commerce issued a charge and order (Charge) establishing the ATF, comprising representatives of Dodge and Mower Counties and the townships of Ripley, Ashland, Hayfield, and Sargeant. The Charge specified that the ATF would include up to 11 members who would

[96] Ex. DOC-147 at 1 (EERA Proposed Charge, Structure, and Tentative Schedule for ATF).
[97] *Id.* at 2.
[98] *Id.* at 2-3.
[99] *Id.* at 1.
[100] Ex. PUC-154 (Order – Issuing Preliminary Draft Site Permit, Authorizing ATF, and Varying Rule).
[101] Ex. PUC-155 (Hayfield Township Letter to Commission).

be expected to participate in up to three meetings and who would assist the Department with the development of a summary of the task force's work. The Charge specified two specific charges for the ATF: first, that the ATF assist in identifying impacts and issues of local concern that should be analyzed in the EA; and second, that the ATF assist in identifying mitigation measures, including route alternatives, which should be analyzed in the EA. The Charge specified that the ATF would expire upon issuance of the EA scoping decision for the Project.[102]

78. On March 6, 2023, in compliance with the Commission's February 24, 2023 Order, DCW filed its proposed referral language in the event the matter would be referred to the OAH. The proposed referral language included the following issues:

- What county ordinances or requirements are claimed to apply to the Applicant's proposed transmission line ROW, and are these provisions reasonable and in conformance with Minn. Stat. § 222.37?

- Are the counties' ordinances or requirements ambiguous and, if so, capable of being interpreted in harmony with Minn. Stat. § 222.37?

- What are the counties' processes for working with the Applicant to facilitate discussion and record development prior to a county determination on a transmission line ROW request?

- What requirements and factors have the counties applied to Applicant's proposed transmission line ROW request and how have these requirements and factors been applied to past applicants?

- Are the counties acting reasonably in evaluating Applicant's request, including its proposed mitigation measures and determination of the actual safety impacts of Applicant's proposed ROW use?

- What are the impacts of the counties' positions and processes on the project?

- Has the Applicant demonstrated that its proposed use of the applicable ROW will comply with reasonable conditions imposed by the counties and townships?

- Has the Applicant demonstrated that its proposed use of the applicable ROW will not interfere with the safety and convenience of ordinary travel along or over the county and township roads?[103]

79. On March 16, 2023, in accordance with the Commission's February 24 Order, DOC-EERA submitted a proposed DRP for the Transmission Project. The DRP

[102] Ex. DOC-149 at 1 (DCW Transmission Line ATF Establishment, Charge, and Order).
[103] Ex. DCW-131 at 1 (Proposed Language for Issue Referral to Office of Administrative Hearings).

included all alternative routes proposed to date, along with applicable ROW width, and alignments for each route segment.[104] The DRP submitted by DOC-EERA included a requirement for a preconstruction meeting, which had not historically been required for route permits,[105] as well as a plan-and-profile requirement that is linked to the pre-construction meeting. The DRP also included a more detailed description of the review of required pre-construction filings and a discussion of what happens if the Commission determines that pre-construction filings are not consistent with the permit.[106]

80. On March 30, 2023, DOC-EERA filed a Notice of Appointment indicating the composition of the ATF. The named appointed individuals were as follows: Jim Checkel (Ashland Township), Lauren Cornelius (Dodge County), Guy Kohlnhofer (Dodge County), Eric Caspers (Hayfield Township), Mike Hanson (Mower County), Val Sheedy (Mower County), John Simonette (Ripley Township), and Chris Nielsen (Sargeant Township).[107]

81. On May 2, 2023, a Notice of Comment Period was issued by the Commission. The specified topics open for comment were as follows:

- What are possible methods to minimize, mitigate, or avoid potential impacts of the proposed project that should be considered in the proposed DRP?
- Does DCW's proposed contested case referral language sufficiently address the contested issues in the docket?
    - If not, what other issues should be added to any potential contested case referral?
- Are there other issues or concerns related to this matter?

The Notice established a time frame for initial comments ending on May 22, 2023 and reply comments by June 9, 2023.[108]

82. On May 23, 2023, the ATF filed its final report on the HVTL.[109] The ATF recommended further review of approximately 40 miles of route alternatives. The recommendations combined portions of the Applicant's original route proposal, most of the alternative segments proposed by the Applicant in July 2022, and approximately 21 miles of route alternatives that were not in the record prior to the ATF report. The ATF also recommended that approximately 22 miles of the route in the Amended Route Permit

[104] Ex. DOC-150 at 1-2 (EERA Comments and Draft Route Permit).
[105] *Id.* at 3.
[106] *Id.* at 2-5.
[107] Ex. DOC-151 (Notice of Appointment for DCW Transmission Line ATF).
[108] Ex. PUC-157 at 1-2 (Notice of Comment Period).
[109] Ex. DOC-153 at 6-7 (ATF Report).

Application not be reviewed any further.[110] Other recommendations of the ATF report are discussed later in these Findings.

83. On June 9, 2023, DOC-EERA filed comments indicating its belief that an uncontested proceeding provides an adequate opportunity for interested persons to present information on issues to the judge assigned to the case. DOC-EERA indicated in its comments that, should the Commission determine that a contested case hearing offers a better path for record development, then DOC-EERA recommends the referral to the OAH be focused on the final two issues proposed by DCW in its proposed referral language.[111] DOC-EERA staff recommended minor changes to these two points to include the potential location within Minnesota state highway ROW:

- Has the Applicant demonstrated that its proposed use of the applicable ROW will comply with reasonable conditions ~~imposed~~ required by the counties, ~~and~~ townships, and Minnesota Department of Transportation?

- Has the Applicant demonstrated that its proposed use of the applicable ROW will not interfere with the safety and convenience of ordinary travel along or over the county and township roads and state highways?[112]

84. On June 30, 2023, a Notice of Commission Agenda Meeting for the Commission's July 13, 2023 meeting was issued, placing DCW on the agenda. The notice indicated that the issues to be considered were as follows:

(1) What action should the Commission take concerning route alternatives to be evaluated in the EA?

(2) Should the Applications be referred to the OAH for contested case proceedings?[113]

85. On July 5, 2023, Commission staff issued its briefing papers for the July 13, 2023 Agenda Meeting. Commission staff recommended that the Commission: (i) accept DOC-EERA's March 6, 2023 proposed DRP; (ii) recommend that DOC-EERA's proposed scope of the EA and route alternatives, alignments and route widths be analyzed, and recommend that DOC-EERA not analyze route segments the ATF recommended to be withdrawn; (iii) refer the Applications to the OAH for contested case proceedings; (iv) request the administrative law judge examine whether the Applicant has demonstrated that its proposed use of the applicable ROW will comply with reasonable conditions required by the counties, townships, and MnDOT and whether the Applicant has demonstrated that its proposed use of the applicable ROW will not interfere with the

[110] *Id.* at 10.
[111] Ex. DOC-154 at 10 (EERA Recommendations on Route Alternatives, Comments on Draft Route Permit, and Referral Language for Hearing).
[112] *Id.*
[113] Ex. PUC-178 (Notice of Commission Meeting – July 13, 2023 Agenda Meeting).

safety and convenience of ordinary travel along or over the county and township roads and state highways; and (v) request the judge examine whether the CON exemption in Minn. Stat. § 216B.243, subd. 8 as amended by Act of May 24, 2023, Chapter 60 § 22 for independent power producers for wind generating facilities includes the HVTL.[114]

86. On July 10, 2023, Commission staff issued amended briefing papers to include a summary of GRE's May 22, 2023 comments arguing that a lengthy permitting process creates uncertainty and could delay its members realizing the benefits of the Project and urging the Commission to consider whether a contested case is necessary.[115]

87. On July 11, 2023, DOC-EERA filed a letter seeking clarification from the Commission as to whether, in light of legislative changes, DOC-EERA should proceed with an EA in lieu of an ER and, if so, what impacts and alternatives the assessment should address.[116]

88. Also on July 11, 2023, DCW proposed three decision options for the July 13, 2023 Agenda Meeting. First, DCW proposed a decision option requiring briefing on whether the CON exemption in Minn. Stat. § 216B.243 for independent power producers for wind generating facilities includes the HVTL proposed by the Applicant. Second, DCW proposed a decision option that would authorize the ALJ to develop a factual record through filed testimony rather than a contested case. Lastly, DCW proposed a decision option directing the administrative law judge to adopt an expedited schedule, given the narrow issues that potentially could arise following the EA's study of the route alternatives recommended by the ATF.[117]

89. On July 12, 2023, Commission staff issued revised briefing papers reflecting the modifications and additions proposed by DOC-EERA and DCW.[118]

90. On July 13, 2023, the Commission held its Agenda Meeting and approved moving the proceeding forward without referral for a contested case, along with the other rulings embodied in its Order later issued on September 1, 2023, discussed below.

91. On July 27, 2023, DOC-EERA issued its Scoping Decision[119] and provided notice of same.[120]

92. On August 4, 2023, DOC-EERA filed documentation showing that notice was provided to landowners that may be affected by a routing alternative for the HVTL, which included notice of the environmental scoping decision. Contact information for

[114] Ex. PUC-179 (Briefing Papers – July 13, 2023 Agenda).
[115] Ex. PUC-180 (Briefing Papers – July 13, 2023 Agenda Amended).
[116] Ex. DOC-156 (EERA Comments Requesting Clarification Regarding Environmental Review).
[117] Ex. DCW-134 at 1-2 (Alternative Decision Options).
[118] Ex. PUC-183 (Briefing Papers – Decision Options).
[119] Ex. DOC-157 (Signed Environmental Assessment Scoping Decision).
[120] Ex. DOC-158 (Notice of Environmental Assessment Scoping Decision).

DOC-EERA and the Commission was provided with these notices, along with information on how to participate in the proceeding.[121]

93. On August 22, 2023, the Judge issued an order setting a prehearing conference to be held on September 5, 2023 at 1:00 p.m.[122]

94. On September 1, 2023, the Commission issued an Order Accepting Draft Route Permit, Authorizing Environmental Assessment, Requesting Route Analysis, and Providing Further Instruction (September 1 Order). The September 1 Order (i) accepted the DRP proposed by DOC-EERA; (ii) asked the DOC-EERA to prepare an EA in lieu of an ER, and that the EA evaluate impacts related to both power plants required under Minn. R. 7849.1500, subp. 2, and transmission lines required under Minn. R. 7849.1500, subp. 3; (iii) directed that DCW provide DOC-EERA with any information requested to prepare the EA; (iv) recommended analyzing DOC-EERA's proposed scope of the EA and route alternatives, alignments, and route widths; (v) requested the ALJ order the necessary filings to adequately develop the factual record on whether DCW has demonstrated that its proposed use of the applicable ROW will comply with reasonable conditions required by the counties, townships, and MnDOT and not interfere with the safety and convenience of ordinary travel along or over the county and township roads and state highways; and (vi) asked the Judge to set a procedural schedule that would allow the Commission to make a final decision in early 2024.[123]

95. On September 7, 2023, Judge Middendorf issued the First Prehearing Order, establishing the procedure for the proceeding, setting the date of December 12, 2023 as the date to file pre-filed testimony, and setting two in-person hearings for December 19, 2023 (1 p.m. and 6 p.m.) and a virtual hearing to take place on December 20, 2023 (6 PM).[124]

96. On November 30, 2023, DOC-EERA issued the EA, which is discussed below.[125]

97. On December 5, 2023, the Notice of Environmental Assessment Availability, Public Hearings, and Comment Period was issued, informing the public of the availability of the EA, the time and place of the public hearings, and establishing a comment period to run through January 10, 2024. As provided in the notice, the in-person hearings would take place at 1:00 p.m. and 6:00 p.m. on December 19, 2023 at Saker's Sports Bar & Grill, 401 8th Street Southeast, Kasson, Minnesota 55944. Dial-in information was also provided for the remote access hearing to take place on December 20, 2023. The notice requested that comments be directed toward answering the following questions:

[121] Ex. DOC-159 (Letter to Newly Affected Landowners).
[122] Ex. PUC-184 (Order for Prehearing Conference).
[123] Ex. PUC-185 at 12 (Order Accepting Draft Route Permit, Authorizing Environmental Assessment, Requesting Route Analysis, and Providing Further Instructions).
[124] Ex. PUC-186 (Order – First Prehearing Order).
[125] Ex. DOC-160 (Environmental Assessment).

- Should the Commission grant a CON, Site Permit, and Route Permit for the proposed Project?
- Is the proposed project needed and in the public interest?
- What are the human and environmental impacts of the project, and how can these impacts be addressed and mitigated in the Site and Route Permits?
- If a Route Permit is granted for the facility, what additional conditions or requirements should be included?
- If a Site Permit is granted for the facility, what additional conditions or requirements should be included?

The Notice also included information on how the public could participate in the public hearing and provide comments.[126]

98. On December 12, 2023, DCW filed the testimonies and schedules of Clay Cameron, Tara Corbett, Richard Lampeter, Charles Gauger, and Thomas Koegel.[127]

99. On December 13, 2023, DOC-EERA confirmed that the EA had been properly noticed in the EQB Monitor.[128]

100. On December 14, 2023, DOC-EERA confirmed that the EA had been provided to libraries to make available to the public, and that agencies, local governments, tribal governments, and THPOs had been informed of the availability of the EA.[129]

101. On December 18, 2023, DCW attested that the Notice of EA Availability, Public Hearings, and Comment Period had been published in legal newspapers of general circulation in the area where DCW proposes to construct its wind generation and transmission project in Dodge, Mower, and Steele Counties.[130]

102. The in-person public hearings took place as scheduled on December 19, 2023, at 1:00 p.m. and 6:00 p.m. and were presided over by Judge Middendorf. The hearings were well attended.

103. The remote access public hearing took place as scheduled at 6:00 p.m. on December 20, 2023, and was presided over by the Judge.

[126] Ex. DOC-161 (Notice of Environmental Assessment Availability, Public Hearing, and Comment Period).
[127] Ex. DCW-138 (Cameron Direct); Ex. DCW-139 (Corbett Direct); Ex. DCW-140 (Lampeter Direct); Ex. DCW-141 (Gauger Direct); Ex. DCW-142 (Koegel Direct).
[128] Ex. DOC-162 (Notice of Environmental Assessment Availability Published in EQB Monitor 12/12/23).
[129] Ex. DOC-163 (Notification to Agencies, Local Governments, and Tribal Historic Preservation Offices); Ex. DOC-164 (Certificate of Mailing to Local Libraries).
[130] Ex. DCW-144 (Compliance Filing – Affidavits of Publication).

104. In early January 2024, it was realized that 19 properties adjacent to one of the proposed routes did not receive the Notice of Environmental Assessment Availability, Public Hearings, and Comment Period. To facilitate participation by these landowners, additional notice was provided and the period for written hearing comments was extended from January 10, 2024 to February 1, 2024.[131]

III. ADVISORY TASK FORCE

105. The optimal route for the HVTL has been a key area of contention in this proceeding for the public, municipalities, Dodge and Mower Counties, and state agencies. As such, the work of the ATF was critical in incorporating community feedback to identify and analyze potential routes.

A. Creation and Activities of the ATF

106. The ATF was authorized in accordance with the Commission's February 24 Order to create a community-directed advisory body that could review potential routes and elevate questions and concerns of the affected local communities in a manner that would be considered and addressed directly. The Commission directed the ATF to: (i) identify impacts and issues of local concern that should be analyzed in the EA; and (ii) identify mitigation measures, including route alternatives, that should be analyzed in the EA.[132] Although DCW was not invited to be a member of the ATF, DCW attended all ATF meetings and developed and shared information with the ATF members (Members).[133]

107. The ATF comprised representatives of the local government units (LGUs) surrounding the transmission line route alternatives proposed in this proceeding. Specifically, the Members included representatives from Dodge and Mower Counties and from the townships of Ripley, Ashland, Hayfield, and Sargeant.[134]

108. The ATF evaluated routing options for the Transmission Project through three separate meetings that were intended to solicit and build upon stakeholder and community feedback. In all, the ATF, along with DCW and the DOC-EERA, met on March 31, April 14, and April 28, 2023, to discuss issues of local concern regarding the various routes and route segments that had been submitted by DCW and others in the proceeding.[135]

[131] *See* Notice of Environmental Assessment Availability, Public Hearings and Extended Comment Period (Jan. 11, 2024) (eDocket No. 20241-202087-02).
[132] Ex. PUC-154 at 7-8 (Order – Issuing Preliminary Draft Site Permit, Authorizing ATF, and Varying Rule).
[133] Ex. DCW-142 at 7 (Koegel Direct).
[134] Ex. DOC-151 (Notice of Appointment for DCW Transmission Line ATF); Ex. DCW-142 at 8 (Koegel Direct).
[135] Ex. DOC-153 at 5 (ATF Report).

109. At the first meeting, Members reviewed the state's permitting process and DCW's proposed Transmission Project. Members then began identifying impacts and issues that should be analyzed in the EA.[136]

110. At the second meeting, Members reviewed the impacts and issues identified at the first meeting, as well as prioritized the impacts and issues, ranking them in order of importance. Members also reviewed and discussed the proposed transmission line routes, including: (i) those proposed by DCW in its Amended Route Permit Application and the additional route segments proposed in July 2022; (ii) two route segments proposed by MnDNR; and (iii) approximately 35 miles of additional route options that DCW had shared with MnDOT, Dodge County, and Mower County in March 2023. Members assessed potential routes and raised potential issues and areas of concern with the routes and various route options. The Members also discussed potential mitigation measures and DCW provided a presentation on the proposed power pole structures for the HVTL.[137]

111. At the third meeting, Members reviewed the prioritized issues and impacts, mitigation measures, and the issues and impacts of the transmission line routes discussed at the previous meeting. Members also discussed which transmission line routes should be studied in the EA.[138]

112. The ATF filed its report with the Commission on May 23, 2023. In the report, the ATF recommended that the EA review approximately 21 miles of additional route segments and that DCW withdraw approximately 20 miles of the route proposed in its Amended Route Permit Application.[139]

113. In light of the alternatives recommended by the ATF and the willingness of MnDOT to permit use of state road ROW, DCW agreed that it would be beneficial to withdraw the route sections that the ATF recommended not be further evaluated.[140]

114. The ATF also noted in its report the following seven concerns it recommended be analyzed in the EA:

(1) Safety (Clear zone, farm equipment, aviation)

(2) Drainage (Ditches, tiling)

(3) Construction (Obstruction, means, and methods)

(4) Maintenance of the Transmission Facilities

(5) Planning (Land use)

[136] *Id.*; Ex. DCW-142 at 8 (Koegel Direct).
[137] Ex. DOC-153 at 5 (ATF Report); Ex. DCW-142 at 8-9 (Koegel Direct).
[138] Ex. DOC-153 at 5 (ATF Report); Ex. DCW-142 at 9 (Koegel Direct).
[139] Ex. DOC-153 at 10 (ATF Report); Ex. DCW-142 at 9 (Koegel Direct).
[140] Ex. DCW-142 at 9 (Koegel Direct).

(6) Communication

(7) Feasibility of the Project[141]

115. The report issued by the ATF noted the following additional points for continued consideration:

- Members identified the need for clear and consistent communication between DCW and local jurisdictions, including clearly identified processes, responsibilities, and compensation, before, during, and after project construction.

- Analysis of the hydrology of the area and employment of related mitigation measures are important to the task force.

- Impacts to the site of pole placements and its effect on adjacent landowners and farmers, both with and without property easements, should be considered in mitigation.

- Members noted doubts about the feasibility of constructing a transmission line within township or county roads that have a width of less than 120 feet of total ROW.[142]

B. Routes Considered by the ATF

116. Following review of approximately 90 miles of route alternatives the task force recommended further review of approximately 40 miles of route alternatives. The recommendations combine portions of the applicant's original route proposal, most of the alternative segments proposed by the applicant in July 2022, and approximately 21 miles of route alternatives that were not in the record prior to the task force report. The task force also recommended that approximately 22 miles of the route in the application not be reviewed any further. The task force recommended two major north-south route alternatives (Minnesota Highway 56 and Dodge County Highway 9/Mower County Highway 20) with several connector segments. The EA reviewed the route alternatives recommended by the ATF, and identified three route alternatives: (i) the Hybrid Route Alternative (EA Route Segments 1, 2, 7, 6, 4); (ii) the Highway 56 Route Alternative (EA Route Segments 1, 2, 3, 4); and (iii) the County Road Alternative (EA Route Segments 1, 5, 6, 4).[143, 144]

117. The Hybrid Route Alternative is a 26.7-mile route. This route would be constructed by utilizing the following: (i) a combination of private easements and county road ROW between the DCW collector substation (DCW Substation) and Minnesota

[141] Ex. DOC-153 at 6-7 (ATF Report); Ex. DCW-142 at 9-10 (Koegel Direct).
[142] Ex. DOC-153 at 15 (ATF Report); Ex. DCW-142 at 10 (Koegel Direct).
[143] Ex. DOC-153 at 10, 14 (ATF Report); Ex. DOC-160 at 139-44 (Environmental Assessment); Ex. DCW-142 at 12 (Koegel Direct).
[144] Referenced in these Findings to "EA Route Segments" refer to those segments depicted on page 142 of the EA. Descriptions of the segments are provided on page 141 of the EA.

Highway 56 (MN 56); (ii) MnDOT ROW for two miles along MN 56; (iii) county road ROW along Dodge County Road 4/710th Street, before turning south; (iv) then county road ROW along Dodge County Road 9, Mower County Road 20; and (v) double circuit within GRE's existing Pleasant Valley to Austin Northeast 161 kV line ROW into the Pleasant Valley Substation.[145]

118. The Highway 56 Route Alternative is a 27.4-mile route. This alternative would be constructed within MN 56 ROW for the north-south portion of the route for approximately 9.2 miles. After exiting the DCW Substation and before entering MN 56 ROW, Segment 1 of the route would be constructed using private easements. Upon existing MN 56 ROW, a combination of township and county road ROWs would be used east of MN 56, and then the line would be double circuited within GRE's existing Pleasant Valley to Austin Northeast 161 kV line ROW into the Pleasant Valley Substation.[146]

119. The County Road Alternative is a 26.5-mile route. This alternative would be constructed within county road ROW along Dodge County Road 9 and Mower County Road 20 for the north-south portion of the route. The remaining portions of the route would be constructed using a combination of private easements and county road ROW between the DCW Substation and Dodge County Road 9 and would double circuit within GRE's existing Pleasant Valley to Austin Northeast 161 kV line ROW into the Pleasant Valley Substation.[147]

120. These route alternatives were analyzed in the EA and have been publicly presented for in-person and written comments from the public. As described later in these Findings, there is no consensus as to which of these routing options represents the optimal route for the Transmission Project.

IV. SCOPING PROCESS AND THE EA

121. Under Minn. R. 7849.1200 and Minn. R. 7850.3700, DOC-EERA is responsible for conducting environmental review for the Project. The Commission authorized DOC-EERA to combine the environmental review for the Applications in its March 8 Order.

122. The scoping process has two primary purposes: (1) to gather public input as to the impacts and mitigation measures to study in the EA and (2) to focus the EA on those impacts and mitigation measures that will aid in the Commission's decisions on the Applications.[148]

123. Commission and DOC-EERA staff held two public information and scoping meetings on May 10, 2022, in Kasson, Minnesota. Approximately 71 persons attended

[145] Ex. DOC-153 at 10, 14 (ATF Report); Ex. DOC-160 at 139-44 (Environmental Assessment); Ex. DCW-142 at 12 (Koegel Direct).
[146] Ex. DOC-153 at 10, 14 (ATF Report); Ex. DOC-160 at 139-44 (Environmental Assessment); Ex. DCW-142 at 12-13 (Koegel Direct).
[147] Ex. DOC-153 at 10, 14 (ATF Report); Ex. DOC-160 at 139-44 (Environmental Assessment); Ex. DCW-142 at 13 (Koegel Direct).
[148] Ex. DOC-157 at 2 (Signed Environmental Assessment Scoping Decision).

these meetings and 32 attendees provided public comments.[149] The following evening, on May 11, 2022, approximately 44 people attended the remote access meeting and 14 people provided comments.[150] In addition to the public meeting and associated comment period, 19 people responded to the survey on DOC-EERA's website.[151]

A. Oral Comments at the May 10, 2022 1:00 P.M. In-Person Public Information and Environmental Assessment Scoping Meetings

124. Following introductions and presentations from the Commission, DCW, and DOC-EERA, the following speakers offered comments at the first May 10, 2022 meeting: Aaron Tempel, Orin Johnson, Eric Caspers, Mark Moenning, Adam Hutchens, Brian Brunette, John Goins, Nathan Dull, Brad Meier, Steve Schroeder, Wayne Gehling, Kayla Christensen, Gloria Schibursky, Donald Ness, Lorne Lundeen, Marie McNamara, Guy Kohlnhofer, Jerome Nelson, and Eric Hahn.

125. Aaron Tempel, conservationist and landowner, stated his concerns with the proximity of the Project to the diverse ecological makeup of his property.[152]

126. Orin Johnson, Vernon Township Supervisor, explained the township's concerns with the Transmission Project and questioned whether the lines could be buried. Mr. Johnson also expressed concern with the Project's impact on local farming, specifically with regard to aerial applications for crops.[153]

127. Eric Caspers, from the Hayfield Township Board, stated the pole placement and routing of the Transmission Project may impact ROW and drainage areas in the township.[154]

128. Mark Moenning, from Moenning Family Farms, LLC, reiterated concerns with drainage and requested local oversight to ensure these concerns are taken into account in the Project's construction.[155]

129. Adam Hutchens, from Local 563, spoke in support of the Project, asserting that it will help the families of Minnesota by adding jobs and contributing to the local economy.[156]

130. Brian Brunette, with the Minnesota Laborers' Union, spoke in support of the Project because of the jobs it will create for the industry and local workers.[157]

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[149] Ex. DOC-123 Kasson 1:00 p.m. Tr. at 3-4 (May 10, 2022); Ex. DOC-123 Kasson 6:00 p.m. Tr. at 3-4 (May 10, 2022).
[150] Ex. DOC-123 Remote Access 6:00 p.m. Tr. at 2 (May 11, 2022).
[151] Ex. DOC-135 at 1 (Metroquest Survey Report).
[152] Ex. DOC-123 Kasson 1:00 p.m. Tr. at 26-30 (May 10, 2022) (Tempel).
[153] *Id*. at 30-34.
[154] *Id*. at 34-36.
[155] *Id*. at 36-39.
[156] *Id*. at 39-40.
[157] *Id*. at 40-41.

131. John Goins, from Local 405, spoke in support of the Project, noting the jobs that it will support and the training that local workers will receive.[158]

132. Nathan Dull, from Minnesota Land & Liberty Coalition, spoke in support of the Project because of the monetary value landowners and the community will receive over the Project's life.[159]

133. Brad Meier, from Owatonna Area Chamber of Commerce Tourism, voiced his support for the Project because of the economic benefits the Project will provide throughout the community.[160]

134. Steve Schroeder, a resident of Mantorville, expressed concern regarding the changing environment and the increase of eagles and raptors from neighboring states. Mr. Schroeder also explained that renewable energy policies were placing a disproportionate burden on some individuals.[161]

135. Wayne Gehling, from Grand Meadow, expressed concern regarding how landowner agreements and payments work based on his personal experience with another wind project.[162]

136. Kayla Christensen, Executive Director of the Minnesota Conservative Energy Forum, voiced her support for the Project because of the economic, employment, and environmental benefits the Project could provide to Minnesota.[163]

137. Gloria Schibursky is dissatisfied with notice provided to landowners and believes the Project would negatively impact her property.[164]

138. Donald Ness shared concerns with the Project's lights and inquired about the radar-based lighting system.[165] DCW responded at the meeting that the radar-based lighting system would maintain the lights in the off position unless there are planes in the area and that DCW would ensure that the system is operating properly.[166]

139. Lorne Lundeen, a Local 405 member, spoke in support of the Project because of jobs she believed the Project would bring for their members.[167]

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[158] *Id*. at 41-42.
[159] *Id*. at 42-43.
[160] *Id*. at 43-44.
[161] *Id*. at 44-46.
[162] *Id*. at 46-48.
[163] *Id*. at 49-50.
[164] *Id*. at 53.
[165] *Id*. at 53-54.
[166] *Id*. at 54-55.
[167] *Id*. at 55.

140. Marie McNamara, from Goodhue County, questioned whether any requests for rulemakings on Minn. R. ch. 7854 had been made and does not support the Project because of inaudible noise which, according to certain studies, impacts health.[168]

141. Guy Kohlnhofer, Dodge County Engineer, explained his opposition to using road ROW and questioned why MN 56 was not being included as part of the HVTL route.[169]

142. Jerome Nelson, a resident of Dodge County, posed a question about the ambient noise and compared it to wind generators placed near his property.[170] Mark Moenning explained the generators Mr. Nelson was referring to were part of a private project built in 2002-2004.[171] Mr. Moenning also stated his concerns with safety and fire or emergency procedures.[172] DCW explained that the fire departments are familiar with the operating systems to be used for the Project and will offer additional training events in coordination with fire departments directly to address any issues that arise during operations.[173] Mr. Moenning inquired further about the fire suppressant to be used for the Project and DCW explained that the occurrence of fire in a wind turbine is rare and not typically a concern for wind turbines.[174]

143. Ms. McNamara also voiced concern about emergency services, particularly helicopter and air lift, as well as how DCW will inform aircrafts like aerial applicators.[175]

144. Mr. Caspers spoke, objecting to usage of the ROW in Hayfield Township and the potential for poles to be placed in a ditch.[176] DCW responded that it was working to acquire overhang easements, looking for ways to partner with landowners, and would comply with requirements so as to not negatively impact the drainage ditch.[177] Commission staff also explained the procedure involved should an Applicant offer alternate routes and the Commission's role in that process.[178]

145. Ms. McNamara observed that the route appears to be in the township ROW and that traffic studies being utilized are from 2013.[179] DCW explained its proposed route utilizes the ROW available in accordance with state statute[180] and that traffic studies were in process to review clear zones and sight lines.[181] Ms. McNamara further inquired

[168] *Id*. at 56-60; 70-72.
[169] *Id*. at 61-62.
[170] *Id*. at 63-65.
[171] *Id*. at 65-66.
[172] *Id*. at 65-66.
[173] *Id*. at 66-67.
[174] *Id*. at 67-69.
[175] *Id*. at 72-77.
[176] *Id*. at 78-79.
[177] *Id*. at 79-80.
[178] *Id*. at 80.
[179] *Id*. at 81-86.
[180] *Id*. at 84-86.
[181] *Id*. at 86-87.

whether and in what situation eminent domain would be used. DCW clarified it would not be pursuing the use of eminent domain.[182]

146. Eric Hahn, from Hayfield Township, posed questions concerning a township road that had a 33-foot-wide ROW on one side where a pole would be located, and what potential impacts to traffic safety and drainage could result.[183] DCW asserted that there will be no encroachment on the landowner's property, traffic safety standard compliance would be maintained, and DCW is working on drainage system preservation throughout the ROW.[184]

147. Ms. McNamara as asked about requirements for the turbines, the meteorological (MET) tower, and their proximity to state and county roads.[185] DCW clarified that turbines and MET towers must be 250 feet from the edge of the ROW under state regulation.[186] Ms. McNamara encouraged attendees to work with townships and township supervisors with regard to the safety concerns she raised.[187]

B. Oral Comments at the May 10, 2022 6:00 P.M. In-Person Public Information and Environmental Assessment Scoping Meetings

148. In addition to the Project introductions given by the Commission, DCW, and DOC-EERA, the following speakers offered comments at the second May 10, 2022 Public Information and Environmental Assessment Scoping Meeting: Alex Pouliot, Nathan Tempel, Kristi Rosenquist, Mary Hartman, Ronald Behounek, Kathryn Frette, Samuel Iverson, Marie McNamara, Benjamin Tempel, James Tempel, and Gloria Schibursky.[188]

149. Alex Pouliot, Field Director for Minnesota Land & Liberty Coalition, spoke in support of the Project on account of the benefits the Project would bring to landowners, the community, and the economy through taxes and jobs.[189]

150. Nathan Tempel, a landowner in Ashland Township, questioned why the potential of a transmission line route down MN 56 was not under consideration.[190] DCW explained that the route was designed to accommodate MnDOT's policy and not use MnDOT's trunk highway systems.[191] Mr. Tempel commented that his land is used as prairie, protecting the various species that inhabit the land, and urged further consideration of burying the transmission line.[192]

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[182] *Id*. at 85-86.
[183] *Id*. at 90-91.
[184] *Id*. at 91-92.
[185] *Id*. at 92-94.
[186] *Id*. at 93-94.
[187] *Id*. at 95.
[188] Ex. DOC-123 Kasson 6:00 p.m. Tr. at 3-4 (May 10, 2022).
[189] *Id*. at 28-29.
[190] *Id*. at 29.
[191] *Id*. at 30.
[192] *Id*. at 30-34.

151. Kristi Rosenquist is opposed to the Project because of the health impacts of wind turbines with respect to the low frequency noise.[193] Ms. Rosenquist requested further information about the radar detecting technology for aircrafts.[194] Ms. Rosenquist requested DOC-EERA evaluate phone service in the proposed project area since much of the rural community still uses copper phone lines which could be interrupted by neighboring transmission lines.[195] Ms. Rosenquist reiterated her concern about noise and expressed concern about sleep deprivation when the turbines are operating.[196] Ms. Rosenquist further recommended DOC-EERA require the use of U.S. Fish and Wildlife Service (USFWS) recommendations and MnDNR feathering recommendations in an effort to protect bats and avian species.[197]

152. Mary Hartman, a business owner in Kasson, acknowledged that the Project area has significant biodiversity and does not favor the Project due to concerns over the avian and bat protection plan as well as the environmental impact of the Project on the area's rich agricultural soil.[198]

153. Ronald Behounek, a farmer and supervisor in Hayfield Township, does not support the Project, noting the lack of detail in DCW's Applications related to tile land, tile crossings going across roads, and livestock facilities. Mr. Behounek also shared his concerns about the impact of the Transmission Project on property values.[199]

154. Kathryn Frette, from Ripley Township, questioned why DCW did not purchase private land for the HVTL instead of utilizing the public road ROW, and expressed concern regarding the quality of the impacted land and whether it could support the structures.[200] Ms. Frette also noted the liability and injury potential of boring holes and questioned whether those concerns were taken into consideration.[201] Ms. Frette also expressed concern about the comments filed in the previous docket and whether those who are elderly or less technologically experienced would know how to re-submit comments they have already filed.[202] Lastly, Ms. Frette commented that the available map is difficult to read and it is unclear where the lines will be.[203] DCW and DOC-EERA both offered to assist Ms. Frette in reviewing the map and legend provided in the application.[204] DCW explained that it is maximizing the use of ROW pursuant Minnesota's rules and that doing so will minimize the impact to private land.[205] DOC-EERA clarified that the statute requires specific findings as to why the lines are not

[193] *Id*. at 35-37.
[194] *Id*. at 38-39.
[195] *Id*. at 38-40.
[196] *Id*. at 40-41.
[197] *Id*. at 41-42.
[198] *Id*. at 43-49.
[199] *Id*. at 49-53.
[200] *Id*. at 53-54.
[201] *Id*. at 54.
[202] *Id*. at 54-57.
[203] *Id*. at 57-60.
[204] *Id*. at 57-60.
[205] *Id*. at 60-61.

located on public ROW and does not require that the Project be sited on the ROW.[206] DOC-EERA commented that if the HVTL is on private land where DCW has an easement, DCW would be responsible for maintenance. DOC-EERA noted the maintenance responsibility is less clear when transmission lines are in public ROW.[207] DCW clarified that it is required to coordinate with the county under the utility permits for maintenance and operations responsibilities.[208]

155. Samuel Iverson, from Hayfield Township, questioned whether the transmission lines generate noise.[209] DCW explained that the transmission lines generate some noise which could elevate in certain weather conditions and only become audible in close proximity to the line.[210] Mr. Iverson commented that his property is under the HVTL and expressed concern about hearing the noise while on his porch.[211] Mr. Iverson asked for clarification as to how wide the base of the poles are.[212] DCW explained generally between two and six feet for poles, with spans of about 500-800 feet.[213] Mr. Iverson stated his concern regarding the poles being on township roads disrupting clean-up after a snow event.[214] Mr. Iverson also asked about the swing between the poles and expressed concern about his nearby property and icy conditions on the roads.[215] DCW explained that it has agreements with some landowners for an overhang for the line to swing out over an adjacent property.[216] For areas without an agreement, DCW will design the line so there is not blowout over the landowner or the adjacent property.[217] Mr. Iverson concluded his comment indicating while more expensive, he would prefer the Project to be buried.[218]

156. Marie McNamara, a resident of Goodhue County, asked whether DCW had a county or township agreement.[219] DCW replied that it was still in discussions.[220] Ms. McNamara further inquired about the involvement of the Minnesota Township Association and where the road borings or holes were located.[221] DOC-EERA replied that the association had not submitted a comment but could be reached out to.[222] DCW explained the borings were placed in both county and township roads and they followed the standard utility permits for the area.[223] Ms. McNamara requested that photos of the borings be placed in the docket, requested further consideration for a rulemaking for

[206] *Id*. at 61.
[207] *Id*. at 64.
[208] *Id*.
[209] *Id*. at 65.
[210] *Id*.
[211] *Id*. at 66.
[212] *Id*.
[213] *Id*.
[214] *Id*. at 67.
[215] *Id*. at 67-68.
[216] *Id*. at 68.
[217] *Id*. at 68-69.
[218] *Id*. at 69.
[219] *Id*. at 71.
[220] *Id*.
[221] *Id*. at 72.
[222] *Id*.
[223] *Id*. at 71.

Minn. R. 7854 and 7830, and asked whether DCW could meet the nighttime noise standards as stated in its application.[224] Richard Lampeter, from Epsilon Associates, on behalf of DCW, replied that he was supervising the study for DCW and explained that the Project is designed to meet the requirements of the state.[225] Ms. McNamara asked whether the turbines will be turned off if they do not meet the state noise standard and who was responsible for monitoring noise.[226] DCW responded that it would adjust operations to meet the state standard and that, during the first year of operations, state siting permits require post-construction noise monitoring programs to be approved at the time of construction at the cost of the operator.[227] Ms. McNamara queried whether there would be a public meeting and DCW replied that they would be posted in the docket. Mr. Lampeter added that the sound study will be posted as part of the public record.[228] Ms. McNamara further inquired as to the safest distance for employees to be near a turbine during maintenance and requested a safety manual to be shared.[229] DCW responded that operating procedures allow for employees to drive next to the turbines while they are operating and there is an emergency response plan that will be filed with the Project.[230] Ms. McNamara questioned whether the safety manual from the turbine maker, GE, would be made public.[231] Ms. McNamara asked whether landowner participants would have access while the area is under lock and key, to which DCW responded landowners will have full access to the property with exception of the turbine itself.[232] On the question of the borings, DCW clarified that it had reached out to the townships and counties and DCW believed it had all permits needed to perform boring work in the ROW.[233] Ms. McNamara asked whether those permits where available, to which DCW replied the permits were provided to the state and could be provided again.[234]

157. Benjamin Tempel, a resident of Ashland Township, inquired whether there was an existing private construction project of similarly sized power lines using narrow township roads.[235] DCW replied that it was unaware of a specific project but it is common practice in the utility industry to locate poles within clear zones that are closer to a road, and thus more impactful than what is proposed by DCW.[236] DOC-EERA responded that it looked at Commission-issued permits and found three examples.[237] Mr. Tempel asked whether one of the prior examples was a U.S. highway ROW and DOC-EERA replied that a project in Detroit Lakes utilized U.S. highway and there were two prior projects that that used local ROW in small areas. DOC-EERA added that using local ROW is uncommon in Minnesota and the state does not have precedent for locating 24 miles within a public

[224] *Id*. at 72-75.
[225] *Id*. at 76-77.
[226] *Id*. at 77.
[227] *Id*.
[228] *Id*. at 77-78.
[229] *Id*. at 79.
[230] *Id*. at 79-80.
[231] *Id*. at 80.
[232] *Id*.
[233] *Id*. at 81-82.
[234] *Id*. at 82.
[235] *Id*. at 83.
[236] *Id*.
[237] *Id*.

road ROW.[238] Mr. Tempel questioned why the lines would not be buried.[239] DCW asserted that an aboveground line is more reliable than an underground line due to the specialized parts required for underground line, the shorter lifespan than aboveground, and the difficulty locating faults underground.[240] Mr. Tempel asked why a power line would fault aboveground and DCW claimed that a majority are related to avian or airborne object outages which are mitigated with spacing.[241] Mr. Tempel further inquired about the reliability of aboveground lines and, in the event that there was a fire caused by a transmission line, whose responsibility would that be.[242] DCW explained that the underground lines have more parts and pieces that can fail, and, were that if incident were to occur, DCW would compensate as required. DCW added that it has worked to design an HVTL that will not cause fires.[243] Mr. Tempel concluded by saying he did not support the Project but should the Project continue, he requested the lines be buried.[244]

158. Ms. Rosenquist asked whether DCW would comply with the published GE ice throw setback distances.[245] DCW responded that it would comply with the county requirements to be set back from roads.[246] Ms. Rosenquist requested the GE ice throw setback guidance provided by the turbine manufacturer be a requirement under the permit.[247] Ms. Rosenquist further inquired about the evacuation zone for each of the turbines, whether DCW had operational safety manuals or if they could be provided to the state as part of the record, and requested that the safety and operational manuals for each of the turbine types be followed.[248] DCW replied it would have to follow up.[249] Ms. Rosenquist asked for clarification on the wind rose depicted in the Amended Site Permit Application and the setbacks it represented.[250] DCW explained that, for this Project, the wind comes from the south and the area impacted would be on the northern direction and that dictates setbacks.[251] Ms. Rosenquist also raised a state requirement that no more than 20 percent of the turbines overlap in the three-by-five area and commented that the maps appear to show significant overlap.[252] DCW responded that no more than 20 percent were overlapping and explained that the requirement is that the turbine cannot be in the other three-by-five and there are not any turbines that do not meet that standard.[253] DOC-EERA also commented that it interprets the standard in the same manner as DCW described and what was submitted is no more than 20 percent of

[238] *Id*.
[239] *Id*.
[240] *Id*.
[241] *Id*. at 86-87. DCW later clarified that they no longer believed avian related outages to be the most common cause of an outage and were unable to pinpoint the most common cause of an outage at this time. *Id*. at 135-136.
[242] *Id*. at 88-91.
[243] *Id*. at 90-93.
[244] *Id*. at 93-94.
[245] *Id*. at 94-95.
[246] *Id*.
[247] *Id*.
[248] *Id*. at 95-97.
[249] *Id*. at 97.
[250] *Id*. at 98-100.
[251] *Id*. at 100.
[252] *Id*. at 100-101.
[253] *Id*. at 101.

turbine locations closer than that three-by-five.[254] Ms. Rosenquist expressed concern over whether the three-by-fives go over non-participating property, whether the landowners understood what they signed when they became participants, and whether landowners would be provided a property value guarantee.[255]

159. James Tempel, a landowner and pilot for Mayo One, stated his concerns about the maintenance of the radar light system and interference with medical air transport.[256]

160. Mr. Behounek does not support use of township roads for bringing in supplies and staging, or the use of a public road for a private company venture.[257]

161. Ms. Hartman asked about health effects that allegedly occurred due to a ventilation fan and those of an industrial wind turbine, and questioned what risks the Wind Project might pose.[258] Mr. Lampeter stated that DCW looked at low frequency and infrasound from wind turbines and a variety of criteria on sound and audibility and determined that the Wind Project turbines meet all applicable standards.[259] Ms. Hartman requested a hearing for health concerns around wind projects and inquired whether eagle and bat permits were being applied for.[260]

162. Ms. McNamara requested that Commission Docket No. 09-845 be incorporated in this docket, that the comments from the 2017 proceeding be transferred to the current docket and reiterated the concern with the Mayo Clinic helicopter operating in the area.[261] DOC-EERA replied that the Project has changed since 2017 and did not see the need to transfer comments but noted that the comments submitted are still available.[262]

163. Ms. Rosenquist reiterated her concerns over the sound study, specifically whether the study was done at a low enough hertz, and further inquired about the standard for a CON.[263] Commission Staff responded that they would follow up after the hearing to go over the factors they consider in detail.[264] Ms. Rosenquist inquired about the complaint process and whether there was a physical office in the state.[265] DCW responded there is a physical office on Main Street in Kasson and that complaints will go through headquarters and will be handled by the operations and maintenance facility dedicated to the Project during the operations period.[266]

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[254] *Id*. at 101-102.
[255] *Id*. at 101-104.
[256] *Id*. at 111-113.
[257] *Id*. at 113-114.
[258] *Id*. at 114.
[259] *Id*. at 115.
[260] *Id*. at 116-121.
[261] *Id*. at 121-125.
[262] *Id*. at 122-123.
[263] *Id*. at 126-129.
[264] *Id*. at 129-130.
[265] *Id*. at 130-133.
[266] *Id*. at 131-132.

164. Gloria Schibursky and Ms. McNamara expressed concern over the maps being old and misrepresenting Steele County.[267]

165. Nathan Tempel objected to receiving information in averages and metrics.[268]

C. Oral Comments at the May 11, 2022 Remote Access Public Information and Environmental Assessment Scoping Meeting

166. In addition to the Project introductions given by the Commission, DCW, and DOC-EERA, the following speakers offered comments at the May 11, 2022 remote access meeting: Carol Overland, Gregg Mast, Nathan Runke, Todd Koenigs, Lucas Franco, Kayla Christensen, Elaine Hansen, Alex Pouliot, Cynthia Sheely, Tanner Kramer, Rod Peterson, Karen Biel, Mark Van Dyne, Rajeeb Rath, and Tom Kramer.[269]

167. Carol Overland commented on several items including clear zones on the roadway, transmission easements, use of market value, the need for the Project, the number of homes within the three-by-five setback area, and appropriate noise standards.[270]

168. Gregg Mast, Executive Director of CEEM, spoke in support of the Project, based upon an anticipation of economic benefits for the counties and the state.[271]

169. Nathan Runke, representative from IUOE Local 49, spoke in support of the Project, based upon DCW's claim it would try to use local labor for the Project and expressing concern regarding the confusion that proposed route alternatives has caused.[272]

170. Todd Koenigs, Director of Business Development with Ellingson Companies, commented on how they, as contractors, have been involved with the Project in the planning stages to address landowner concerns over agricultural drain tile impacts and noted his company's experience with construction of similarly sized infrastructure projects.[273]

171. Lucas Franco, Regional Research Manager with LIUNA, supoorted the Project because of the opportunities the Project could present for local workers and the socioeconomic benefits that may be created for local communities. Mr. Franco also supports the Project because it will provide clean, affordable electricity that will be

[267] *Id*. at 136-138.
[268] *Id*. at 139-140.
[269] Ex. DOC-123 Remote Access 6:00 p.m. Tr. at 2 (May 11, 2022).
[270] *Id*. at 28-32.
[271] *Id*. at 36-38.
[272] *Id*. at 38-40.
[273] *Id*. at 40-45.

provided to rural electric co-ops.[274] Mr. Franco also commented on LIUNA's commitment to safety.[275]

172. Kayla Christensen, Executive Director of the Minnesota Conservative Energy Forum, spoke in support of the Project because of the benefits to the state environment, economy, and consumers.[276]

173. Elaine Hansen, President of the Austin Area Chamber of Commerce, voiced support for the Project because of its potential to increase the post-pandemic economic development of the area.[277]

174. Alex Pouliot, Field Director for the Minnesota Land and Liberty Coalition, spoke in support of the Project, based upon financial benefits of the Project for the families choosing to participate in the Project.[278]

175. Cynthia Sheely, spoke on behalf of her mother, a landowner near the proposed Project. Ms. Sheely voiced her mother's objections to the Project because of the obstruction to her view and the safety of transmission lines' proximity to her property, and asked whether the lines could be buried.[279] DCW replied that underground lines would not achieve the reliability obligated to GRE and would result in more difficult repairs than overhead lines.[280]

176. Tanner Kramer, resident of Hayfield Township, opposes the Project due to his concern regarding stray voltage and the potential impact it may have on his hog site.[281] DCW claimed that, while they do not foresee any stray voltage concerns, there are stray voltage mitigation measures that can be taken if it becomes noticeable.[282] Mr. Kramer also inquired about the Steele-Waseca line that is parallel and whether those lines would be buried.[283] DCW explained it is in coordination with Steele-Waseca to bury the lower voltage lines where there might be crossings with the high-voltage lines proposed.[284]

177. Rod Peterson, County Commissioner for Dodge County, asked whether there was a baseline for stray voltage on each animal unit or facility the proposed line passes, who would be responsible for stray voltage claims investigation, and who would own the facility.[285] DCW explained it has employed design considerations that mitigate

[274] *Id*. at 45-49.
[275] *Id*. at 50-51.
[276] *Id*. at 51-52.
[277] *Id*. at 52-53.
[278] *Id*. at 54.
[279] *Id*. at 55.
[280] *Id*. at 56-57.
[281] *Id*. at 58-59.
[282] *Id*. at 59-60.
[283] *Id*. at 60.
[284] *Id*. at 60-61.
[285] *Id*. at 61-63.

stray voltage, and that it intends to investigate and correct any stray voltage events. DCW added that it intends to own and operate the Project for the foreseeable future.[286]

178. Karen Biel, landowner, asked why the route is in a zigzag form.[287] Mark Van Dyne from Burns & McDonnell, on behalf of DCW, explained that the current route utilizes the existing road ROW.[288] Ms. Biel opposed the Project because of the loss of acreage and the impact on the agricultural community.[289]

179. Rajeeb Rath, Managing Director of Supporting Strategies, spoke in support of the Project and asked how the Project would impact homeowners and landowners in terms of budgeting and cost overruns.[290] DCW explained that the PPA with GRE requires that any cost overruns that occur during the development or operation of the Project would be borne by the Project and would not carry on to customers that consume energy.[291]

180. Tom Kramer shared his concern over the route being on narrow ROW that could impact farming, drainage, and aerial application, and noted the impact of holes previously drilled.[292]

D. Written Comments Pursuant to April 19, 2022 Notice

181. Pursuant to the Corrected Notice of Public Information and Environmental Assessment Scoping Meeting, issued on April 19, 2022, written comments were submitted by MnDOT, MnDNR, the Minnesota-Wisconsin Field Office of the USFWS, the Minnesota Pollution Control Agency (MPCA), as well as Dodge and Mower Counties and the public.

182. MnDOT requested in its comments that DCW: (1) work with MnDOT for safe permittable pole placement at the crossings of MN 56 and Trunk Highway 30; and (2) adjust the LWECS northern boundary to reflect the alignment of US Highway 14.[293]

183. MnDNR provided comments regarding the Project's impact on: Sullivant's milkweed; the wetland bank property located west of the proposed route; the riparian habitat near the Zumbro River; the Henslow's sparrow, loggerhead shrike, and horned grebe; and public waters. MnDNR also proposed potential site permit conditions involving: coordination with snowmobile trail users in Steele and Dodge Counties; wildlife-friendly erosion control; blue hue substation facility lighting; and chemical dust suppressants.[294] In responsive comments, DCW stated that: (1) it agreed with the proposed condition to require coordination with snowmobile trail users to ensure rider safety; (2) it included avoidance measures within the Avian and Bat Protection Plan

[286] *Id*. at 62-65.
[287] *Id*. at 65.
[288] *Id*. at 65-67
[289] *Id*. at 67-69.
[290] *Id*. at 70-71.
[291] *Id*. at 71.
[292] *Id*. at 72-77.
[293] Ex. DOC-125 (MnDOT Scoping Comments).
[294] Ex. DOC-127 (MnDNR Comments).

(ABPP) and would continue to coordinate with MnDNR regarding the state's endangered species; (3) it would commit to avoiding "blue hue" nighttime lighting and would use amber-hued lighting only when technicians are present and working; (4) permanent impacts to streams and ditches should be avoided and clarified the collection line crossings beneath public waters that would occur on this Project; (5) alternative segments for consideration had been proposed regarding wetland bank property distances; and (6) it would commit to minimizing impacts to waterways, wetlands, and riparian habitats near the Zumbro River.[295]

184. The USFWS submitted comments recommending DCW follow Final Land-Based Wind Energy Guidelines and the Eagle Conservation Plan Guidance to minimize impacts to birds, eagles, and endangered species, specifically highlighting the northern long-eared bat and prairie bush-clover in the Project area.[296]

185. MPCA stated that the Project must meet requirements for additional best management practices where discharges might reach impaired waters, including stabilizing exposed soils on site that will not be worked on for 7 days or more and avoiding disturbances of the existing natural buffer to surfaces waters and wetlands.[297]

186. Dodge County filed comments acknowledging that while the Wind Project is exempt from local zoning it recommended utilizing the more restrictive standards for siting of Project turbines. Dodge County added that DCW should ensure that agricultural operations are not negatively impacted by turbine and access road construction or placement and that efforts should be made to work with local authorities on the timing and location of construction activities. Dodge County remained concerned with stormwater management and the proximity of residences to the HVTL and encouraged the development of a route within MnDOT ROW. Dodge County also filed a later submittal indicating its preference for a contested case proceeding.[298]

187. Dodge County requested an extension of the comment period until September 28, 2022 to allow time for Board approval.[299] On September 28, Dodge County submitted comments expressing concern over the use of county ROW by a private company and the placement of the HVTL in the less than 60 feet of ROW. The County also expressed its preference for the HVTL to be placed on a wider state highway ROW.[300] In responsive comments, DCW asserted its legal authority to utilize road ROW for the entirety of the potential route for the Project, explained that it can safely operate and maintain a transmission line in a ROW as narrow as 50 feet, and reflected its understanding that MnDOT's interpretation of the Utility Accommodation Policy does not support longitudinal placement as preferred by Dodge County.[301]

[295] Ex. DCW-129 at 9, 14-15 (Comments – Response Comments to Environmental Scoping).
[296] Ex. DOC-114 (Dawn Marsh, UFWFS Comment).
[297] Ex. DOC-112 (MPCA Comments on Dodge County Wind Project Site and Route Permit Applications).
[298] Ex. DOC-130 (Dodge County Board Scoping Comments and Clarification).
[299] Ex. DOC-141 (Compiled Public Scoping Comments Received Through 9/22/22).
[300] Ex. DOC-144 (Dodge County Comments).
[301] Ex. DCW-129 at 15-16 (Comments – Response Comments to Environmental Scoping).

188. Mower County submitted comments stating that lands within 300 feet of public waters inventory (PWI) should be treated the same in Mower County as in Dodge County and in compliance with Mower County Shoreland Overlay regulations. Mower County also explained that structure placement within township road ROW could infringe upon the required clear zone and could impede drainage patterns and advocated for structures to be located outside of Mower County's road ROW.[302] In responsive comments, DCW clarified that, in compliance with Mower County Shoreland Overlay regulations, no Project infrastructure or construction activities in Mower County are planned within 300 feet of MnDNR-designated PWI and that HVTL pole placements would fully span the shoreland areas. DCW added that all transmission structures would be placed outside of clear zones consistent with Minn. R. 8820.9920 and appropriate utility permits, and that DCW was coordinating with landowners along the proposed Transmission Project ROW to obtain private land easements to move planned infrastructure outside of county road ROW to the extent feasible.[303]

189. Comments were also filed by individuals.[304] Rajeeb Rath, Owner and Manager of the Rochester, Minnesota Office of Supporting Strategies, supports the Project as a business owner because of the economic benefits that Project could have on local businesses.[305]

190. Marlin Fay, a farmer in Mower County, filed comments expressing support for the Project and noting its benefit to the local farmers participating in the Project.[306]

191. Guy Kohlnhofer, Dodge County Engineer, opposed the Project because of the pole placement in ROW, the size of the poles, the proposed use of narrow ROW, and the proposed pole locations being within the ditch drainage area.[307]

192. Pete Henslin, a Minnesota resident, is opposed to the Project due to concerns related to the potential health risks associated with living in proximity to power lines, the interferences of guy wires with driveways in their building site, stray voltage impacting the livestock, the impact the Project will have on the runway located on their property, and the Project's impact on property values. [308]

193. Pam Seaser, member of Owatonna Chamber of Commerce Public Policy Committee, submitted comments in favor of the Project explaining the positive economic benefits they have experienced with a similar project in Iowa.[309]

[302] Ex. DOC-131 (Mike Hanson, Mower County Engineer Scoping Comments).
[303] Ex. DCW-129 at 17 (Comments – Response Comments to Environmental Scoping).
[304] Ex. DOC-132 (Compiled Public Scoping Comments).
[305] Comment by Rajeeb Rath (May 3, 2022) (eDocket No. 20225-185519-02).
[306] Ex. DOC-134 (Marlin Fay Comments).
[307] Ex. DOC-116 (Guy Kohlnhofer, Dodge County Engineer – Comment 5-6-22).
[308] Ex. DOC-115 (Pete Henslin Comment).
[309] Ex. DOC-117 (Pam Seaser Comment).

194. Michael Jordal, Sales Account Executive with Black Forest LTD., submitted comments in support of the Project because of the benefit to local businesses and job creation.[310]

195. John Dunlop, Professional Engineer with Renewable Energy Services, expressed support for the Project because of the amount of energy the Project is proposed to generate, which will help the state reach its goal of being carbon free by 2040.[311]

196. Jason Emde, a Minnesota resident, filed comments opposing the Project because of the potential harm it would cause to calcareous fens in the region.[312]

197. Kayla Christensen, Executive Director of the Minnesota Conservative Energy Forum, wrote in support of the Project because of the benefits it will bring to the state environment, economy, and the residents.[313]

198. Carol Overland submitted comments opposing the Project and requesting the Commission authorize an ATF and institute contested case proceedings.[314] Ms. Overland submitted another comment during the extended comment period reiterating her concerns and requesting the Commission include a condition in the permit that offers a "Buy the Farm" option to affected landowners.[315]

199. Marie McNamara, Minnesota resident, submitted comments opposing the Project, raising issues related to Project maps, impacts on protected species, impacts on inhabitants of the project area, and the use of township roads. Ms. McNamara also requested the Commission establish an ATF and grant a contested case.[316] Ms. McNamara submitted additional comments during the extended comment period reiterating concerns about the Project's impact on protected species and farmland, requesting a condition on the permit to bury lines, questioning the need for the Project, and stating her prior comments apply to the alternate routes proposed by DCW.[317]

200. Kristi Rosenquist submitted comments questioning the need for the Project,[318] and expressed concern about the Wind Project's impact on: (i) health in relation to low frequency noise,[319] (ii) grid reliability,[320] (iii) safety evacuation zones,[321]

[310] Ex. DOC-119 (Michael Jordal Black Forest, LTD Comment).
[311] Ex. DOC-118 (Renewable Energy Services Comment).
[312] Ex. DOC-122 (J. Emde Comment).
[313] Ex. DOC-121 (K. Christensen MN Conservative Energy Form Comment).
[314] Ex. DOC-124 (Overland Comment and Request for Task Force and Contested Case); Ex. DOC-142 (Overland Additional Comments Buy the Farm Permit Condition).
[315] Ex. DOC-142 (Overland Additional Comments Buy the Farm Permit Condition).
[316] Ex. DOC-126 (Marie McNamara Comments).
[317] Ex. DOC-140 (Marie McNamara Comments).
[318] Comment by Kristi Rosenquist (May 25, 2022) (eDocket No. 20225-186074-01).
[319] Comment by Kristi Rosenquist (May 25, 2022) (eDocket Nos. 20225-186074-07 and 20225-186074-06).
[320] Comment by Kristi Rosenquist (May 25, 2022) (eDocket No. 20225-186074-02).
[321] Comment by Kristi Rosenquist (May 25, 2022) (eDocket No. 20225-186074-03).

and (iv) ice throw safety setback standards.[322] Ms. Rosenquist also expressed concern regarding the number of homes within the three-by-five rotor diameter (RD) setback.[323]

201. The IUOE Local 49 and the North Central States Regional Council of Carpenters wrote in joint support of the Project for its socioeconomic benefits and contribution to the effort to decarbonize GRE's generation.[324]

202. Aaron Tempel submitted comments opposing the Project due to its impact on the agricultural community that is not participating in the Project.[325] Mr. Tempel joined his brothers James, Nathan, and Benjamin in requesting an ATF and a contested case proceeding, and stated concerns about the Project's impact on the landscape, endangered species, and landowners.[326]

203. Colton Thompson, a Minnesota resident, submitted comments in opposition to the Project, alleging that it will disrupt farming practices.[327]

204. Dan Welsh, a Minnesota resident and business owner, submitted comments in opposition to the Project because of its impacts on viewshed, raptors and birds, township roads, and aerial applicators.[328]

205. Mr. and Mrs. Charles Paulus, Minnesota residents, submitted comments requesting further studies be done to better understand how the Project will impact owners of agricultural land.[329]

206. Mark C. Preul, a Minnesota resident, submitted comments opposing the Project, citing the value of the soil that will be removed from agricultural production, the risk of a no-fly zone, the use of rural roads, the impact to viewshed, and the impact to farming operations.[330] Mr. Preul submitted comments during the extended comment period, reiterating his concerns and stating that they also apply to the alternate routes proposed by DCW.[331]

207. Sylvia Rolfs, a Minnesota resident, submitted comments questioning the accuracy of the Project maps, potential flooding, and the impact of the Project on the region's geology.[332]

[322] Comment by Kristi Rosenquist (May 25, 2022) (eDocket No. 20225-186074-04).
[323] Comment by Kristi Rosenquist (May 25, 2022) (eDocket No. 20225-186074-05).
[324] Ex. DOC-129 (IUOE Local 49 and NCSRC of Carpenters Comments).
[325] Ex. DOC-132 (Compiled Public Scoping Comments, Part 4).
[326] *Id. See also* Ex. DOC-141 (Compiled Public Scoping Comments Received through 9/22/22).
[327] Ex. DOC-132 (Compiled Public Scoping Comments, Part 4).
[328] *Id.*
[329] Ex. DOC-132 (Compiled Public Scoping Comments, Part 3).
[330] *Id.*
[331] Ex. DOC-143 (Public Scoping Comments Received After 9-21-22 – Charlie Molitor and Mark Preul).
[332] Ex. DOC-132 (Compiled Public Scoping Comments, Part 3).

208. Gloria Schibursky, a Minnesota resident, submitted comments opposing the Project due to aviation impact, the accuracy of the Project maps, the benefits of energy generated going to other areas, and what will occur with the Project after 20 years.[333]

209. Matt Senjem, a Minnesota resident, is concerned that the 33-foot township road is not enough space for the HVTL's poles and that the Project could be unreliable.[334]

210. Cynthia Sheely, Deanna Sheely, and Laurie Sheely, Minnesota residents, submitted comments in opposition to the Project because of its impact on the agricultural industry, viewshed, livestock, and the environment.[335] Cynthia Sheely submitted a separate comment during the extended comment period requesting that transmission lines be buried and reiterating her concerns with the Project.[336]

211. Tom Soukup, a Minnesota resident, submitted comments opposing the Project because of its safety risks, health risks, effect on airlift services, impact to property values, and impact to birds.[337]

212. LaVae Kramer, a Minnesota resident, opposed the Project because of its impact to farming operations, raptor populations, lack of notice for drilling, and risks associated with living near a transmission line.[338]

213. Tanner Kramer, a Minnesota resident, opposes the Project because of the lack of notice for boring, impact to the farming and livestock community, the impact to water flows due to the use of township roads, the inability to use township roads for agricultural equipment, and the risk of stray voltage impacting his hog facility.[339]

214. Tom Kramer, a Minnesota resident, opposes the Project because of its impact to farmland, drainage, aerial applicators, and the use of small township roads.[340]

215. Ryan Lubben, aerial applicator with West Central Ag-Air Inc., submitted comments opposing the Project because affected farmland will not be able to be treated by aerial applicator aircraft.[341]

216. Mark Moenning, a Minnesota resident, submitted comments expressing concern about the Project's impact on drainage, livestock facilities, aerial applicators, the local economy, and safety.[342]

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[333] *Id.*
[334] *Id.*
[335] *Id. See also* Ex. DOC-133 (Comments from Cynthia Sheely to Mower County Commissioner Polly Glynn).
[336] Ex. DOC-141 (Compiled Public Scoping Comments Received through 9/22/22).
[337] Ex. DOC-132 (Compiled Public Scoping Comments, Part 3).
[338] Ex. DOC-132 (Compiled Public Scoping Comments, Part 2).
[339] *Id.*
[340] *Id.*
[341] *Id.*
[342] *Id.*

217. Eric Caspers, Hayfield Township Supervisor, submitted comments in opposition to the Project due to, among other things, its impact on the narrow township roads, the additional township expense of maintaining the ROW, potential restrictions on land use, loss of aerial crop spraying, potential harm to livestock near the line, impact on property values, and resulting financial hardship.[343]

218. Kelly Caspers, resident of Hayfield Township, submitted comments in opposition to the Project because of its potential impact on the agricultural community, small roads, drainage, vehicular incidents, traffic, animals, and the potential to cause "snow fences."[344]

219. Kevin Hoebing, a Minnesota resident, opposed the Project because of the risk of stray voltage, the impact on livestock, the limitation on aerial applicators, and concern over a private company utilizing public ROW.[345]

220. LIUNA submitted comments supporting the Project because of its positive impact on the regional economy, its use of union labor, and the clean, affordable energy the Project will provide.[346]

221. Mara Wiebusch, a resident of Hayfield Minnesota, submitted comments expressing concern about the Transmission Project's electromagnetic fields (EMF), its impact to their equine massage business, and the potential impact to property values.[347] Her husband, Matt Wiebusch, joined her during the extended comment period, expressing concerns with the impact of the HVTL on their property, health, and livestock.[348]

222. Ronald Behounek, a resident of Minnesota, submitted comments opposing the Project due to the impact on the agricultural community.[349]

223. Bruce and Lois Beukema submitted comments in support of proposed Route Segment B due to its lesser viewshed impact, utilization of wider ROW, and mitigation of the potential impact to the corner of 710th and 210th Streets.[350]

224. Rachel Gagliasso, a Minnesota resident, submitted comments expressing concern about the limited notice period, the Project's potential health and environmental impacts, the procedures for operational hazards including downed lines and stray wires,

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[343] Ex. DOC-132 (Compiled Public Scoping Comments, Part 1); *see also* Ex. DOC-136 (Hayfield Township Request to DCW to Address Boring Holes Along Proposed Route).
[344] Ex. DOC-132 (Compiled Public Scoping Comments, Part 1).
[345] *Id.*
[346] Ex. DOC-128 (LIUNA Comments).
[347] Ex. DOC-141 (Compiled Public Scoping Comments Received through 9/22/22); *see also* Comment by Matt Wiebusch (Sept. 20, 2022) (eDocket No. 20229-189173-01).
[348] Ex. DOC-139 (Matt and Mara Wiebusch Comments).
[349] Ex. DOC-141 (Compiled Public Scoping Comments Received through 9/22/22).
[350] *Id.*

the impact to the neighboring dairy and buffalo farm, the impact to the farmland, and insufficient need for the Project.[351]

225. Kelsey Gronseth, Sargeant Township Clerk, submitted comments opposing the Project's use of township ROW.[352]

226. Charlie Molitor, a Dodge County resident, offered concerns about the placement of the HVTL's poles close to roads, the HVTL's impact on roads and farmland, the lack of notice about the Project, DCW's unwillingness to bury lines, and the potential impact on property values.[353]

227. Ron Olness, a Minnesota resident, submitted comments expressing concern with the number of electrical projects already in the state, the impact to viewshed, the HVTL's proximity to the interconnecting substation, and the length of the transmission line route.[354]

228. DCW responded to the comments (1) not objecting to the request for a contested case to fully develop the record, (2) opposing the use of an ATF as an improper procedural mechanism to address the range of concerns from commenters, and (3) responding to comments from Dodge and Mower Counties, MnDNR, and other commenters about the potential impacts of the Project and choices in siting the route.[355]

229. In addressing the comments concerning the potential impacts of the Project, DCW explained that it adequately demonstrated the need for the Project and addressed the potential impacts on the environment and human activities. In particular, DCW directed commenters to the sections of the Amended Site Permit Application and Amended Route Permit Application that detailed how DCW designed the Project to meet applicable government requirements related to the environment, including those related to protecting wildlife and water resources, as well as requirements protecting human health and activities, including those related to agricultural operations, drainage, and the safety of local residents.[356]

230. Additionally, DCW's response addressed comments specific to the siting of the HVTL, including the safety and the use of existing road ROW. DCW argued that the use of existing road ROW by DCW was permissible and that the road ROW had sufficient space, from an engineering and safety perspective, to allow for placement of the planned structures. However, DCW proposed several alternative route segments that could use private land to attempt to minimize significant concerns about use of the road ROW.[357]

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[351] *Id.*
[352] *Id.*
[353] *Id. See also* Comment Received Outside of Comment Period by Charlie Molitor (Sept. 19, 2022) (eDocket No. 20229-189142-01); Ex. DOC-143 (Public Scoping Comments Received After 9-21-22 – Charlie Molitor and Mark Preul).
[354] Ex. DOC-141 (Compiled Public Scoping Comments Received through 9/22/22).
[355] Ex. DCW-129 (Response Comments to Environmental Scoping).
[356] *Id*. at 3-11.
[357] *Id*. at 11-17.

E. Written Comments Pursuant to May 2, 2023 Notice

231. Pursuant to the Notice of Comment Period, issued on May 2, 2023, written comments were submitted by MnDOT, LIUNA, as well as Mower County and the public.

232. Steele Waseca Cooperative Electric commented in support of the Project, emphasizing the needed energy it will bring to the region, its economic benefits to the community, and the renewable energy resource that the Project will provide to help the state reach its 2040 carbon free goal.[358]

233. Mower County provided comments explaining its involvement in the Project to date, describing the Conditional Use Permit requirements and Mower County ordinances applicable to transmission line routing and pole placement, and its experience on the ATF.[359] Mower County provided attachments to their comments, including maps of routes located in Mower County, alternative routes, and routes based on analysis of routes considered in the ATF process. Mower County also provided an attachment indicating the roadway that would be recommended for pole placement and recommendations for other roadways should poles be placed outside of existing ROW. Mower County also provided a copy of the Minnesota Minimum Design Standards.[360]

234. Zac Ruzycki, Director, Resource Planning with GRE, raised concerns that referring issues to a contested case would unnecessarily hinder the timely completion of these proceedings, delay their member-owners from realizing the benefits of cost-effective renewable energy, and emphasized the importance of the Project in their portfolio to help them achieve the State's carbon-free goals.[361] Mr. Ryzycki also discussed GRE's involvement in the ATF process and the importance of the EA to vet the environmental and human impacts of the proposed Project and inform the routing and siting process.[362] Lastly, Mr. Ryzycki commented on how the issues raised for a contested case are common to nearly every wind farm development in the state and are mitigated by conditions in site and route permits that the Commission has developed.[363]

235. John Kreuger submitted comments opposing the HVTL on the basis that will not fit in ROW along township roads and would impact farmers' use of their land.[364]

236. Elaine Hansen, President of Austin Chamber of Commerce, commented in support of the Project because of the job creation, economic and energy benefits, and investment to local businesses and organizations that the Project will bring.[365]

237. Kayla Christensen, Executive Director of the Minnesota Conservative Forum, provided comments in support of the Project because of the investment the

[358] Ex. PUC-158 at 1 (Comment by Steele Waseca Coop).
[359] Ex. PUC-159 at 1-3 (Comment by Mower County).
[360] *Id*. at 2, 4-11.
[361] Comment by Great River Energy (May 22, 2023) (eDocket No. 20235-196028-01).
[362] *Id*. at 2.
[363] *Id*.
[364] Ex. PUC-160 at 1 (Comment by John Kreuger).
[365] Ex. PUC-161 at 1 (Comment by Elaine Hansen); Ex. PUC-169 at 1 (Comment by Elaine Hansen).

Project will bring to the local community.[366] Ms. Christensen also hoped that the work of the ATF and MnDOT's pilot program will help the Project continue expeditiously.[367]

238. Jim Checkel, member of Ashland Township Board, Dodge County Planning and Zoning, and President of the Dodge County Farm Bureau, submitted comments describing his experience on the ATF representing Ashland Township. Mr. Checkel explained that there were several routes reviewed by the ATF that were deemed unsafe and urged the Commission to consider the options identified by the task force.[368]

239. Tom Monson, President of Kasson Chamber of Commerce, submitted comments in support of the Project and requested a more streamlined permitting process to bring economic development, predictability, and energy production to Dodge County.[369]

240. Marie McNamara, Goodhue County resident, provided comments suggesting the Commission: (i) request the Applicant provide proof of all signed leases for both transmission and turbines; (ii) request the Applicant provide updated maps to identify parcels with signed lease agreements and parcels with changes to verify agreements; and (iii) initiate a contested case to build the record and resolve issues.[370]

241. LIUNA provided comments in support of the Project, again asserting that the Project can benefit both their members and the public at large by creating construction and maintenance jobs, while also generating clean energy and providing local socioeconomic benefits.[371] LIUNA also noted DCW's track record of prioritizing the use of local workers and acknowledged the ATF as an additional method for stakeholder engagement.[372]

242. Nathan Runke, Regulatory and Political Affairs Coordinator, IUOE Local 49, and Adam Duininck, Director of Government Affairs, North Central States Regional Council of Carpenters, submitted comments in support of the Project due to its creation of jobs for local construction workers and the provision of renewable energy for Minnesotans served by GRE. Mr. Runke and Duininck also encouraged the Commission to continue to move the Project toward a final decision.[373] Mr. Runke and Mr. Duininck also acknowledged that they did not have recommendations to minimize, mitigate, or avoid potential impacts of the Project.[374]

243. Tamara A. Nelsen, Executive Director for the Minnesota Agri-Growth Council, submitted comments in support of the Project due to its economic and clean

[366] Ex. PUC-170 (Comment by Kayla Christensen).
[367] *Id*.
[368] Ex. PUC-162 at 2 (Batch 12 Comments, Comment by Jim Checkel).
[369] *Id*. at 3 (Batch 12 Comments, Comment by Tom Monson).
[370] Ex. PUC-167 at 1-2 (Comment by Marie McNamara).
[371] Ex. PUC-164 at 1 (Comment by LIUNA).
[372] *Id*.
[373] Ex. PUC-165 at (Comment by IUOE Local 49 and NCSRC of Carpenters).
[374] *Id*.

energy benefits and the support she believes the Applicant has shown for Minnesota's agricultural communities.[375]

244. Marlin Fay, a farmer in Mower County, submitted comments in support of the Project due to its benefits to some farmers and landowners in the area. Mr. Fay also thanked the Commission for its service to the State and urged it to expedite the permitting process for the Project.[376]

245. Bruce Schmoll, a resident of Claremont, submitted comments in support of the Project due to its benefits to the local agricultural industry, increases in local tax revenue, and contribution to reaching Minnesota's own renewable energy goals. Mr. Schmoll also commended the Commission for its commitment to advancing Minnesota's renewable energy goals.[377]

246. Brad Meier, President/CEO of the Owatonna Area Chamber of Commerce & Tourism, submitted comments in support of the Project because due to its economic benefits for Southeastern Minnesota and local businesses. Mr. Meier requested the Commission advance and approve the Project.[378]

247. Charlie Moliter from Molitor Brothers Farm submitted comments opposing the Project because the HVTL would lead to a loss of property value and interruption of farming practices, like helicopter use, in Dodge County.[379]

248. Mark C. Preul, Owner of M&K Preul Farms LLC and General Manager of Preul Farms LLC, opposes the Project due to its negative agricultural impacts and requested the Applicant consider more metropolitan areas that would not impede agriculture operations.[380]

249. Aaron Tempel submitted comments opposing the Project, expressing concern regarding its proximity to Rice Lake State Park, Claremont state game refuge, waterfowl production areas, state remnant prairie, and calcareous fens.[381] Mr. Tempel also raised concern about the turbines impact to viewshed and emergency services like the Mayo Clinic.[382]

250. Thomas and Sharman Walerak, farmland property owners along the proposed HVTL route, submitted comments in opposition to the Project because of the environmental impact the Project and its potential effect on the use of their land. Thomas and Sharman Walerak also noted concerns regarding potential negative health impacts,

[375] Ex. PUC-168 (Comment by Tamara Nelsen).
[376] *Id.*
[377] *Id.*
[378] Comment by Brad Meier (May 25, 2023) (eDocket No. 20235-196124-01).
[379] Ex. PUC-171 (Comment by Charlie Moliter).
[380] Ex. PUC-172 (Comment by Mark Pruel).
[381] Ex. PUC-174 (Comment by Aaron Tempel).
[382] *Id*.

decreases in property values, and disruption to agricultural practices such as the aerial application of pesticides.[383]

251. Joanne Larrison commented in support of the Project due to the potential economic benefits to Dodge County.[384]

252. DCW submitted Reply Comments acknowledging the progress made by the ATF, urging an expeditious permitting process, supporting the study of additional routes identified by the ATF, and acknowledging most of the suggested mitigation measures recommended by the ATF are either (1) captured in compliance requirements for route permitting in Minnesota or (2) typical practice that can be readily integrated into mitigation measures addressed in the EA and ultimately the route permit. [385] DCW also recognized that its proposed referral language was no longer relevant given the success of the ATF and there was no need for a contested case.[386]

253. MnDOT submitted reply comments on the ATF Report, acknowledging that there is an additional route for study in the report along MN 56 and referring back to its earlier comments on May 22, 2023.[387]

F. Scoping Decision

254. The Department issued its Scoping Decision on July 27, 2023 following public comment and the conclusion of the ATF process. The Scoping Decision specified the issues to be analyzed in the EA for the Project. The decision stated that the EA would describe the Project and the human and environmental resources of the project area and provide information on the potential impacts of the Project and possible mitigation measures. The decision also reflected that the EA would identify impacts that cannot be avoided and irretrievable commitments of resources, as well as permits from other government entities that may be required for the project. The decision indicated that the EA would discuss the relative merits of the route alternatives recommended for review by the ATF with respect to the factors in Minn. R. 7850.4100. The EA would also include a description and analysis of the human and environmental impacts of the proposed Project and alternatives to the Project that would have otherwise been required by Minn. R. 7849.1500 in an ER. The Scoping Decision also stated that the EA would not address route alternatives not specifically identified for study in the Scoping Decision, any system alternative (an alternative to the proposed Wind Project or Transmission Project) not specifically identified for study in the Scoping Decision, or the manner in which landowners are compensated for the Project. The Scoping Decision also indicated the EA was anticipated to be completed and available in November 2023.[388]

[383] Ex. PUC-175 (Comment by Tom and Sharman Walerak).
[384] PUC-177 (Comment by Joanne Larrison).
[385] Ex. DCW-133 (Reply Comments).
[386] *Id*.
[387] Ex. PUC-176 (MnDOT Comments).
[388] Ex. DOC-157 (Signed Environmental Assessment Scoping Decision) (eDocket No. 20237-197773-03).

255. Confirmation of the distribution of notices of the Scoping Decision availability was filed on December 14, 2023.[389]

G. The Environmental Assessment

256. On November 30, 2023, DOC-EERA issued the EA. The EA described the Project, highlighted some resources affected by the Project, and evaluated some of the potential human and environmental impacts of the proposed Project and Project alternatives, as well as possible mitigation measures, including alternate route segments for the Project and best management practices (BMPs).[390]

257. The EA evaluated key issues that had been raised during the scoping and ATF processes, such as: (i) whether valuable farmland should be used for power generation or transmission; (ii) turbine setbacks from residences; (iii) noise; (iv) decommissioning; (v) the status of DCW's landowner agreements; (vi) impacts to livestock through stray voltage; (vii) concerns with EMF; (viii) human health impacts; (ix) availability of emergency air evacuation services within and adjacent to the wind site; (x) visual impacts; (xi) limitation on aerial spraying and resulting lost agricultural productivity; (xii) impacts to property values; (xiii) impacts to wildlife; and (xiv) impacts to calcareous fens. The EA also analyzed the availability and suitability of other site or transmission alternatives, including undergrounding the HVTL and the suitability of routing within relatively narrow county and township road ROW as opposed to wider state highway ROW.

258. The EA included eight separate appendices: Appendix A, the Scoping Decision; Appendix B, the proposed DSP; Appendix C, the proposed DRP; Appendix D, Resource Maps; Appendix E, Wind Farm Detailed Maps; Appendix F Transmission Routes Detailed Maps; Appendix G, Responses to Data Requests; Appendix H, Environmental Justice Community Report.[391]

259. The EA is based on information provided by DCW in its applications for a certificate of need (CON), the large wind energy conversion system (LWECS) site permit application, and the route permit application. The EA was intended to address public comments received during the scoping meetings. Those comments were summarized as follows:

> [C]ommenters identified a range of potential impacts, benefits, and mitigation strategies related to the proposed project. Comments addressed whether valuable farmland should be used for power generation or transmission, turbine setbacks from residences, noise, decommissioning, the status of DCW's landowner agreements, impacts to livestock through stray voltage, concerns with electromagnetic fields, human health impacts, availability of emergency air evacuation services within and adjacent to the wind site, visual impacts, limitation on aerial spraying and resulting lost agricultural productivity, impacts to property

[389] Ex. DOC-158 (Notice of Environmental Assessment Scoping Decision).
[390] Ex. DOC-160 (Environmental Assessment).
[391] *Id.*

values, impacts to wildlife, and impacts to calcareous fens. Comments also addressed the availability and suitability of other site or transmission alternatives including undergrounding the HVTL and the suitability of routing within relatively narrow county and township road rights-of-way (ROW) as opposed to wider state highway ROW.[392]

260. DCW proposes to locate the Project in an area that is predominantly agriculture in character.[393] The scoping process identified agricultural impact as a predominant concern over the Project.[394] The Scoping Decision included "agriculture (cropland, livestock, compaction, tile systems, aerial spraying, GPS) as topics to be examined.[395]

261. The EA generally concluded that "[i]mpacts to agriculture are anticipated to be minimal. Construction of the wind turbines and transmission structures will remove a small amount of cultivated land from agricultural production."[396]

262. The Minnesota Department of Agriculture (MDA) ensures the integrity of Minnesota's food supply while protecting the health of its environment and the resources required for food production. MDA has authority to develop agricultural impact mitigation plans (AIMPs) that outline necessary steps to avoid and mitigate impacts to agricultural lands.[397]

263. The Project site is in a predominately agricultural area of southern Minnesota. Land use within the project area is primarily agricultural and is the use that accounts for approximately 26,321 acres, or approximately 93 percent of the site (with an additional 1.8 percent of land indicated as hay or pasture/herbaceous land cover.[398]

264. The Project would require a new collector substation (DCW Substation) in southwestern Dodge County, within the site. DCW has executed an option to purchase up to ten acres to construct the new DCW Substation on existing agricultural land along 140th Avenue in Section 15 of Ripley Township. DCW anticipates the developed graveled area of the DCW Substation would be approximately two acres, in addition to the farmland on which the turbines will be installed.[399]

265. The project area is rural open space. Agriculture, both cultivated croplands and livestock are present throughout the project area, as are homesteads.[400]

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[392] Ex. DOC-160 at 18.
[393] Ex. DOC-160 at 27.
[394] Ex. DOC-160 at 18.
[395] Ex. DOC-157 at 9 (Signed Environmental Assessment Scoping Decision) (eDocket No. 20237-197773-02).
[396] Ex. DOC-160 at 9.
[397] Ex. DOC 160 at 18.
[398] Ex. DOC-160 at 29.
[399] Ex. DOC-160 at 32 (citing Amended RPA, at p. 22-23).
[400] Ex. DOC-160 at 39.

266. LWECS have the potential for effects real or perceived on a local area, including impacts to human, community, and social environments. The human setting into which this wind project is being proposed to be set is rural and predominately agricultural. There are commercial wind turbines operating to the east, southeast, and southwest of the proposed site.[401]

267. Construction of the Project would alter the current landscape through the introduction of large wind turbines. These turbines will have unavoidable impacts on the residences in the project area, and visitors to the area, because it is characterized by flat to gently undulating topography.[402]

268. Lighting at the O&M facility, the DCW Substation, and other installations must be minimized and designed so that light is directed downward (toward the access or work area) and be hooded to prevent light from shining into the sky and attracting or disorienting nocturnal migrants.[403]

269. The EA identifies the following impacts regarding agricultural aviation:

> The aviation industry is concerned that the growth of wind energy development will endanger agricultural aviators and restrict the business opportunities for aerial application of seeds, fertilizers and crop protection chemicals. A wind turbine in a farm field subject to aerial spraying represents an obstacle for the pilot; agricultural aviators fly below the height of turbine blades while distributing (as low as 10 feet above ground level) but need to rise to a higher altitude to turn around for their next pass. This turn can take a half mile to complete. In addition to collision risk, the vortices and the turbulence that the wind turbines generate can also be a concern for agricultural aviators. Minnesota has approximately 150 agricultural aircraft pilots. [. . .] Fixed-wing aircraft account for 84 percent of the aircraft used by agricultural applicators, helicopters and other rotorcraft account for the rest. Approximately 127 million acres of U.S. croplands are treated with crop protection products; aerial application accounts for about a fifth to a quarter of that acreage. The NAAA reports that between 2009 and 2019, nine (9) percent of aerial application fatalities were the result of collisions with various types of towers and 13 percent were the result of collisions with wires. Both participating and non-participating landowner's agricultural operations may be affected; if one landowner erects a wind tower that resides too close to an adjacent landowner's field, the second landowner may lose their current or future opportunity to spray their crops, detrimentally affecting agricultural production. Additionally, where aerial applications in the vicinity of wind farms are still possible, the increased complexity and time required could result in higher cost.[404]

[401] Ex. DOC-160 at 41.
[402] Ex. DOC-160 at 42.
[403] Ex. DOC-160 at 42.
[404] Ex. DOC-160 at 68.

270. Large electric generation facilities in agricultural areas will have some impact on cropland and possibly on livestock operations, including to area farmers that are not among Project participants.[405]

271. Approximately 39 percent of the total site is classified as prime farmland, while approximately 57 percent is classified as prime farmland, if drained, and approximately 2.1 percent is considered farmland of statewide importance.[406]

272. The DCW Project is not expected to "significantly" impact agricultural land use or the general character of the area. While an estimated 0.8 acres of land per turbine will be taken out of agricultural production for the life of the project to accommodate the turbine pad, access roads, DCW Substation, O&M facility, and ancillary facilities, landowners may continue to plant crops near, and graze livestock up to the gravel roadway around each turbine pad. Large-scale impacts to agriculture or agricultural lands are not anticipated with the placement of turbines, access roads, and ancillary facilities in agricultural fields. Because collector lines are underground below the plow zone there will be no permanent impacts. At least 62 acres of cropland will be removed from production due to turbine placement.[407]

273. The MPCA regulates animal feedlots in Minnesota. DCW reported that in 2016 there were 21 registered feedlots within the site out of 620 registered feedlots in Dodge County and 643 registered feedlots in Steele County. Livestock in and adjacent to the site would be exposed to noise and shadow flicker created by wind turbines. Exposure levels will depend on factors such as grazing, housing, and the distance between livestock and the turbines. Health impacts from turbine noise and shadow flicker are uncertain.[408]

274. Farming activities may continue to be carried out on the land surrounding turbines and access roads. The proposed DSP (Appendix B) contains several standard conditions to address some agricultural mitigation and soil-related impacts:

- Section 5.3.5 requires protection and segregation of topsoil;
- Section 5.3.6 requires measures to minimize soil compaction;
- Section 5.3.7 requires the permittee to "implement erosion prevention and sediment control practices recommended by the [MPCA]" and to obtain a Construction Stormwater (CSW) Permit. A CSW Permit requires both temporary and permanent stormwater controls to ensure that stormwater does not become a problem on or off-site;

[405] Ex. DOC-160 at 73.
[406] Ex. DOC-160 at 75.
[407] Ex. DOC-160 at 75.
[408] Ex. DOC-160 at 75.

- Section 5.3.10 requires the permittee to adhere to MDA, DNR, and EPA pesticide requirements and to obtain approval from landowners prior to application;

- Section 5.3.11 requires the permittee to develop an Invasive Species Management Plan to prevent introduction and spread of invasive species during construction of the project;

- Section 5.3.12 requires the permittee to take reasonable precautions against the spread of noxious weeds;

- Section 5.3.15 requires the permittee to promptly repair private roads;

- Section 5.3.18 requires the permittee to take precautions to protect livestock during all phases of the Project's life;

- Section 5.3.19 requires the permittee to promptly replace or repair all fences and gates removed or damaged during all phases of the project's life unless otherwise negotiated with the landowner;

- Section 5.3.20 requires the permittee to avoid, promptly repair, or replace all drainage tiles broken or damaged during all phases of the project's life unless otherwise negotiated with the affected landowner;

- Section 5.3.22 requires the permittee to restore areas affected by construction as soon as practical, but in all cases no longer than 12 months after completion of construction; and,

- Section 5.3.25 requires the permittee to fairly restore or compensate landowners for damages to crops, fences, drain tile, etc. during construction.

275. In addition to the proposed site permit conditions, if the Commission approves the Project, the permittee should be required to develop an agricultural impact mitigation plan (AIMP) with MDA. AIMPs are used in other types of large energy facilities to detail methods to minimize soil compaction, preserve topsoil, control noxious weeds and invasive species, maintain the existing drainage conditions through appropriate maintenance and repair of existing drain tile, and establish and maintain appropriate vegetation to ensure the project is designed, constructed, operated and ultimately restored in a manner that would preserve soils to allow the land to be returned to agricultural use.[409]

276. The proposed transmission line project is just one possible solution to get the power from the wind farm to the electrical grid. There may be other alternatives—system alternatives—that also address this problem. Only the alternatives noted in the Scoping Decision for the EA, including the no-build alternative and transmission lines of

[409] *See* Ex. DOC-160 at 76-77.

a different size or with different endpoints, were analyzed to evaluate impacts of the various route proposals.[410]

277. The HVTL Project area is in a rural area in southeastern Minnesota. Along the transmission routes the land is a mixture of agricultural, and rural residential uses. The HVTL Project is proposed to be located in Dodge and Mower counties, in southeastern Minnesota. The primary land use in the area is cultivated agricultural fields The general topography is described as undulating, rolling relief with approximate elevations between 1,276 and 1,368 feet above mean sea level. The route alternatives pass near the cities of Hayfield, Waltham, and Sargeant as well as rural residences and, for the most part, closely parallel existing roads. The project area is crossed by a network state of highways, county, and township roads, agricultural ditches and intermittent and ephemeral streams.[411]

278. Within the Ecological Classification System developed by the MnDNR and U.S. Forest Service, the route is located within the Oak Savanna Subsection of the Minnesota and Northeast Iowa Morainal Section (222M) of the Eastern Broadleaf Forest Province. The Oak Savanna Subsection (222Me), which was historically covered by bur oak savanna, patches of tallgrass prairie, and maple basswood forest on gently rolling hills. Today, most of this subsection is farmed, with extensive development to the north. Loss of wetlands, declines in water quality, and sedimentation of surface waters are of concern throughout the subsection. [412]

279. There are several existing large energy facilities in the Project Area. The G. McNeilus Wind Farm, a 41-turbine LWECS, is located approximately one mile east of Segment 1. The Pleasant Valley Wind Farm, a 100-turbine LWECS, feeds into the Pleasant Valley Substation; Route Segments 3, 4, and 6, pass through the 45,000-acre site. The Wapsipinicon Wind Project is a 67-turbine LWECS that also feeds into the Pleasant Valley Substation.[413]

280. The transmission line will result in removal of agricultural production around the estimated 30 – 50 pole locations in fields currently used to produce corn and soybeans. The removal of that cultivated land is not expected to significantly impact agricultural-related businesses, such as farm dealerships, seed dealers, and dealers of agricultural inputs such as fertilizer and pesticides, in the area. Adverse impacts associated with the loss of agricultural land and agricultural production resulting from construction of the DCW Substation could be mitigated through lease payments to the landowner. To the extent that easements are obtained for the transmission line, easement payments could provide some relief. It is unclear how much cropland would be impacted

[410] Ex. DOC-160 at 135.
[411] Ex. DOC-160 at 148-149.
[412] Ex. DOC-160 at 148-149.
[413] Ex. DOC-160 at 148-149.

by such easements.[414] Each of the proposed HVTL routes will place some burden on agricultural operations such as aerial pesticide applications and drainage.[415]

281. A route permit from the Commission supersedes local zoning, building, or land use rules. Though zoning and land use rules are superseded, the Commission's route permit decision must be guided, in part, by consideration of impacts to local zoning and land use in accordance with the legislative goal to "minimize human settlement and other land use conflicts."

282. The Dodge County Comprehensive Plan identifies maintaining the county's rural values and character and maintaining prime farmland as priorities for the county. The Mower County Comprehensive Plan, within its agricultural management areas, the primary land use objectives are the continuation of long-term commercial agriculture, the preservation of the maximum amount of agricultural land, preservation of the rural lifestyle and values, encouragement of environmentally acceptable agricultural practices, and protection of groundwater resources.[416]

283. The EA concluded the HVTL Project would not result in appreciable land use changes and is generally consistent with planning and zoning ordinances in Dodge and Mower counties. None of the evaluated route alternatives will result in displacement of homes or businesses. Local zoning ordinances for transmission lines over 100 kV generally defer permitting and environmental review to the Commission.[417]

284. Considering the potential for impact to livestock,[418] the EA observed that if neutral to earth voltage (NEV) is prevalent in an agricultural operation it can affect livestock health. This concern has primarily been raised on dairy farms because of its potential to affect milk production and quality. NEV is by and large an issue associated with distribution lines and electrical service at a residence or on a farm. Transmission lines do not create NEV stray voltage because they do not directly connect to businesses, residences, or farms.[419]

285. Because all the routes evaluated use existing road and transmission ROW for most of their length, DOC-EERA anticipates minimal impacts to land-based economies due to the Transmission Project. There are no managed forest resources or active mining operations along any of the route alternatives, therefore no impacts to these resources are anticipated. DOC-EERA expects minimal impacts to agriculture for all routes, although somewhat higher for the County Road Route, as it has a relatively higher proportion of its length located within private easements. Nevertheless, DOC-EERA

[414] Ex. DOC-160 at 181-183.
[415] *See* Ex. DOC-160; Comment by Dodge County, MN (Feb. 22, 2024) (eDocket No. 20242-203725-02); Comment by Tony Kramer (Feb. 2, 2024) (eDocket No. 20242-203043-03); Comment by Cynthia Sheely (Jan. 31, 2024) (eDocket No. 20242-203006-01); Comment by Matt Senjem (Jan. 30, 2024) eDocket No. 20241-202856-02); Comment by Martha Ziehwein (Jan. 30, 2024) (eDocket No. 20241-202855-01).
[416] Ex. DOC-160 at 162.
[417] Ex. DOC-160 at 163.
[418] *See, e.g.,* Comment by Ross Bailey, DVM (Jan. 17, 2024) (eDocket No. 20241-202268-03); Comment by Jill Hahn (Jan. 12, 2024) (eDocket No. 20241-202134-01).
[419] Ex. DOC-160 at 177.

observed that transmission lines have the potential to impact land-based economies. Transmission line structures are a physical long-term presence on the landscape that can prevent or otherwise limit use of the landscape for other purposes. Although transmission structures have a relatively small footprint, they can interfere with farming operations.[420]

286. DOC-EERA concluded potential impacts to agricultural producers would likely be minimal across all routing options. According to the EA, transmission line interference with farming or grazing operations is generally limited to the area immediately surrounding the transmission poles. Potential on-the-ground impacts can be mitigated. Short- and long-term financial impacts, such as crop losses, can be mitigated through easement agreements. Because most of the length of the route alternatives is proposed to be located primarily within road ROW or co-located with existing transmission, the ROW of the route alternatives has a lower proportion of agricultural landcover in the ROW than the region generally, between approximately 60 and 66 percent. Crops comprise most of the market value of agricultural production in both counties (approximately 57 to 59 percent), with the remainder from livestock. In terms of acreage, corn and soybeans dominate the landscape, though both counties also have thousands of acres of hay, vegetables, and sweet corn. Hogs and pigs comprise the largest portion of livestock revenues for both counties.[421]

287. The EA determined that potential impacts to agriculture due to the Transmission Project fall into two categories, temporary and permanent. Temporary impacts are caused by construction activities and limited to the duration of construction. These activities could limit the use of fields or could affect crops and soil by compacting soil, generating dust, damaging crops or drain tile, or causing erosion. Project construction activities would typically be limited to the transmission line ROW.[422]

288. Permanent agricultural impacts are caused by the physical presence of transmission line structures in crop, pasture, and other agricultural lands. Foundations for transmission line structures will be 6 to 12 feet in diameter, resulting in a footprint of 29 to 113 square feet per structure. The footprint of the transmission line structures is land that cannot be used for agricultural production. This footprint negatively impacts farm income and property values. However, more than the footprint itself, structures can impede the use of farm equipment and can significantly limit management options for agricultural operations. Each structure must be carefully avoided during tillage, planting, spraying, and harvesting of fields. Structures require extra time and resources for the management of weeds, already a significant concern for Minnesota's farmers. Interference with farming or grazing operations is generally limited to the area immediately surrounding the transmission poles. [423]

289. Because all three route alternatives have most of the transmission infrastructure located in public road ROW or co-located with existing transmission, the DCW transmission line will remove a minimal amount of cultivated agriculture from

[420] Ex. DOC-160 at 181.
[421] Ex. DOC-160 at 181.
[422] Ex. DOC-160 at 181.
[423] Ex. DOC-160 at 182.

production. Because the County Road Route follows agricultural field lines for a longer distance (6.7 miles) than either of the other route alternatives (five miles in each case), the County Road Route would have a somewhat higher number of structures located within fields. Assuming an average span of 800 feet between structures crossing agricultural fields, the County Road Route will result in approximately 44 structures compared to approximately 33 for both the Highway 56 and Hybrid routes. This impact is considered minor in context of agricultural land in Dodge and Mower counties.[424]

290. Transmission line structures hinder aerial applications of agricultural products in certain areas by limiting those areas where applicators can safely fly. Structures also affect the coverage and effectiveness of aerial spraying. Potential impacts to agriculture production from the transmission line are anticipated to be minimal. Transmission lines present a safety concern for aerial aviators; however, transmission lines are present in the landscape and are generally arranged in a linear, stepwise fashion on the landscape. This arrangement typically allows aerial spraying to be safely conducted in at least one direction, either north-south or east-west.

291. The Project area is home to cattle and hog farms. These livestock operations could be temporarily affected during construction (e.g., disturbances to livestock due to construction noise). Though no stray voltage impacts are anticipated because of the Project, stray voltage (if it occurs) could be of concern to livestock farmers, particularly on dairy farms, due to its potential impacts on milk production and quality (Section 3.3.9). Induced voltage may be of concern to livestock farmers with buildings near a transmission line. These buildings may require grounding of their metal components to avoid induced voltages.[425]

292. To an extent, locating the route within public road ROW mitigates potential impacts to agriculture. Several sections of the proposed DRP (Appendix C) are standard conditions to address agricultural mitigation and soil-related impacts:

- Section 5.3.8 of the DRP requires the permittee to "implement erosion prevention and sediment control practices recommended by the [MPCA]" and to obtain a Construction Stormwater Permit (CSW) Permit. A CSW Permit requires both temporary and permanent stormwater controls to ensure that stormwater does not become a problem on or off-site.

- Section 5.3.12 of the DRP requires the permittee to develop an Invasive Species Management Plan to prevent introduction and spread of invasive species during construction of the project.

- Section 5.3.13 of the DRP requires the permittee to take reasonable precautions against the spread of noxious weeds.

[424] Ex. DOC-160 at 182.
[425] Ex. DOC-160 at 182.

- Section 5.3.17 of the DRP requires the permittee to fairly restore or compensate landowners for damages to crops, fences, drain tile, etc. during construction.[426]

293. Addressing aerial application of agricultural chemicals, DOC-EERA concludes that potential impacts to agricultural production and to aerial spraying businesses could be mitigated by selecting routes that follow existing infrastructure ROW, e.g., existing transmission lines, existing roadways. The routes evaluated generally follow existing roadways and compared to earlier versions of the route, have fewer turns. The Highway 56 route has 9 turns, while the County Road Route and the Hybrid Route each have 10 turns.[427]

294. Road use permits or agreements may also include mitigation measures to minimize adverse impacts to soils and maintain drainage. Development of an AIMP for portions of the transmission line located in agricultural fields can also identify measures to minimize soil impacts.[428]

295. Sharing ROW with existing infrastructure or paralleling existing rights-of-way minimizes fragmentation of the landscape and may minimize some human and environmental impacts (e.g., aesthetic and agricultural impacts). The use and paralleling of existing rights-of-way are considered by the Commission in determining the most appropriate route for a project.[429]

296. ROW sharing opportunities in the Project area exist where the rights-of-way of the route alternatives would be shared with or would parallel immediately adjacent the ROW of existing infrastructure—a transmission line or road—or existing field and parcel lines not always visible on the landscape. There is a difference in potential impacts between using ROW for double-circuiting and paralleling existing ROW. Both can minimize land-use, agricultural, and natural resource impacts, but double-circuiting with existing transmission lines best minimizes potential impacts.[430]

297. All route alternatives are collocated (double-circuited) with GRE's existing Pleasant Valley to North Austin 161 kV transmission line for approximately 13 percent of their respective route lengths. Existing ROWs are used for nearly 60 percent of both the Highway 56 and Hybrid routes, and more than 50 percent of the entire route length of the County Road Route uses existing ROW. Transmission lines that parallel roads could affect future road expansions or realignments because poles placed along the road ROW might need to be moved to preserve a safe distance between poles and the edge of the expanded roadway. MnDOT's accommodation policy addresses MnDOT's responsibility for preserving the public investment in the transportation system and for ensuring that non-highway uses of the ROW do not interfere with the ability of the state to make long-term highway improvements, such as adding lanes, interchanges or bridges, or to

[426] Ex. DOC-160 at 183.
[427] Ex. DOC-160 at 183; *see* Comment by Ryan Lubben (Jan. 8, 2024) (eDocket No. 20241-201957-01).
[428] EX. DOC-160 at 193.
[429] Ex. DOC-160 at 203.
[430] Ex. DOC-160 at 204.

safely operate and maintain the existing system. Although the network of public roads in the project area is large, public road ROW is a finite resource. The addition of private transmission infrastructure within public road ROWs also limits the use of that resource for future uses (e.g. larger transmission lines that form the electric grid, communications infrastructure, or pipelines).[431]

298. According to DOC-EERA, cumulative potential effects on land-based economies, including agriculture, are anticipated to be minimal. The identified projects are along roadways. A minimal amount of land would be converted from agricultural use to other uses. Where conversion does occur, it must occur consistent with local land-use and zoning regulations.[432] To the extent that impacts to agricultural operations exist, these can be mitigated through development of an AIMP, payments to affected landowners, easements, and local land use regulation.

299. Confirmation of the distribution of notices of the EA availability was filed on December 5, 2023.[433]

H. Adequacy of the Environmental Assessment

300. The Commission is required to determine the adequacy of the EA. To be adequate, the EA must, among other things, address the issues and alternatives identified in the Scoping Decision.[434]

301. The EA is adequate in its examination of most of the issues raised through the scoping process, and that examination has significantly contributed to these Findings. The evidence in the record demonstrates that the EA is adequate because it addresses the issues and alternatives raised in the Scoping Decision, provides responses to the substantive comments received during the scoping process, suggests the use of AIMP to mitigate agricultural impacts, and was prepared in compliance with Minn. Stat. § 216E.04; Minn. R. 7850.2900 to 7850.3900.

V. TESTIMONY, PUBLIC HEARING, AND COMMENTS

A. DCW December 12, 2023 Testimony

302. On December 12, 2023, DCW filed the testimonies and schedules of five witnesses: Clay Cameron, the developer of the Project; Tara Corbett, an environmental consultant with Atwell, LLC; Richard Lampeter, and environmental scientist and sound and shadow flicker expert with Epsilon; Charles Gauger, a construction manager with

[431] Ex. DOC-160 at 204.
[432] Ex. DOC-160 at 209.
[433] Ex. DOC-161 (Notice of Environmental Assessment Availability, Public Hearing, and Comment Period); Ex. DOC-162 (Notice of Environmental Assessment Availability Published in the EQB Monitor 12/12/23); Ex. DOC-163 (Notification to Agencies, Local Governments, Tribal Governments, and Tribal Historic Preservation Offices); Ex. DOC-164 (Certificate of Mailing to Local Libraries).
[434] Minn. R. 7850.3700, subp. 3-4.

DCW; and Thomas Koegel, a transmission line siting consultant with Sargent & Lundy.[435] No other parties or individuals submitted testimony.

303. Mr. Cameron's testimony was offered in support of DCW's Applications. His testimony described the overall Project and its components and provided detail regarding the following: (i) the Project's design and need; (ii) its benefits; (iii) DCW's stakeholder outreach efforts, including consultation with local units of government and the ATF; (iv) the optimal route options for the Transmission Project in light of the EA; (v) compliance with the state and local government requirements for a LWECS; and (vi) DCW's responses to public comments to that point.[436]

304. Mr. Cameron explained the Applicant's position regarding the need for and design of the Project. Mr. Cameron's testimony states "the Project is needed to assist GRE in maintaining its compliance with Minnesota's RES and delivering reliable and affordable wholesale electricity to its member-owner cooperatives." To this end, the Project "is designed to efficiently deliver the energy produced by the Project to GRE. As reflected in the terms of the power purchase agreement (PPA) executed between DCW and GRE, the parties selected a voltage of 161 kV and the point of interconnection (POI) at the Pleasant Valley Substation to ensure the reliable and efficient delivery of the Project's wind energy output."[437] According to DCW, "DCW has been seeking to develop a wind project in Dodge County since 2014. These efforts have included a prior iteration of the Project that was proposed to interconnect at the Byron substation to serve a different customer. That prior project could not be constructed due to excessive interconnection costs that DCW would have been required to incur."[438]

305. Addressing a primary point of opposition for many area residents, Mr. Cameron explained the decision to construct the "Gen-Tie" between the DCW Collector Substation and the Pleasant Valley Substation: "The Gen-Tie is a 161 kV transmission line that extends from the proposed DCW collector substation near Dodge Center to the existing Pleasant Valley Substation located in Mower County. The sole purpose of the Gen-Tie is to transmit the power generated by the Wind Project to GRE."[439]

306. Mr. Cameron was asked to comment on the feasibility of a closer point of connection for Gen-Tie, thereby reducing the Project's need for 27 miles of transmission line. He responded:

> Pleasant Valley Substation is an optimal point of interconnection for two primary reasons. The first is location. The existing GRE Pleasant Valley Substation is located in a relatively proximate location to the DCW collector substation, which allows for a more direct, and less obstructive, interconnection. Second, the existing GRE Pleasant Valley Substation site

[435] Ex. DCW-138 (Cameron Direct); Ex. DCW-139 (Corbett Direct); Ex. DCW-140 (Lampeter Direct); Ex. DCW-141 (Gauger Direct); Ex. DCW-142 (Koegel Direct).
[436] Ex. DCW-138 at 1-2 (Cameron Direct).
[437] Ex. DCW-138 at 7 (Cameron Direct).
[438] Ex. DCW-138 at 8 (Cameron Direct).
[439] Ex. DCW-138 at 14 (Cameron Direct).

> can accommodate the new 161 kV line and associated substation equipment, as well as the up to 252 MW generation capacity of the Wind Project. Interconnection at the GRE Pleasant Valley Substation and the use of surplus interconnection capacity provides for optimization of existing transmission infrastructure as no interconnection system upgrades or associated system upgrade costs are required. A Generator Interconnection Agreement for the full output from DCW was executed in the second quarter of 2023.[440]

307. Mr. Cameron's testimony concluded that the Project should be approved because it: (i) advances renewable energy production and usage in the state of Minnesota in support of state carbon reduction goals; (ii) safely and reliably delivers the renewable output to the electrical grid in compliance with applicable regulations and permit conditions; (iii) provides substantial and quantifiable benefits to the communities in which the Project is situated; and (iv) incorporates refinements and input offered by impacted counties and communities to address concerns.[441] As support, Mr. Cameron pointed to the enactment of House File 7, which directs that the State of Minnesota achieve 100 percent clean electricity by 2040. Mr. Cameron also posited that the Project is supportive of this goal because it will supply GRE – and the customers it serves – with the renewable energy generated by the Project for 30 years.[442]

308. Mr. Cameron also introduced the Memorandum of Understanding (MOU) between DCW and Mower County that identifies the Hybrid Alternative Route as Mower County's preferred route.[443]

309. Ms. Corbett's testimony summarized the environmental studies, surveys, impacts, and impact avoidance and mitigation measures related to Project. For the Project, Ms. Corbett's testimony: (i) overviewed the environmental studies conducted; (ii) described DCW's efforts to avoid environmentally sensitive areas when siting the Wind Project and how these considerations shaped its siting; and (iii) reviewed the EA's conclusions regarding the Wind Project. For the Transmission Project, her testimony: (i) provided an overview of the environmental considerations accounted for in DCW's Amended Route Permit Application; (ii) described the environmental considerations that shaped the identification of the three route alternatives evaluated in the EA; (iii) provided an overview of environmental studies and surveys that have been conducted on behalf of DCW for the route alternatives and discussed additional studies that will be completed; and (iv) reviewed the EA's conclusions regarding the HVTL.[444]

[440] Ex. DCW-138 at 27 (Cameron Direct).
[441] *Id.* at 2.
[442] *Id.* at 2.
[443] *Id.* at 3.
[444] Ex. DCW-139 at 2 (Corbett Direct).

310. Ms. Corbett concluded that the Project, as demonstrated through the EA, is compatible with environmental preservation, sustainable development, and the efficient use of resources.[445]

311. Mr. Lampeter's testimony provided: (i) a description of noise emissions from utility-scale wind turbines in general and the Minnesota regulations governing these emissions; (ii) a summary of the Project's Noise Analysis; (iii) information on low frequency noise (LFN) and infrasound levels produced by wind turbines; (iv) a description of the shadow flicker effect that can be attributable to large wind turbines; (v) a summary of the results of DCW's Shadow Flicker Analysis; and (vi) responses to public comments received in the proceeding.[446]

312. Mr. Lampeter concluded that the Project will operate in a manner consistent with Minnesota's sound level regulations and will not create unreasonable levels of shadow flicker based on the implementation of a mitigation plan to reduce shadow flicker for landowners who are projected to receive more than 30 hours of shadow flicker per year and have no agreement with DCW. Also, based on studies from authoritative sources, LFN and infrasound levels produced by the Project will not negatively affect the health and safety of the surrounding community.[447]

313. Mr. Gauger's testimony discussed the construction, operation, and decommissioning of the wind and transmission lines. His testimony described: (i) the design, construction, operation and maintenance (O&M), and decommissioning of the Wind Project; (ii) the technical specifications for the proposed HVTL and the processes associated with engineering, construction, O&M, and decommissioning of the line; (iii) the engineering, procurement, and construction (EPC) work required to construct the Project and DCW's use of an EPC contractor; and (iv) the safety of the Project. Mr. Gauger also provided responses to various comments that had been submitted in the proceeding that are relevant to the engineering and construction of the Project.[448]

314. Mr. Gauger concluded that the Project will be constructed, operated, and decommissioned in a safe and efficient manner that is compliant with engineering standards and applicable Site and Route Permit conditions.[449]

315. Mr. Koegel's testimony provided an assessment and analysis of the HVTL routes that had been proposed throughout the proceeding – particularly those recommended by the ATF and examined in the EA – and identified the Hybrid Route Alternative as the route that is the most feasible for construction. He also described consultations that have occurred with LGUs and state agencies in the development of

[445] *Id*. at 3.
[446] Ex. DCW-140 at 1 (Lampeter Direct).
[447] *Id.* at 1-2.
[448] Ex. DCW-141 at 1-2 (Gauger Direct).
[449] *Id.* at 2.

DCW's proposed Transmission Project. Mr. Koegel also responded to comments submitted in the proceeding concerning the route and route alternatives.[450]

316. Mr. Koegel concluded that the route selection process in this proceeding was robust and incorporated community input regarding impacts, feasibility, and safety of the HVTL, as well as county, state agency, and landowner preferences. Mr. Koegel also concluded that the stakeholder input process was strengthened through the ATF, which the Commission convened to review routes, and segments of routes, in a manner that incorporated the positions of the LGUs in which those routes and route segments potentially could be sited.[451]

317. Mr. Koegel concluded in his testimony that Hybrid Route Alternative is the most constructible route of the final alternatives evaluated in the EA. He holds this view based on the route's overall constructability, its avoidance of 66-foot township ROW, and the fact that it is the only route that has Mower County's support.[452]

B. Public Comments and Questions at the December 19, 2023 1:00 p.m. Hearing

318. The first hearing began at 1:00 p.m. at Saker's Sports Bar & Grill, 401 8th Street Southeast, Kasson, Minnesota, 55944. It was well-attended by members of the public. Exhibits were entered into the record at the commencement of the hearing.[453] Mr. Lobby presented on behalf of the PUC, explaining the details and specifications of the Project as well as the required regulatory approvals from the Commission needed to construct and operate the Project. Mr. Lobby also explained the remaining procedural schedule and described how to submit comments in the dockets related to the Project. For DOC-EERA, Ms. Steinhauer described her role in supporting the EA and the ATF. For DCW, Mr. Cameron described aspects of the Project, its schedule, its benefits, and introduced the witnesses available to answer questions. The witnesses present were Mr. Cameron, Richard Lampeter, Charles Gauger, Tara Corbett, and Thomas Koegel.[454]

319. The following individuals provided oral comments at the December 19, 2023 1:00 p.m. hearing: Aaron Tempel, Bruce Beukema, Guy Kohlnhofer, Tom Monson, Lucas Franco, Tony Wicken, Bob Wohlberg, Nathan Runke, Paul Burandt, Ron Behounek, Kyle Behounek, Keith Behounek, Brad Meier, Todd Koenigs, Duane Quam, Jim Checkel, Tanner Kramer, Glen Hahn, John Schmeling, Gene Anderson, Richard Masching, Duane Klocke, and Andy Walerak.[455]

320. Aaron Tempel opposed issuing any permits for the Project. Mr. Tempel inquired about the dispatchability of wind energy and questioned whether the Project would meaningfully contribute to the area's economy. Ms. Corbett responded by stating

[450] Ex. DCW-142 at 1 (Koegel Direct).
[451] *Id.* at 1-2.
[452] *Id.* at 2.
[453] Kasson 1:00 p.m. Tr. at 11 (Dec. 19, 2023).
[454] *Id.* at 6-23.
[455] *See* Kasson 1:00 p.m. Tr.

that there are different types of economic benefits associated with the Project, such as increased tax revenue and an increase in the tax base. Mr. Cameron added that landowner payments will be arranged consistent with agreed-upon terms. Mr. Tempel posed questions regarding the Aircraft Detection Lighting System (ADLS) system and emergency response. Ms. Steinhauer answered that emergency response times could be delayed if during construction the roads are less passable. Setbacks from forested areas were also raised by Mr. Tempel, because a state park was missing from the northwest portion of DCW's Project maps. Mr. Tempel opposes the use of public ROWs by a private company like DCW. Mr. Tempel also mentioned in his public comments lawsuits that had been filed against NextEra Energy, Inc. and its subsidiaries.[456]

321. Bruce Beukema lives along the Hybrid Route Alternative and has a grove of trees that are the tallest in the county. Mr. Beukema does not support the Project and suggested that the County Road Alternative should be the preferred route if the Project were approved. Mr. Koegel responded that the County Road Alternative was not workable due to land rights and that the Highway 56 Route Alternative is not preferred due to 66-foot ROW concerns that previously have been expressed. Mr. Beukema also raised a concern regarding the impact stray voltage could have at a nearby dairy operation.[457]

322. Guy Kohlnhofer, Dodge County Engineer, stated that Dodge County's stance that the Highway 56 Route Alternative is the least objectionable route.[458]

323. Tom Monson expressed in public comments that continuous dialog with the Applicant is key and asked how DCW would continue its work in the community. Mr. Cameron responded that there will be full-time employees on site to maintain a local presence and that DCW would continue to contribute to the local community and provide sponsorships. Ms. Corbett added that a notice of site manager will be required, which will allow for access to the individual managing the construction of the Project. Ms. Steinhauer added that the DSP has a condition that the Applicant provide contact information and submit a monthly complaint summary. Ms. Steinhauer clarified that no such condition exists in the DRP.[459] The Route Permit should include the same condition, in light of the many concerns raised by area residents throughout the process.

324. Lucas Franco, with LIUNA, commented that workers earn good wages working on projects such as the one proposed. Mr. Franco expressed support for the Project and mentioned its benefits, such as employment of union workers, which has a corresponding positive economic impact and workforce safety benefit.[460]

[456] *Id.* at 24-32.
[457] *Id.* at 32-37.
[458] *Id.* at 37-38.
[459] *Id.* at 38-42.
[460] *Id.* at 42-45.

325. Tony Wicken provided oral comments, noting his 25 years of experience in union marketing, and expressed support for DCW and the Project because he believes it will support local union jobs. [461]

326. Bob Wohlberg raised concerns regarding the environmental and magnetic field studies supporting the Project. Mr. Koegel mentioned that these topics are covered in the EA and noted that substantial studies on EMF have been performed, which show no health and safety impacts. Mr. Koegel added that the Project will be below the recommended limits for EMF. Mr. Wohlberg asked whether the public gets to vote on DCW's proposal. Judge Middendorf explained that she will consider all comments and exhibits that are part of the record in making her recommendation and noted the Commission will ultimately decide the outcome. Mr. Lobby mentioned that the Commission is a neutral arbiter that is considering the Project and is neither "for" nor "against" it. Noise and the location of eagles are also concerns for Mr. Wohlberg.[462]

327. Nathan Ruenke, member of the IUOE Local 49 stated that projects such as the one proposed are good for the union workforce. Mr. Ruenke noted that the union is largely supportive of the Project. He also noted the safety benefits of utilizing a union workforce.[463]

328. Paul Burandt, a farmer from Wisconsin, provided oral comments, stating that he has leased land in Minnesota and voiced support for the Project, despite his initial uncertainty. Mr. Burandt highlighted the property tax benefits of the Project and the increases in taxes that farmers and locals have been shouldering on their own. Mr. Burandt mentioned that he lives downstream from a coal power plant and near to a nuclear power plant, adding that he is much more supportive of wind than other energy resources.[464]

329. Ron Behounek and Kyle Behounek oppose the Project. They shared concerns about pole staking when the Project has not yet been approvedRon Behounek showed an image of his farm and described his concern regarding the impact of stray voltage on cows. He also stated that 300 feet of setback from any route would be appropriate, and that a mile would be better. Kyle Behounek added that he has been in communication with a stray voltage expert who recommended the 300-foot setback. He also mentioned the potential for lawsuits concerning the stray voltage impact. Keith Behounek asserted that tremendous investment has been made in his property and questioned what setbacks are required from the HVTL. Keith Behounek asked about the number of feet the setback would require, adding that eagles receive larger setback than residences. Ms. Corbett responded that eagle setbacks are appropriate given that eagles fly into power lines and those setbacks are not related to EMF. Keith Behounek noted that the five to eight permanent employees the Project will support is fewer than the number he has on his farm. Kyle Behounek added that stray voltage remained a concern, though the line will not use a neutral wire. Kyle Behounek opined that the Highway 56

[461] *Id.* at 45-46.
[462] *Id.* at 47-53.
[463] *Id.* at 53-56.
[464] *Id.* at 56-59.

Route Alternative would have a lesser impact. Exhibit 1, showing the aerial photo of the Behounek farm, was entered into the record.[465] Ron Behounek, added that there are other lines in the region that can cause a shock when standing on the ground nearby.[466]

330. Brad Meier of the Owatonna Area Chamber of Commerce spoke in support of the Project due to his belief in a positive economic impact and the Project's furtherance of renewable energy goals.[467]

331. Todd Koenigs, a Dodge County resident working for Ellingson Companies, spoke in favor of the Project as a contractor that has done work for affiliates of DCW on prior occasions.[468]

332. Representative Duane Quam expressed concern about milk production drop on account of EMF. Mr. Quam shared his concerns about EMF levels when the Project is powering up and down. Mr. Quam added that, depending on the route, there could be impacts on farmers due to Project construction, and indicated the impact should be minimized. Mr. Quam also asked if there were natural gas pipelines in the region and encouraged the collection and distribution of more data concerning the Project.[469]

333. Jim Checkel, of Ashland Township, discussed how the routes have been narrowed and reflected his view that that the Highway 56 Route Alternative was the best of the routes proposed, noting that MnDOT would allow DCW to use state road ROW as a test following the recent legislative change. Mr. Checkel, mentioned that despite the MOU, the HVTL is largely a Dodge County issue and Dodge County should be the one to make the determination as to what route is best.[470]

334. Tanner Kramer, a resident of Hayfield Township, asked that the panel say where they are from and what their father did for a living. Mr. Kramer expressed opposition to the Project, adding that the region is agricultural and that the Project will negatively impact agriculture and his farm.[471]

335. Glen Hahn, a local resident, expressed his opposition that the Project could cause gas turbines to be shut off, which would cause disruption and expense.[472]

336. John Schmeling, a Dodge County resident, asked whether new lines would be added to the Transmission Project and what might happen to the line in the future. Mr. Cameron responded that there are no plans to expand the HVTL and that any new

[465] Ex. PUC-199 (Public Exhibit 1 Photograph of Behounek Dairy Farm).
[466] Kasson 1:00 p.m. Tr. at 60-73 (Dec. 19, 2023) (Koegel).
[467] *Id.* at 73-74.
[468] *Id.* at 74-77.
[469] *Id.* at 77-80
[470] *Id.* at 80-83.
[471] *Id.* at 83-86.
[472] *Id.* at 87-88.

line would need to go through the permitting process. Ms. Steinhauer added that any further changes to the HVTL would require Commission review and approval.[473]

337. Gene Anderson, Chairman of Waltham Township, stated his concerns regarding pole height and the potential for a pole fall. Mr. Anderson questioned the need for a longer route when the Byron substation is available. Mr. Cameron claimed that the Byron substation would have required substantial and prohibitive upgrade costs. Mr. Anderson asked why the DCW team has changed. Mr. Cameron mentioned that a developer is on extended medical leave.[474]

338. Mr. Beukema posed another question, concerning the separation between the proposed HVTL and transmission lines run by utilities. In response, Mr. Koegel explained how the Transmission Project would interact where the lines crossed or ran parallel to existing poles. Mr. Koegel explained that interaction between DCW and existing poles will be dependent on the route eventually selected.[475]

339. Mr. Revell, appearing on behalf of DCW, asked about the routes that have been proposed and why one route is preferred over others. Mr. Koegel responded that the County Road Alternative is not a feasible option since the land rights cannot be secured in order to enable it. The Highway 56 Route Alternative is not preferred since it utilizes 66-foot ROW, which Waltham Township opposed using, and poses greater safety risks to the motoring public. Mr. Koegel explained that, because of those concerns, DCW has worked with the Dodge and Mower County engineers to design the Hybrid Route Alternative. Mr. Koegel explained that DCW did an in-person walk-through with Dodge and Mower Counties for both the Highway 56 Route Alternative and the Hybrid Route Alternative. Mr. Koegel asserted that the Hybrid Route Alterative is the most technically feasible and will keep poles out of ditches. Mr. Gauger stated that DCW employs underground radar as part of the construction process to try to identify and avoid underground structures.[476]

340. Jim Checkel mentioned that Mower County has entered into an MOU, but Dodge County has not. Mr. Checkel asked what DCW is going to do if Dodge does not sign. Mr. Koegel responded that the MOU was entered to demonstrate coherence and cooperation regarding a potential route. Mr. Panait added that the Commission has jurisdiction over the route selection and will make a decision based on the record. Mr. Panait mentioned that the Commission does not want to curtail local regulations to the extent it can.[477]

[473] *Id.* at 88-90.
[474] *Id.* at 90-96
[475] *Id.* at 96-99.
[476] *Id.* at 99-103.
[477] *Id.* at 103-06.

341. Richard Masching, a farmer along County Road 4, asked if DCW has the signatures needed for the County Road 4 segment. Mr. Koegel responded that the poles for this section would be put in the ROW along the County Road, not on private land.[478]

342. Duane Klocke asked about whether easements in Dodge County Road 9 would be in the ROW. Mr. Koegel confirmed that they would be under the current design. Mr. Klocke expressed his dissatisfaction with the amount of data available and opposes the routes proposed. Mr. Klocke stated:

> I know the power company, because we talked to some of their representatives last winter, but everything is a secret. They're trying to keep everything a secret. And it's like they should be out broadcasting this, trying to tell everybody about the project. 'Cause I just am upset because this project is in the northeast, northwest corner of Dodge County, and a couple in Steele County. Why the hell isn't it going to the north or towards the cities of Owatonna, Faribault? There's got to be a substation closer than 27 miles right across - straight across Dodge County. It doesn't make sense. I'm a logical person and I always take the shortest route when I'm going someplace. And this doesn't make no sense at all to me. None. And that's why there's so many farmers who are upset, you know.[479]

343. Duane Quam added that borings were done in a field and that clarification should be given regarding activities that may occur in a farmer's field. Mr. Koegel asserted that borings are performed on a participating landowner's property or in the road ROW.[480]

344. Andy Walerak questioned where the ROW starts. Mr. Koegel explained the width of ROW along County Road 9. Mr. Walerak also asked why the lines would not be buried. Mr. Koegel responded that it is challenging and costly to underground lines of the Project's voltage and added that underground repairs are more difficult and time-consuming. Mr. Walerak also asked whether anyone from DCW would be willing to live under the HVTL, considering the EMFs. Mr. Koegel said that he would and claimed that EMF levels at a normal distance are no different than what the average person would experience on a regular basis.[481]

345. Mr. Masching asked how far the HVTL needs to be from fiberoptic cable. Mr. Koegel noted that working near such cable would have to be coordinated with the utilities operating the cable. Mr. Masching noted that borings were done in his field.[482]

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[478] *Id.* at 106-08.
[479] *Id.* at 109-11.
[480] *Id.* at 111-13.
[481] *Id.* at 113-17.
[482] *Id.* at 117-19.

C. Public Comments and Questions at the December 19, 2023 6:00 p.m. Hearing

346. The second in-person hearing began at 6:00 p.m. at Saker's Sports Bar & Grill, 401 8th Street Southeast, Kasson, Minnesota 55944. Introductions similar to those provided at the December 19, 2023 hearing were given by the PUC, DOC-EERA, and the Applicant.[483]

347. The following individuals provided oral comments at the December 19, 2023 6:00 p.m. hearing: Dave Born, Shirley Kiefer, Rod Peterson, Jon Masching, Henry Ripka, Gregg Mast, Mark Moenning, Benjamin Tempel, Duane Quam, and Lauren Cornelius.

348. Dave Born, Dodge County resident, opined that much of the discussion and consideration in the proceeding relates to the proposed routes. Mr. Born noted that the biggest concern is that no decision has been made on the route. Judge Middendorf clarified that the Commission must consider the routes proposed and their relative impacts. Mr. Born asked about how roads will be returned to pre-construction condition and what the timing of that is. Mr. Cameron clarified that DCW will coordinate with the counties on a road use agreement that specifies what actions will be taken to restore roads. Mr. Cameron also clarified that roads will be maintained during construction.[484]

349. Shirley Kiefer, a resident of Mower County, stated that she did not receive notice of the Project. Ms. Kiefer does not support the Project and added that her house is very vulnerable and in close proximity to the lines. She also expressed concern that her trees will be taken down and that water quality could be impacted. Ms. Kiefer worries that noise impacts could occur due to her proximity to the line. Ms. Kiefer also expressed concern with safety. Mr. Koegel responded that DCW has looked into alternative siting with the Mower County Engineer and that the plan on the north side of the property was to have the wires hanging further out from the house. Ms. Kiefer noted that her husband got cancer shortly after Xcel Energy transmission lines were installed near their home, and expressed her view that stray voltage was a contributing cause. Ms. Kiefer asked whether this could happen again. Mr. Koegel responded by noting the studies he is aware of, some of which are noted in the EA, indicate that safety will not be compromised by the Project. Ms. Kiefer also asked whether monitoring has taken place to verify stray voltage levels. Mr. Koegel believed that monitoring has been done in the past. Ms. Steinhauer added that DOC-EERA sent notices out and that Ms. Keifer's name should have been included on those notices.[485,486]

350. Rod Peterson, from Canisteo Township and Dodge County Commissioner, stated that while it is good that DCW got an MOU from Mower, most of the HVTL's

[483] Kasson 6:00 p.m. Tr. at 5-24 (Dec. 19, 2023).
[484] *Id.* at 24-29.
[485] *Id.* at 29-41.
[486] It was later realized that a number of properties adjacent to one of the proposed routes did not receive notice. To remedy this oversight, additional notice was provided and the period for written hearing comments was extended. *See* Notice of Environmental Assessment Availability, Public Hearings and Extended Comment Period (Jan. 11, 2024) (eDocket No. 20241-202087-02).

footprint is in Dodge County. Mr. Peterson noted that agriculture is a big part of Dodge County's identity, and the HVTL will inevitably affect that identity. Mr. Peterson requested that the Highway 56 Route Alternative be chosen because it minimizes impact to local residents' land.[487]

351. Gregg Mast, executive director of CEEM, overviewed the purpose of CEEM and expressed support for the Project based on its economic, employment, and clean energy benefits. Mr. Mast maintained that 60,000 Minnesota clean energy jobs exist and that the Project will continue to drive that employment. Mr. Mast also asserted that the Project is needed to reach the 100 percent renewable energy goal mandated by Minnesota law.[488] A copy of Mr. Mast's statement was entered into the record as Exhibit #2.[489]

352. Mark Moenning, a farmer from Dodge County, noted that he has been in consistent contact with DCW for about seven years. Mr. Moenning stated that stray voltage has a negative impact on livestock. Mr. Moenning offered that DCW has not done enough outreach to landowners in the region. Mr. Moenning also recommended that the Project not be approved based on the presence of existing facilities, aboveground and underground. Mr. Moenning questioned what will happen if a route is approved that is not workable. Mr. Cameron clarified that radar will be used to try to identify underground facilities that could impact the location of poles. Mr. Koegel added that DCW would need to work with utilities to work around underground utilities, and shifts could be implemented. Mr. Moenning questioned the need for the Project and whether it will be reliable. Mr. Moenning advocated that the Commission further investigate the "no build" option.[490]

353. Rod Peterson appeared again to express concern regarding the economic impact of the Project and noted that there should be a preference for local employment. Mr. Peterson also noted that there are countervailing economic negatives but recognized the benefit of the taxes for Dodge County.[491]

354. Benjamin Tempel, a Dodge County resident, asked for confirmation that comments submitted by Dodge County asserting sole authority over their ROW and designation of acceptable pole locations reflected an accurate legal position. Judge Middendorf noted that Dodge County is saying that they hold the legal right to that territory but indicated that the parties will need to brief this issue and it will need to be further researched. Mr. Tempel mentioned that the Project is planned to operate for 30 years and asked what would happen after that time. Mr. Cameron stated that the contract could potentially be renewed. Ms. Steinhauer added that the standard length of a Site Permit is 30 years, and the Project will have to be decommissioned at the end of the permit life. Ms. Steinhauer also noted that DCW could request an extension from the Commission. Mr. Tempel asked if money is set aside for decommissioning, and, if so, how much.

[487] Kasson 6:00 p.m. Tr. at 41-42 (Dec. 19, 2023) (Peterson).
[488] *Id.* at 43-47.
[489] Ex. PUC-200 (Public Exhibit 2 Statement by Clean Energy Economy Minnesota).
[490] Kasson 6:00 p.m. Tr. at 47-54 (Dec. 19, 2023) (Moenning).
[491] *Id.* at 54-56.

Ms. Steinhauer noted that the decommissioning plan is updated consistent with the Site Permit. Ms. Steinhauer added that there is a requirement to decommission at the end of the Project's life. Mr. Tempel asked why the HVTL is not terminating at the Owatana substation or the Byron substation. Mr. Cameron explained that the Byron substation was the original substation and GRE preferred the Pleasant Valley substation as a point of delivery. Mr. Cameron added that the Owatana substation was not selected due to GRE's needs. Mr. Tempel noted that the Project does not even provide power to the area through which the route passes. Mr. Tempel also questioned why the lines are not proposed to be buried. Mr. Koegel stated that burying the lines is not economical or standard practice. Mr. Koegel added that there is much more ground disturbance and impact to underground facilities where lines are undergrounded. Mr. Koegel also noted the ease of repair for overhead lines as opposed to underground. Mr. Tempel countered that Germany buries high voltage lines.[492]

355. Mr. Quam asked whether the PUC representative had considered whether county ROW can be determined by the county. Mr. Panait noted that counties can have special requests accommodated but noted there is often a resolution that accommodates any unique needs of the county. Mr. Quam added that there have been times when the county has been overruled by the Commission. Judge Middendorf explained to attendees that private property rights come from the constitution, whereas a public entity's property rights are generally the creation of statutes. Mr. Quam expressed hope that the routing would be precisely determined instead of landowners feeling risk that their land could be disturbed. Mr. Quam also indicated that he was interested in comparing the federal subsidy as compared to the tax benefit. Mr. Cameron pointed out that there are production tax benefits associated with the Project but added that he did not have the subsidy info.[493] Judge Middendorf requested that DCW provide information on the public monies received for the Project, subject to appropriate confidentiality protections.[494]

356. Mr. Dornfeld, on behalf of DOC-EERA, asked Mr. Cameron about whether DCW could commit to ensuring Ms. Kiefer will receive all required notices. Mr. Cameron agreed to do so.[495]

357. Mr. Revell, on behalf of DCW, asked Mr. Koegel about the process of developing the routes. Mr. Koegel discussed the ATF process and how routes were developed. Mr. Koegel also described how obtaining utility permits would work.[496]

358. Lauren Cornelius, environmental service director for Dodge County, explained that the County's initial stance was that a private entity cannot use ROW, but legislation has changed and now allows such access. Ms. Cornelius added that if ROW is now open, then MnDOT ROW is now open, and the County's stance is that the wider MnDOT should be used. Ms. Cornelius asserted that Dodge County rejected the MOU because the Highway 56 Route Alternative is the County's preferred route. Ms. Cornelius

[492] *Id.* at 56-68.
[493] *Id.* at 68-74.
[494] *Id.* at 73-75, 78.
[495] *Id.* at 75.
[496] *Id.* at 75-77.

noted the stray voltage concern and specified that the MnDOT route has no feedlots, whereas the Hybrid Route Alternative has seven. Ms. Cornelius added that if the County is to allow private entities into ROW, then the County should determine where pole placements go. Ms. Cornelius added that normally operations permits are not placed on these projects, but since the developer is a private entity, it should be required to get an operations permit.[497] Exhibit 3, a map brought by Ms. Cornelius showing feedlots in Dodge County in proximity to the proposed transmission routes, was entered into the record.[498]

359. Mr. Peterson appeared again, noting that there have been several developers working on the Project. Mr. Peterson noted that the original project could not be completed due to upgrades required at the Byron substation. Mr. Peterson emphasized that communication from DCW has been lacking.[499]

360. Mr. Moenning again appeared and referenced blade issues at the McNeilus wind farm and the Wind Project's potential fire hazard. Mr. Moenning mentioned that fire suppression should be incorporated in the design of the Project and that it should be a condition of the Site Permit. Mr. Moenning also mentioned he is not necessarily opposed to wind as a supplemental energy source. Mr. Gauger responded that thermal events in turbines are incredibly rare, and DCW works with emergency management services for the safety of the public. Mr. Gauger also mentioned that cranes will be walked on mats in order to ensure the safety of the public and those individuals working on the Project. Mr. Cameron added that there is an emergency response plan that will be filed. Ms. Corbett said the emergency response plan will be filed as part of the compliance filing process.[500]

361. Mr. Tempel asked whether the Mayo Clinic has been consulted. Ms. Steinhauer indicated that she will reach out to the Mayo Clinic. Mr. Cameron indicated he has not personally communicated with the Mayo Clinic.[501]

D. Public Comments and Questions at the December 20, 2023 6:00 p.m. Virtual Hearing

362. The remote access hearing began at 6:00 p.m. Introductions similar to those provided at the December 19, 2023 hearing were given by the PUC, DOC-EERA, and the Applicant. In addition, Mr. Koegel provided an introduction to the routes, and described the coordination that had taken place with Dodge and Mower Counties regarding the development of the routes since the completion of the ATF process.[502]

363. The following individuals provided oral comments at the December 20, 2023 6:00 p.m. remote access hearing: Eric Caspers, Kayla Christensen, and Mark Moenning.

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[497] *Id.* at 78-81.
[498] Ex. PUC-201 (Public Exhibit 3 Map of Dodge County Feedlots).
[499] Kasson 6:00 p.m. Tr. at 82-83 (Dec. 19, 2023) (Peterson).
[500] *Id.* at 83-88.
[501] *Id.* at 88-90.
[502] Remote Access 6:00 p.m. Tr. at 4-28 (Dec. 20, 2023) (Koegel).

364. Eric Caspers, supervisor of Hayfield Township and member of ATF, raised the issue of eagle mortalities at the facilities of DCW affiliates and the Project's foreseeable eagle deaths. Mr. Capsers added that there have been communication issues with DCW concerning what is going to happen in relation to the Project. Mr. Caspers added that, in the ATF process, all that was being discussed was the safety of pole placement and he agreed that there were safety issues concerning the placement of poles in narrow township ROW. Mr. Caspers also claimed that safety issues were not properly considered by DCW. Mr. Caspers asked whether Dodge County or Mower County objected to the usage of the narrower ROW. Mr. Koegel added Waltham Township and Mower County expressed that concern. Mr. Koegel added that proposed pole placements are as close to the edge of the ROW as possible and added that in some instances there are slope easements that move the poles even further out. Mr. Caspers asked which route DCW prefers. Mr. Koegel responded that the Hybrid Route Alternative is DCW's preferred route due to it being less contentious than the other routes. Mr. Caspers also asked why the Byron substation was eliminated from consideration. Mr. Cameron responded that the original route into Byron substation was for a different customer and that proposal did not work out. Mr. Caspers stated that shortening the length of the HVTL would lessen the environmental impact. Mr. Caspers also asked about the federal subsidies DCW is receiving with respect to the Project. Mr. Cameron added that 3 cents per kW is the federal Inflation Reduction Act (IRA) rate. Judge Middendorf asked whether the receipt of public monies is public information that can be communicated. Mr. Revell pointed out that information available to the Applicant has been provided in data requests that are attached to the EA. Mr. Revell indicated that total Project costs have been included with the data requests. Ms. Steinhauer added that there is high-level cost information included in Appendix G of the EA and that environmental impacts would be different, though unknown, if the Project were to interconnect to the Byron substation. Mr. Caspers asked about the cost of the HVTL and noted that the cost of decommissioning is significantly less than the cost of construction. Ms. Steinhauer clarified that decommissioning requirements will apply to both the HVTL and Wind Project. Ms. Corbett clarified that a decommissioning plan for the wind turbines was provided and salvage was removed. Ms. Corbett added that a transmission line estimate was put together, as well, and that a decommissioning plan will be revisited on a regular basis.[503]

365. Kayla Christensen, executive director of Minnesota Conservative Energy Forum, noted her support for the Project and emphasized that renewable efficiency is driving down the cost of electricity, which in turn lowers costs for consumers in Minnesota. Ms. Christensen noted that it is rare for power to be consumed near to where it is produced. Ms. Christensen also mentioned that transmission capacity at substations is an issue and the Pleasant Valley substation has available capacity for the Project. Ms. Christensen also noted that renewables are now cost competitive without subsidy and that PTC credits are typically passed along to consumers. Ms. Christensen also added that the production tax revenue associated with the Project would equate to about

[503] *Id.* at 30-52.

10 to 11 percent of the Dodge County budget. Ms. Christensen closed by expressing her support for the Project.[504]

366. Mr. Caspers added that the community outreach from DCW has been weak, and no permission was requested by DCW prior to doing boring sampling. Judge Middendorf asked if there is a condition that could be added to the permit to alleviate the township's concerns about borings. Mr. Caspers responded that more communication is needed and that the township sometimes struggles to answer questions about borings from landowners.[505]

367. Mark Moenning asked about whether DCW would cooperate with Xcel Energy's transmission line along MN 56. Mr. Koegel responded that the proposed route would be on its own line and that the only co-location proposed would be with GRE. Mr. Moenning asked about how far lines need to be from fiberoptic or telephone lines. Mr. Koegel said that this will be coordinated with any utility or fiberoptic company that owns the lines and that underground detection would be used to detect where underground facilities are located. Mr. Moenning added that an individual said that five feet of clearance is ordinarily preferred. Mr. Moenning also questioned whether the Hybrid Route Alternative would impact the parcel at 210th and County Road 4 and questioned whether property lines can be used to alleviate resident concerns, adding that leadership would need to take place if that route is chosen. Ms. Steinhauer asked Mr. Moenning about the parcel size at the location he noted, and whether it would be preferable to move the poles out of the ROW. Mr. Moenning clarified that the size of the parcel allows for routing around an area that could impact dairy farming. Mr. Koegel responded that to the best of his knowledge the preliminary pole locations were on the south side of the road and suggested that continued coordination will be undertaken, which could lead to an alteration. Mr. Koegel added that he could evaluate the feasibility of potential reroutes. Mr. Moenning asked whether pole locations were available. Mr. Koegel added that preliminary pole locations have been staked in the field with the county and are not final. Mr. Panait clarified that the Commission permits a route within an alignment, and pole finalization takes place later. Ms. Steinhauer clarified that the preliminary pole placements for the Hybrid Route Alternative are included in the MOU attached to Mr. Cameron's testimony.[506]

E. State Agency Written Hearing Comments

368. Four state agencies submitted comments following the hearing: DOC-EERA, MnDOT, MnDNR, and the Minnesota Indian Affairs Council (MIAC).

[504] *Id.* at 52-57.
[505] *Id.* at 57-59.
[506] *Id.* at 60-78.

1. DOC-EERA

369. DOC-EERA's filed hearing comments summarized changes to proposed Site and Route Permit conditions that had been included in the DRP and DSP attached to the EA.[507]

370. DOC-EERA's comments also recommended that DCW combine the Wind Project and Transmission Project decommissioning plans and proposed that DCW make the following updates and adjustments in the formation of a consolidated plan:

- Revise the cover of the decommissioning plan to include the date of the plan and the Commission's docket numbers for the Project and add a table of contents;
- Have the cost estimates included in the pre-construction decommissioning plan be prepared by an independent entity;
- Add to the project description: (i) a site map showing the final location of project components; (ii) a description of the transmission project including a route map showing the final location of easements, transmission poles, guy wires, and other facilities associated with the transmission line; (iii) updated information on the number and model of turbines, and number of MET towers, aircraft lighting detection system facilities, miles of access roads, miles of underground collector lines, miles of 161 kV transmission line; (iv) the anticipated date of commercial operation; and (v) the date and eDocket location of the site and route permits when issued;
- Update the decommission plan to include the expiration date of the power purchase agreement with GRE;
- Revise the plan to identify the schedule for updates to the decommissioning plan;
- Include a preliminary list of required permits;
- Include more detail about the assumptions for salvage, recycling, and disposal of project components;
- Update cost information to incorporate final number of turbines, the transmission route that is permitted, and including assumptions on the location of salvage locations, recycling facilities, and disposal facilities along with cost estimates for transport of materials to these destinations;

[507] Comment by DOC-EERA at 4-7 (Feb. 1, 2024) (eDocket No. 20242-202977-01).

- Clarify the anticipated financial assurance instrument, the beneficiary of the financial assurance, and the timeframe for full funding of the financial assurance instrument; and

- Clarify that the beneficiary of the financial surety is a governmental unit rather than individual landowners.[508]

371. DOC-EERA's comments also note that DOC-EERA reached out to the Mayo Clinic Ambulance Service and that the clinic indicated that Mayo Clinic's Air Ambulance Helicopters treat turbines and wind generating facilities in the same way that other obstacles are managed: through use of navigation aids, aircraft safety technology, and local emergency responders to coordinate a safe landing place.[509] According to DOC-EERA's comments, Mayo Clinic indicated that navigating around wind generating facilities has not to date created a barrier to care.[510]

2. MnDOT

372. MnDOT filed comments clarifying the required permitting for the Project's transmission lines and the various conditions and authorities with which DCW must comply. MnDOT indicated in its comments that it reserves the right to dictate the placement of any utilities seeking occupation within state trunk highway ROW and added that utility easements do not apply within MnDOT ROW.[511]

373. MnDOT noted in its comments that safe points of access from MnDOT ROW, whether at an existing or new access point, is at the discretion of the road authority and that new highway access permits will be required.[512] For utility construction in MnDOT ROW, MnDOT clarified that DCW is required to develop a written traffic control plan based upon the Minnesota Manual on Uniform Traffic Control Devices and the Temporary Traffic Control Zone Layout Field Manual, and that the MnDOT Traffic Office must approve the plan.[513]

374. MnDOT added that, to the extent possible, DCW should work to ensure that Project construction, placement and maintenance does not interfere with the intended functions of the road ROW or MnDOT's ability to perform roadway maintenance activities.[514] MnDOT also suggested in its comments that DCW should understand its full responsibilities under Minn. R. 8810.3100 to 3600 and Minn. Stat. § 161.45.[515]

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[508] *Id.* at 1-3.
[509] *Id.* at 4.
[510] *Id.*
[511] Comment by MnDOT at 1 (Jan. 23, 2024) (eDocket No. 20241-202516-01).
[512] *Id.* at 2.
[513] *Id.*
[514] *Id.*
[515] *Id.* at 3.

375. MnDOT also provided with its comments an attachment with extensive comments relating to transmission line sited solely within MnDOT ROW.[516]

3. MnDNR

376. MnDNR's filed comments expressed its support for the Hybrid Route Alternative and appreciation at having its proposed conditions being included in the Project's Site and Route Permits. MnDNR asserts that the Hybrid Route Alternative most effectively avoids rare features and communities.[517]

377. MnDNR's comments also add that DCW will need to obtain a no effect concurrence decision from MnDNR prior to construction to ensure that calcareous fens are not impacted or altered.[518]

378. MnDNR's comments also reference that a robust postconstruction fatality monitoring plan will be necessary to assess bird and bat fatalities at the Project site, and advised that all wind projects in Minnesota are currently required to conduct post-construction fatality monitoring for a minimum of two days per week for two years.[519]

4. MIAC

379. MIAC filed comments recommending additional cultural resource management fieldwork within all Project areas, and consideration be given to archaeological monitoring.[520] MIAC also requested to remain a consulting agency throughout the Project's duration.[521]

F. County and LGU Written Hearing Comments

380. The three counties involved in the Project – Dodge, Mower, and Steele – each filed comments following the hearing. The City of Hayfield also filed comments.

1. Dodge County

381. Dodge County is the county most affected by the Project. Dodge County's comments reflected its preference for the Highway 56 Route Alternative, emphasizing that the route makes better use of wider MnDOT ROW, which the County asserts will result in fewer impacts. Dodge County also reiterated that, notwithstanding recent legislative changes, it retains the authority to permit utilities in its ROW and accommodate them when possible.[522]

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[516] *Id.* at Attachment 1.
[517] Comment by MnDNR (Feb. 1, 2024) (eDocket No. 20242-202994-01).
[518] *Id.* at 1-2.
[519] *Id.* at 2.
[520] Comment by Minnesota Indian Affairs Council (Jan. 10, 2024) (eDocket No. 20241-202107-02).
[521] *Id.*
[522] Comment by Dodge County at 1 (Jan. 22, 2024) (eDocket No. 20241-202433-03).

382. Dodge County recommended several conditions. One of Dodge County's proposed permit conditions is a Route Permit condition requiring DCW to have an operations plan, regardless of route selected, to adequately respond to flooding, drainage, and weed issues.[523] Dodge County also recommended a Route Permit condition requiring a stormwater impact bond and that the MPCA review DCW's National Pollutant Discharge Elimination System (NPDES) permit and Stormwater Pollution Prevention Plan (SWPPP) on a monthly basis during construction.[524] Dodge County also proposed a permit condition that would require DCW to post financial security for potential private property damage from a natural disaster or turbine failure.[525] Additionally, Dodge County proposed a permit condition requiring that, at the end of the Project's life, DCW completely remove all Project facilities and cabling, not just down to a depth of four feet.[526] Lastly, Dodge County also proposed a Route Permit condition requiring stray voltage baseline monitoring and posting of a surety bond to cover post-installation stray voltage testing.[527]

383. Dodge County also requested that underground installation of the HVTL be further explored.[528]

2. Mower County

384. Mower County filed comments stating its preference for the Hybrid Route Alternative on the basis that it avoids using 66-foot township ROW. Mower also noted a concern that it would not be able to permit the HVTL if poles must be sited within clear zone areas. Mower County offered in its comments three potential solutions that could be required of the Applicant: (i) acquire more ROW and move poles further from the centerline; (ii) construct traffic barriers; and (iii) re-slope at DCW's cost.[529]

385. Mower County also requested that an NPDES Permit and SWPPP become part of any Route Permit issued by the Commission, and that stray voltage be monitored, and, if necessary, remediated at feedlots.[530]

386. Mower County noted in its comments that the Highway 56 Route Alternative passes within 40 feet of two residences and a commercial facility in Mower County, which violates the County's established 40-foot minimum setback from ROW.[531]

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[523] *Id.* at 1.
[524] *Id.* at 2.
[525] *Id.*
[526] *Id.* at 3.
[527] *Id.* at 2.
[528] *Id.*
[529] Comment by Mower County at 3-4 (Jan. 23, 2024) (eDocket No. 20241-202666-01).
[530] Comment by Mower County at 5 (Jan. 29, 2024) (eDocket No. 20241-202869-02).
[531] *Id.*

3. Steele County

387. Steele County filed comments requesting that the following items be made a part of any permit issued by the Commission:

- A requirement that collector lines within or across public road ROW receive approval or a permit from the local road authority;
- A requirement that access roads connecting onto public roads will need permission or permit(s) from the local road authority, or, in cases where the access roads access county roads, a Steele County access permit is required;
- A provision indicating that the use of public roads for Project construction and the movement of materials and equipment on public roads may require special permits or a development agreement with the local road authority;
- A requirement that wind turbines and any ancillary buildings, or MET towers receive a building permit from the Steele County Building Inspection Department;
- A requirement that turbines or groups of turbines display addressing and signs as determined by Steele County; and,
- A requirement that the location of any construction and / or storage yards receive zoning approval from Steele County.[532]

4. City of Hayfield

388. Rich Fjerstad, Hayfield City Mayor, filed comments on behalf of the City of Hayfield, expressing the City's concerns and disapproval of the Project. Mayor Fierstad stated that the Project would impact the ability to land air aid from Mayo Clinic, endangering the public by increasing response times. Mayor Fierstad offered other concerns including: aesthetic impacts, roadway safety, snapping power poles and related maintenance, the use of public ROW, whether the local community will benefit from the value created by the Project, the cost of wind energy, property values, public health, wildlife impacts, and where the energy from the Project will be provided.[533]

G. Written Hearing Comments from the Public

389. Karen Biel filed comments in opposition to the Project because of the impact on farming, aerial applicators, and drainage, as well as the efficiency of wind power.

[532] Comment by Steele County (Jan. 31, 2024) (eDocket No. 20242-203040-02).
[533] Comment by Rich Fjerstad, Hayfield City Mayor (Feb. 1, 2024) (eDocket No. 20242-203042-01).

Ms. Biel also expressed concern about the precedent that would be set by allowing a private entity to use public ROW.[534]

390. John Iverson, with the Thompson Cemetery Association, submitted comments in support of the Project due to its contribution of funds to the cemetery, which would keep the cemetery free from needing taxpayer funds.[535]

391. Dale and Nancy Mussman, of Claremont, filed comments in support of the Project.[536]

392. Jeremy Kiefer, a supervisor for Waltham Township, filed comments expressing concern regarding the Transmission Project's use of public ROW and its effect on drainage and the community as a whole. Mr. Kiefer also expressed concern regarding stray voltage impacts on public health.[537]

393. Ross Anderson, a supervisor for Waltham Township, submitted comments expressing opposition to the Highway 56 Route Alternative, emphasizing that there is not sufficient ROW in township road ditches for the Transmission Project's poles.[538]

394. John Schmeling, a landowner in Dodge County, questioned whether a closer substation was available for the Transmission Project and whether state funds were being used to support the Project. Mr. Schmeling noted that the Highway 56 Route Alternative was the least objectionable route of Dodge County and most of its landowners, and questioned whether the line may be expanded over time. Mr. Schmeling also expressed doubt that the employment and corresponding economic benefits of the Project would materialize. He also expressed that the HVTL should not be routed near the Behounek dairy.[539]

395. Bruce Schmoll, from Claremont, offered support for the Project, noting the large amount of time that has been allotted to analyzing it. Mr. Schmoll cited the economic benefits he expects the Project would provide, not only to participating landowners, but also the county as a whole.[540]

396. Roger Kruger opposes the Project because of concerns about the environmental impacts of the Project. Mr. Kruger also expressed concern regarding the potential safety impacts of placing the HVTL's poles in public ROW and the public funding and tax impacts of the Project.[541]

397. Joe and Evelyn Stransky filed comments opposing the Project. The comments expressed that renewable forms of energy like wind and solar are inefficient

[534] Ex. PUC-193 (Comment by Karen Biel).
[535] Ex. PUC-196 (Comment by Thompson Cemetery Association).
[536] Comment by Dale and Nancy Mussman (Dec. 18, 2023) (eDocket No. 202312-201314-01).
[537] Comment by Jeremy Kiefer (December 19, 2023) (eDocket No. 202312-201377-01).
[538] Comment by Ross Anderson (Dec. 19, 2023) (eDocket No. 202312-201376-03).
[539] Comment by John Schmeling (Dec. 20 2023) (eDocket No. 202312-201457-03).
[540] Comment by Bruce Schmoll (Dec. 19, 2023) (eDocket No. 20241-201787-01).
[541] Comment by Roger Kruger (Dec. 29, 2023) (eDocket No. 20241-201786-01).

and take valuable farmland out of production. The comments also expressed concern about how the flow of subsidies to the Project could cease, thereby causing the Project to be abandoned.[542]

398. Ryan Lubben, Owner of West Central Ag-Air Inc., filed opposition comments because the Project will substantially and negatively impact the ability of aerial applicators to safely apply crop protection products, seeds, and fertilizers, thereby impacting growers both financially and environmentally. Mr. Lubben provided maps with his comments showing that his regularly flown routes intersect with the Project area and expressed concern that needed turn-around distances could be greatly impacted by the Wind Project. Mr. Lubben also highlighted that the HVTL would cause a significant risk to aerial applicators.[543]

399. Brady Kramer of Hayfield Township filed comments expressing concern about the impacts stray voltage and EMF could have on his farm, which all three proposed transmission-line routes pass. Mr. Kramer mentioned that he has approximately 4,400 hogs on his farm throughout the year.[544]

400. Jill Nelson, with Olmar farms, submitted comments expressing concern regarding the effect of Very Low Frequency currents on dairy cows, and requested the Commission require stray voltage testing as a permit condition for DCW.[545]

401. Mark Moenning filed comments expressing concern regarding the reliability of the Wind Project and its potential for malfunction or to cause fires. Mr. Moenning also expressed dissatisfaction at the number of Project developers that have been representing DCW. Mr. Moenning recommended that fire suppression for the wind turbines be mandated as a permit condition. Mr. Moenning also recommended that the Hybrid Route Alternative should not receive any consideration unless it is routed to the south around the intersection of 210th Ave and County Road 4. Mr. Moenning also questioned whether there would be a closer available substation for interconnection of the HVTL and expressed a desire that the field-representative condition of DCW's permits be strengthened to include local supervision.[546] Mr. Moenning later filed additional comments again questioning whether a substation nearer to the Wind Project was available and expressing his view that the Project seems to have been developed in a rush to meet political mandates.[547]

402. Ken Hafstad, on behalf of Jennie-O Turkey Store, Inc., filed comments noting that there are eight proposed turbines within one mile of their turkey farm, with one turbine as close as one-third of a mile from the farm. Mr. Hafstad's comments

[542] Comment by John and Evelyn Stransky (Dec. 27, 2023) (eDocket No. 20241-201840-03).
[543] Comment by Ryan Lubben (Jan. 8, 2024) (eDocket No. 20241-201957-01).
[544] Comment by Brady Kramer (Jan. 4, 2024) (eDocket No. 20241-201951-02).
[545] Comment by Jill Nelson (Jan. 10, 2024) (eDocket No. 20241-202108-01).
[546] *Id.* (Comment by Mark Moenning).
[547] Comment by Mark Moenning (Feb. 1, 2024) (eDocket No. 20242-203047-01).

expressed concern about the potential negative impacts wind turbines could have on avian species, and cited studies in support.[548]

403. Keith Behounek, an owner of Behounek Dairy, Inc. in Hayfield Township, noted that the Hybrid Route Alternative passes within 100 feet of where livestock will be grazing and would be close to other current- and planned-dairy-facility expansions at the farm. Mr. Behounek expressed concern regarding the effects an HVTL could have on his farm and recommended a condition be added to DCW's permit requiring stray voltage monitoring.[549]

404. Ron, Rhonda and Kyle Behounek, with Behounek Dairy, Inc., echoed the comments provided by Keith Behounek in the above paragraph, and expressed a preference for the Highway 56 Route Alternative. The comments also requested that stray voltage monitoring be added as a condition to DCW's permit.[550]

405. Karen Larson, a pastor with a church in Dodge County, supports the Project, noting that it will increase the availability of clean energy and mitigate damage being done to the air and climate caused by burning fossil-based fuels.[551]

406. James Hahn, of Mower County, expressed concern regarding the potential transmission line routes, particularly the Hybrid Route Alternative due to its proximity to homes and livestock facilities.[552]

407. Ross Bailey, a dairy veterinarian who has worked with Behounek Dairy for over 30 years, objects to the Project because stray voltage can cause problems in dairy production and recommended the HVTL not come within a half mile of an active dairy.[553]

408. Heather Behounek, who has been involved with Behounek Dairy for over 11 years, filed comments expressing concern regarding the effects of stray voltage on dairy production at the Behounek farm. If the Project secures the necessary approvals, Ms. Behounek prefers the Highway 56 Route Alternative.[554]

409. Duane Klocke, of Hayfield Township, submitted comments questioning whether a nearer termination point for the HVTL was available and noting the aesthetic impacts of the Wind Project. Mr. Klocke also referenced how the government is financially supporting the development of renewable energy, but expressed doubt about whether the power generated by the Project will be cost effective.[555]

[548] Comment by Ken Hafstad (Jan. 10, 2024) (eDocket No. 20241-202108-01).
[549] *Id.* (Comment by Keith Behounek).
[550] *Id.* (Comment by Ron, Rhonda and Kyle Behounek).
[551] Comment by Karen Larson (Jan. 9, 2024) (eDocket No. 20241-202136-03).
[552] Comment by James Hahn (Jan. 10, 2024) (eDocket No. 20241-202134-03).
[553] Comment by Ross Bailey (Jan. 11, 2024) (eDocket No. 20241-202268-02).
[554] Comment by Heather Behounek (Jan. 18, 2024) (eDocket No. 20241-202320-02).
[555] Comment by Duane Klocke (Jan. 22, 2024) (eDocket No. 20241-202555-02).

410. John Kruger of Hayfield Township filed comments expressing opposition to the Project and questioning whether a substation nearer to the Wind Project is available. Mr. Kruger also expressed concern regarding the effects of stray voltage.[556]

411. Janice Durst, of Kasson, filed a comment expressing support for the Project.[557]

412. Matt Senjem filed comments listing numerous concerns related to the Project, including: aesthetic impacts, the use of public ROW, noise, its effect on crop production, wildlife impacts, atmospheric impacts, drainage, the potential use of eminent domain, stray voltage and EMF, shadow flicker, and communications interference.[558]

413. Martha Ziehwein, of Burnsville, filed comments expressing concern regarding the potential for drain tile and underground facility impacts along the MnDOT ROW that is part of the Highway 56 Route Alternative.[559]

414. Minnesota Land and Liberty Coalition filed comments in support of the Project and expressed frustration at the permitting process and local officials, displeased that Dodge County does not appear to support the Project.[560]

415. Goodhue County resident Marie McNamara filed comments emphasizing the importance of the decommissioning plan and related financial assurances. Ms. McNamara also questioned the legal sufficiency of DCW's Applications and expressed concern regarding the noise emanating from the Wind Project and how that noise is evaluated. Ms. McNamara also questioned whether public notice for the Project was appropriately administered.[561]

416. LIUNA filed comments expressing support for the Project based on its socioeconomic benefits to the region and the creation of construction and maintenance jobs. LIUNA also mentioned the affordable clean energy that the Project will provide to members of cooperatives served by GRE and the safety benefits of using skilled union labor.[562]

417. Grant Klenert, of Hayfield Township, filed comments opining that the Project will counteract efforts made by Hayfield Township to attract citizens to the community. Mr. Klenert also noted the Project's impact on aerial crop spraying and the effects of shadow flicker. Mr. Klenert also does not support the Project's use of public ROW instead of private easements, which give individual landowners more control.[563]

[556] Comment by John Kruger (Jan. 26, 2024) (eDocket No. 20241-202817-02).
[557] Comment by Janice Durst (Jan. 29, 2024) (eDocket No. 20241-202805-02).
[558] Comment by Matt Senjem (Jan. 30, 2024) (eDocket No. 20241-202856-03).
[559] Comment by Martha Ziehwein (Jan. 29, 2024) (eDocket No. 20241-202855-03).
[560] Comment by Minnesota Land & Liberty Coalition (Jan. 31, 2024) (eDocket No. 20241-202909-01).
[561] Comment by Marie McNamara (Feb. 1, 2024) (eDocket No. 20242-203028-02).
[562] Comment by LIUNA (Feb. 1, 2024) (eDocket No. 20242-203026-03).
[563] Comment by Grant Klenert (Feb. 1, 2024) (eDocket No. 20242-203013-05).

418. Roger Sowieja, of Ashland Township, filed comments opposing the Project due to its potential for noise and shadow flicker impacts and its negative impact on the character of the region.[564]

419. Kayla Christensen, Executive Director of the Minnesota Conservative Energy Forum, filed comments expressing concern regarding the permitting process and how the actions of local officials involved in that process have created a guide for those who oppose renewable energy projects by demonstrating how to delay permitting and chase away future investments in the state. Ms. Christensen also expressed concern regarding how this opposition may impact Minnesota's legislatively set renewable standard, requiring 100 percent renewable energy by 2040.[565]

420. Paul and Deborah Burandt filed comments expressing support for the Project, emphasizing its tax revenue benefits to Dodge County and its potential to relieve the tax burden felt by landowners in the County. The comments also stated that only a small amount of land would be taken out of production, while still allowing farmers to continue their agricultural operations.[566]

421. Abby DeDina, an agriculture instructor at Blooming Prairie High School and advisor for the school's Future Farmers of America chapter, filed comments in support of the Project. Ms. DeDina's comments cited the importance of renewable energy and expressed excitement at having received wind generation STEM kits from DCW, which were included as an addition to her agricultural science course.[567]

422. Dennis and Joleen Tempel submitted a comment opposing the Project, claiming that it will damage farmland, cause bird and wildlife fatalities, and damage the physical and mental health of those in the community.[568]

423. Cynthia Sheely, of Dexter, filed comments expressing concerns regarding the Project's potential effect on aerial applicators, the aesthetic quality of the region, and on farming operations. Ms. Sheely recommended that the HVTL be undergrounded and buried to a depth of at least 6 feet.[569]

424. Kathryn Frette, of Ripley Township, filed comments opposing the Project due to its potential impacts on public safety. Ms. Frette emphasized that ROW setbacks are not wide enough and that the HVTL's pole placement could endanger drivers and farming operations. Ms. Frette also expressed a concern regarding the impacts of stray voltage.[570]

425. Tom Kramer, of Hayfield Township, filed comments listing numerous concerns related to the Project, including: whether the community will receive the value

[564] Comment by Roger Sowieja (Jan. 31, 2024) (eDocket No. 20242-203013-02).
[565] Comment by Minnesota Conservative Energy Forum (Feb. 1, 2024) (eDocket No. 20242-203011-03).
[566] Comment by Paul and Deborah Burandt (Jan. 24, 2024) (eDocket No. 20242-203009-01).
[567] Comment by Abby DeDina (Feb. 1, 2024) (eDocket No. 20242-203008-01).
[568] Comment by Dennis and Joleen Tempel (Jan. 31, 2024) (eDocket No. 20242-203007-01).
[569] Comment by Cynthia Sheely (Jan. 31, 2024) (eDocket No. 20242-203006-03).
[570] Comment by Kathryn Frette (Feb. 1, 2024) (eDocket No. 20242-203046-01).

the Project creates; public safety; property values; impact on aerial applicators; emergency services; use of public ROW; the cost of the electricity produced; wildlife impacts; noise; and shadow flicker.[571]

426. Glenn Hahn filed comments expressing his view that the Project provides no additional power to the electrical grid and that it only partially displaces natural gas. Mr. Hahn also expressed concern about stray voltage from the HVTL and its impact on dairy production. Mr. Hahn also questioned whether the Project will bring the claimed benefits and recommended consideration of undergrounding the wires.[572]

427. Tony Kramer, of Dodge County, filed comments in opposition to the Project. Mr. Kramer expressed concern about the Project's impacts on wildlife, human health on account of EMF, roads and transportation, community aesthetics and property values, and safety and emergency response.[573] Mr. Kramer recommended in his comments that the Wind Project's turbines be moved to an area less populated by farms and wildlife and that DCW be required to bury the HVTL's transmission lines.[574] Mr. Kramer also warned that if the Commission approves the Project, legal action to halt the Project may be brought.[575] Mr. Kramer also attached to his comments a list of over 300 individuals who have signaled opposition to the Project.[576] This list was filed in the dockets a second time.[577]

428. Mark Preul, Owner and President M&K Preul Farms LLC and Owner and General Manager Preul Farms LLC, filed comments in opposition to the Project. Mr. Preul cited numerous concerns related to the Project such as: subsidies and state encouragement of renewable energy, aviation and wildlife impacts, the reliability of wind power, aesthetic impacts, Project maintenance, and soils and agricultural impacts.[578]

429. Various individuals from around the state filed comments in support of the Project, noting the benefits to Dodge, Steele and Mower Counties, including up to $39 million that will be generated in additional tax revenue over the first 30 years, creation of jobs, and affordable energy. The comments noted that wind power helps the country move toward energy independence from foreign oil.[579]

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[571] Comment by Tom Kramer (Feb. 2, 2024) (eDocket No. 20242-203045-02).
[572] Comment by Glenn Hahn (Feb. 1, 2024) (eDocket No. 20242-203044-03).
[573] Comment by Tony Kramer at 1-5 (Feb. 1, 2024) (eDocket No. 20242-203043-01).
[574] *Id.* at 3.
[575] *Id.* at 4.
[576] *Id.* at Appx. B.
[577] Comment by Tony Kramer (Feb. 2, 2024) (eDocket No. 20242-203041-02).
[578] Comment by Mark Preul (Feb. 1, 2024) (eDocket No. 20242-203039-01).
[579] Ex. PUC-195 (Comments by Romona Jacobs, Sue Torgerson, Bruce Schmoll, Hannah Moe, Lori Withem, Raymond Grumney, Todd Koenigs, Clint Willette, Harlan Faircloth, Lyle Thompson, Richard Bromley, Amanda Kellogg, Dawn Iverson, Jeffrey Studley, Nancy Archer, Robert Kuhn, Brenda Peterson, Debra Young, Jenny Sack, Paige Hulne, Sharon Shelby, Bruce Bordelon, Gladys Alberts, Jon Fosness, and Patrick Segler); Comments by Thomas Deyo, Daniel Walterman, Karen Vincent, Amanda Rivers (Jan. 4, 2024) (eDocket No. 20241-201860-02); Comment by Donna Neubauer (Feb. 1, 2024) (eDocket No. 20242-203013-11); Comment by Mark Grossman (Feb. 1, 2024) (eDocket No. 20242-203013-08);

430. Many area residents filed comments opposing the Project. There is significant opposition to the proposed HVTL due to its length, use of road ROW, and ability to interfere with agricultural operations and area aesthetics.

H. DCW Reply to Hearing Comments

431. DCW submitted Reply Comments (1) detailing the factors supporting the Hybrid Route Alternative as the optimal route for the Project, (2) addressing concerns related to the Hybrid Route Alternative and proposed permit conditions, (3) responding to a range of other comments including those related to human health and safety, environmental impacts, and community engagement, and (4) finally, clarifying several logistical questions about the Project.[580]

432. First, DCW asserted that the Hybrid Route Alternative was the optimal route because it avoids narrow township ROWs and minimizes negative impacts on both communities and the environment. Both factors had been particularly and consistently identified by commenters, the counties, and state agencies throughout the proceeding. DCW explained that the Hybrid Route Alternative is responsive to concerns about ROW and negative impacts and has the support of Mower County and MnDNR while other route alternatives do not.[581]

433. Second, DCW responded to proposed permit conditions from Dodge, Mower and Steele Counties as well as DOC-EERA and MnDNR. DCW considers many of the conditions proposed by the counties to be unnecessary. Other proposed conditions, including those related to ROW maintenance and stormwater, could be addressed in local permits or approvals required for the Project.[582] Additionally, DCW indicated that it was largely agreeable with the proposed permit conditions from DOC-EERA and MnDNR related to prevailing wages, shadow flicker management, and conditions protective of certain species, and it would coordinate where appropriate with the MIAC and MnDOT.[583]

434. Third, DCW's filing addressed comments raising a range of issues related to the potential human, environmental and community impacts of the Project. Generally, DCW noted that the Project has been designed to comply with standards protective of human health, agriculture operations, and the environment. In particular, DCW responded to comments about stray voltage and EMF, setbacks from residences, ice fall and ice throw, risk of fire, clear zones and traffic safety, aviation safety and aerial spraying, emergency response and services, and water quality.[584] In addition, DCW noted that the

Comments by Elaine Hansen et al. (Jan. 29, 2024) (eDocket No. 20241-202830-03); Comments by Jake McQueen et al. (Jan. 29, 2024) (eDocket No. 20241-202811-02).

[580] Hearing Reply Comments by Dodge County Wind, LLC (Feb. 15, 2024) (eDocket No. 20242-203500-05).

[581] *Id.* at 2-4, 8, 10-11.

[582] *Id.* at 4-9.

[583] *Id.* at 9-12, 22.

[584] *Id.* at 12-18.

Project is designed to mitigate environmental harms, including to birds and bats, and will comply with permit conditions protective of the environment.[585]

435. Finally, DCW clarified logistical questions related to the financing and siting choices for the Project. Reiterating its statements at the public hearings, DCW explained that, generally, wind projects are eligible for PTCs, the credit rate for which is established by the IRA and publicly available. DCW also clarified that the length of the HVTL has nothing to do with the amount of public funding the Project receives. [586] In terms of siting, DCW acknowledged comments about other points of interconnection closer to the Wind Project but explained that the proposed Pleasant Valley Substation is the appropriate point of interconnection because it can accommodate the output of the up to 252 MW of generation provided by the Wind Project.[587]

436. DCW's decision to forego closer points of interconnection in favor of the Pleasant Valley Substation is a significant source of contention in these proceedings. In its reply to public comments, DCW claimed that the Pleasant Valley Substation is the only appropriate POI for the Project. According to DCW:

> [S]uggestions that other, or nearer, substations would be better points of interconnection fail to recognize that although a substation is in close proximity to the Project, it does not follow that it is a viable alternative. For example, a prior iteration of the Project proposed to have its transmission line interconnect at the Byron substation, but significant upgrade costs at the substation made the Project uneconomical and thus unconstructible. Critically, the Pleasant Valley substation can accommodate the new 161 kV line and associated substation equipment, as well as the up to 252 MW generation capacity of the Wind Project. Interconnection at the GRE Pleasant Valley Substation and use of its surplus interconnection capacity provides for optimization of existing transmission infrastructure because no interconnection system upgrades or associated system upgrade costs are required. The location of the Pleasant Valley Substation is also relatively proximate to the Wind Project, which allows for a more direct, and less obstructive, interconnection as compared to one greater in distance. At this time, DCW is prepared to have the Project interconnect at the Pleasant Valley Substation, having executed a Generator Interconnection Agreement for the full output of the Project in the second quarter of 2023.[588]

437. Given that the Project is designed to minimize costs for the Applicant while requiring local residents and LGUs to accept 27 miles of new HVTL, based upon its

[585] *Id.* at 19-21.
[586] *Id.* at 21.
[587] *Id.* at 18-19.
[588] DCW Reply at 23 (eDocket No. 20242-203500-05).

rejection of closer substations, additional permit conditions intended to minimize those impacts are appropriate, as discussed below.

VI. DESCRIPTION OF THE WIND PROJECT

438. The Project's up-to-252 MW[589] will be generated with up to 77 wind turbines. The total capacity will be generated using two GE models: the 2.52 MW turbine, with an approximately 116.5-meter (382-foot) rotor diameter (RD), and the 3.4 MW turbine, with an approximately 140-meter (460-foot) RD. In total, 12 GE 2.52 MW wind turbines and 65 GE 3.4 MW wind turbines will be constructed.[590] All of the turbines will attach Low Noise Trailing Edge (LNTE) serrations on the turbine blades to reduce sound impacts. LNTE serrations will be the same color as the turbine blades and will cover approximately 20-30 percent of the trailing edge of the outboard blade length.[591] In addition to the LNTE, three turbines will utilize NRO to ensure compliance with sound requirements. The NRO mode reduces the sound power level by lowering the rotor speed, which lowers the blade tip speed, and can modify the blade pitch.[592]

439. The Project's wind turbines will consist of a foundation, tower, nacelle, hub, and three blades. The turbine towers are comprised of tapered steel cylinders consisting typically of three to four sections joined together through factory-fabricated welds, which are automatically controlled and ultrasonically inspected during manufacturing per American National Standards Institute specifications.[593]

440. The Project also includes underground collection lines, crane walk paths, access roads, the DCW Substation, up to two MET towers, two ADLS towers, an O&M facility, and other associated facilities.[594]

441. The Project is expected to have an operational life of 30 years.[595]

442. An automated Supervisory Control and Data Acquisition system located at the DCW Substation will provide local and remote supervision and control of turbine equipment and performance.[596]

443. Each turbine will have a step-up transformer to raise the voltage to the 34.5 kV collection line system. Energy from the turbines will be routed through an underground electrical collection system that will deliver power to the DCW Substation.[597]

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[589] This figure accounts for the two proposed wind turbines removed from the Project during the proceedings. *See* Ex. DCW-138 at 1 (Cameron Direct).
[590] *Id.* at 9-10.
[591] *Id.* at 14.
[592] *Id*. at 47, 50; Ex. DCW-140 at 14 (Lampeter Direct) (eDocket Nos. 202312-201166-10 (CN), 202312-201166-11 (SP), and 202312-201166-12 (RP)).
[593] Ex. DCW-117 at 17 (DCW Amended Site Permit Application) (eDocket No. 20221-181456-01).
[594] *Id*. at 1, 20.
[595] *Id.* at 27.
[596] *Id*. at 17.
[597] *Id*.

444. DCW proposes to begin construction of the Project in second quarter of 2025 and enter commercial operations in the fourth quarter of 2025.[598]

445. DCW provides no assurances that it will use local or union labor. Rather, it has "committed to using reasonable efforts to employ at least 60 percent local labor during construction and to use union workers for skilled roles such as engineering and electrical construction."[599]

VII. WIND SITE LOCATION AND CHARACTERISTICS

446. The estimated size of the Project Site is 28,348 acres (44.3 square miles) of mostly agricultural land located in the western part of Dodge County and the eastern part of Steele County. The size of the Project Site provides sufficient room for the required setbacks and buffering of sensitive features. The turbines, access roads, DCW Substation, collection lines, MET towers, ADLS towers, and O&M facility will be located within the Project Site.[600]

447. Land use within the Project Area is primarily agricultural. Permanent land disturbance will be approximately 62 acres for turbines and associated facilities.[601]

448. The Project's layout follows Commission guidelines (Minn. Stat. § 216F.03, Minn. R. Ch. 7854).

VIII. WIND RESOURCE CONSIDERATIONS

449. DCW's affiliate NextEra Analytics, Inc. (NextEra Analytics) assessed the wind resource for the Project. Six temporary MET towers and three Triton sonic detection and ranging locations were used in NextEra Analytics' analysis. The data was collected in ten-minute intervals at the Project's location for an average of nearly four years. Based on the measured data, the overall average wind speed based on the turbine locations is 7.9 m/s at hub height with seasonal variations ranging from 6.6 m/s to 8.6 m/s.[602]

450. The prevailing frequency and energy direction sectors are south and northwest respectively.[603]

451. DCW expects an annual net capacity factor of approximately 38.9 to 46.5 percent and a projected average annual output of approximately 885,900 to 1,059,100 megawatt hours.[604]

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[598] Ex. DCW-138 at 9 (Cameron Direct) (eDocket No. 202312-201166-05).
[599] Ex. DCW-117 at 30 (DCW Amended Site Permit Application) (eDocket No. 20221-181456-01); Ex. DCW-141 at 5 (Gauger Direct) (eDocket No. 202312-201166-13).
[600] Ex. DCW-117 at 1, 5-6 (DCW Amended Site Permit Application) (eDocket No. 20221-181456-01).
[601] *Id*. at 92.
[602] *Id*. at 136-37.
[603] *Id*. at 141.
[604] *Id*. at 151.

IX. WIND RIGHTS AND EASEMENT/LEASE AGREEMENTS

452. DCW states it has completed securing landowner agreements for wind rights and property easements necessary to support the Wind Project.[605]

X. FACTORS FOR ISSUING A SITE PERMIT

453. Wind energy projects are governed by Chapter 216F of the Minnesota Statutes and Chapter 7854 of the Minnesota Rules. Minn. Stat. § 216F.01, subd. 2, defines a "large wind energy conversion system" as any combination of wind energy conversion systems with a combined nameplate capacity of five MW or more. Minn. Stat. § 216F.03 requires that a LWECS be sited in an orderly manner compatible with environmental preservation, sustainable development, and the efficient use of resources.

454. 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, which specifies, in relevant part, that the Site Permit determination shall be guided by, but not limited to, the following considerations:

> (1) evaluation of research and investigations relating to the effects on land, water and air resources of large electric power generating plants and high-voltage transmission lines and the effects of water and air discharges and electric and magnetic fields 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 and routes 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 and transmission technologies and 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 and routes including, but not limited to, productive agricultural land lost or impaired;

[605] Hearing Reply Comment by Dodge County Wind (Feb. 15, 2024) (eDocket No. 20242-203500-05).

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

(7) evaluation of alternatives to the applicant's proposed site or route proposed pursuant to subdivisions 1 and 2;

(8) evaluation of potential routes that would use or parallel existing railroad and highway rights-of-way;

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

(10) evaluation of the future needs for additional high-voltage transmission lines in the same general area as any proposed route, and the advisability of ordering the construction of structures capable of expansion in transmission capacity through multiple circuiting or design modifications;

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

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

455. The Commission must also consider whether the Applicant has complied with all applicable procedural requirements.

456. The Commission's rules require the 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.

XI. APPLICATION OF SITING CRITERIA TO THE PROPOSED PROJECT

A. Socioeconomic Considerations

457. The Wind Project is located in southeastern Minnesota in an agricultural/rural region within Dodge and Steele Counties. The proposed site is approximately 44.3 square miles (28,350 acres) located in western Dodge County (Ashland, Claremont, Ripely, and Westfield townships) and eastern Steele County (Aurora and Havana townships).[606]

458. Both Dodge and Steele Counties are part of the Minnesota Department of Employment and Economic Development Region 10, which is in the Southeast Planning Region. Between 2010 and 2022, the population in Dodge County grew by 4.5 percent

[606] Ex. DCW-117 at 5-6 (Amended Site Permit Application) (eDocket No. 20221-181456-01); Ex. DOC-160 at 2 (Environmental Assessment).

while the population in Steele County grew by 2.2 percent over the same period. The region continues to suffer from a shortage of workers which is slowing economic growth. Unemployment rates fluctuate with the economy, but the unemployment rate for Region 10 has been consistently about 0.1 to 0.5 percent below Minnesota's unemployment rate. In 2022, the unemployment rate in the region was 2.4 percent, somewhat lower than the state average of 2.7 percent. The unemployment rates for Dodge and Steele Counties were 2.7 and 2.8 percent, respectively.[607]

459. In 2022, the largest employment categories in Dodge County were manufacturing (24.6 percent), wholesale trade (12.1 percent), and educational services (11.6 percent); the largest 2022 employment categories for Steele County were manufacturing (25.7 percent), retail trade (14.8 percent), and healthcare and social assistance (12.6 percent).[608]

460. Overall, the Project is likely to impact the region by adding infrastructure, providing temporary and permanent jobs, increasing the counties' tax bases, and providing lease payments to Project participants.[609] The communities near the Project may receive some economic benefits as construction will generate numerous temporary and several full-time positions. Approximately 400 construction and five to eight full-time operations and maintenance jobs are expected as part of the Project.[610] DCW states it will make "reasonable efforts" to employ local labor for approximately 60 percent of the construction labor force.[611] It is anticipated that wages earned by local workers will have some positive effect on the local economy. Non-local workers may also provide a short-term boost to the local economy for food, lodging, fuel, and incidental expenditures. Local contractors and suppliers may be used for portions of the construction. Additional income may be generated for the county and state economy by way of the developer's expenditures and payment of state and local taxes. Payments for equipment, fuel, operating supplies, and other products and services may benefit local and regional businesses.[612]

461. Wind energy infrastructure in Dodge and Steele Counties might provide long-term economic benefits to some local landowners, the state, and the local economy of southwestern Minnesota. Participating landowners in the Project Area will benefit from annual lease payments and DCW will pay property tax and production taxes on the land and energy production to local governments. The Wind Project will pay a Wind Energy Production Tax to the local units of government of $0.0012 per kWh of electricity produced.[613] This results in an annual Wind Energy Production Tax ranging from

[607] Ex. DOC-160 at 51-52 (Environmental Assessment).
[608] *Id*. at 52.
[609] Ex. DCW-117 at 27 (Amended Site Permit Application) (eDocket No. 20221-181456-01).
[610] *Id*.; Ex. DOC-160 at 53-54 (Environmental Assessment).
[611] Ex. DCW-117 at 30 (Amended Site Permit Application) (eDocket No. 20221-181456-01); Ex. DCW-141 at 5 (Gauger Direct).
[612] Ex. DOC-160 at 53 (Environmental Assessment).
[613] *Id*. at 54.

approximately $750,000 to $1,000,000 for Dodge County after the first year, and between $120,000 and $180,000 annually for Steele County after the first year.[614]

462. The Project is not anticipated to significantly change the demographics of the Dodge or Steele Counties.[615]

463. DOC-EERA utilized the U.S. Environmental Protection Agency's (EPA) Environmental Justice Screening Tool to evaluate the Project Area and its associated census tracts to determine whether there may be disproportionate adverse human health or environmental effects on demographics identified in Minn. Stat. § 216B.1691, subd. 1(e). This tool suggests the exposure of the population in the Project area to environmental hazards is similar to, or less than, the state and national average exposure values across a range of variables relevant to the Project.[616]

464. Accordingly, the Wind Project's demographic and socioeconomic impacts are expected to be beneficial.

B. Land-Based Economies

1. Agriculture

465. Land use within the area of the Wind Project is primarily agricultural. Approximately 39 percent of the total site is classified as prime farmland, while approximately 57 percent is classified as prime farmland, if drained, and approximately 2.1 percent is considered farmland of statewide importance.[617]

466. The Wind Project is not expected to significantly impact agricultural land use or the general character of the area. While an estimated 0.8 acres of land per turbine will be taken out of agricultural production for the life of the Project to accommodate the turbine pad, in addition to an undetermined amount of acreage for access roads,[618] the DCW Substation, the O&M facility, and ancillary facilities, landowners may continue to plant crops near, and graze livestock up to the gravel roadway around each turbine pad.[619]

467. Large-scale impacts to agriculture or agricultural lands are not anticipated with the placement of turbines, access roads, and ancillary facilities in agricultural fields. The primary permanent impact to active agricultural land will be the reduction of crop production on the acres of cultivated crop removed from production in the Project area.[620] Aerial and ground application of agricultural chemicals may be more complicated due to

[614] Ex. DCW-138 at 18 (Cameron Direct).
[615] Ex. DCW-117 at 27 (Amended Site Permit Application).
[616] Ex. DOC-160 at 56 (Environmental Assessment).
[617] *Id*. at 74-75; Ex. DCW-117 at 91 (Amended Site Permit Application).
[618] *Id*. at 92 (Amended Site Permit Application).
[619] *Id*.
[620] Ex. DOC-160 at 75 (Environmental Assessment).

having to avoid the turbines and other obstacles. Because collector lines are underground below the plow zone there will be no permanent impacts.[621]

468. DCW reports that in 2016 there were 21 registered feedlots within the site out of 620 registered feedlots in Dodge County and 643 registered feedlots in Steele County.[622]

469. The proposed Site Permit contains several standard conditions to address agricultural mitigation and soil-related impacts:

- Section 5.3.5 requires protection and segregation of topsoil.
- Section 5.3.6 requires measures to minimize soil compaction.
- Section 5.3.7 requires DCW to "implement erosion prevention and sediment control practices recommended by the [MPCA]" and to obtain a Construction Stormwater (CSW) Permit. A CSW Permit requires both temporary and permanent stormwater controls to ensure that stormwater does not become a problem on or off-site.
- Section 5.3.10 requires DCW to adhere to Minnesota Department of Agriculture, MnDNR, and EPA pesticide requirements and to obtain approval from landowners prior to application.
- Section 5.3.11 requires DCW to develop an Invasive Species Prevention Plan to prevent introduction and spread of invasive species during construction of the Wind Project.
- Section 5.3.12 requires DCW to take reasonable precautions against the spread of noxious weeds.
- Section 5.3.15 requires DCW to promptly repair private roads.
- Section 5.3.18 requires DCW to take precautions to protect livestock during all phases of the Wind Project's life.
- Section 5.3.19 requires DCW to promptly replace or repair all fences and gates removed or damaged during all phases of the Wind Project's life unless otherwise negotiated with the landowner.
- Section 5.3.20 requires DCW to avoid, promptly repair, or replace all drainage tiles broken or damaged during all phases of the Wind Project's life unless otherwise negotiated with the affected landowner.

[621] *Id*.
[622] Ex. DCW-117 at 91-92 (Amended Site Permit Application).

- Section 5.3.22 requires DCW to restore areas affected by construction as soon as practical, but in all cases no longer than 12 months after completion of construction.

- Section 5.3.25 requires DCW to fairly restore or compensate landowners for damages to crops, fences, drain tile, etc. during construction.[623]

470. Although most of the Wind Project will not have significant agricultural impacts, the Project design decision to use GRE's Pleasant Valley Substation as the POI is the sole basis that 27 miles of HVTL is being proposed. That decision will impact aerial applicators and farmers if the Site Permit Application is granted and supports the recommended additional conditions described herein.

2. *Forestry and Mining*

471. Active forestry operations, including commercial timber harvest, woodlots, or other forestry resources do not occur within the Project Area. Impacts to forestry operations will not occur. Trees within the site typically consist of rows of trees functioning as shelter belts and windbreaks. There will be no impact to forestry operations from the Wind Project.[624]

472. The Aggregate Source Information System maintained by MnDOT does not identify any active mining operations within the site.[625]

473. The construction of the LWECS may increase the short-term demand for a sand and aggregate, which could benefit local mines through the purchase of materials, but any demand will be short-term and temporary and will not lead to new mines or the expansion of existing mining operations. Impacts to mining resources are anticipated to be negligible.[626]

474. Accordingly, the record shows that the presence of the Wind Project will have some impact to the area's agricultural land use but will not alter the general character of the area. To mitigate the agricultural impacts, a condition of the Site Permit should be that DCW be required to work with MDA to develop an AIMP.

C. Recreation and Tourism

475. Tourism in the Project Area is largely related to recreational activities including bird watching, fishing, hunting, canoeing/kayaking, hiking, and snowmobiling. Activities in the project area are associated with watercourses, Wildlife Management Areas (WMAs), Scientific and Natural Areas (SNAs), snowmobile trails, and county and

[623] *Id*. at 95-96; Ex. DOC-160 at 76-77 (Environmental Assessment).
[624] Ex. DOC-160 at 77 (Environmental Assessment).
[625] *Id*.
[626] *Id*.

city parks.[627] The Project will not impact these recreational areas directly but may indirectly impact recreational resources through aesthetic changes or construction noise.[628]

476. Rice Lake State Park is located approximately 1.6 miles north of the Wind Project's northern boundary.[629] Rice Lake is the source of the south branch of the middle fork of the Zumbro River and provides habitat to many species of wildlife, including migrating waterfowl and shorebirds. The park provides recreational opportunities for camping, hiking, canoeing, kayaking, snowmobiling, snowshoeing, hunting, and wildlife observation.[630]

477. In addition to Rice Lake State Park, four publicly managed areas are open to the public for recreational activities. Two WMAs (McMartin and Marsh Wren) are located adjacent or within one-half mile of the site.[631] Both WMAs provide opportunities for wildlife observation and hunting. The Hythecker Prairie SNA, a 40-acre prairie site, is open to the public for wildlife observation. The Dodge Center Creek Waterfowl Protection Areas (WPA) is adjacent to the western border of the site and is open to the public for hunting, fishing, and foraging. A snowmobile trail runs along the western edge of the Project Site.[632]

478. Turbines are likely to be visible in the distance from all the public recreation areas in the project vicinity. The nearest proposed turbine for the Wind Project is approximately 2.3 miles southwest of the southern border of the park. Construction of the LWECS will result in temporary noise and dust generation. Ice throw from turbine blades could potentially impact recreational users during the winter. Although there will be both temporary impacts from construction activities and a permanent aesthetic impact from the turbines, construction and operation of the Wind Project will not preclude future tourist activities in the area.[633]

479. Section 6.5 of the proposed Site Permit is a special condition that requires DCW to coordinate with local snowmobile groups regarding potential impacts to area snowmobile trails.[634] DCW has indicated that Wind Project turbines have been sited at least 1.1 times the total turbine height from snowmobile trails to minimize the potential for ice throw.[635]

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[627] Ex. DCW-117 at 78-81 (Amended Site Permit Application); Ex. DOC-160 at 77 (Environmental Assessment).
[628] Ex. DCW-117 at 81 (Amended Site Permit Application); Ex. DOC-160 at 77-78 (Environmental Assessment).
[629] Ex. DCW-117 at 80 (Amended Site Permit Application).
[630] Ex. DOC-160 at 78 (Environmental Assessment).
[631] Ex. DCW-117 at 78 (Amended Site Permit Application).
[632] Ex. DOC-160 at 78 (Environmental Assessment).
[633] *Id*.
[634] *Id*.
[635] Ex. DCW-117 at 97 (Amended Site Permit Application).

480. Accordingly, no direct permanent impacts from the Project to recreational resources are anticipated, as all turbines have been sited outside of recreational resource areas.[636]

D. Land Use

481. The LWECS is consistent and compatible with Dodge and Steele Counties' respective comprehensive plan goals to conserve farmland and natural resources and support economic and sustainable development.[637] The LWECS will be compatible with the rural and agricultural character of the counties. In Dodge County, the Wind Project will be sited in the Agricultural District. In Steele County, the Wind Project will be sited in areas primarily zoned agricultural. Even though the Wind Project is sited outside of incorporated areas, all of the infrastructure will be located at least one mile from all identified urban expansion areas.[638]

482. The 2019 Comprehensive Plan for Dodge County established a policy to protect agricultural and natural resource areas while practicing "smart growth" principles that make efficient and effective use of land resources and existing infrastructure and provide a mix of land uses that provide a variety of housing choices.[639]

483. Zoning is the primary tool the county uses to implement the comprehensive plan. The majority of land in the unincorporated area of Dodge County is zoned Agricultural.[640] Chapter 8 of the Dodge County Zoning Ordinance states: "The purpose of the Agricultural District is to retain, conserve, and enhance agricultural land in Dodge County and to protect this land from scattered residential development." Conditional uses in the agricultural district include wind installations. The agricultural district allows for wind and generating systems as a conditional use subject to performance standards.[641]

484. The broad goals of the 2007 Steele County Comprehensive Land Use Plan are to: protect, preserve, and enhance the quality of the natural environment and require development to take place in a manner, which makes wise use of Steele County's resources without degradation; make the most efficient and economical use of public funds and investments; and protect agricultural lands from encroachment by incompatible uses and provide assurance that such areas will remain agricultural in nature. While the Steele County comprehensive plan does not address renewable energy, the county zoning ordinance expressly provides for the development of wind infrastructure.[642]

485. Setback requirements for commercial wind installations are outlined in Section 16.51 of the Dodge County Zoning Ordinance and Section 1527 of the Steele

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[636] *Id*. at 81.
[637] *Id*. at 32.
[638] *Id*. at 42; Ex. DOC-160 at 58 (Environmental Assessment).
[639] Ex. DOC-160 at 58-59 (Environmental Assessment).
[640] *Id*. at Appx. D, Map D-1.
[641] *Id*. at 59.
[642] *Id*.

County Zoning Ordinance. The proposed Wind Project meets each county's minimum setback requirements for commercial LWECS.[643]

486. The proposed LWECS is compatible with existing land use and zoning.[644]

E. Sound

487. The Wind Project is subject to sound level requirements in Minn. R. Ch. 7030 for Noise Pollution Control. These rules are enforced by MPCA through the use of Noise Area Classifications (NAC) that are defined in subpart 2 of Minn. R. 7030.0050 in terms of land use. The sound standards for each NAC are defined in subpart 2 of Minn. R. 7030.0040.

488. Sound levels are measured and quantified using the logarithmic decibel (dB) scale. A sound level meter is used to measure sound. It contains "weighting networks" (e.g., A-, C-, Z-weightings) to adjust the frequency response of the instrument. The most commonly used weighting network is the A-weighting because it most closely approximates how the human ear responds to sound at various frequencies. The A-weighting network is the accepted scale used for community sound level measurements; therefore, sounds are frequently reported as detected with a sound level meter using this weighting. These sound levels are reported in decibels designated as "dBA".[645]

489. DCW conducted a survey of ambient noise levels at six locations in the Project Area in 2018 that showed existing nighttime L_{50} noise measurements ranging from 21 to 56 dBA when ground-level wind speeds were at or below 11 mph and winds at hub height corresponded to conditions in the modeling. The measured ambient sound levels exceeded 50 dBA at five of the six locations during the survey.[646]

490. DCW conducted a preliminary noise assessment of the proposed Wind Project, which modeled the anticipated sound levels that will be experienced at noise-sensitive receptors throughout the Project Area. The predicted turbine-only worst-case L_{50} sound level from the project wind turbines is 47 dBA. In instances where there is a high ambient noise level, the additional noise added by the turbines will increase the sound level by 0 to 2 dB, a change that is imperceptible to an average person. Anticipated noise levels from the DCW turbines and ambient background noise are expected to be below the MPCA L_{50} nighttime noise limit of 50 dBA.[647] Since the time DCW ran its shadow flicker analysis, DCW has made adjustments to the Wind Project by removing two proposed wind turbines. Although a new sound analysis has not been run,

[643] *Id*.; Ex. DCW-117 at 33 (Amended Site Permit Application).
[644] Ex. DCW-117 at 32 (Amended Site Permit Application); Ex. DOC-160 at 62 (Environmental Assessment).
[645] Ex. DCW-117 at 44-45 (Amended Site Permit Application).
[646] *Id*. at Appx. G, p. 48.
[647] *Id*. at 48.

lowering the number of wind turbines from 79 to 77 will lower potential sound levels in areas proximate to the removed turbines.[648]

491. The Applicant also modeled and estimated noise levels associated with the DCW Substation. Based on this modeling, the estimated sound level at the nearest receptor (a residence approximately 1,900 feet from the proposed substation site) is 34 dBA.[649] This noise level is at the low end of ambient noise levels in the Project area and would not be perceptible.[650]

492. DCW has incorporated into the project design a 1,400-foot setback from residences for compliance with MPCA noise standards.[651] Additionally, consistent with the 3 RD by 5 RD setback and Dodge County Zoning Ordinance requirements, the turbines in Dodge County will be set back from nonparticipating properties (measured at property line, not residence) by at least 1,147 feet or 3 RD in the non-prevailing wind direction and at least 1,911 feet or 5 RD, in the prevailing wind direction. Turbines in Steele County will be set back from non-participating properties by at least 1,911 feet or 5 RD to comply with Steele County's 5 RD by 5 RD setback.[652]

493. DCW's design of the Wind Project incorporates two design and operation features intended to reduce the aerodynamic noise that results from air flowing over the turbine blades, as follows:

- DCW will construct all turbines with LNTE serrations along the blades to reduce aerodynamic noise.

- Three of the 3.4 MW turbines will use NRO. Turbines equipped with NRO software allow the operator to lower the rotor speed, and consequently the tip speed, and optimize blade pitch angle to lower the noise produced as wind passes over the rotors. Three turbines (Turbine Nos. 58, 60, and 61) will operate in NRO.[653]

494. The Project has been designed to meet the MPCA state noise standards.[654] The Project was also designed to minimize the sound levels due to the wind turbines at the homes in the community, while also meeting the other constraints of the project design and regulatory requirements.[655]

495. Section 4.3 of the proposed Site Permit is a standard permit condition that requires DCW to comply with the MPCA noise standards with respect to all homes or other receptors in place at the time of construction. Section 7.4 of the proposed Site

[648] Ex. DCW-140 at 6, fn 1 (Lampeter Direct).
[649] Ex. DCW-118 at 119 (Amended Route Permit Application).
[650] Ex. DOC-160 at 49-50 (Environmental Assessment).
[651] Ex. DCW-117 at 50 (Amended Site Permit Application).
[652] *Id*.
[653] Ex. DOC-160 at Appx. G, DR 17 (Environmental Assessment).
[654] Ex. DCW-117 at 50 (Amended Site Permit Application).
[655] *Id*.

Permit requires DCW to conduct a post-construction noise study within 18 months of commencing commercial operation.[656]

496. The record indicates that the Project has been designed to meet applicable noise standards and minimize sound levels. Sections 4.3 and 7.4 of the proposed Site Permit are appropriate conditions to ensure that compliance.

F. Visual Impacts

1. Generally

497. Large energy projects can pose an impact aesthetically or on visual resources. The Wind Project would alter the current landscape through the introduction of large wind turbines.[657]

498. There are existing wind facilities near the Project Area. Three commercial wind farms (Oak Glen Wind, G. McNeilus, and Pleasant Valley) are located within ten miles of the Project area and contain turbines of various heights and rotor diameters. The Oak Glen Wind farm is located southwest of the Wind Project and utilizes 24 1.8 MW turbines. The G. McNeilus Wind Farm is located approximately one mile east of the Project and utilizes 41 various turbine models that generate 0.9 MW, 0.95 MW, 1.5 MW, and 1.65 MW. The Pleasant Valley Wind Farm is located approximately six miles southeast of the Project and has 100 2.0 MW turbines; a recently approved repowering will increase each turbine's generating capacity to 2.2 MW turbines by 2025.[658]

499. In addition to the turbines, the Wind Project will also introduce a new collector substation, an O&M facility, two ADLS towers, and MET towers. The DCW Substation and O&M facility will be located adjacent to one another immediately west of 140th Avenue in Ripley Township. The DCW Substation will include 161 kV busses, transformers, circuit breakers, metering equipment, switches, steel structures, and a control building within a graveled area of approximately two acres. The DCW Substation will be enclosed by an eight-foot chain link fence topped by barbed wire. Within the substation, deadends will be up to 75 feet tall, and other equipment associated with the substation will be around 30 feet tall. The O&M facility is anticipated to be approximately 2 acres and will include an access road, parking lot and O&M building. The O&M building will be a one-story structure with an attached garage for vehicle storage and maintenance. Collection lines bringing the power from the turbines to the DCW Substation will be buried 36 to 48 inches below the surface.[659]

500. The general vicinity surrounding the collector substation and O&M facility currently includes farmsteads, overhead transmission lines, distribution lines, a railroad, and wind turbines. In addition, highways and county roads are an existing part of the

[656] Ex. DOC-160 at 50 (Environmental Assessment).
[657] *Id*. at 41-42.
[658] *Id*. at 44.
[659] Ex. DCW-117 at 18 (Amended Site Permit Application); Ex. DOC-160 at 44 (Environmental Assessment).

man-made alterations to the environment. Residents located near the collector substation and O&M facility are expected to have a higher sensitivity to the potential aesthetics impacts than temporary observers.[660]

501. Lighting of the wind turbines will be consistent with Federal Aviation Administration (FAA) guidelines and is similar to that for other tall structures in rural areas, such as communication towers. The LWECS will have some non-turbine facilities (e.g., O&M facility and DCW Substation) which must be lit at times to allow for worker safety; DCW has indicated that lighting at these facilities will face downward and only operate when workers are present.[661]

502. DCW will implement the following mitigation measures to minimize potential visual impacts: (1) turbines will be uniform in color; (2) turbines will not be located in sensitive areas such as public parks, WMA, SNAs, or WPAs; (3) turbines will be illuminated to meet the minimum requirements of FAA regulations for obstruction lighting of wind turbine projects and will utilize an ADLS; (4) electric collection lines will be buried to minimize above-ground structures within the Project Area; (5) existing roads will be used for construction and maintenance, as appropriate, to minimize the number of new roads constructed; and (6) temporarily disturbed areas will be converted back to cropland or otherwise reseeded with native seed mixes appropriate for the region.[662]

503. The proposed Site Permit also contains several permit conditions that DCW believes will somewhat mitigate aesthetic impacts of the Wind Project:

- Section 4.1 requires turbines to be set back from non-participating property lines a minimum distance of 5 RD on the prevailing wind direction and 3 RD on the non-prevailing wind direction.

- Section 4.5 precludes DCW from locating turbines or other associated facilities within aesthetic and biologically sensitive areas such as public parks, WMAs, SNAs, and WPAs without the landowner's consent.

- Section 4.11 requires MET towers to be marked as required by the FAA with no lights on the MET towers other than what is required by the FAA.

- Section 5.3.28 requires turbines to be marked as required by the FAA with no lights on the towers other than what is required by the FAA. This section also requires DCW to install and employ an FAA-approved lighting mitigation system, such as an ADLS or other FAA-approved mitigation method.

[660] Ex. DOC-160 at 44 (Environmental Assessment).
[661] *Id.;* Ex. DCW-117 at 58 (Amended Site Permit Application).
[662] Ex. DCW-117 at 58 (Amended Site Permit Application).

- Section 5.5 requires electric collector lines to be buried to minimize aboveground structures within the turbine array. Feeder lines that carry power from an internal project interconnection point to the DCW Substation may be either overhead or underground.

- Section 6.3 is a special condition requiring DCW to use shielded downward facing LED lighting that minimizes blue hues at the substation.[663]

2. Shadow Flicker

504. With respect to wind turbines, shadow flicker can be defined as an intermittent change in the intensity of light in a given area resulting from the operation of a wind turbine due to its interaction with the sun. For this to occur, the wind turbine must be operating, the sun must be shining, and the window must be within the shadow region of the wind turbine, otherwise there is no shadow flicker.[664] Minnesota currently does not have a specific rule or regulatory standard defining the amount of shadow flicker acceptable for a commercial wind project.

505. Modern wind turbines rotate at a maximum rate of 20 revolutions per minute (rpm), so with the Wind Project's three blades, shadow flicker would never be more than 60 rpm (1 hertz), which is below the 120 flashes per minute threshold known to trigger epilepsy symptoms.[665]

506. DCW modeled maximum shadow flicker under both worst case (constant sun with no clouds during daytime hours, turbines running continually, windows on all sides, no buildings or vegetation that would serve as obstructions) and expected (incorporating sunshine probabilities and expected turbine operational hours per wind direction) for 554 receptors. The expected maximum estimates are conservative in that they assume windows on all sides of the receptor and no buildings or vegetation to obstruct the flicker.[666]

507. The maximum expected shadow flicker of 59 hours, 42 minutes per year occurs at receptor #16, a participating receptor. The maximum expected annual duration of shadow flicker at a non-participating location (#217) is 40 hours, 30 minutes per year. Approximately 96 percent of receptors are expected to experience less than 30 hours per year of shadow flicker and 70 percent of receptors are expected to experience no shadow flicker. A total of 22 receptors, including three receptors that are not participating in the Project, are expected to experience more than 30 hours of shadow flicker per year.[667]

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[663] Ex. DOC-160 at 46 (Environmental Assessment).
[664] *Id.* at 42-43; Ex. DCW-117 at 52 (Amended Site Permit Application); Ex. DCW-140 at 15, 19 (Lampeter Direct).
[665] Ex. DCW-117 at 55-56 (Amended Site Permit Application); Ex. DOC-160 at 43 (Environmental Assessment).
[666] Ex. DCW-117 at Appx. H, pp. 3-2 – 3-3 (Amended Site Permit Application); Ex. DOC-160 at 44 (Environmental Assessment).
[667] Ex. DCW-140 at 17 (Lampeter Direct); Ex. DOC-160 at 45 (Environmental Assessment).

508. The proposed Site Permit contains a permit condition to help mitigate shadow flicker impacts from the wind farm:

- Section 6.6 is a special condition requiring DCW to develop and file a Shadow Flicker Management Plan. The plan will identify receptors anticipated to experience shadow flicker in excess of 30 hours per year and identify the measures that DCW will employ to mitigate these impacts. These measures could include mutual agreements between DCW and landowners, installation of screening such as shades, blinds, awnings, or vegetation buffers, or operational software adjustments to temporarily shut down specific turbines for brief periods of time. This condition is adapted from recently issued wind site permits that required the permittee to develop a Shadow Flicker Management Plan. The condition also requires that, if DCW is unable to reduce a residence's anticipated shadow flicker exposure less than 30 hours per year, a shadow flicker detection system will be utilized during project operations to monitor shadow flicker exposure at the residence.[668]

509. DCW has indicated it will comply with this condition.[669]

510. Accordingly, the proposed Site Permit adequately addresses the Wind Project's aesthetic and potential shadow flicker impacts.

G. Public Services and Infrastructure

1. Roads

511. Dodge and Steele Counties have an established transportation network of state, county and township roads. Although there are no federal or state highways within the Project Area, US Highway 14 borders the western portion of the site to the north, US Highway 218 is approximately two miles west of the site, and MN 56 is approximately two miles east of the site. County Roads are two-lane paved roads. The remaining roads within the Project area are two-lane gravel roads. Access from surrounding roadways will reduce the need for extensive access roads and allow existing primarily agricultural uses to continue relatively unaltered.[670]

512. The record shows that within the site, road surfaces vary, and gravel roads are common. Traffic volumes in the area are relatively light, with the average daily traffic of between 25 to 355 vehicles per day depending upon the road.[671]

[668] Ex. DOC-160 at 46 (Environmental Assessment).
[669] Ex. DCW-138 at 26-27 (Cameron Direct); Ex. DCW-140 at 17 (Lampeter Direct).
[670] Ex. DOC-160 at 64 (Environmental Assessment).
[671] Ex. DCW-117 at 59-60 (Amended Site Permit Application).

513. DCW indicates it has located turbines to minimize traffic congestion along major highways that border the Project.[672] Prior to construction, DCW proposes to coordinate with applicable local and state road agencies so that all relevant permits are obtained, delivery plans are communicated, weight limits are not exceeded, and traffic management plans are implemented where necessary.[673]

514. During construction peak, DCW estimates there will be an additional 500 vehicle trips per day.[674] During operations, only the maintenance crew workers will utilize roads within the site for regular inspections and maintenance. Current traffic levels in the Project area are below roadway capacities.[675]

515. The Wind Project's impacts to traffic are anticipated to be short-term and intermittent, occurring during the construction phase of the Project. Impacts will be from the transport of project components to the project site and from the movements of construction workers. Equipment and materials used in construction of wind farms can be extremely heavy and/or oversized loads. Possible weight-related impacts to roads include physical damage to the structure of the road itself and/or damage to culverts and bridges.[676]

516. Construction of the Wind Project will include adding new driveways to access turbine locations, the DCW Substation, and the O&M building. Depending on final turbine location and established haul routes, intersections may be temporarily widened to accommodate oversize loads.[677]

517. Constructing the Wind Project will require the construction of approximately 26 miles of gravel access roads. Access roads would be used by operation and maintenance crews while inspecting and servicing the wind turbines throughout the life of the Project. The roads will initially be wide enough for construction traffic, but the permanent access roads will be approximately 16 feet wide with a low profile to allow cross travel by farm equipment.[678]

518. Dodge and Steele Counties will require permits for installations or modification of road approaches and overweight and over-dimension loads to transport equipment and materials over county highways.[679]

519. The proposed Site Permit contains several standard mitigation measures for potential road impacts:

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[672] *Id*. at 67.
[673] *Id*.
[674] *Id*. at 65.
[675] Ex. DOC-160 at 65 (Environmental Assessment).
[676] *Id*.
[677] *Id.*; Ex. DCW-117 at 67 (Amended Site Permit Application).
[678] Ex. DOC-160 at 65 (Environmental Assessment); Ex. DCW-117 at 21 (Amended Site Permit Application).
[679] Ex. DOC-160 at 65 (Environmental Assessment).

- Section 5.3.13 requires DCW to inform road authorities of roads that will be used during construction and acquire necessary permits and approvals for oversize and overweight loads. This section also requires DCW to make satisfactory arrangements with road authorities prior to using the roads; this could include permits, written authorizations, road use agreements, development agreements, or some other arrangement.

- Section 5.3.14 requires DCW to minimize the construction of access roads to the number needed to safely and efficiently operate the Wind Project.

- Section 5.3.15 requires DCW to promptly repair private roads damaged when moving equipment or accessing the site.[680]

520. These conditions are appropriate for ensuring proper road usage and maintenance and should be included in any Site Permit.

2. Water and Wastewater

521. DCW anticipates installing a well and septic system to provide for domestic water needs at the O&M facility.[681] A well construction permit from the Minnesota Department of Health (MDH) would be required if a well is installed at the O&M facility. A septic system permit is required from Dodge County prior to installation of a septic system.[682]

3. Airports and Aviation

522. There are no registered public airports located within the site.[683] There are five active registered airports and three active heliports located within 20 miles of the site. The closest registered airport is the Dodge Center Airport (TOB), located approximately 3.8 miles east of the site boundary, is a public-use airport with one concrete runway and one turf runway which require permission prior to landing. The Owatonna-Degner Regional Airport is a public use airport with concrete and asphalt runways located approximately 8.6 miles northwest of the site. The Allina Hospital and Clinic Owatonna has a heliport and is located approximately eight miles northwest of the site.[684]

523. Due to the agricultural use within the region, small private runways associated with crop dusting activities likely exist within or near the Project Area.[685]

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[680] *Id*. at 66.
[681] Ex. DCW-117 at 21 (Amended Site Permit Application).
[682] Ex. DOC-160 at 66 (Environmental Assessment).
[683] Ex. DCW-117 at 84 (Amended Site Permit Application).
[684] *Id.* at 84-85; Ex. DOC-160 at 67 (Environmental Assessment).
[685] Ex. DCW-117 at 85 (Amended Site Permit Application); Ex. DOC-160 at 67 (Environmental Assessment).

524. Under 14 CFR Part 77.9, all structures exceeding 200 feet above ground level must be submitted to the FAA so that an aeronautical study can be conducted to identify obstacle clearance surfaces that could limit the placement of wind turbines. The aeronautical study informs the FAA's issuance of a determination of Hazard or No Hazard. Additionally, a Tall Towers Permit and approval may be required by the MnDOT prior to constructing the Wind Project to ensure the safety of airspace within Minnesota.[686]

525. DCW received determinations of No Hazard from the FAA on March 3, 2022 and received extensions to all determinations of no hazard on October 19, 2023.[687] DCW's obstruction evaluation for the Wind Project determined that all turbines would be in line-of-sight of the Rochester radar operated by the U.S. Department of Defense and North American Aerospace Defense Command, potentially resulting in false radar returns and a decrease in radar sensitivity could impact air traffic control operations. The obstruction analysis also identified a military training route that passes over a portion of the site. After coordinating with the Air National Guard, DCW agreed to use turbines with a lower tip height in areas underneath the training route. DCW reached a mitigation agreement with the U.S. Department of Defense and Air National Guard, in December 2021.[688]

526. The record also shows that DCW has operational capabilities to enhance the safety of aviation operations in the vicinity of the Project, which was a concern raised frequently in public comments. For example, if DCW is notified prior to aerial application activities in the Project's vicinity, DCW can adjust the turbine direction to create flyways through the Wind Project.[689] Additionally, DCW will ensure that its MET towers will not utilize guy wires, reducing the risk to low-flying aircraft.[690]

527. The proposed Site Permit contains several standard conditions to minimize aviation impacts:

- Section 4.11 requires that permanent MET towers for meteorological equipment are required to be free standing (no guy wires) and marked as required by the FAA.

- Section 4.12 prohibits turbines and associated facilities from being placed in a location that could obstruct navigable airspace of private and public airports and requires the permittee to adhere to setbacks and other limitations required by MnDOT Department of Aviation and the FAA. This section also requires DCW to notify owners of all known airports within six miles prior to construction.

[686] Ex. DOC-160 at 67 (Environmental Assessment); Ex. DCW-117 at 86-87 (Amended Site Permit Application).
[687] Hearing Reply Comment by Dodge County Wind (Feb. 15, 2024) (eDocket No. 20242-203500-05).
[688] Ex. DCW-117 at 87 (Amended Site Permit Application); Ex. DOC-160 at Appx. G DR 19 (Environmental Assessment).
[689] Ex. DCW-138 at 25 (Cameron Direct); Ex. DCW-141 at 20 (Gauger Direct).
[690] Ex. DCW-117 at 87 (Amended Site Permit Application).

- Section 5.3.28 requires towers to be marked and lighted as required by FAA.[691]

528. The record demonstrates that DCW has taken steps to minimize and mitigate impacts to aviation. In light of these mitigation measures, the requirements of the proposed Site Permit, and the development of an AIMP, it is not anticipated that the construction and operation of the Wind Project will have a significant impact on aviation.

4. Communications Systems

529. Wind turbines can cause interference with electronic communications by obstructing the reception of communication signals. According to the EA, wind turbines do not impact digital signals (e.g., digital television, internet, cell phones), unless the turbines directly obstruct the signal, such as being located in the line-of-sight. Analog signals (e.g., amplitude modulated (AM) and frequency modulated (FM) radio, microwaves) can be interfered with by direct obstruction and by indirect signal interference, resulting in ghosting of television pictures or signal fading.[692]

a) Radio

530. FM radio is not impacted by wind turbines or transmission facilities, but AM radio can be impacted near transmission facilities (e.g., signal fading underneath a transmission line). Potential communications impacts due to the LWECS are anticipated to be minimal.[693]

531. An updated electromagnetic interference analysis prepared by DCW in September 2023 did not identify AM or FM radio towers within the site boundaries. There are three AM towers and 13 FM towers within 15.5 miles of the site.[694]

532. The analysis indicated that interference to AM or FM signals are expected to be minimal. Some AM/FM signal loss may occur close to individual turbines, but most AM/FM radio receptors near residences should have sufficient setback to minimize signal interruptions.[695]

b) Microwave Beam Paths

533. According to the EA, microwave bands are a telecommunication system that provides long-distance and local telephone service, backhaul for cellular and personal communication service, data interconnects for mainframe computers and the Internet, network controls for utilities and railroads, and various video services. Wind turbines can interfere with microwave paths by blocking or partially blocking the

[691] Ex. DOC-160 at 70 (Environmental Assessment).
[692] *Id*.
[693] *Id*.
[694] *Id.* at 71; Ex. DCW-137 (Electromagnetic Interference Analysis); Ex. DCW-117 at 61 (Amended Site Permit Application).
[695] Ex. DOC-160 at 71 (Environmental Assessment); Ex. DCW-137 (Electromagnetic Interference Analysis).

line-of-sight path between microwave transmitters and receivers. To prevent disruption of the microwave beam path, turbines should not be sited the centerline of a beam path.[696]

534. The updated Electromagnetic Interference Analysis provided by DCW identified seven microwave beam paths that cross into the site. Turbine 14 is intersected by a microwave link that began operation in September 2022.[697] Mr. Cameron stated in his testimony that DCW has been in communication with the owner of the beam path tower and was working on a resolution to minimize potential communications disruption.[698] DCW believes that a solution that maintains Turbine 14 as part of the Wind Project and ameliorates the potential for communications disruption is likely to be obtained.[699]

535. Based on its preliminary assessment, Turbine 14 has the potential to interfere with an existing microwave beam path. DCW is responsible for mitigating impacts to the beam path; mitigation measures may include negotiating a mitigation solution with the beam path owner, adjusting the turbine location to avoid existing beam paths in a manner that is consistent with other required setbacks or removing the turbine.

c) Radar

536. The federal government has a large number of departments and agencies that operate a set of communication systems that are not part of any public databases. The United States Department of Commerce National Telecommunications and Information Administration (NTIA) coordinates government communication systems for all departments and agencies. NTIA reviewed an earlier Wind Project layout for concerns with radio frequency transmission blockage and issued a finding that No Harmful Interference Anticipated.[700] On October 5, 2023, DCW requested that the NTIA review the Wind Project. On December 6, 2023, DCW received a letter stating that no reviewing agencies had concerning issues with turbine placement in the Project Area.[701] Therefore the LWECS is not expected to impact federal communication systems.

d) Telephone Service

537. Telephone service in the Project Area is provided both through landlines and wireless signals. Carriers include Alltel Corporation, AT&T Mobility Spectrum LLC, Cellco Partnership, CenturyLink, Charter Spectrum, Citizens Telecom-Frontier Communications, Sprint, T-Mobile, U.S. Cellular, and Verizon Communications.[702]

[696] Ex. DOC-160 at 71 (Environmental Assessment).
[697] *Id.*; Ex. DCW-137 (Electromagnetic Interference Analysis).
[698] Ex. DCW-138 at 12-13 (Cameron Direct).
[699] *Id.*
[700] Ex. DCW-117 at 60 (Amended Site Permit Application).
[701] Ex. DOC-160 at 71 (Environmental Assessment); Ex. DCW-139 at 13, Sched. 2 (Corbett Direct).
[702] Ex. DCW-117 at 61 (Amended Site Permit Application); Ex. DOC-160 at 71-72 (Environmental Assessment).

538. The record shows that operation of the Wind Project will not impact the telephone service in the Project Area. However, physical damage to underground telephone lines could occur during construction.[703]

539. Land mobile systems are designed with multiple base transmitter stations; therefore, any signal blockage caused by the wind turbines would not perceptibly degrade their reception. Construction and operation of the LWECS is not expected to impact telephone service to the area.[704]

e) Television

540. Broadcast facilities (HDTV and digital television) provide television services to the Project Area. Some residents utilize cable and satellite television options as well.[705]

541. There are no television (TV) towers located within site. There are 31 licensed TV towers within 31 miles (50 km) of the Project and are likely to be broadcasting to the Project area. Most of these towers are low-power stations or translator stations that have limited range and are unlikely to experience reception interference. Six full-power towers (call signs KXLT-TV, KSMQ-TV, KAAL, KIMT, KYIN, and KTTC) could experience reception interference if Project infrastructure is in line-of-sight between a transmitting tower and a TV receptor. These towers are located approximately 29 to 36 miles from the Project.[706]

542. There is a possibility that broadcast facilities (HDTV and digital television) could be impacted by the LWECS. Interference would be more likely to occur where there is direct interference with digital broadcast paths of local television stations. According to the EA, multipath interference from one or more turbines can cause video failure in HDTV receivers, especially if the receiver location is in a valley or other place of low elevation.[707]

543. In the event TV interference is reported following project construction, DCW has committed to work with affected residents or businesses to determine the cause of interference, and, when necessary, reestablish TV reception and service in a timely manner.[708]

f) Global Positioning Systems

544. Global positioning systems (GPS) use satellite signals to determine locations on the earth's surface and are commonly used to guide agricultural operations. Because GPS uses multiple digital satellite signals, interference with the signals or subsequent uses is not anticipated. Obstruction of any one satellite signal would require

[703] Ex. DCW-117 at 66 (Amended Site Permit Application); Ex. DOC-160 at 72 (Environmental Assessment).
[704] Ex. DCW-117 at 66 (Amended Site Permit Application); Ex. DOC-160 at 72 (Environmental Assessment).
[705] Ex. DOC-160 at 72 (Environmental Assessment).
[706] *Id.*; Ex. DCW-117 at 62-67, Appx. I (Amended Site Permit Application).
[707] Ex. DOC-160 at 72 (Environmental Assessment).
[708] Ex. DCW-117 at 68 (Amended Site Permit Application).

direct line-of-sight obstruction due to a wind turbine. The record demonstrates, however, that such an obstruction would be temporary.[709]

g) Wireless Broadband Internet

545. It is unclear if there are impacts to wireless broadband internet signals due to operation of an LWECS. For a previous wind project, DOC-EERA contacted engineers at the local wireless broadband internet service provider (StarCom/StarNet) for further information. StarCom representatives stated that it is possible that a wind turbine operating along the "line of sight" between a broadband signal tower and residential antenna can cause intermittent signal loss, but that such cases were rare.[710]

546. Section 5.3.17 of the proposed Site Permit prohibits DCW from operating the project in a manner that causes interference to microwave, television, radio telecommunications, or navigation interference in violation of FCC regulations or other law and requires the permittee to take timely measures to correct any problems. This section also requires DCW to provide an assessment of television and radio signal reception, microwave signal patterns, and telecommunication in the Project Area.

547. The record demonstrates that the Wind Project is not anticipated to have sustained impacts on communications services in the Project Area, and Section 5.3.17 of the proposed Site Permit appropriately requires mitigation of any communication impacts that arise.

H. Public Health and Safety

1. Construction Safety

548. The record demonstrates that the Wind Project will be designed and constructed in compliance with applicable electric codes and electrical work will be completed by trained technicians.[711]

549. Construction is bound by federal and state Occupational Safety and Health Administration (OSHA) requirements for worker safety, and must comply with local, state, and federal regulations regarding installation of the facilities and qualifications of workers. Established industry safety procedures will be followed during and after construction of the project. Crews will be trained and briefed on safety issues, reducing the risk of injury. Access to sensitive site areas such will be restricted through control measures, including the use of keyed locks and fencing, to protect against unauthorized access to the Wind Project's facilities and exposure to potential hazards.[712]

550. DCW has also indicated it will implement specific safety measures during construction. These measures include the following:

[709] Ex. DOC-160 at 72 (Environmental Assessment).
[710] *Id*. at 73.
[711] *Id*. at 81.
[712] *Id.*; Ex. DCW-117 at 89 (Amended Site Permit Application).

- Proper health and safety training of construction and maintenance contractors will occur;

- DCW will engage contractors who demonstrate a strong safety culture including management commitment and engagement, safe work policies and programs, employee involvement, and historic safe work performance indicators; and

- Contractors will be required to implement safe work requirements that meet or exceed OSHA requirements, applicable permits, applicable equipment manufacture and technical work instructions, and any other prudent safety practices, methods, and/or standards generally engaged in, or observed by, the majority of construction contractors for similar work.[713]

551. Public safety is also addressed in several sections of the proposed Site Permit:

- Section 5.3.26 requires DCW to take several public safety measures, including landowner educational materials, appropriate signs and gates, etc.

- Section 5.3.27 requires DCW to mark each tower with a visible identification number.

- Section 10.11 requires DCW to file an Emergency Response Plan with the Commission and local first responders prior to operation.

- Section 10.12 requires disclosure of extraordinary events, such as fires, etc. within 24 hours of the event and a report identifying the cause of the event and the steps taken to avoid future occurrences within 30 days.[714]

2. Emergency Services

552. Emergency services in the Project area are provided by local law enforcement and emergency response agencies located in nearby communities. Law enforcement in the Project area is provided by the sheriff's offices of Dodge and Steele Counties. Law enforcement in the nearby cities of Dodge Center, Owatonna is provided by local police departments. Fire service is provided by city and community fire departments from Claremont, Dodge Center, Owatonna, Blooming Prairie, Medford, and Mantorville. Ambulance response is provided by local ambulance services out of Dodge Center, Owatonna, Hayfield, and West Concord.[715]

553. In its Amended Site Permit Application, DCW indicated it will integrate current engineering standards with applicable regulatory requirements throughout the

[713] Ex. DCW-117 at 89-90 (Amended Site Permit Application).
[714] Ex. DOC-160 at 81 (Environmental Assessment).
[715] *Id.*; Ex. DCW-117 at 59 (Amended Site Permit Application).

project design. DCW also indicated it will actively work with the Dodge County Emergency Management (DCEM) and Steele County Emergency Management (SCEM) offices and other agencies to prepare an emergency management plan for the Wind Project to respond to emergencies, natural hazards, hazardous materials incidents, human-made problems (e.g., fire), and related incidents. Additionally, DCW has committed to work closely with county planning offices to assign 911 addresses for coordination of emergency responses.[716]

554. In addition, DOC-EERA reached out to the Mayo Clinic Ambulance Service and the Clinic indicated that Mayo Clinic's Air Ambulance Helicopters treat turbines and wind generating facilities in the same way that other obstacles are managed: through use of navigation aids, aircraft safety technology, and local emergency responders to coordinate a safe landing place.[717] According to DOC-EERA's comments, the clinic indicated that navigating around wind generating facilities has not to date created a barrier to care.[718] This is consistent with what the Mayo Clinic has conveyed to DCW.[719]

555. DCW has also indicated it will implement measures designed to ensure fast and unobstructed emergency response. These measures include the following:

- Wind turbine locations will be registered with DCEM and SCEM for emergency responses and procedures related to the Project;
- The turbines will be clearly numbered for identification and emergency response;
- Wind Project turbines and towers will comply with the setback standards established by the Commission, Dodge County, and Steele County; and
- In the event that local residents need emergency services during construction, construction will cease, and any impeding construction equipment and vehicles will be relocated so that emergency vehicles and services may easily access the emergency location.[720]

556. In all, the record shows that during operation the Project will not interfere with emergency services.[721]

557. Public safety is also addressed in several sections of the proposed Site Permit:

[716] Ex. DCW-117 at 89 (Amended Site Permit Application).
[717] Comment by DOC-EERA at 4 (Feb. 1, 2024) (eDocket No. 20242-202977-01).
[718] *Id.*
[719] Hearing Reply Comment by Dodge County Wind (Feb. 15, 2024) (eDocket No. 20242-203500-04).
[720] Ex. DCW-117 at 89-90 (Amended Site Permit Application).
[721] *Id*. at 90.

- Section 5.3.26 requires DCW to take several public safety measures, including landowner educational materials, appropriate signs and gates, etc.

- Section 10.11 requires DCW to file an Emergency Response Plan with the Commission and local first responders prior to operation.

- Section 10.12 requires disclosure of extraordinary events, such as fires, etc.[722]

558. These permit conditions are appropriate measures for the protection of public safety and are proper for inclusion in the proposed Site Permit.

3. Solid and Hazardous Wastes

559. If not properly handled, solid and hazardous wastes can contaminate air, soils, and water, which can cause a variety of human and environmental impacts depending on the type and amount of contamination.[723]

560. Prior to construction, DCW has committed to conduct an American Society for Testing and Materials-conforming Phase I Environmental Site Assessment within the site to identify potential existing environmental hazards.[724] Potential hazardous materials within the site are expected to be typical of agricultural uses and may include contamination from petroleum products, pesticides and herbicides. Older farmsteads may also contain lead-based paint, asbestos-containing building materials, and polychlorinated biphenyls in electrical transformers. Unmarked farmstead waste dumps which may contain various types of wastes are also commonly found in rural settings.[725]

561. The LWECS would generate solid waste during construction including construction debris such as scrap wood, plastics, cardboard and scrap metals. Petroleum products would also be present on site, such as oil and fuel. Operation of the LWECS is not expected to generate significant quantities of solid and hazardous waste materials. Small quantities of hydraulic oil, lube oil, grease, and cleaning flush will be maintained and stored at the O&M building, and as these fluids are replaced the waste products will be handled and disposed of through an approved disposal firm as required by regulations.[726]

562. DCW indicates it will create a Spill Prevention, Control, and Countermeasure plan detailing storage, cleanup, and disposal of hazardous waste associated with both the construction and operation phases of the Wind Project. It is not anticipated that the LWECS would require a hazardous waste generators license as

[722] Ex. DOC-160 at 82 (Environmental Assessment).
[723] *Id*. at 82.
[724] Ex. DCW-117 at 90 (Amended Site Permit Application).
[725] *Id*.; Ex. DOC-160 at 82 (Environmental Assessment).
[726] Ex. DOC-160 at 82 (Environmental Assessment).

hazardous waste generation would likely fall below the quantity required for a very small quantity generator license.[727]

563. The proposed Site Permit contains several conditions to ensure that waste is disposed of properly:

- Section 5.3.23 requires DCW to promptly remove personal litter and construction debris from the site and dispose of the waste properly.

- Section 5.3.24 requires DCW to comply with all laws related to the generation, storage, transportation, clean up and disposal of all wastes generated during construction and operation of the facility.

- Section 11.1 requires a decommissioning plan detailing plans and financial safeguards to remove the wind farm and associated facilities at the end of the project's life. The permittee is required to file the decommissioning plan prior to construction and update it every five years.[728]

564. These conditions of the proposed Site Permit are adequate for monitoring and mitigating potential impacts from solid and hazardous wastes.

4. EMFs

565. EMFs are invisible regions of force resulting from the presence of electricity. EMF is often raised as a concern with electric transmission facilities. Naturally occurring EMF are caused by the earth's weather and geomagnetic field. Man-made EMFs are caused by any electrical device and found wherever people use electricity.[729]

566. Although EMF is often raised as a concern with electrical transmission projects, the Commission has found that there is insufficient evidence to demonstrate a causal relationship between EMF exposure and human health effects.[730]

567. EMF from underground electrical collection lines is understood to dissipate close to the lines because they are installed below ground, geometrically close to each other, and wound with copper wires in their jackets. Collection lines will be buried underground to a depth of at least 48 inches. DCW plans to use shielded underground cabling, which would confine electrical fields to the interior of the cable. Magnetic fields from each cable are largely canceled out from the proximity of the three cables comprising the circuit and will decrease rapidly with distance. DCW's and modeling indicates that the magnetic field would be approximately three milligauss (mG) within 25 feet on either side of the installed cable[731], a level similar to or less than generated by many household

[727] *Id.* at 83; Ex. DCW-117 at 91 (Amended Site Permit Application).
[728] Ex. DOC-160 at 83 (Environmental Assessment).
[729] *Id*. at 84.
[730] *Id*.
[731] Ex. DCW-117 at 83 (Amended Site Permit Application).

appliances. EMF associated with the transformers within the nacelle also dissipates rapidly with distance, so the 1,400-foot turbine setback from residences may be adequate to avoid any EMF exposure to homes.[732]

568. In addition, stray voltage is typically not associated with underground electric collector lines, which connect to the Project substation and are not tapped or diverted for other uses. Therefore, stray voltage from underground collector lines is not expected to have an impact on public health and safety.[733]

5. Climate Change and Greenhouse Gases

569. Climate change refers to any significant change in measures of climate lasting for an extended period. Greenhouse gases (GHGs) are gaseous emissions that trap heat in the atmosphere and contribute to climate change. These emissions occur from natural processes and human activities. The most common GHGs emitted from human activities include carbon dioxide, methane, and nitrous oxide.[734]

570. Total GHG emissions for construction of the Wind Project are estimated to be approximately 3,031 tons of carbon dioxide (CO_2).[735] The Wind Project's construction emissions are an insignificant amount relative to Minnesota's overall emissions of approximately 137 million tons in 2020. Potential impacts due to construction GHG emissions are anticipated to be negligible.[736]

571. Once operational, the Wind Project will generate minimal GHG emissions. Emissions that do occur would result from vehicle usage related to maintenance and operation of the turbines and substation and from diesel used to power a forklift and tractor at the site. GHG emissions for project operation are estimated to be approximately 27 tons of CO_2 annually.[737]

572. In addition to GHG emissions from vehicles during operation, sulfur hexafluoride, a GHG, may be used at the substation. Small releases will occur as part of regular breaker operation and maintenance. Potential impacts due to operational GHG emissions are anticipated to be negligible.[738]

573. In some ways, the Wind Project is expected to beneficially impact climate change because it will reduce the need for carbon-based electric generation processes. If electrical energy from the Wind Project displaces energy that would otherwise be generated by carbon-fueled power plants (e.g., coal, natural gas), the Wind Project could reduce GHG emissions by up to 159,000 - 231,000 metric tons of CO_2 annually.[739] Comparing the Wind Project to other fossil-fueled facilities, the Wind Project is estimated

[732] Ex. DOC-160 at 84 (Environmental Assessment).
[733] Ex. DCW-117 at 84 (Amended Site Permit Application).
[734] Ex. DOC-160 at 85 (Environmental Assessment).
[735] *Id*. at Appx. G DR 12.
[736] *Id*. at 85.
[737] *Id*. at 85, Appx. G DR 12.
[738] *Id*. at 86.
[739] *Id*. at Appx. G DR 12.

to emit over its 30-year life just under 740,000 kg CO_2, as compared to approximately 5 billion kg of CO_2 for a natural gas facility and 6 billion kg CO_2 for a coal-fired facility producing a comparable amount of energy.[740] Thus, compared to non-renewable energy generation, the Wind Project would be beneficial with respect to GHG emissions.[741]

I. Soils and Topography

574. Construction of large energy facilities can change the topography of the site through grading and excavation and can impact soils through compaction from construction equipment, soil profile mixing during grading and trenching, rutting from tire traffic, drainage interruptions, and soil erosion. According to the EA, the underlying geology of the region can affect the stability of project substructures through siting above shallow karst features that could be present in the underlying bedrock.[742]

575. The general topography of the Project area is described as undulating, rolling relief with approximate elevations between 1,228 and 1,324 feet above mean sea level. Local slopes vary in the project area, and generally slopes from the northeast, southeast, and southwest toward the center of the site.[743]

576. Per the EA, the geology of the region is defined by glacial deposits overlying Paleozoic Era bedrock. The glacial deposits are largely composed of sand, gravel, sandstone, and clay. The underlying bedrock is made up of alternating beds of limestone, sandstone, and shale but is composed largely of limestone. Depth to bedrock varies in the Project area, with data sources estimating it as deep as 225 feet, and as shallow as 50 feet.[744]

577. Surface soils in the site are composed of loams containing various amounts of silt and clay.[745]

578. The grading and construction of access roads, turbine foundations, crane work pads, the O&M building, and the DCW Substation will have minimal impacts on the topography of the site. Significant impacts to topography, such as the creation of abrupt elevation changes or modifications to natural drainage patterns, are not expected.[746]

579. Construction of the Wind Project will disturb approximately 1,411 acres within the site.[747] Depending upon site-specific design requirements, each concrete turbine foundations will require up to approximately 1,900 cubic yards of excavation depending on soil requirements and turbine size. Additional grading will be required to provide a level and stable base for the project substation, O&M building, access roads.

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[740] Ex. DCW-139 at 15 (Corbett Direct).
[741] Ex. DOC-160 at 86 (Environmental Assessment).
[742] *Id*. at 89.
[743] *Id*. at 90; Ex. DCW-117 at 51 (Amended Site Permit Application).
[744] Ex. DOC-160 at 90 (Environmental Assessment).
[745] *Id.*; Ex. DCW-117 at 98 (Amended Site Permit Application).
[746] Ex. DOC-160 at 90 (Environmental Assessment).
[747] *Id.*; Ex. DCW-117 at 113 (Amended Site Permit Application).

The installed foundation concrete is anticipated to take up to approximately 550 cubic yards of material.[748]

580. Grading, trenching, and excavation activities associated with Wind Project construction are not anticipated to extend to bedrock depth, and blasting or excavation of bedrock is extremely unlikely. There is a potential for karst features to be located in the subsurface within the project area. Geotechnical investigations are planned at each turbine location to determine soil stability and depth to bedrock.[749] Foundation design is dictated by geotechnical data, turbine loads, and cost considerations.[750]

581. Topsoil depth varies throughout the site, but most of the site is estimated to have topsoil depths of greater than 12 inches. Grading and excavating will separate the first 12 inches of topsoil, which will be stored on site and replaced when construction is completed. Approximately 71.5 miles of underground collector and communication lines will be installed in trenches or conduits 36 – 48 inches below the surface.[751]

582. With any ground disturbance, there is potential for soil compaction and erosion. Heavy rainfall events during construction or prior to re-vegetation increase the risk that significant sedimentation and erosion could occur. Inadvertent disturbance of drain tile from construction activities could disrupt existing drainage.[752]

583. Impacts to soils and topography are anticipated to be minor.[753]

584. Several sections of the proposed Site Permit address soil-related impacts:

- Section 5.3.5 requires protection and segregation of topsoil.
- Section 5.3.6 requires DCW to take measures to minimize soil compaction and correct any compaction that occurs.
- Section 5.3.7 requires DCW to obtain a MPCA CSW Permit and implement the BMPs within for erosion prevention and sediment control. Because the project will disturb more than one acre, DCW must obtain a CSW Permit from the PCA. The CSW Permit will identify BMPs for erosion prevention and sediment control. As part of the CSW Permit, DCW will also develop a SWPPP that describes construction activity, temporary and permanent erosion and sediment controls, BMPs, permanent stormwater management that

[748] Ex. DCW-117 at 148 (Amended Site Permit Application); Ex. DOC-160 at 90 (Environmental Assessment).
[749] Ex. DCW-117 at 100 (Amended Site Permit Application).
[750] *Id.* at 148; Ex. DOC-160 at 90 (Environmental Assessment).
[751] Ex. DCW-117 at 20 (Amended Site Permit Application); Ex. DOC-160 at 91 (Environmental Assessment).
[752] Ex. DOC-160 at 91 (Environmental Assessment).
[753] Ex. DCW-117 at 97, 99 (Amended Site Permit Application).

will be implemented during construction and through the life of the project.

- Section 6.6 is a special condition that requires DCW to file a geotechnical reports and engineering recommendations for turbine and substation foundations prior to the site plan.

- Section 11.2 requires DCW to restore and reclaim the site to pre-project conditions upon decommissioning, including topography and topsoil to the extent feasible.[754]

J. Groundwater Resources

585. Dodge and Steele Counties are part of groundwater province 2 (South-Central groundwater province). Bedrock in this region is made up of alternating beds of limestone, sandstone, and shale, but is composed largely of limestone. The St. Peter Sandstone is the deepest layer of sedimentary rock and varies in thickness from less than 200 feet to over 550 feet. Glacial drift overlies this Paleozoic rock and makes up the present surface of the project area. The average thickness of the glacial drift is generally around 100 feet.[755]

586. Potential impacts to groundwater can occur directly or indirectly. Direct impacts are generally associated with construction, for example excavation for turbine foundations could penetrate shallow water tables. Although there is potential that subsurface activity might disturb shallow groundwater resources, the depth of disturbance (approximately 36-48 inches for collector cables, 12 feet for turbine foundations and 20 feet for the collector substation) would be well above well-depth used for potable water in the local vicinity.[756] Portions of the soluble components of the cement paste from the concrete foundations could potentially leach into groundwater prior to the setting and hardening of the concrete. This would change the pH of groundwater around the surface of the concrete but should not extend far from the foundation. Impacts to surface waters can lead to indirect impacts to groundwater.[757]

587. During construction of the LWECS, DCW estimates that dewatering and other construction needs will require up to 12 million gallons including water for dust abatement and turbine foundations. DCW anticipates that water required for construction would come from existing local wells.[758] A water appropriations permit may also be required if temporary dewatering activities are needed during construction.[759]

588. DCW will install a well for potable water and an Individual Sewer Treatment System (septic system) at the O&M facility. The amount of water used for these facilities

[754] Ex. DOC-160 at 92 (Environmental Assessment).
[755] *Id.* at 93; Ex. DCW-117 at 99-100 (Amended Site Permit Application).
[756] Ex. DCW-117 at 100 (Amended Site Permit Application).
[757] Ex. DOC-160 at 94 (Environmental Assessment).
[758] Ex. DCW-117 at 100 (Amended Site Permit Application).
[759] *Id.* at 148; Ex. DOC-160 at 94 (Environmental Assessment).

is anticipated to be roughly equivalent to the amount consumed by a residence or farmstead in the area (approximately 320 - 500 gallons per day).[760]

589. Large scale excavation at wind farms is limited to the turbine pads the project substation, and the O&M facility (including well and septic). Groundwater resources are not expected to be impacted from these activities. Individual wind turbine locations should not impact the use of existing water wells; to comply with residential and noise setbacks, turbines are generally located at least 1,400 feet from homes[761], well away from where most residential wells are located. During "down-stream" permitting, measures would be taken to identify any nearby wells prior to construction of turbine foundations. Permitting agencies such as the MnDNR, MPCA, and MDH determine appropriate actions to protect local groundwater resources.[762]

590. Groundwater use is anticipated to be minimal, and supply and drawdown impacts will be further addressed, if necessary, in appropriations permits.[763]

591. Stormwater management is important to ensure that structure foundations maintain their integrity and that rainwater and surface runoff drain away from the turbines and roads in a way that does not adversely affect existing drainage systems, roads, or nearby properties and indirectly impact groundwater. Section 5.3.7 of the proposed Site Permit is a standard condition that requires the permittee to obtain an MPCA CSW Permit and implement the BMPs within for erosion prevention and sediment control.[764] Impacts to groundwater can also be minimized by mitigating impacts to and soils and surface waters.[765]

592. Any new wells require notification to MDH and would be constructed by a well borer licensed by MDH.[766]

593. If temporary dewatering is required during construction activities, discharge of dewatering fluid will be conducted under the NPDES permit program and addressed by the Project's SWPPP, as required. If dewatering of more than 10,000 gallons per day or 1,000,000 gallons per year is required, a Water Appropriations Permit from MnDNR is required.[767]

594. The Project's O&M facility would generate household amounts of wastewater.[768] DCW plans to build an on-site septic system to serve the O&M facility.[769]

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[760] Ex. DOC-160 at 94 (Environmental Assessment); Ex. DCW-117 at 100 (Amended Site Permit Application).
[761] Ex. DCW-117 at 50 (Amended Site Permit Application).
[762] Ex. DOC-160 at 95 (Environmental Assessment).
[763] *Id.*; Ex. DCW-117 at 100-01 (Amended Site Permit Application).
[764] Ex. DOC-160 at 95 (Environmental Assessment).
[765] *Id*.
[766] *Id*.
[767] *Id*.
[768] Ex. DCW-117 at 100 (Amended Site Permit Application).
[769] *Id*. at 21.

The potential impacts of this wastewater and septic system are anticipated to be minimal.[770]

K. Surface Water and Floodplain Resources

595. The Wind Project is located within the Upper Mississippi River Basin. Most of the site is located within the Zumbro River Watershed, while smaller portions are within the Cannon River and Cedar River watersheds.[771]

596. Public waters are those lakes, wetlands, and watercourses over which MnDNR has regulatory jurisdiction and are identified on PWI maps. Within the Project Area, 20 watercourses are designated as public waters and are listed in the PWI.[772] Minnesota's Buffer Law requires perennial vegetative buffers of up to 50 feet along lakes, rivers, and streams and buffers of 16.5 feet along ditches. Seven of the PWI streams within the site have designated 50-foot protection buffer requirements, including Dodge Center Creek and two associated tributaries. In addition, 13 PWI-designated watercourses scattered throughout the site have 16.5-foot protection buffer requirements.[773]

597. The Clean Water Act requires each state to list streams and lakes that are not meeting their designated uses (i.e., impaired) because of excess pollutants. The MPCA identifies the Dodge Center Creek as impaired and failing to meet several water quality standards.[774]

598. No MnDNR-designated wildlife lakes, outstanding resource value waters, or trout streams have been identified within or adjacent to the site.[775]

599. Floodplains are areas susceptible to flooding that are adjacent to rivers, streams, and lakes. In flat areas, the floodplain can extend more than a mile from the flooding source. Floodplains can also be the normally dry areas adjacent to wetlands, small ponds, or other low areas that cannot drain as quickly as the rain falls. Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps have been created and are available for most of the Project Area; however, not all of the base flood elevations have been determined. Dodge Center Creek and tributaries in the northeast portion of the site have been designated as Zone A (a one-percent annual chance of flooding), while the agricultural watercourses in most of the site have been determined to be in Zone C

[770] Ex. DOC-160 at 96 (Environmental Assessment).
[771] *Id.*; Ex. DCW-117 at 101 (Amended Site Permit Application).
[772] Ex. DOC-160 at 96 (Environmental Assessment); Ex. DCW-117 at 101-02 (Amended Site Permit Application).
[773] Ex. DCW-117 at 101 (Amended Site Permit Application); Ex. DOC-160 at 96-97 (Environmental Assessment).
[774] Ex. DOC-160 at 98 (Environmental Assessment).
[775] *Id.*; Ex. DCW-117 at 102 (Amended Site Permit Application).

(minimal flooding hazard, although there may be a potential for ponding or local drainage problems).[776]

600. During construction of the LWECS, there is the potential for sediment to reach surface waters due to ground disturbances from vegetation clearing, excavation, grading, and construction traffic. Potential impacts to surface water resources from construction of access roads, turbine sites, and collection lines when the ground is disturbed by excavation, grading, trenching, and construction traffic could include erosion from increased surface water runoff, sedimentation, discharges from groundwater dewatering, and diversion of watercourses. However, these impacts will be temporary during construction of the Wind Project and will be minimized to the extent possible through the use of BMPs. Impacts to surface waters are expected to be negligible.[777] If access roads cross waterbodies, they will be designed to maintain stream flow by using culverts.[778]

601. Turbine siting and general site design will reduce impacts to surface waters. Optimal turbine locations are those which are topographically elevated from their surroundings. The proposed turbines, DCW Substation, and O&M facility are all outside the FEMA designated floodplain, although up to 0.7 miles of collection lines and 0.3 miles of access roads are located within designated floodplains in the Dodge County portion of the site.[779]

602. Accordingly, negligible impacts to surface water or floodplains are expected from operation of the Wind Project.[780]

603. Several standard conditions of the proposed Site Permit also address potential impacts to surface waters:

- Section 5.3.7 requires DCW to "implement erosion prevention and sediment control practices recommended by the PCA and to "obtain a construction stormwater permit." A construction stormwater permit requires both temporary and permanent stormwater controls. This section also requires implementation of erosion and sediment control measures, contours graded to provide for proper drainage, and all disturbed areas be returned to pre-construction conditions. DCW will also develop a SWPPP that complies with MPCA rules and guidelines. The SWPPP describes construction activity, temporary and permanent erosion and sediment controls, BMPs, permanent stormwater management that will be implemented during construction and through the life of the project. Implementation of the

[776] Ex. DOC-160 at 98 (Environmental Assessment); Ex. DCW-117 at 102-03 (Amended Site Permit Application).
[777] Ex. DCW-117 at 104 (Amended Site Permit Application); Ex. DOC-160 at 98 (Environmental Assessment).
[778] Ex. DOC-160 at 98 (Environmental Assessment).
[779] *Id.*; Ex. DCW-117 at 43, 103-04 (Amended Site Permit Application).
[780] Ex. DCW-117 at 43, 104 (Amended Site Permit Application).

protocols outlined in the SWPPP will minimize the potential for soil erosion during construction.

- Section 5.3.8 requires DCW to minimize access to riparian areas and to restore water resource areas to pre-construction conditions and meet all requirements of the U.S. Army Corps of Engineers (USACE), MnDNR, Minnesota Board of Soil and Water Resources (BWSR), and local units of government.

- Section 5.3.14 requires DCW to design and construct turbine access roads so runoff from the upper portions of the watershed can readily flow to the lower portion of the watershed. This section also requires DCW to provide the SWPP to the local SWCD and landowners to minimize the potential for project runoff to adversely impact drainage conservation and drainage practices in the area.

- Section 11.2 requires DCW to restore and reclaim the site to pre-project conditions.[781]

L. Wetlands

604. Wetlands are areas with hydric (wetland) soils, hydrophilic (water-loving) vegetation, and wetland hydrology (inundated or saturated during much of the growing season). Wetland types include marshes, swamps, bogs, and fens.[782]

605. Wetlands are not a common feature at the site, but there are isolated wetlands and wetland complexes associated with watercourses across the site. Most of the identified wetlands are classified as freshwater emergent with some shrub/scrub and forested wetland types. According to the USFWS National Wetlands Inventory (NWI) database, the site contains approximately 676 acres of mapped NWI wetlands and open water features, comprising 2.4 percent of the site area.[783]

606. Turbines and MET towers for the LWECS will be sited and built in upland, higher elevation areas to maximize the wind resources and, in doing so, will avoid direct impacts to wetlands and surface waters.[784] DCW indicates it has located and designed access roads and project infrastructure to avoid or minimize permanent impacts to wetlands to the greatest extent feasible.[785] Temporary impacts to wetlands may occur within construction easement extents.[786] A review of the NWI database indicates the project may temporarily impact up to 5.5 acres, primarily freshwater emergent wetlands and permanently impact up to 1.4 acres of freshwater emergent wetlands.[787]

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[781] Ex. DOC-160 at 99 (Environmental Assessment).
[782] *Id*.
[783] *Id*. at 100; Ex. DCW-117 at 105 (Amended Site Permit Application).
[784] Ex. DCW-117 at 107 (Amended Site Permit Application).
[785] *Id*.
[786] *Id*.
[787] Ex. DOC-160 at 100-01 (Environmental Assessment).

607. DCW indicated it has completed delineation surveys for waters of the United States and for wetlands regulated by the State of Minnesota and has initiated coordination with the USACE, MnDNR, and local governments.[788]

608. Several standard conditions of the proposed Site Permit address wetland mitigation.

- Section 4.6 precludes wind turbines and most associated facilities from being placed in public waters wetlands, except that electric collector or feeder lines may be placed in public waters or public water wetlands subject to permits and approvals by the MnDNR and USACE and local units of government implementing the Wetland Conservation Act.

- Section 5.3.8 requires mitigation measures for any construction in wetland areas. The preferred mitigation is to construct during frozen ground conditions occur during frozen ground conditions and, when winter construction is not feasible, use of mats to protect wetland vegetation. The condition requires that wetland areas be accessed using the shortest route possible and that all construction and restoration activities meet the requirements of USACE, MnDNR, BWSR, and local government requirements.

- Section 5.3.21 precludes DCW from locating temporary equipment staging areas in wetlands.[789]

609. Accordingly, the Wind Project's impacts on wetland and water resources should be minor and potential impacts are appropriately accounted for and mitigated in the Site Permit conditions.

M. Vegetation

610. The Project Area is located within the Oak Savanna Subsection of the Minnesota and Northeast Iowa Morainal Section of the Eastern Broadleaf Forest Province. This subsection consists primarily of row crop agricultural land.[790]

611. Construction, maintenance, and operation of large energy projects may cause short-term and long-term impacts to vegetation. Short-term impacts are associated with construction; once the construction activity (i.e., temporary lay-down areas, grading and excavation of soils, trenching for electric feeder/collector lines, etc.) is completed the disturbed area can be returned to pre-construction conditions. Long-term impacts include those which are permanent in nature and are usually associated with the construction site

[788] *Id*. at 101.
[789] *Id.* at 101, Appx. G DR 23.
[790] Ex. DCW-117 at 108 (Amended Site Permit Application).

of individual wind turbines and associated facilities, such as collector and feeder lines, access roads, and O&M building.[791]

612. Based on the United States Geological Society's National Land Cover Database, land cover in the Project area is primarily cultivated crops, which account for approximately 93 percent of the land cover within the site. For the most part, pasture and grassland areas are fragmented across the Project Area and forested areas appear limited to stream corridors, near lentic water features, and around homesteads.[792]

613. Nearly all Wind Project infrastructure will be located in agricultural fields. Less than one percent of the total site will be permanently converted to wind turbines or other project infrastructure.[793] Temporary vegetation impacts will occur during the construction of access roads, crane walks, turning radii, equipment laydown areas, construction easements around turbines, and collection line installation, while permanent impacts include the area at each turbine inside the turbine ring roads, permanent access roads, and the DCW Substation and O&M facility.[794]

614. MnDNR has mapped two native prairie areas within the boundary of the Wind Project, comprising approximately 26.1 acres.[795]

615. To mitigate the potential impact to native prairie, DCW will identify potentially affected native prairies and prepare a Prairie Protection and Management Plan in consultation with the MnDNR. The Prairie Protection and Management Plan will detail efforts to avoid impacts to prairies through site design.[796] The Minnesota Biological Survey (MBS) also identifies six Sites of Biodiversity Significance[797] and thirteen native plant communities[798] that are located completely within or partially within the Project area.

616. The record demonstrates that DCW has planned the Wind Project, and will continue to develop the Project, to avoid direct permanent and temporary impacts to natural areas, including wetlands, native plant communities, and MBS Sites of Biodiversity Significance, including native prairies, to the extent feasible.[799]

617. Several standard conditions of the proposed DSP address impacts to vegetation:

- Section 5.3.9 requires DCW to minimize disturbance to vegetation to the extent necessary for safe construction, operation, and

[791] Ex. DOC-160 at 109 (Environmental Assessment).
[792] *Id*. at 109-10.
[793] Ex. DCW-117 at 111 (Amended Site Permit Application).
[794] Ex. DOC-160 at 110 (Environmental Assessment).
[795] Ex. DCW-117 at 111 (Amended Site Permit Application).
[796] *Id*. at 114.
[797] *Id*. at 109.
[798] *Id*. at 110.
[799] *Id*. at 114.

maintenance. This section directs the permittee to minimize the number of trees removed.

- Section 5.3.11 requires DCW to develop an invasive species management plan identifying BMPs to avoid introduction and spread of invasive species from construction of the project.

- Section 5.3.12 requires DCW to take all reasonable precautions against the spread of noxious weeds during construction. This condition also requires DCW to use weed-free seed mixes when establishing temporary or permanent vegetative cover and to consult with landowners on the selection of seed mixes for replanting.

- Section 5.3.22 requires the permittee to restore construction areas to pre-construction conditions to the extent possible no later than 12 months after the completion of construction.

- Section 4.7 requires the permittee to prepare a Prairie Protection and management Plan in consultation with DNR if native prairie is identified within the site boundaries and prohibits the permittee from placing turbines or other associated facilities in native prairie unless addressed in the Prairie Protection and Management Plan.[800]

N. Wildlife

618. Wildlife can potentially be impacted by large energy projects. Wildlife such as birds, mammals, fish, reptiles, amphibians, and insects, can be permanent or migratory. Many species utilize the available habitat in and adjacent to the Project Area for forage, breeding and shelter.[801]

619. The most common species within the site tend to be generalists that use the cultivated areas and the scattered woodlands, grasslands, streams, and wetland habitats. According to the general distribution of wildlife in the region and their habitat preferences, a variety of common and widespread species have the potential to occur within the site at some time during the year.[802]

620. Local and migratory species use the grasslands, farm woodlots, and cultivated areas wetlands and other areas for food and cover. Mammals common to this landscape include white-tailed deer, raccoon, coyote, red and grey fox, opossum, skunk, squirrels, weasels, and badgers. Reptiles and amphibians are associated with wetlands, waterways and forested stretches throughout the project area. Reptiles and amphibians include snakes, turtles, toads and frogs. Several species of birds and bats are also known

[800] Ex. DOC-160 at 111, 118 (Environmental Assessment).
[801] *Id*. at 102.
[802] *Id*.

to occur in this landscape, including grassland birds, migratory birds, raptors and waterfowl.[803]

621. The proposed Site Permit includes several standard conditions to minimize adverse impacts to wildlife and habitat:

- Section 4.5 precludes siting of turbines or associated facilities on public lands without the agreement of the public entity owning the land. As a result, turbines are set back three to five times the RD setback from WMAs and WPAs to reduce the risk to waterfowl/waterbirds and grassland-associated birds;

- Section 4.7 requires DCW to prepare a Prairie Protection and Management Plan in consultation with MnDNR if native prairie is identified within the site boundaries and prohibits the permittee from placing turbines or other associated facilities in native prairie unless addressed in the Prairie Protection and Management Plan.

- Section 6.2 is a special permit condition that requires DCW to use wildlife-friendly erosion control materials.

- Section 7.1 requires DCW to design and conduct pre-construction studies of WMAs, SNAs, recreation areas, native prairies and forests, wetlands, and any other biologically sensitive areas within the site and to assess for the presence of state or federally listed endangered or threatened species.

- Section 7.5.1 requires DCW to conduct a minimum of two years of avian and bat fatality monitoring studies after the project begins operation.

- Section 7.5.2 requires DCW to comply with the provisions of the August 2021 ABPP provided as Appendix M of the January 12, 2022, Amended Site Permit Application. This section also requires the permittee to file an annual report detailing findings of its annual audit of ABPP practices and recommend changes to operation to reduce avian and bat fatalities.

- Section 7.5.3 requires DCW to submit quarterly reports on avian and bat fatalities and injuries describing, if known, the potential cause of the occurrence and steps to reduce future occurrences.

- Section 7.5.4 requires the permittee to report defined clusters of deaths or injuries or deaths or injuries of certain state-or federally listed species of birds and bats or within 24 hours. This section also

[803] *Id*. at 102-03; Ex. DCW-117 at 120-22 (Amended Site Permit Application).

requires DCW to follow up the immediate reports with further analysis and plans to address the issue.

- Section 7.5.5 requires DCW to equip turbines with operational software that allows for adjustment of turbine cut-in speeds and requires the permittee to lock or feather turbine blades up to the manufacturer's standard cut-in speed overnight between April 1 and October 31.[804]

1. Habitat

622. In highly fragmented landscapes or those with few intact natural communities, public lands (state or federal) and private lands under permanent conservation easement provide wildlife habitat that has long-term protections from development and encroachment. Within and adjacent to the site, there are two MnDNR-owned WMAs, one MnDNR-owned SNA, and a federally owned WPA.[805]

623. There are no National Audubon Society important bird areas or MnDNR-designated Waterfowl Feeding and Resting Areas located within ten miles of the project area. Rice Lake, a MnDNR-designated wildlife lake, is located approximately 1.75 miles north of the site boundary in Rice Lake State Park. DCW indicates it is not aware of any conservation easements in areas that will be disturbed during the LWECS construction and operation.[806]

624. As detailed in the EA, the potential for habitat fragmentation impacts as a result of the Wind Project is low because the Project is sited in an agricultural landscape and much of the remaining habitat is disturbed. The Wind Project is designed to avoid placing turbines and access roads in wetlands, native plant communities, and MBS sites of Biodiversity Significance.[807]

2. Birds

625. Studies have shown that placement of turbines and auxiliary structures can result in decreased densities of songbirds and other species. The potential for habitat avoidance by wildlife in response to wind turbines and associated infrastructure is highly variable depending on the species, seasonal and annual variation in weather, migration patterns, and individual behavior patterns. Based on these studies of existing wind power projects in the United States and Europe, the impact to wildlife would primarily occur to avian and bat populations.[808]

[804] Ex. DOC-160 at 108-09 (Environmental Assessment).
[805] *Id*. at 103.
[806] *Id.*; Ex. DCW-117 at 44 (Amended Site Permit Application).
[807] Ex. DOC-160 at 106 (Environmental Assessment).
[808] *Id*. at 103-04.

626. Studies of bird fatalities near wind facilities indicate that fatalities will occur, and they will vary with bird type (e.g., raptor, waterfowl, passerine), habitat availability, and other resources available within the site.[809]

627. Bald eagle collisions with wind turbines are of additional concern as bald eagle populations continue to grow and expand throughout Minnesota. Bald eagles are afforded additional protections under the Bald and Golden Eagle Protection Act, which is administered by the USFWS. Wind energy facilities are eligible to apply for Incidental Take Permits and Nest Removal Permits issued by the USFWS, which will allow for the non-intentional take of bald eagles and the removal of bald eagle nests, respectively. Bald eagle incidental take permits and nest removal permits are considered to be voluntary permits, meaning a project proposer must make the determination to pursue a permit based on the respective risk of their project's potential to take a bald eagle.[810]

628. DCW conducted two years of avian use point count surveys to document species presence and overall avian use of the site consistent with USFWS methodology. No threatened or endangered species listed under the Endangered Species Act were observed during the surveys.[811] The surveys observed 144 different species, with passerines as the most abundant species group of birds recorded during surveys, accounting for between 61 and 84 percent of all birds observed. Both years of survey showed relatively low raptor usage at the site, with red-tailed hawks and turkey vultures the most frequently observed raptor. The most commonly observed species during the wetland utilization survey were redhead and ring-necked duck, representing 25 percent and 13 percent of all observations, respectively. Other species observed during the surveys included waterfowl (Canada goose, mallard, northern shoveler), upland game birds (ring-necked pheasant and mourning dove), raptors (bald eagle, red-tailed hawk, American kestrel) and many songbirds (blackbirds, sparrows, swallows).[812]

629. The LWECS has the potential to cause displacement of some bird species from the site due to increased human activity or the presence of tall structures, though clearing of habitat will be minimal. Many of the most-observed bird species within the site are common, disturbance-tolerant species, similar to the results of surveys at other wind energy facilities in the region.[813]

630. The operation of the Wind Project may result in avian fatalities from collision with the turbines or other structures. Based on the results of post-construction monitoring at similar facilities located on agricultural landscapes in southern Minnesota, estimated bird carcass rates at the Wind Project would be expected to be within the range reported from studies at other wind facilities in the region. No single species or group is expected to experience a disproportionate amount of estimated mortality or impacts of a magnitude

[809] *Id*. at 104.
[810] *Id*.
[811] Ex. DCW-117 at 117 (Amended Site Permit Application).
[812] *Id*. at 116-20; Ex. DOC-160 at 106 (Environmental Assessment).
[813] Ex. DOC-160 at 106-07 (Environmental Assessment).

to affect the local or migratory population, as reflected in studies completed by Erickson et al.[814]

3. Bats

631. Bat species present in Minnesota include the hoary bat, eastern red bat, big brown bat, silver-haired bat, tri-colored bat, little brown bat, northern long-eared bat, and evening bat. The northern long-eared bat is federally listed endangered and state listed as special concern and the tri-colored bat is proposed to be listed as an endangered species. The big brown bat, little brown bat, and tri-colored bat are also listed as special concern.[815]

632. Bat fatality studies indicate a broad range of fatalities across the United States as a result of wind development. Fatality rates are highest for migrating-tree roosting bat species, with the majority of fatalities occurring during the late summer and early fall migration (roughly July-October). Documented bat fatalities are highest in the eastern United States, while those in the Midwest represent a wide range of fatality rates. Post-construction fatality studies completed in Iowa, Minnesota and Wisconsin show bat fatality estimates ranging from 1 to 24 bats/MW/year. Post construction surveys for Commission-permitted wind projects show an estimated bat fatality rate of 1 to 37.6 bats/MW/year.[816]

633. It is presumed that projects in areas with similar habitat and cover types would have similar fatality rates, depending on migration patterns, known roosting and foraging areas, and hibernacula. However, as detailed in the EA, bat migration routes and behavioral patterns are poorly understood and there is a lack of comparative studies of bat fatalities from wind facilities, making it difficult to determine fatality rates at regional levels much less at broader scales.[817]

634. The site is within the range of several bat species common in Minnesota, including little brown bat, big brown bat, silver-haired bat, eastern red bat, and the hoary bat. Although the site is in the range of each of these species, the preferred habitat of these species (e.g., the caves where little brown and big brown bats roost and lakes and streams where they forage, and the forested habitat preferred by silver-haired, eastern red, and hoary bats) is not abundant within or in the vicinity of the Wind Project.[818]

635. Estimated bat carcass rates at the Wind Project are expected to be within the range reported from studies at other wind facilities in the region.[819]

636. To mitigate potential impact to bat and avian species, DCW will implement an ABPP during construction and operation of the Project. The ABPP has been developed in accordance with the guidelines and recommendations set forth in the

[814] *Id*. at 107.
[815] *Id*. at 105.
[816] *Id*.
[817] *Id*. at 105-06.
[818] *Id*. at 107; Ex. DCW-117 at 120 (Amended Site Permit Application).
[819] Ex. DOC-160 at 107 (Environmental Assessment).

USFWS Land-based Wind Energy Guidelines and the Wind Turbine Guidelines Advisory Committee's recommended guidelines to the USFWS.[820]

4. Mammals

637. Many common mammal species including white-tailed deer, raccoon, coyote, red fox and gray fox, Virginia opossum, skunk, badger, and various types of squirrels are likely to be present at the site. The larger mammal species are most likely to utilize the wooded areas and uncultivated grassland areas that are present within the site, while the smaller mammal species are also likely to use the cultivated areas that dominate the site.[821]

638. To account for and address the presence and potential impacts of these species, DCW has submitted a wildlife conservation strategy or ABPP, which provides information on species present in the area of the Wind Project and the mitigation techniques that DCW will employ to assist in the conservation of species in the vicinity of the Project.[822]

5. Reptiles and Amphibians

639. An assortment of reptiles and amphibians (e.g., American toad, Cope's gray treefrog, wester chorus frog, painted turtle, snapping turtle, wood turtle, common and plain garter snake, milk snake, redbelly snake, and smooth green snake) are anticipated to be present within the site. Most of the reptiles and amphibians live in habitats associated with wetlands, streams, and ditches, although some species (e.g., wood turtle and garter snakes) are also found in grasslands or fallow fields.[823]

640. DCW has stated its commitment to minimizing avian and wildlife impacts from construction and operation of the Wind Project and has adopted implementation measures to avoid and minimize impacts to sensitive wildlife species and habitat. DCW acknowledges that it will coordinate with USFWS and MnDNR regarding appropriate mitigation measures for wildlife impacts; and, should additional avoidance and minimization measures be warranted based on operational impacts or a change in listing status for a species, DCW will coordinate with MnDNR, DOC-EERA, and/or USFWS.[824]

641. DCW has taken steps to minimize and mitigate impacts to wildlife. It is not anticipated that the construction and operation of the Project will have a significant impact on wildlife given these steps and the requirements of the proposed Site Permit.

O. Rare and Unique Natural Resources

642. There are ten MnDNR-identified native plant communities located within the site and six MBS sites of Biodiversity Significance that are located completely or partially

[820] Ex. DCW-117 at 135 (Amended Site Permit Application).
[821] *Id.* at 120; Ex. DOC-160 at 106 (Environmental Assessment).
[822] Ex. DCW-117 at Appx. M (Amended Site Permit Application).
[823] *Id*. at 122; Ex. DOC-160 at 106 (Environmental Assessment).
[824] Ex. DCW-117 at 135 (Amended Site Permit Application).

within the site. Three of the MBS sites within the site, totaling 23.4 acres, have been given a "below" Biodiversity Significance ranking, one site (0.1 acres) is ranked as "moderate", and two sites (totaling 350.2 acres) are ranked as "high".[825]

643. These resources are concentrated in the northern and northeastern portion of the site. The Southern Wet Prairie sites (also ranked as sites of high Biodiversity Significance) are located within the Hythecker Prairie SNA, a 40-acre prairie site located in the northern portion of the site in Dodge County. Most of the other native plant communities are located along the Dodge Center Creek in the northeastern portion of the site; these communities are also ranked as sites of high Biodiversity Significance. Areas with moderate and below MBS sites are primarily located along the western and southern portions of the site.[826]

644. Construction and operation of the Wind Project could result in direct and indirect impacts to vegetation communities. Direct effects to vegetation would occur from disturbance or removal of vegetation at the wind turbine generator pad sites, along access roads, and in association with the 34.5-kV underground electrical collection system. Indirect impacts could occur from erosion, runoff, introduction of invasive species or noxious weeds.[827]

645. DCW indicates it has designed the Wind Project to minimize direct impacts to these communities by avoiding the native plant communities and sites of Biodiversity Significance ranked as high. However, DCW anticipates temporary impacts to approximately 0.9 acres and permanent impacts of approximately 0.03 acres to an area ranked as "Below."[828]

646. There are two federally listed threatened or endangered species listed by the FWS as potentially occurring in Dodge and Steele counties: the northern long-eared bat (NLEB) and prairie bush clover. In addition to these species, the USFWS is considering whether to list the tri-colored bat as an endangered species.[829]

647. The Natural Heritage Information System (NHIS) database maintained by MnDNR identifies 24 records of 10 species of rare plants or animals within one mile of the site. In addition to the species identified in the NHIS database, DCW wildlife surveys documented three species of state listed endangered bird species in the vicinity of the site: Henslow's sparrows, horned grebe, and loggerhead shrike.[830]

648. As referenced earlier, bald eagle collisions with wind turbines are a concern as populations continue to grow. In Minnesota, the bald eagle nesting season is generally

[825] *Id.* at 97-104, 109-10; Ex. DOC-160 at 112 (Environmental Assessment).
[826] Ex. DOC-160 at 113 (Environmental Assessment).
[827] *Id*.
[828] *Id*.; Ex. DCW-117 at 114 (Amended Site Permit Application).
[829] Ex. DOC-160 at 114 (Environmental Assessment).
[830] *Id*.; Ex. DCW-117 at 125 (Amended Site Permit Application).

January through early July. Bald eagles are primarily found near rivers, lakes, and other waterbodies in remote and, more recently, within metropolitan areas.[831]

649. The avian surveys observed bald eagles and golden eagles within the site and flying within the rotor swept zone (defined in the study as 66-492 feet above ground level). Ground-based raptor nest surveys were conducted in 2015 and 2016 and aerial nest surveys were conducted in 2017 and 2020. The 2020 survey did not identify any eagle nests within the site but did identify five occupied and active bald eagle nests within five miles of the site and one additional occupied and active bald eagle nest outside of the five-mile buffer. The 2021 nest survey documented three nests within two miles of the site. No bald eagle nests were identified within the site.[832]

650. The proposed Site Permit includes several standard conditions related to minimizing the potential for adverse impacts to rare and unique natural resources:

- Section 4.5 precludes siting of turbines or associated facilities on public lands without the agreement of the public entity owning the land. As a result, turbines will set back three to five times the RD setback from the Hythecker Prairie SNA to reduce the risk to waterfowl/waterbirds and grassland-associated birds;

- Section 4.7 requires DCW to prepare a Prairie Protection and Management Plan in consultation with MnDNR if native prairie is identified within the site boundaries and prohibits DCW from placing turbines or other associated facilities in native prairie unless addressed in the Prairie Protection and Management Plan.

- Section 6.8 requires DCW to comply with the USFWS guidance and requirements in effect regarding NLEB, including tree clearing restrictions if applicable.

- Section 6.9 requires DCW to avoid tree and shrub removal within suitable Loggerhead Shrike habitat during the April through July breeding season, and to coordinate with MnDNR if tree and shrub clearing will occur during the breeding season to identify potentially suitable habitat and ensure that a qualified surveyor inspects the trees/shrubs for active nests prior to removal.

- Section 7.1 requires DCW to design and conduct pre-construction studies of WMAs, SNAs, recreation areas, native prairies and forests, wetlands, and any other biologically sensitive areas within the site and to assess for the presence of state or federally listed endangered or threatened species.

[831] Ex. DOC-160 at 117 (Environmental Assessment).
[832] *Id*.

- Section 7.5.1 requires DCW to conduct a minimum of two years of avian and bat fatality monitoring studies after the Wind Project begins operation.

- Section 7.5.2 requires DCW to comply with the provisions of the August 2021 ABPP provided as Appendix M of the January 12, 2022, Amended Site Permit Application. This section also requires DCW to file an annual report detailing findings of both formal and informal monitoring and recommend changes to operation to reduce avian and bat fatalities.

- Section 7.5.3 requires DCW to submit quarterly reports on avian and bat fatalities and injuries describing, if known, the potential cause of the occurrence and steps to reduce future occurrences.

- Section 7.5.4 requires DCW to report defined clusters of deaths or injuries or deaths or injuries of certain state-or federally-listed species of birds and bats within 24 hours. This section also requires the permittee to follow up the immediate reports with further analysis and plans to address the issue.

- Section 7.5.5 requires DCW to equip turbines with operational software that allows for adjustment of turbine cut-in speeds and requires the permittee to lock or feather turbine blades up to the manufacturer's standard cut-in speed overnight between April 1 and October 31.[833]

651. In addition to these measures, DCW indicates it will site turbines at least 1,000 feet from forested areas of ten acres or greater to minimize potential impacts to NLEBs.[834]

P. Cultural and Archaeological Resources

652. Archeological resources are locations where objects or other evidence of archaeological interest exist, and can include aboriginal mounds and earthworks, ancient burial grounds, prehistoric ruins, or historical remains.[835] Historic resources are sites, buildings, structures, or other antiquities of state or national significance.[836]

653. DCW contacted 31 tribes, including the eleven Minnesota Tribal Nations' THPOs and the MIAC for additional information or comment on the Project. DCW indicates that representatives from the Standing Rock Sioux Tribe, Upper Sioux Community, Rosebud Sioux Tribe, and Sisseton Wahpeton Oyate participated in project

[833] *Id*. at 118-19.
[834] *Id*. at 119; Ex. DCW-117 at 124 (Amended Site Permit Application).
[835] Minn. Stat. § 138.31, subd. 14.
[836] Minn. Stat. § 138.51.

micro-siting and Phase I archaeological field surveys.[837] DCW indicates that no concerns were reported by tribal representatives and that DCW continues to coordinate with tribes.[838]

654. No previously recorded archaeological or historic sites will be directly impacted by the proposed LWECS.[839] DCW conducted a cultural resource literature search for the Wind Project in 2020.[840] The records search reviewed records from the Minnesota State Historic Preservation Office (SHPO) and Minnesota Office of the State Archeologist for an area within one mile of the Wind Project. In addition to the literature search, DCW has conducted pedestrian field surveys within the site.[841]

655. DCW's records search identified 12 architectural resources within the site; three of these sites (all farmsteads) have been recommended as eligible for listing in the National Register of Historic Places (NRHP), five have been recommended as Not Eligible for listing in the NRHP, and four are not evaluated (three of the four unevaluated sites appear to be demolished).[842]

656. A literature search identified eight archaeological sites within the Wind Project site; three sites are recorded as Not Eligible for listing on the NRHP, three are recommended as Not Eligible, and two are unevaluated lithic scatters. Phase I archaeological surveys completed in 2021 identified three archaeological sites that were determined as Not Eligible for listing in the NRHP after review by the SHPO.[843]

657. The Cultural Resources Literature Search conducted on behalf of DCW recommended additional surveys at construction locations prior to construction to identify any unrecorded archaeological sites. DCW indicates it plans additional Phase I archaeological surveys developed in coordination with SHPO.[844]

658. Prudent siting and routing to avoid impacts to archaeological and historic resources is the preferred mitigation. Section 5.3.16 of the proposed Site Permit addresses archeological resources and requires DCW to avoid impacts to archaeological and historic resources where possible and to mitigate impacts where avoidance is not possible. If previously unidentified archaeological sites are found during construction, the permit requires DCW to stop construction and contact SHPO to determine how best to proceed. Ground disturbing activity will stop and local law enforcement will be notified should human remains be discovered.[845]

659. In addition to the condition in the proposed Site Permit, DCW indicates it will prepare an Unanticipated Discoveries Plan prior to construction. The plan will outline

[837] Ex. DCW-117 at 30 (Amended Site Permit Application).
[838] *Id.* at 77; Ex. DOC-160 at 79 (Environmental Assessment).
[839] *Id.*
[840] Ex. DCW-117 at Appx. J (Amended Site Permit Application).
[841] *Id*. at 69; Ex. DOC-160 at 79 (Environmental Assessment).
[842] Ex. DOC-160 at 79 (Environmental Assessment).
[843] *Id*.
[844] *Id*. at 80; Ex. DCW-117 at 77, Appx. J (Amended Site Permit Application).
[845] Ex. DOC-160 at 80 (Environmental Assessment).

steps to be taken if previously unrecorded cultural resources or human remains are encountered during construction.[846] DOC-EERA proposed a special condition (Section 6.10) requiring the Permittee to conduct an archaeological survey in areas of construction activity within undisturbed land that have not been surveyed and to prepare an Unanticipated Discoveries Plan.[847]

> **6.10. Unanticipated Discoveries Plan**
>
> Prior to construction, the Permittee shall survey areas of construction activity within undisturbed land that have not been surveyed. The Permittee shall develop an Unanticipated Discoveries Plan (UDP) to identify guidelines to be used in the event previously unrecorded archeological or historic properties, or human remains, are encountered during construction, or if unanticipated effects to previously identified archaeological or historic properties occur during construction. This is in addition to and not in lieu of any other obligations that may exist under law or regulation relating to these matters. The UDP shall describe how previously unrecorded, nonhuman burial, archaeological sites found during construction shall be marked and all construction work must stop at the discovery location. The Permittee shall file the UDP with the Commission at least 14 days prior to the preconstruction meeting.[848]

660. With the conditions of the proposed Site Permit coupled with DCW's avoidance and mitigation measures, impacts on cultural and archeological resources are expected to be minimal.

XII. SITE PERMIT CONDITIONS

661. The Commission's February 24 Order included a preliminary DSP for the Project with proposed permit conditions, many of which have been previously referenced in these Findings. Most of the conditions included in the DSP were established as part of previous site permit proceedings for large wind turbine projects permitted by the Commission.[849]

662. Other conditions included in the DSP reflected input from commenters and stakeholders. Comments received by the Commission – from MnDNR in particular – helped lead to the proposal for five special conditions unique to DCW's proposed Site Permit.[850] Those five special conditions, which were included in the DSP issued by the Commission, were the following:

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[846] *Id.*; Ex. DCW-117 at 78 (Amended Site Permit Application).
[847] Hearing Reply Comments by DOC-EERA (February 29, 2024) (eDocket No. 20242-203500-05).
[848] *Id*.
[849] Ex. DOC-145 at 25 (EERA Scoping Comments and Recommendations to Commission, Including Preliminary Draft Site Permit).
[850] *See* Ex. DOC-127 at 3-4 (DNR Comments).

6.1 Independent Third-Party Monitor

Prior to any construction, the Permittee shall propose a scope of work and identify one independent third party monitor on behalf of the Department of Commerce. The scope of work shall be developed in consultation with and approved by the Department of Commerce. This third-party monitor will report directly to and will be under the control of the Department of Commerce with costs borne by the Permittee. The Permittee shall file the scope of work, and the name, address, email, phone number, and emergency phone number of the third-party monitor with the Commission at least 14 days prior to the preconstruction meeting, and upon changes to the scope of work or third-party monitor contact information.

6.2 Wildlife-Friendly Erosion Control

The Permittee shall use only "bio-netting" or "natural netting" types of erosion control materials and mulch products without synthetic (plastic) fiber additives.

6.3 Substation Lighting

The Permittee shall use shielded and downward facing lighting and LED lighting that minimizes blue hue at the project substation. Downward facing lighting must be clearly visible on the plan and profile submitted for the project.

6.4 Dust Control

The Permittee shall minimize and avoid, if possible, the use or chloride-based dust control chemicals (i.e., calcium chloride, magnesium chloride).

6.5 Snowmobile Trails

The Permittee shall coordinate with local snowmobile groups regarding potential project related impacts to the snowmobile trails in Steele and Dodge counties. Coordination with local snowmobile groups shall include discussions of potential construction timing and activities that could impact the trail and potential trail rerouting needs.

663. DCW asserts that it is amenable to the wildlife-friendly erosion control,[851] substation lighting,[852] dust control,[853] and snowmobile trail conditions.[854] DCW indicated

[851] Ex. DCW-139 at 28 (Corbett Direct).
[852] Ex. DCW-129 at 9 (Comments – Response to Environmental Assessment Scoping).
[853] Ex. DCW-139 at 28 (Corbett Direct).
[854] Ex. DCW-129 at 14 (Comments – Response to Environmental Assessment Scoping).

in its February 15, 2024 reply comments that it was agreeable to each of these conditions.[855]

664. On November 30, 2023, the EA was issued. It included four additional special conditions to be added to DCW's Site Permit.[856] The four added special conditions in the EA were as follows:

> **6.6 Shadow Flicker Management Plan**
>
> The Permittee shall prepare a Shadow Flicker Management Plan. The Shadow Flicker Management Plan will include the results of any shadow flicker modeling, assumptions made, levels of exposure prior to implementation of planned minimization and mitigation efforts, planned minimization and mitigation efforts, and planned communication and follow up with residence. Mutual agreements between the permittee and landowners shall be considered a mitigation measure. The Shadow Flicker Management Plan shall be filed with the Commission at least 14 days prior to the preconstruction meeting to confirm compliance with conditions of this permit. Mutual agreements with landowners finalized after the preconstruction meeting shall be filed as amendments to the Shadow Flicker Management Plan. Should shadow flicker modeling identify any residence that will experience in 30 hours, or more, of shadow flicker per year, the Permittee must specifically identify these residences in the Shadow Flicker Management Plan. If through minimization and mitigation efforts identified in the Shadow Flicker Management Plan the Permittee is not able to reduce a residence's anticipated shadow flicker exposure to less than 30 hours per year a shadow flicker detection systems will be utilized during project operations to monitor shadow flicker exposure at the residence. The Shadow Flicker Management Plan will detail the placement and use of any shadow flicker detection systems, how the monitoring data will be used to inform turbine operations, and a detailed plan of when and how turbine operations will be adjusted to mitigate shadow flicker exposure exceeding 30 hours per year at any one receptor. The results of any shadow flicker monitoring and mitigation implementation shall be reported by the Permittee in the Annual Project Energy Production Report identified in Section 10.9 of this Permit. Commission staff and EERA staff will be responsible for the review and approval of the Shadow Flicker Management Plan. The Commission may require the Permittee to conduct shadow flicker monitoring at any time during the life of this Permit.

[855] Hearing Reply Comment by Dodge County Wind (Feb. 15, 2024) (eDocket No. 20242-203500-05).
[856] Ex. DOC-160 at Appx. B, pp. 15-16 (Environmental Assessment).

6.7 Karst Geology

At least 14 days prior to the pre-construction meeting, the Permittee shall file with the Commission a geotechnical report and engineering recommendations for turbine and substation foundations. The geotechnical report shall be prepared under the direction of a geotechnical engineer licensed in the State of Minnesota. The submittal shall also include a letter from the Permittee summarizing the geotechnical report recommendations to be implemented on the project.

6.8 Northern Long-Eared Bat

For Project construction, the Permittee shall comply with the U.S. Fish and Wildlife Service guidance and requirements in effect regarding NLEB, including tree clearing restrictions if applicable.

6.9 Loggerhead Shrike

The permittee shall avoid tree and shrub removal within suitable Loggerhead Shrike habitat during the April through July breeding season. If tree or shrub removal will occur during the breeding season, the permittee shall coordinate with DNR to identify potentially suitable habitat and ensure that a qualified surveyor inspects the trees/shrubs for active nests prior to removal.

665. DCW provided testimony stating it would comply with the shadow flicker[857] and loggerhead shrike[858] conditions and agreed to each of them in its February 15, 2024 reply comments.[859]

666. DOC-EERA also included in the DSP a new condition (Section 5.6.3) reflecting recent changes to Minn. Stat. 216F.04. That condition requires DCW, as well as DCW's contractors and subcontractors, to pay no less than the prevailing wage as defined in Minnesota Statute 177.42 and to comply with the Fair Labor Standards Act. In its reply comments, DOC-EERA also proposed modifications to Section 6.5 of the DSP memorializing DCW's commitment to set turbines back a minimum of 1.1 times the total turbine height from existing snowmobile trails and adding a new condition (Section 6.10) requiring the Permittee to conduct an archaeological survey in areas of construction activity within undisturbed land that have not been surveyed and to prepare an Unanticipated Discoveries Plan.[860]

667. The Judge finds the conditions provided in the DSP attached to the EA, including the special conditions provided in Section 6.0 of the DSP, and new condition

[857] Ex. DCW-138 at 27 (Cameron Direct); Ex. DCW-140 at 19 (Lampeter Direct).
[858] Ex. DCW-139 at 30 (Corbett Direct).
[859] Hearing Reply Comment by Dodge County Wind (Feb. 15, 2024) (eDocket No. 20242-203500-04).
[860] Hearing Reply Comments by DOC-EERA (February 29, 2024) (eDocket No. 20242-203937-01).

6.10, to represent reasonable conditions and recommends their inclusion in the Site Permit issued to DCW.

668. Steele County filed comments following the December 19 and 20, 2023 hearings stating that ancillary activities associated with the Wind Project may require permits from Steele County or local township government and asked that local permitting requirements become a condition of any permit issued by the Commission.[861] DCW indicated that consistent with the proposed Site Permit, it will obtain the local approvals or permits required from Steele County or local township government for: collector lines that cross public road ROW; access roads connecting onto public roads; and use of public roads for the movement of materials and equipment. DCW indicted that while these permits are necessary for the Project and captured within Section 5.6.2 of the proposed Site Permit, they need not be individually listed in the permit.

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669. At the public hearings, a commenter mentioned that fire suppression in the design of the Wind Project should be a condition of the Site Permit.[862] DCW responded to this request be indicating that thermal events in wind turbined are rare[863] and are appropriately handled within the emergency response requirements of the Site Permit. DCW noted that Section 10.11 of the proposed Site Permit contains a condition requiring an Emergency Response Plan that will be provided to emergency responders and Public Safety Answering Points with jurisdiction over the facility prior to commencement of construction.[864] As part of this planning, DCW will work with Dodge County Emergency Management, Steele County Emergency Management, and other agencies in the preparation of the plan, which will address contingencies such as fire.

670. Section 10.11 appropriately addresses emergency events associated with the Wind Project and no further condition related to fire suppression is necessary.

671. To address and mitigate the many concerns raised by area farmers and agricultural businesses, and as noted by DOC-EERA at various points in the EA, it is recommended that the DSP include a condition that DCW work with MDA to develop an AIMP.

XIII. DESCRIPTION OF THE PROPOSED HVTL

672. DCW proposes to connect the Wind Project to the electrical grid through approximately 27 miles of new 161 kV transmission line between the LWECS and GRE's Pleasant Valley Substation, located in Pleasant Valley Township in Mower County. The transmission line would originate at a new collector substation (the DCW Substation) in the eastern portion of the LWECS site (Ripley Township, Dodge County). In addition to the construction of the DCW Substation and the 161 kV transmission line, the

[861] Comment by Steele County (Jan. 31, 2024) (eDocket No. 20242-203040-02).
[862] Kasson 6:00 p.m. Tr.at 83-88 (Dec. 19, 2023) (Moenning).
[863] *Id.* at 86.
[864] Hearing Reply Comment by Dodge County Wind (Feb. 15, 2024) (eDocket No. 20242-203500-04).

Transmission Project will require equipment additions and reconfigurations within the Pleasant Valley Substation to connect the new 161 kV line. DCW proposes to use monopole structures up to 160 feet tall, with an average height of 80 to 140 feet. DCW is designing the transmission line with average spans of 500 to 800 feet between structures and maximum spans of 900 feet.[865]

673. DCW proposes to use steel single circuit (carrying one three-phase conductor set) monopole structures for most of the Transmission Project. Approximately 3.5 miles of the route would be built on double-circuit structures with GRE's existing Pleasant Valley to Austin Northeast 161 kV line.[866]

674. Three types of structures will be used for the transmission line: (i) tangent structures for in-line (straight segments); (ii) small angle structures in locations where there are slight shifts in the alignment direction; and (iii) deadend structures within, the project substation, at locations with 90 degree turns, and as the transmission line approaches and enters the Pleasant Valley Substation.[867]

675. DCW proposes to use steel single circuit (carrying one three-phase conductor set) monopole structures for the majority of the transmission line's length. All steel used for the structure types will be weatherizing steel.[868]

XIV. CRITERIA FOR ROUTE PERMIT

676. The Minnesota Power Plant Siting Act (PPSA) provides that no person may construct a HVTL without a Route Permit from the Commission.[869] Under the PPSA, an HVTL includes a transmission line that is 100 kV or more and is greater than 1,500 feet in length.[870] The proposed 161 kV transmission line is an HVTL greater than 1,500 feet in length and, therefore, a Route Permit is required from the Commission prior to construction.

677. The Commission's rules establish two tracks for the permitting of HVTL. The "full permitting process" includes preparing an environmental impact statement (EIS) and holding a contested case hearing.[871] The "alternative permitting process" generally applies to modestly-sized projects.[872] It requires an EA instead of an EIS and a public hearing instead of a contested case hearing.[873]

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[865] Ex. DCW-118 at 8-9 (Amended Route Permit Application); Ex. DOC-160 at 124 (Environmental Assessment).
[866] Ex. DOC-160 at 126, Appx. G DR 25 (Environmental Assessment).
[867] *Id*. at 126; Ex. DCW-118 at 8 (Amended Route Permit Application).
[868] Ex. DCW-118 at 8 (Amended Route Permit Application); Ex. DOC-160 at 126 (Environmental Assessment).
[869] Minn. Stat. § 216E.03, subd. 2.
[870] Minn. Stat. § 216E.01, subd. 4.
[871] *See* Minn. R. 7850.1700–.2700 (full permitting procedures).
[872] *See* Minn. R. 7850.2800, subp. 1 (describing criteria for eligible projects); accord Minn. Stat. § 216E.04, subd. 2.
[873] *See* Minn. R. 7850.2900–.3900 (alternative permitting procedures).

678. DCW's proposed HVTL will operate at a voltage between 100 and 200 kVs, and therefore the transmission line is eligible for the alternative permitting process authorized by Minn. Stat. § 216E.04, subd. 2(3) and Minn. R. 7850.2800, Subp. 1(C).

679. The PPSA requires that route permit determinations "be guided by the state's goals to conserve resources, minimize environmental impacts, minimize human settlement and other land use conflicts, and ensure the state's electric energy security through efficient, cost-effective power supply and electric transmission infrastructure."[874]

680. Under the PPSA, the Commission and Administrative Law Judge must be guided by the following responsibilities, procedures, and considerations:

(1) evaluation of research and investigations relating to the effects on land, water and air resources of large electric power generating plants and high voltage transmission lines and the effects of water and air discharges and electric and magnetic fields 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 and routes 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 and transmission technologies and 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 and routes including, but not limited to, productive agricultural land lost or impaired;

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

(7) evaluation of alternatives to the Applicants' proposed site or route proposed pursuant to Section 216E.03, subdivisions 1 and 2;

[874] Minn. Stat. § 216E.03, subd. 7.

(8) evaluation of potential routes that would use or parallel existing railroad and highway rights-of-way;

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

(10) evaluation of future needs for additional high voltage transmission lines in the same general area as any proposed route, and the advisability of ordering the construction of structures capable of expansion in transmission capacity through multiple circuiting or design modifications;

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

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

681. In addition to the PPSA, Minn. R. 7850.4000 provides that no route permit may be issued in violation of site selection criteria and standards found in Minnesota Statutes or Commission rules. Power line permits must be consistent with state goals to minimize environmental impacts and conflicts with human settlement and other land use. The Commission and ALJ are governed by Minn. R. 7850.4100, which provides for the following factors to be considered when determining whether to issue a route permit for a high voltage transmission line:

A. effects on human settlement, including, but not limited to, displacement, noise, aesthetics, cultural values, recreation, and public services;

B. effects on public health and safety;

C. effects on land-based economies, including, but not limited to, agriculture, forestry, tourism, and mining;

D. effects on archaeological and historic resources;

E. effects on the natural environment, including effects on air and water quality resources and flora and fauna;

F. effects on rare and unique natural resources;

G. application of design options that maximize energy efficiencies, mitigate adverse environmental effects, and could accommodate expansion of transmission or generating capacity;

H. use or paralleling of existing rights-of-way, survey lines, natural division lines, and agricultural field boundaries;

I. use of existing large electric power generating plant sites[875];

J. use of existing transportation, pipeline, and electrical transmission systems or rights-of-way;

K. electrical system reliability;

L. costs of constructing, operating, and maintaining the facility which are dependent on design and route;

M. adverse human and natural environmental effects which cannot be avoided; and

N. irreversible and irretrievable commitments of resources.[876]

682. There is sufficient evidence in the record for the Judge and the Commission to assess the proposed routes and alternatives using the criteria set out above.

XV. APPLICATION OF STATUTORY AND RULE CRITERIA

683. As referenced earlier in these Findings, the EA evaluated three route alternatives: the Hybrid Route Alternative, the Highway 56 Route Alternative, and the County Road Alternative. This section of the Findings analyzes all three potential routes under the criteria for issuing a route permit, and, where there are differences between the three routing options, those differences are separately noted and evaluated.

A. Effects on Human Settlement

684. Minnesota statutory and rule criteria require consideration of the proposed transmission line routes' effect on human settlement, including displacement of residences and businesses, noise created during construction and by operation of the Project, and the routes' impact on aesthetics, cultural values, recreation and public services.[877]

1. Displacement

685. For electrical safety code and maintenance reasons, residences and other buildings are not allowed within the ROW of a transmission line. Any residences or other buildings located within a proposed ROW are generally removed or displaced.

[875] This criterion is not applicable here because it applies only to power plant siting.
[876] Minn. R. 7850.4100.
[877] Minn. Stat. § 216E.03, subd. 7(b); Minn. R. 7850.4100(A).

Displacements are relatively rare and are more likely to occur in more populated areas where it may not be feasible to avoid all residences and businesses.[878]

686. None of the routes would require displacement of any businesses or residences.[879]

2. Noise

687. The Transmission Project is located in a rural area. Daytime noise sources in rural areas may be in the 35 to 40 dBA range but with a somewhat higher noise level along roads, particularly Minnesota Highway 56 and Dodge County Road 9/Mower County Road 20, and when farm equipment is being used.[880]

688. Potential noise impacts from the Transmission Project are associated with construction and operation.

689. During the construction of the Transmission Project, temporary, localized noise from heavy equipment and increased vehicle traffic is expected to occur along the route during daytime hours. Construction activity and crews would be present at a particular location during daytime hours for a few days at a time but on multiple occasions throughout the period of approximately six months between initial ROW clearing and final restoration.[881] Construction equipment (e.g., graders, chainsaws, delivery trucks, drill rigs, and cranes) produces sound levels in the range of 70 to 85 dBA 50 feet from the noise source.[882] Construction noise could temporarily affect residences, schools, and businesses that are close to the ROW. Residences are the closest noise receptors to the ROW. As sound pressure levels decrease with distance, no exceedances of MPCA daytime noise standards are anticipated.[883]

690. Audible noise from electric power lines is created by small electrical discharges at specific locations along the surface of the conductor that ionize surrounding air molecules. This phenomenon— common to all power lines—is known as corona and sounds like a crackling sound.[884] Resulting noise levels are dependent upon voltage level (corona noise increases as voltage increases) and weather conditions. In foggy, damp, or rainy conditions, audible corona noise is common. In light rain, dense fog, snow or other relative moist conditions, corona noise might be higher than rural background levels. In heavy rain, corona noise increases even more, but because background noise

[878] Ex. DOC-160 at 149 (Environmental Assessment); Ex. DCW-118 at 61 (Amended Route Permit Application).
[879] Ex. DOC-160 at 149 (Environmental Assessment).
[880] *Id.* at 154.
[881] *Id*.; Ex. DCW-118 at 68 (Amended Route Permit Application).
[882] Ex. DOC-160 at 154 (Environmental Assessment); Ex. DCW-118 at 62-63 (Amended Route Permit Application).
[883] Ex. DOC-160 at 155 (Environmental Assessment).
[884] Ex. DCW-118 at 61-62 (Amended Route Permit Application).

increases too, corona noise is undetectable. During dry weather, corona noise is less perceptible.[885]

691. The Applicant's model estimated L_{50} noise levels during rainy weather to be between 22.6 and 25.3 dBA 50 feet from the conductors depending upon the structure type.[886] These noise levels are at the low end of ambient noise levels in area of the HVTL and would not be perceptible. As the rain itself will create a noise level of approximately 50 dBA, the noise created by the HVTL under rainy weather would not be perceptible. Thus, under all weather conditions, noise impacts from the Transmission Project are anticipated to be minimal.[887]

692. Noises associated with a substation result from the operation of transformers and switchgear. Transformers produce a consistent humming sound, resulting from magnetic forces within the transformer core. Switchgear produces short-term noises during activation of circuit breakers. These activations are infrequent. The nearest homes are approximately 3,000 feet from the Pleasant Valley Substation. Improvements to the Pleasant Valley Substation will not change or increase noise levels to nearby homes; thus, noticeable noise impacts near the substation are not anticipated.[888]

693. Overall, noise impacts from the Transmission Project are anticipated to be minimal and within Minnesota's noise standards.[889]

694. Section 5.3.6 of the proposed Route Permit is a standard permit condition that requires DCW to comply with noise standards established under Minnesota noise standards as defined under Minn. R. 7030.010 to 7030.0080, and to limit construction and maintenance activities to daytime hours to the extent practicable.[890]

3. Aesthetics

695. Aesthetics refers to the visual quality of an area as perceived by the viewer and forms the impression a viewer has of an area. According to the EA, aesthetics are subjective, meaning their relative value depends upon the perception and philosophical or psychological responses unique to individuals. How an individual values aesthetics, as well as perceived impacts to a viewshed, can vary greatly.[891]

696. The existing landscape in the area of the HVTL is rural and agricultural consisting of flat to gently rolling row crop fields of corn and soybeans. The built environment includes the cities of Hayfield, Waltham, and Sargeant, roads, a railroad, transmission and distribution lines, the existing Pleasant Valley Substation, small solar facilities, and wind turbines. Residences and farmsteads are scattered throughout the

[885] Ex. DOC-160 at 155 (Environmental Assessment).
[886] *Id.*; Ex. DCW-118 at 62 (Amended Route Permit Application).
[887] Ex. DOC-160 at 155 (Environmental Assessment).
[888] *Id.*
[889] *Id.*
[890] *Id.*
[891] *Id*. at 151.

project area. Viewsheds in this area are generally broad and uninterrupted, with only small, scattered areas where they are defined by trees, watercourses, or topography. The landscape is also shaped by the built environment. Horizontal elements, such as highways and roads are consistent with the long and open viewsheds in the area. Vertical elements, such as wind turbines and transmission lines, are visible from a distance and are the tallest and often most dominant visual features of the landscape.[892]

697. The HVTL will introduce new built features – transmission structures and conductors – to the landscape. These new features will result in aesthetic impacts. The extent of these impacts depends upon:

- Proximity to residences, schools, churches, etc., where relatively more persons are present to experience aesthetic impacts.
- Views valued by the public at large, such as scenic overlooks or scenic byways.
- The use of existing infrastructure ROW, where the HVTL would have an incremental impact relative to existing human modifications to the landscape.
- The presence of terrain and vegetation that could shield views of the HVTL and the preservation of such vegetation.[893]

698. The route alternatives have between 38 and 112 residences within 1,600 feet of the anticipated alignment. The Highway 56 Route has the most homes, 112, within 1,600 feet, but most of these homes are along EA Route Segment 3 near Hayfield and are more than 800 feet from the alignment along Highway 56. The other segments have fewer homes, and only EA Route Segments 2, 3, and 4 have homes located less than 100 feet from the alignment.[894]

699. None of the route alternatives are located within or cross any scenic byways or scenic overlooks. Aesthetic impacts can also be minimized by following existing infrastructure ROW, where elements of the built environment already define the viewshed. All of the routes follow existing infrastructure, roads and existing transmission lines, for most of their length. However, the Highway 56 Alternative and Hybrid Route Alternative follow road ROW for somewhat more of their length (69 percent) than the County Road Alternative (62 percent).[895]

700. The EA indicates that impacts to property values that result from transmission line construction have been studied for over half a century. While the research demonstrates that property value impacts vary, the majority indicate that high voltage transmission lines have no significant impact or a slight negative impact on

[892] *Id.* at 152; Ex. DCW-118 at 65 (Amended Route Permit Application).
[893] Ex. DOC-160 at 152 (Environmental Assessment).
[894] *Id*.
[895] *Id*.

residential properties.[896] DCW also provided its property value analysis for the Project, which indicated that the Project is anticipated to have a negligible effect on property values.[897] The analysis concluded that "there is no market data indicating the project will have a negative impact on either rural residential or agricultural property values in the surrounding area."[898]

701. DCW's primary strategy for minimizing aesthetic impacts is prudent routing — placing the HVTL away from residences and following existing infrastructure ROW. As mentioned, all of the route alternatives follow existing infrastructure for most of their length. Section 5.3.7 of the proposed Route Permit is a standard route permit condition that requires DCW to consider landowner input with respect to visual impact and to preserve natural landscape consistent with sound engineering principles and system reliability criteria.[899]

4. Cultural Values

702. Cultural values can be defined as shared community beliefs or attitudes that define what is collectively important to the group. Infrastructure projects believed inconsistent with these values can deteriorate community character. Those found consistent with these values can strengthen it. Projects often invoke varying reactions and can, at times, weaken community unity.[900]

703. The 2019 Dodge County Comprehensive Plan identifies maintaining the county's rural values and character and maintaining prime farmland as priorities for the county. Mower County's 2002 Comprehensive Plan identified agricultural land preservation, environmental protection, and maintaining both urban viability while protecting the rural lifestyle as key objectives.[901]

704. The Transmission Project contributes to the growth of renewable energy and is not likely to weaken or undermine the counties' values, especially in an area that already has wind farms and community solar generating facilities. Development of the Transmission Project is unlikely to directly change the character of the area in a way that changes residents' sense of place. Construction and operation of the HVTL is not anticipated to impact or alter the work and leisure pursuits of residents in the area in such a way as to impact the underlying culture of the area.[902]

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[896] *Id*. at 156.
[897] Ex. DCW-118 at 69 (Amended Route Permit Application).
[898] *Id*. at Appx. H, page 2.
[899] Ex. DOC-160 at 154 (Environmental Assessment).
[900] *Id*. at 163.
[901] *Id.*; Ex. DCW-118 at 66 (Amended Route Permit Application).
[902] Ex. DOC-160 at 164 (Environmental Assessment).

705. The area of the HVTL has existing energy generation and transmission infrastructure.[903] Most of the routing options are located along existing road ROWs, which somewhat minimizes the aesthetic changes to the landscape.[904]

5. Recreation

706. Power lines have the potential to impact recreational activities. Impacts might be negative if the line interferes with the resources that provide these activities, for example, changing the aesthetic of a recreational destination in a way that reduces visitor use. Alternatively, a power line might increase recreational opportunities, for example, ROW clearing might provide increased opportunities for wildlife viewing or hunting.[905]

707. Various recreational opportunities exist in the local vicinity including bird watching, fishing, hunting, canoeing/kayaking, hiking, and snowmobiling. Activities in the Transmission Project area are associated with watercourses, WMAs, snowmobile trails, and county and city parks.[906]

708. The Iron Horse Prairie SNA is located approximately one mile south of Hayfield, approximately 0.75 miles east of MN Highway 56 near EA Route Segment 3. The 35-acre site represents the largest contiguous example of mesic tallgrass prairie in the southeastern portion of the state. The SNA does not have any maintained trails or other recreational facilities but is accessible from 740th or 750th streets.[907]

709. There are several snowmobile trails (176, 126, 302) in the Transmission Project area. Trail 126 crosses Dodge CR 9 and Highway 56 and then parallels Highway to the west for several miles in Dodge County. Trail 176 runs along Mower CR 1/320th Street for approximately one-half mile before crossing Highway 56 and turning north just west of Waltham. Trail 302 crosses Dodge CR 9 and CR 4, before joining Trail 126 east of Hayfield.[908]

710. There are no other MnDNR classified lands, such as State Forests, Parks, Trails, or SNAs within 1,000 feet of any routing option. There are no federal parks, forests, or refuges, or county parks, within the local vicinity.[909]

711. Tourist activities within the Transmission Project area are largely related to the recreational activities. In 2020 the leisure and hospitality industry in Dodge County accounted for about $9.6 million in gross sales, and 358 private sector jobs; 2020 tourism generated approximately $46.3 million in gross sales and employed 980 in Mower County.[910]

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[903] Ex. DCW-118 at 72, Appx. I, Fig. 1 (Amended Route Permit Application).
[904] Ex. DOC-160 at 164 (Environmental Assessment).
[905] *Id*. at 184.
[906] *Id*. at 183; Ex. DCW-118 at 70 (Amended Route Permit Application).
[907] Ex. DOC-160 at 183-84 (Environmental Assessment).
[908] *Id*. at 184.
[909] *Id*.
[910] *Id*.

712. As discussed previously, noise impacts from construction are anticipated to be short-term and intermittent.[911] Operational noise is negligible and will not affect recreationalists. Dust associated with construction might indirectly impact recreationalists or natural areas.[912]

713. New built features will be introduced to the landscape, and construction equipment and vehicle traffic will affect aesthetics. While visual impacts will occur, the HVTL and step-up substation will not impede recreational activities, such as snowmobiling, canoeing, hunting, or fishing.[913]

714. Impacts on recreation and tourism due to construction of the Transmission Project are anticipated to be minimal and temporary in nature. Short-term disturbances, such as increased noise and dust, could detract from nearby recreational activities and could, depending on the timing, affect hunting by temporarily displacing wildlife. Wildlife, however, is expected to return to the area once construction has been completed.[914]

715. Once constructed, the Transmission Project itself could impact aesthetics in the Transmission Project area or at a specific recreational feature such that recreation would be less enjoyable for the average person. These long-term impacts to recreation and tourism are anticipated to be minimal. Persons using snowmobile trails in the area may experience aesthetic impacts due to the proximity of transmission line structures.[915]

716. Impacts to recreation can be mitigated by selecting routes and alignments that avoid resources utilized for recreational purposes. The routes identified by the ATF largely follow existing roadways.[916] Impacts can also be mitigated by reducing impacts to natural landscapes during construction. Various sections of the proposed Route Permit indirectly address impacts to recreation, such as noise, aesthetics, and soils, and, as a result, indirectly mitigate impacts to tourism.[917]

717. DCW indicates it has been in coordination with local snowmobile clubs and will continue to coordinate with the clubs regarding placement of structures and construction timing.[918] Section 6.3 of the proposed Route Permit is a special condition requiring the permittee to coordinate with snowmobile clubs regarding the placement of structures near snowmobile trails and the timing for their construction.[919]

[911] Ex. DCW-118 at 62-63 (Amended Route Permit Application).
[912] Ex. DOC-160 at 184 (Environmental Assessment).
[913] *Id*.
[914] *Id*.
[915] Ex. DCW-118 at 71 (Amended Route Permit Application).
[916] *Id*. at 183.
[917] *Id*. at 185.
[918] Ex. DCW-118 at 71 (Amended Route Permit Application).
[919] Ex. DOC-160 at 185 (Environmental Assessment).

6. Public Service and Infrastructure

a) Public Utilities

718. Public utilities that serve residents and businesses in the Transmission Project area include both electric transmission and distribution services. Xcel Energy, People's Energy Cooperative, and Freeborn Mower County Cooperative all provides electric power to consumers various areas portions of the area. In addition, Xcel Energy, and GRE have transmission lines in the Transmission Project area.[920]

719. Minnesota Energy Resources Corporation provides natural gas service to some portions of the project area including Hayfield, Dodge Center, and Waltham.[921]

720. Water and wastewater services within the area are typically provided by private wells and septic systems although municipal water and sewer services are available in the cities of Hayfield and Sargeant.[922]

721. Large energy projects can impact public services, such as buried utilities, but such impacts are usually temporary. Impacts can be long-term if they change the area in a way that precludes or limits public services.

722. Impacts to water and wastewater services are not anticipated, as the HVTL will not require installation of either a well or septic system. No long-term impacts to utilities will occur as a result of the Transmission Project.[923] Limited, temporary impacts to service may occur during interconnection of the HVTL at the Pleasant Valley Substation. These outages are anticipated to be of short duration and closely coordinated with utilities and landowners.[924]

723. Electrical outages can be minimized by coordinating with GRE to minimum disruption and informing customers of any outages well in advance. Impacts to electrical infrastructure that cross the HVTL can be mitigated by appropriate coordination with the owners of the existing infrastructure and following industry best practices.[925]

724. The location of underground utilities can be identified using the Gopher State One Call system during engineering surveys and marking the underground utility locations prior to construction. If a utility is identified, the project component or the utility itself might need to be relocated if it cannot be successfully crossed. Relocation, as well as any necessary crossing, would need to be coordinated with the affected utility.[926]

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[920] *Id.* at 164-65; Ex. DCW-118 at 72 (Amended Route Permit Application).
[921] Ex. DOC-160 at 165 (Environmental Assessment).
[922] *Id*.
[923] *Id*.
[924] *Id*.
[925] *Id*.
[926] *Id.*; Ex. DCW-118 at 73 (Amended Route Permit Application).

725. Section 5.3.4 of the proposed Route Permit is a standard condition requiring DCW to minimize disruptions to public utilities.[927]

b) Roads and Traffic

726. Transmission line projects have the potential to negatively impact roads and airports. According to the EA, these impacts are typically temporary in nature during the construction process. However, impacts could be longer term if they change the area in such a way that future options, such as road improvements, are foreclosed or limited. Temporary impacts to the transportation system resulting from the Transmission Project are anticipated to be moderate to significant.[928]

727. Existing road infrastructure along the potential routes primarily consists of state highways, paved and unpaved county, and unpaved township roads that typically follow section lines. All routing options parallel state, county, or township roads for most of their length. The two highest traffic primary roadways within the Transmission Project area are Minnesota Highway 56 and Minnesota Highway 30.[929]

728. Road ROW extends beyond the traveling surface and typically includes a ditch on either side of the roadway. Roadside ditches drain excess water away from the road surface, provide a safety function for vehicles that leave the travel lanes, provide space for snow storage in winter, provide a location for public utilities including electric and communication lines, and provide vegetation to control erosion and drifting snow and provide pollinator and wildlife habitat. In addition to these functions, private drainage systems (tile lines or drain tile) often drain into roadside ditches with a permit from the road authority.[930]

729. Roadway maintenance is provided by MnDOT for Minnesota Highways 56 and 30, by Dodge and Mower counties for county highways and roads. Individual townships are responsible for maintenance and snow removal from roads, but ditch maintenance is typically delegated to landowners.[931]

730. DCW proposes to place the transmission structures in public road ROW for more than 50 percent of the length of all route alternatives.[932] Construction access to the Transmission Project ROW in these segments would be from the existing road.[933]

731. Siting transmission lines along existing ROWs can minimize the proliferation of new utility ROW and the effects on private landowners. To share or occupy ROW, DCW must acquire all necessary approvals from the agency overseeing use of a particular ROW (like MnDOT, the county, or the township).[934] DCW indicates it will

[927] Ex. DOC-160 at 165 (Environmental Assessment).
[928] *Id*. at 166.
[929] *Id*.
[930] *Id*.
[931] *Id*.
[932] *Id*. at Appx. G, DR 25.
[933] *Id*. at 167.
[934] *Id*.

coordinate construction activities with MnDOT, and Dodge and Mower counties to develop a traffic management plan that minimizes disruption to local traffic during construction.[935]

732. The privilege of DCW to utilize public roads for the purpose of operating the HVTL was directly addressed by the Minnesota Legislature in its 2023 amendments to Minn. Stat. § 161.45, subd. 1 and Minn. Stat. § 222.37, subd. 1. Following the 2023 amendment, Minn. Stat. § 222.37, subd. 1, explicitly allows a private entity like DCW to utilize public roads for the purpose of operating the HVTL, provided that:

> [. . .]such lines shall be so located as in no way to interfere with the safety and convenience of ordinary travel along or over the same; and, in the construction and maintenance of such line, subway, canal, conduit, transmission lines, hydrants, or dry hydrants, the entity shall be subject to all reasonable regulations imposed by the governing body of any county, town or city in which such public road may be.

733. Similarly, Minn. Stat. § 161.45, subd. 1 affords an entity with the ability to use the public road ROW under section 222.37, subd. 1, such as DCW, and to "plac[e] and maintain[] electric transmission lines along, across, or in any trunk highway" subject to public safety protections and "the proper function of the trunk highway."

734. DCW, with receipt of a Route Permit from the Commission, may use county road ROW, subject to the reasonable regulations and permitting that would be required of any other public entity placing transmission infrastructure in such ROW. DCW has indicated it will comply with such reasonable regulations.[936]

735. The Federal Highway Administration defines a clear zone as "an unobstructed, traversable roadside area that allows a driver to stop safely or regain control of a vehicle that has left the roadway." Clear zone widths are location-specific and vary depending upon various risk factors including traffic volume, speed, and slope.[937] DCW proposes to place transmission structures within the outer five feet of public road ROW along portions of the route located within public road ROW. There is some dispute whether transmission structures would be outside the clear zone.[938] DCW has agreed to reslope both sides of the roadway along CSAH 1 in Mower County and CSAH 9 in Didge County to ensure that poles are not placed within the clear zone.

736. Mower County has concerns with placing transmission structures within township road ROW, which is generally 33 feet either side of the centerline.[939] The Mower County Engineer identified most of Mower County's township roads as deficient in cross section, with variable and steep slopes and expressed concern that placement of

[935] *Id.* at 168; Ex. DCW-118 at 41-42 (Amended Route Permit Application).
[936] Hearing Reply Comment by Dodge County Wind (Feb. 15, 2024) (eDocket No. 20242-203500-04).
[937] Ex. DOC-160 at 167 (Environmental Assessment).
[938] Ex. DCW-118 at 21 (Amended Route Permit Application).
[939] Ex. DOC-131 (Mike Hanson, Mower County Engineer Scoping Comments).

additional structures within the ROW may compromise ditches and drainage patterns.[940] The Hybrid Route Alternative avoids utilizing the disfavored and narrow 66-foot township ROW.[941]

737. During construction, workers and trucks delivering construction material and equipment will use the existing state, county, and township road system to access the Project. Since average daily traffic on area roads is below design capacity[942], this increased traffic may be perceptible to area residents, but the increase in volume is not expected to affect traffic function. Slow-moving construction vehicles may also cause delays on smaller roads. However, delays from Transmission Project traffic should be minimal for the relatively short construction delivery period.[943]

738. Project construction would result in temporary road and lane closures to ensure safety of the construction crews and the traveling public.[944] Road and lane closures may cause delays, but the duration of these impacts would be relatively brief, perhaps several weeks. Once the HVTL has been installed, the road and/or lanes would be re-opened and traffic flow would resume as normal. In addition to these impacts to roadways in the immediate vicinity of construction, the HVTL may also impact travel on roadways nearby because hauling of materials and equipment and travel of personnel to the construction site will increase traffic and may cause congestion at times during the five- to seven-month construction period.[945]

739. Most of the roads in the Transmission Project area have minimal daily traffic, so road and/or lane closures and increases in traffic associated with hauling and travel to the construction site are expected to produce localized impacts to a relatively limited number of motorists.[946]

740. Although all route alternatives cross Minnesota Highway 56 at least once, construction impacts for the route alternative within Highway 56 ROW will be significant due to its higher traffic than the county and township roads. Construction impacts will be moderate for the County Road Alternative and the Hybrid Route Alternative due to the lower traffic levels.[947]

741. Section 4 of the proposed Route Permit directs transmission lines to occupy and utilize the existing ROW to the maximum extent possible consistent with the criteria in Minn. R. 7850, and, to the extent applicable, MnDOT procedures for accommodating utilities in trunk highway ROW. This section of the permit does not specifically address requirements or consistency with county road authorities.[948]

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[940] *Id.;* Ex. DOC-160 at 167 (Environmental Assessment); Ex. DCW-142 at 14-15 (Koegel Direct).
[941] Ex. DCW-142 at 14 (Koegel Direct).
[942] Ex. DCW-118 at 75 (Amended Route Permit Application).
[943] Ex. DOC-160 at 167-68 (Environmental Assessment).
[944] Ex. DCW-118 at 75 (Amended Route Permit Application).
[945] Ex. DOC-160 at 168 (Environmental Assessment).
[946] *Id.*; Ex. DCW-118 at 75 (Amended Route Permit Application).
[947] Ex. DOC-160 at 168 (Environmental Assessment).
[948] *Id*.

742. In addition to this condition, the proposed Route Permit contains several standard conditions aimed at minimizing impacts to road resources:

- Section 5.3.4 requires DCW to cooperate with road authorities to develop appropriate signage and traffic management during construction.

- Section 5.3.14 requires DCW to file a Public Road Use Report prior to construction that identifies which roads will be used and requires that road use agreements be filed with the Commission prior to construction.[949]

c) Airports

743. The nearest FAA-registered airport to the HVTL is the Dodge Center Municipal Airport (TOB), located south of U.S. Highway 14, approximately 6.5 miles northeast of the DCW Substation and approximately 3.3 miles northeast of EA Route Segment 1. The airport is owned by the City of Dodge Center and operates one paved runway and one turf runway.[950] DCW has held meetings with the City of Dodge Center Municipal Airport Board to keep the Board abreast of modifications in Project design.[951]

744. To assure safety, both the FAA and the MnDOT Office of Aeronautics have established guidelines for the location of structures near airports. The FAA has height restrictions for development near public airports and guidelines for placement of buildings and other structures near high frequency omnidirectional range navigation systems. MnDOT has zoning areas around public airports that restrict the area where buildings and other structures can be placed.[952]

745. In the case of TOB's airspace, the Applicant has conducted own internal aeronautical evaluation to assess height restrictions to avoid impacts. The Applicant's assessment identified one area along the Highway 56 route and two areas along the County Road Alternative where obstruction surfaces could restrict structure heights.[953]

746. Potential impacts to airports are typically mitigated by using shorter structures in the vicinity of an airport to ensure that structures do not impinge on airport glide slopes, safety zones or setbacks. Following a route determination and final structure design, DCW will file the necessary notices with the FAA and work with both the FAA and MnDOT to ensure compatibility between the transmission lines and air navigation stations and equipment.[954]

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[949] *Id*.
[950] *Id*. at 169.
[951] Ex. DCW-118 at 127 (Amended Route Permit Application).
[952] Ex. DOC-160 at 169 (Environmental Assessment).
[953] *Id*. at 169, Appx. G.
[954] *Id.* at 169; Ex. DCW-118 at 74-75, 77 (Amended Route Permit Application).

B. Effects on Public Health and Safety

747. Minn. R. 7850.4100(B) requires consideration of the Transmission Project's effect on public health and safety. It was also a key consideration and focus of the ATF in assessing potential transmission line routes.[955] The evidence in the record demonstrates that health and safety issues are minimal and appropriately mitigated during construction and operation of the facilities.

1. Construction and Operation of the Project

748. Construction crews must comply with local, state, and federal regulations when installing the HVTL. This includes standard construction-related health and safety practices. The HVTL will be equipped with switching devices (circuit breakers and relays located in the substations where the transmission lines terminate).[956] These devices are intended to make, carry, and break line currents under normal conditions and in specified abnormal conditions such as a short circuit or fault.[957]

749. Emergency services in the Transmission Project area are provided by local law enforcement and the emergency response agencies located in nearby communities. Law enforcement in the area is provided by the sheriff's offices of Dodge and Mower counties. Fire service is provided by city and community fire departments from Dodge Center, Claremont, Hayfield, Kasson Mantorville, Browns Valley, Blooming Prairie, and Austin. Ambulance response is provided by local ambulance services out of Dodge Center, Hayfield, and West Concord. Emergency management is provided by Dodge County and Mower County emergency management departments who dispatch 911 calls from their respective emergency response centers in Mantorville and Austin. Nearby hospitals are located in Owatonna, Rochester, and Austin.[958]

750. Regardless of the route selected, project construction should not directly affect emergency services in the area because any temporary road closures that may affect access to emergency response services would be coordinated with local jurisdictions to ensure that safe alternative access is available for police, fire and other rescue vehicles.[959] Accidents that might occur during construction of the Transmission Project would be handled through local emergency services. Due to the relatively small number of construction workers on the project, the existing emergency services should have sufficient capacity to respond to any emergencies.[960]

751. The Transmission Project will be designed and constructed in compliance with applicable electric codes. Electrical inspections will ensure proper installation of all components, and the HVTL will undergo routine inspection.[961] Electrical work will be completed by trained technicians. Construction is bound by federal and state OSHA

[955] Ex. DOC-153 at 6, 8 (ATF Report).
[956] Ex. DCW-118 at 57 (Amended Route Permit Application).
[957] Ex. DOC-160 at 170, 171 (Environmental Assessment).
[958] *Id.* at 170; Ex. DCW-118 at 56 (Amended Route Permit Application).
[959] Ex. DCW-118 at 57 (Amended Route Permit Application).
[960] Ex. DOC-160 at 171 (Environmental Assessment).
[961] Ex. DCW-118 at 48 (Amended Route Permit Application); Ex. DCW-141 at 14-15 (Gauger Direct).

requirements for worker safety, and must comply with local, state, and federal regulations regarding installation of the facilities and qualifications of workers. Established industry safety procedures will be followed during and after construction of the HVTL. Crews will be trained and briefed on safety issues, reducing the risk of injury.[962]

752. Several standard conditions of the proposed Route Permit address public safety:

- Section 5.3.4 requires DCW to minimize disruption to public services and utilities and to develop appropriate signage and traffic management during construction.
- Section 5.4 requires that the HVTL be properly grounded and limits the electric field to no more than 8 kV per meter (kV/m).
- Section 5.5.2 requires DCW to design and operate the line to meet or exceed all relevant local and state codes, the NESC and North American Electric Reliability Corporation (NERC) requirements.
- Section 5.3.14 requires DCW to file road use agreements or road development agreements with the Commission prior to construction.[963]

2. EMFs

753. EMFs are invisible forces that result from the presence of electricity. They occur naturally and are caused by weather or the geomagnetic field. They are also caused by all electrical devices and found wherever people use electricity. EMFs are characterized and distinguished by their frequency; that is, the rate at which the field changes direction each second. Electrical lines in the United States have a frequency of 60 cycles per second or 60 hertz, which is extremely low frequency EMF. The strength of an electric field decreases rapidly as it travels from the conductor and is easily shielded or weakened by most objects and materials.[964]

754. Concern about the potential health effects of EMF was raised by a number of commenters in the proceeding.[965]

755. The EA cites a variety of recent studies that indicate there is no recognized association between EMF exposure and adverse health effects such as cancer.[966]

[962] Ex. DOC-160 at 171 (Environmental Assessment).
[963] *Id.* at 171-72.
[964] *Id*. at 172.
[965] *See, e.g.,* Ex. DOC-139 (Matt and Mara Wiebusch Comments); Kasson 1:00 p.m. Tr. at 113-17 (Dec. 19, 2023) (Walerak); Kasson 6:00 p.m. Tr. at 35 (Dec. 19, 2023) (Kiefer).
[966] Ex. DOC-160 at 173-74 (Environmental Assessment).

756. The Commission limits the maximum electric field (EF) under high voltage transmission lines in Minnesota to 8.0 kV/m. It has not adopted a standard for magnetic fields (MF).[967]

757. Potential impacts from EMF are anticipated to be negligible and are not expected to negatively affect human health. DCW estimates the maximum EF level for the HVTL will be 4.4 kV/m at one meter above ground directly under a double circuit portion of the transmission line.[968] EF strengths decrease with distance. At the edge of the ROW (50 feet either side of the center line) EF levels are anticipated to be no more than 0.47 kV/m, which is below the Commission's EF limit (less than 8.0 kV/m).[969] Potential health impacts from these EF levels are therefore anticipated to be negligible.[970]

758. While there is no Minnesota or federal standard regarding magnetic fields (MF), the Institute of Electrical and Electronics Engineers (IEEE) C95.6 standard provides that MFs should not exceed 904 mG within or at the edge of the ROW.[971] The maximum MF level for the HVTL is estimated to be 462.9 mG directly under a conductor at a double circuit structure.[972] Fields decrease with distance, and the maximum modeled MF at the edge of the transmission ROW (50 feet either side of the center line) is approximately 46 to 158 mG, depending upon the structure type. According to DCW, MFs of these levels are comparable to those that would be experienced from ordinary household objects.[973] Potential health impacts from these MF levels are therefore anticipated to be negligible.[974]

3. Stray Voltage

759. In general terms, stray voltage is a low-level voltage that can be found between two contact points at any property where electricity is grounded. Stray voltage encompasses two phenomena: neutral-to-earth voltage (NEV) and induced voltage.[975]

760. If NEV is prevalent in an agricultural operation it can affect livestock health. This concern has primarily been raised on dairy farms because of its potential to affect milk production and quality.[976] NEV is typically associated with distribution lines and electrical service at a residence or on a farm. DCW asserts that transmission lines such

[967] *Id*. at 174.
[968] *Id.* at Appx. G DR 15; Ex. DCW-118 at 58 (Amended Route Permit Application); Ex. DCW-141 at 22 (Gauger Direct).
[969] Ex. DOC-160 at Appx. G DR 15 (Environmental Assessment); Ex. DCW-141 at 22 (Gauger Direct).
[970] Ex. DOC-160 at 175 (Environmental Assessment).
[971] Ex. DCW-141 at 22 (Gauger Direct).
[972] Ex. DOC-160 at Appx. G DR 15 (Environmental Assessment).
[973] *Id*. at 173.
[974] *Id*. at 175.
[975] *Id*. at 176.
[976] *See*, *e.g.*, Kasson 1:00 p.m. Tr. at 36-37 (Dec. 19, 2023) (Beukema); Ex. DOC-141 (Compiled Public Scoping Comments Received through 9/22/22) (Gagliasso).

as the HVTL do not create NEV stray voltage as they do not directly connect to businesses, residences, or farms.[977]

761. The primary concern with induced voltage is not the voltage, but rather the current that flows through a person to the ground when touching the object. To ensure safety in the proximity of transmission lines, the NESC requires that any discharge be less than five milliAmperes. In addition, the Commission's EF limit of 8 kV/m is designed to prevent serious shock hazards due to induced voltage. Proper grounding of metal objects under and adjacent to HVTLs is the best method of avoiding these shocks.[978]

762. The Transmission Project does not interconnect to businesses or residences and does not change local electrical service. As a result, impacts to residences or farming operations from NEV are not anticipated.[979] The HVTL could, however, induce a voltage on insulated metal objects within the ROW.[980]

763. Induced voltage is different than stray voltage. The EF from a transmission line can extend to nearby conductive objects and induce a voltage upon them. Since induced voltage is possible, and associated with electric transmission, EF and MF levels must be managed in accordance with applicable standards. The Project is expected to operate well below all recognized and applicable standards. As referenced earlier, the Transmission Project's associated EF is calculated to be no greater than 5.0 kV/m at 1 meter above the ground within the line's ROW, well below the Commission's 8 kV/m limit.[981] Thus, the EFs associated with the Project should prompt no concern, but monitoring could provide important data to confirm the Applicant's expectations and alleviate concerns for local residents.

764. As also referenced, the maximum MF level for the HVTL is estimated to be 462.9 mG directly under a conductor at a double circuit structure, below established electrical standards.

765. DCW will employ measures to mitigate induced voltage concerns if distribution lines are co-located with transmission. These mitigation measures tend to be site specific, but could include phase cancellation, transmission-to-distribution separation, isolation of the end-user neutral, and improved grounding.[982]

766. The proposed Route Permit also contains provisions the Applicant believes will keep the Project operating within appropriate parameters. For example, Section 5.4.1 of the proposed Route Permit establishes that the maximum induced steady-state short-circuit current must be no more than five milliamperes root mean square. DCW must

[977] Ex. DCW-118 at 58-59 (Amended Route Permit Application); Ex. DOC-160 at 177 (Environmental Assessment).
[978] Ex. DOC-160 at 177 (Environmental Assessment).
[979] *Id*. at 178.
[980] *Id*.
[981] Ex. DCW-141 at 22 (Gauger Direct).
[982] Ex. DCW-118 at 59 (Amended Route Permit Application).

comply with this condition. Additionally, that same section of the permit provides that in a circumstance in which there are induced current problems DCW must "address and rectify" them. Section 5.4.2 of the proposed Route Permit captures the maximum Commission's EF limit of 8 kV/m that has been discussed. These conditions will help ensure there are no adverse health impacts associated with stray or induced voltage.

C. Effects on Land-Based Economies

767. Minn. R. 7850.4100(C) requires consideration of the Project's effects on land-based economies, specifically agriculture, forestry, tourism, and mining.

1. Agriculture

768. Agricultural use is the primary land use in Dodge and Mower counties.[983] Because most of the length of the route alternatives are proposed to be located within road ROW or co-located with existing transmission, the ROW of the route alternatives has a lower proportion of agricultural landcover in the ROW than the region generally, between approximately 60 and 66 percent.[984]

769. Transmission line interference with farming or grazing operations is generally limited to the area immediately surrounding the transmission poles. Because all three route alternatives have most of the transmission infrastructure located in public road ROW or co-located with existing transmission, the Transmission Project will remove an amount of cultivated agriculture from production that is undetermined but expected to be minimal. Because the County Road Alternative follows agricultural field lines for a longer distance (6.7 miles) than either of the other route alternatives (five miles in each case), the County Road Alternative would have a somewhat higher number of structures located within fields. Assuming an average span of 800 feet between structures crossing agricultural fields, the County Road Alternative would result in approximately 44 structures compared to approximately 33 for both the Highway 56 Route and the Hybrid Route Alternative.[985]

770. Transmission line structures are likely to hinder aerial applications of agricultural products in certain areas by limiting those areas where applicators can safely fly. Structures could also affect the coverage and effectiveness of aerial and ground spraying. Potential impacts to agriculture production from the HVTL are anticipated to be acceptable. Although transmission lines do present a safety concern for aerial aviators, transmission lines are present in the landscape and are generally arranged in a linear, stepwise fashion on the landscape. This arrangement typically allows aerial spraying to be safely conducted in at least one direction, either north-south or east-west.[986] In

[983] Ex. DCW-118 at 77-78 (Amended Route Permit Application).
[984] Ex. DOC-160 at 181 (Environmental Assessment).
[985] *Id*. at 182.
[986] *Id*.

addition, DCW has committed to marking transmission line guy wires with longer guy line markers to assist with aerial crop dusting.[987]

771. Cattle and hog farms are located in the Transmission Project area. These livestock operations could be temporarily affected during construction. These temporary impacts could be mitigated through coordination with livestock farmers such that noise, disease, and other possible impacts are properly addressed.[988]

772. The Transmission Project's siting within public road ROW somewhat mitigates potential impacts to agriculture. Several sections of the proposed Route Permit are standard conditions to address agricultural mitigation and soil-related impacts:

- Section 5.3.8 requires DCW to "implement erosion prevention and sediment control practices recommended by the [MPCA]" and to obtain a CSW Permit. A CSW Permit requires both temporary and permanent stormwater controls to ensure that stormwater does not become a problem on or off-site.

- Section 5.3.12 requires DCW to develop an Invasive Species Management Plan to prevent introduction and spread of invasive species during construction of the project.

- Section 5.3.13 requires DCW to take reasonable precautions against the spread of noxious weeds.

- Section 5.3.17 requires DCW to fairly restore or compensate landowners for damages to crops, fences, drain tile, etc. during construction.[989]

2. Forestry

773. Cutting tall growing vegetation is required to allow for the safe operation of the HVTL.[990] There are no commercial timber companies and no other forestry operations within any of the proposed route alternatives. Trees along the route alternatives typically consist of rows of trees functioning as shelter belts and windbreaks. To the extent that transmission structures are placed within road ROW, tree removal would be negligible. Impacts to forestry operations will not occur.[991]

[987] Ex. DCW-129 at 10 (Comments – Response Comments to Environmental Assessment Scoping).
[988] Ex. DOC-160 at 182 (Environmental Assessment).
[989] *Id*. at 183.
[990] Ex. DCW-118 at 43-44 (Amended Route Permit Application).
[991] Ex. DOC-160 at 150 (Environmental Assessment).

3. Mining

774. Mineral resources are resources that have a concentration or occurrence of natural, solid, inorganic, or fossilized organic material in such form, quantity, grade, and quality that it has reasonable prospects for commercial extraction. The Aggregate Source Information System maintained by MnDOT did not identify any active mining operations along any of the routes evaluated. Impacts to mining will not occur and no mitigation is proposed.[992]

D. Effects on Archaeological and Historic Resources

775. Minn. R. 7850.4100(D) requires consideration of the Transmission Project's effects on archaeological and historic resources.

776. Cultural resources, including archaeological and historic artifacts and features, contribute to the record of human occupation and alteration of the landscape. Archaeological resources include historic and prehistoric artifacts, structural ruins or earthworks and are often partially or completely below ground. Historic resources include extant structures, such as building and bridges, as well as districts and landscapes.[993]

777. Transmission lines have the potential to impact archaeological and historic resources. Archaeological resources could be impacted by the disruption or removal of such resources during the construction. Historic resources could be impacted by the placement of a line in a manner that impairs or decreases the historic value of the resource.[994]

778. To determine potential impacts on cultural resources, known archaeological and historic sites in the area were identified by the Applicant through a search of agency records.[995] The SHPO maintains records of known archaeological and historic resources in the state. These resources are typically identified through surveys conducted for projects that require compliance with Section 106 of the NHPA, or through state sponsored research initiatives.[996]

779. The literature search did not identify any recorded archaeological sites within the ROW of any of the route alternatives but did identify two archaeological sites within the Transmission Project area (one mile of the route alternatives). The search also identified two architectural resources, Minnesota Highway 56 and Minnesota Highway 30, as within the transmission ROW along EA Route Segments 3 and 6, and an additional 22 architectural resources within the Transmission Project area. Most of the identified architectural resources are located along Route Segment 3 within and near the city of Hayfield and three are located within one mile of Segment 4 in Mower County. None of the recorded architectural resources are listed in either the National Register of Historic

[992] *Id*. at 150-51.
[993] *Id*. at 185.
[994] *Id*.
[995] Ex. DCW-118 at 81-82 (Amended Route Permit Application); Ex. DCW-139 at 15-16 (Corbett Direct).
[996] Ex. DOC-160 at 185-86 (Environmental Assessment).

Places, the Minnesota State Register of Historic Places, or the Minnesota State Historic Sites Network.[997]

780. Prudent siting and routing to avoid impacts to archaeological and historic resources is the preferred mitigation. Section 5.3.15 of the proposed Route Permit addresses archeological resources and requires DCW to avoid impacts to archaeological and historic resources where possible and to mitigate impacts where avoidance is not possible. If previously unidentified archaeological sites are found during construction, the permit requires DCW to stop construction and contact SHPO to determine how best to proceed. Ground disturbing activity will be stopped and local law enforcement will be notified should human remains be discovered.[998]

781. DCW's consultant recommended additional surveys prior to construction for areas of construction activity within undisturbed land that have not been surveyed to date. Prior to construction, DCW will prepare an unanticipated discoveries plan.[999]

E. Effects on Natural Environment

782. Minn. R. 7850.4100(E) requires consideration of the Project's effects on the natural environment including effects on air and water quality and flora and fauna. The evidence on the record demonstrates that the Project is not anticipated to have a material effect on the natural environment.

1. Air Quality

783. Air quality is a measure of how pollution-free the ambient air is and how healthy it is for humans, other animals, and plants. Emissions of air pollutants will occur during construction and operation of new infrastructure for the Transmission Project.[1000]

784. The nearest air quality monitor to the HVTL is in Rochester, Minnesota.[1001] Air quality in the area has been considered "good" between 292 and 325 days of the year from 2017-2021. During the same time, the number of days classified as moderate occurred varied between 40 and 69. Air quality was considered unhealthy for sensitive groups on one day in 2020 and two days in 2021, with zero days classified as unhealthy or very unhealthy.[1002]

785. Minimal intermittent air emissions are expected during construction of the HVTL. Air emissions associated with construction are dependent upon weather conditions and the specific activity occurring. The Transmission Project will not generate criteria pollutants or carbon dioxide once operational.[1003]

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[997] *Id*. at 186.
[998] *Id*.
[999] *Id*.; Ex. DCW-118 at 84 (Amended Route Permit Application); Ex. DCW-139 at 7 (Corbett Direct).
[1000] Ex. DOC-160 at 179 (Environmental Assessment).
[1001] Ex. DCW-118 at 85 (Amended Route Permit Application).
[1002] Ex. DOC-160 at 179 (Environmental Assessment).
[1003] *Id.* at 179-80; Ex. DCW-118 at 86 (Amended Route Permit Application).

786. Motorized equipment will emit exhaust. This includes construction equipment and vehicles travelling to and from the Transmission Project area. Exhaust emissions, primarily from diesel equipment, would vary according to the phase of construction.[1004] Exhaust emissions can be minimized by keeping vehicles and equipment in good working order, and not running equipment unless necessary.[1005]

787. All projects that involve movement of soil, or exposure of erodible surfaces, generate some type of fugitive dust emissions. The Transmission Project will generate fugitive dust from travel on unpaved roads, grading, and excavation.[1006]

788. The record shows that the Applicant will employ BMPs, as necessary, to minimize the amount of fugitive dust and emissions created by construction activities, including the following:

- Minimizing idling of construction vehicles;
- Ensuring that construction equipment is properly tuned and maintained prior to and during on-site operation; and
- Using mechanical sweepers on paved surfaces where necessary to prevent dirt buildup, which can create dust.[1007]

789. Power lines produce ozone and nitrous oxide through the corona effect — the ionization of air molecules surrounding the conductor. These compounds contribute to smog and adverse health effects. Minnesota has an ozone standard of 70 parts per billion (ppb) measured over a daily eight-hour average of the three-year average of the annual fourth-highest daily maximum. The national ozone standard is 0.070 ppm over a 3-year average of the annual fourth-highest daily maximum eight-hour average concentration. Ozone and nitrous oxide emissions are anticipated to be well below these limits. Minimal emissions will be associated with periodic maintenance activities.[1008]

790. Watering exposed surfaces, covering disturbed areas, and reducing speed limits on-site are all standard construction practices. Section 6.2 of the proposed Route Permit is a special condition that requires DCW to minimize, and if possible, avoid, chloride-based dust control chemicals. This permit condition is based on recent MnDNR recommendations for other energy facilities.[1009] DCW indicated it is amenable to such a condition.[1010]

[1004] Ex. DOC-160 at 180 (Environmental Assessment).
[1005] *Id*.
[1006] *Id*.
[1007] Ex. DCW-118 at 86 (Amended Route Permit Application).
[1008] *Id*.; Ex. DOC-160 at 180 (Environmental Assessment).
[1009] Ex. DOC-160 at 180 (Environmental Assessment).
[1010] Ex. DCW-139 at 29 (Corbett Direct).

2. Water Quality and Resources

a) Surface Waters

791. The Transmission Project is located within the Zumbro, Root River, and Cedar River watersheds, which are part of the Upper Mississippi River Basin.[1011]

792. All route alternatives cross watercourses at several points and all watercourses can be spanned.

- The Highway 56 Route has 30 water crossings, including Hayfield Creek, the Cedar River, and the Root River. The route crosses 4 PWIs. Both the Cedar River and the Root River are listed as impaired waters.

- The County Road Alternative has 23 water crossings, including Salem Creek, the Zumbro River, and the Root River. The route crosses three PWIs. The Root River is listed as an impaired water; although portions of Salem Creek to the east of the route are identified as impaired, the location the route's crossing is not.

- The Hybrid Route Alternative has 29 water crossings, including the Zumbro River and the Root River. The Root River is listed as an impaired water.[1012]

793. Because no structures or equipment will enter the water, no direct impacts to surface waters are anticipated. If equipment crosses a watercourse or inadvertently enters a waterbody, direct impacts, for example, bottom disturbance or petroleum-based products washing into the water could occur.[1013]

794. According to FEMA, the flood risk index along all route alternatives is considered relatively moderate. All route alternatives cross Flood Zone A along Segment 1. The Highway 56 Route crosses a Flood Zone A associated with Cedar Creek and another near Waltham. Both the County Road Alternative and the Hybrid Route cross a Flood Zone associated with the Zumbro River.[1014]

795. The presence of the transmission structures will not impact the function of the floodplain. Dodge County restricts structures within its Flood Overlay Zone. All floodplains can be spanned.[1015]

[1011] Ex. DOC-160 at 187 (Environmental Assessment).
[1012] *Id*.
[1013] *Id*.
[1014] *Id*. at 188.
[1015] *Id.*; Ex. DCW-118 at 88 (Amended Route Permit Application).

796. If dewatering is necessary, water removed from foundation locations could contain sediments or pollutants that might be introduced into surface waters. The Applicant does not anticipate that dewatering will be necessary.[1016]

797. Standard construction management practices, including, but not limited to containment of excavated soils, protection of exposed soils, stabilization of restored soils, and controlling fugitive dust, minimize the potential for eroded soils to reach surface waters.[1017]

798. Several standard conditions of the proposed Route Permit address potential impacts to surface waters:

- Section 5.3.8 of the proposed Route Permit requires DCW to "implement erosion prevention and sediment control practices recommended by the [MPCA]" and to "obtain a [CSW Permit]." A CSW Permit requires both temporary and permanent stormwater controls. This section also requires implementation of erosion and sediment control measures, contours graded to provide for proper drainage, and all disturbed areas be returned to pre-construction conditions. DCW will also develop a SWPPP that complies with MPCA rules and guidelines. The SWPPP describes construction activity, temporary and permanent erosion and sediment controls, BMPs, permanent stormwater management that will be implemented during construction and through the life of the project. Implementation of the protocols outlined in the SWPPP will minimize the potential for soil erosion during construction.

- Section 5.3.9 of the proposed Route Permit requires several measures to minimize impact to surface waters including: requiring transmission structures to span watercourses where possible, assembly of transmission structures on upland areas before transporting to the site for installation, no staging or stringing set up areas within or adjacent to riparian areas and requiring that soil excavated from the riparian areas be contained and not placed back into the riparian area.[1018]

b) *Wetlands*

799. Wetlands are areas with hydric (wetland) soils, hydrophilic (water-loving) vegetation, and wetland hydrology (inundated or saturated during much of the growing season). Wetland types include marshes, swamps, bogs, and fens.[1019]

[1016] Ex. DOC-160 at 188 (Environmental Assessment).
[1017] *Id*.
[1018] *Id*.
[1019] *Id*. at 189.

800. The scattered wetland complexes in the Transmission Project area are primarily freshwater emergent wetlands, with scattered areas of riverine and forested wetlands along the Cedar and Root Rivers.[1020] All route alternatives pass through wetland complexes, the Highway 56 Route has the largest amount (2.1 acres) within the evaluated transmission ROW, but the wetland complexes are small and can be spanned for all routes.[1021]

801. There are no known calcareous fens, a rare and distinctive type of wetland dominated by calcium-loving plants, present within one mile of any route alternatives.[1022]

802. DCW plans to delineate wetlands along the selected route during the 2024 field season.[1023]

803. Section 5.3.9 of the proposed Route Permit requires several measures to minimize impact to wetlands including limiting travel through wetlands to the shortest route possible, requiring transmission structures to span wetlands to the extent possible, assembling transmission structures on upland areas before transporting to the site for installation, prohibiting staging or stringing set up areas within or adjacent to wetlands, performing construction in wetland areas during frozen ground conditions where possible and using mats in wetland areas if winter construction is not feasible. This condition also requires that soil excavated from the wetlands be contained and not placed back into the wetland area.[1024]

c) *Groundwater*

804. None of the route alternatives cross any wellhead protection areas. The Highway 56 Route passes near the Drinking Water Supply Management areas for the cities of Hayfield and Waltham.[1025]

805. Potential impacts to groundwater can occur where installation of structures requires drilling to depths that can penetrate shallow water tables or open access channels to deeper aquifers. The majority of the Transmission Project's structures will be directly embedded, requiring a hole 15 to 30 feet deep to be augured or excavated.[1026] For locations where structures require concrete caissons, holes would be approximately 20 to 50 feet deep.[1027] If concrete foundations are used, some portion of the soluble components of the concrete can leach into groundwater prior to the setting and hardening of the concrete. If dewatering is necessary to place the foundations, the water removed

[1020] *Id*. at Appx. D, Map D11.
[1021] *Id*. at 189.
[1022] *Id*.
[1023] *Id*. at 190, Appx. G DR 23.
[1024] *Id*. at 190.
[1025] *Id*. at 191.
[1026] Ex. DCW-118 at 9 (Amended Route Permit Application).
[1027] *Id*. at 45.

from foundation sites could contain sediments or pollutants that may be introduced into surface waters, which can have an impact on groundwater.[1028]

806. Impacts to surface waters can also lead to impacts to groundwater. For example, construction activities can directly or indirectly lead to increased turbidity of surface waters through sedimentation. These contaminated surface waters might then flow to groundwater. Such impacts are typically minor and localized. Impacts to groundwater quality and quantity as a result of the Transmission Project are anticipated to be minimal regardless of the route selected.[1029]

807. Impacts to surface water quantities could potentially impact groundwater quantities by reductions in surface water infiltration if surface waters are removed from the area by pumping or diversion to facilitate construction activities. Surface water removal in the form of pumping or diversion are anticipated to be limited in occurrence and duration.[1030]

808. Impacts to groundwater resources and wells are not expected from construction due to abidance of setback requirements. DCW indicated that it will set back transmission line structures from known well locations in accordance state and county standards.[1031]

809. Section 5.3.8 of the proposed Route Permit is a standard condition that requires the permittee to obtain a MPCA NPDES/State Disposal System CSW Permit and implement the BMPs within for erosion prevention and sediment control. Because the Project as whole (including both the Wind Project and Transmission Line) will disturb more than one acre, a CSW will likely be required for both elements of the project. Impacts to groundwater can also be minimized by mitigating impacts to and soils and surface waters.[1032]

810. Due to the potential for karst geology to underlie portions of the route, Section 6.4 of the proposed Route Permit is a special condition requiring DCW to file a geotechnical report and engineering recommendations for transmission structures using concrete foundations.[1033]

811. In addition to these permit conditions, a Water Appropriations Permit from MnDNR is required if dewatering will be more than 10,000 gallons per day or 1,000,000 gallons per year.[1034]

[1028] Ex. DOC-160 at 191 (Environmental Assessment).
[1029] *Id*.
[1030] *Id*. at 192.
[1031] Ex. DCW-118 at 89 (Amended Route Permit Application).
[1032] Ex. DOC-160 at 192 (Environmental Assessment).
[1033] *Id*.
[1034] *Id*.

3. Flora

812. There are no WPAs, National Wildlife Refuges, Migratory Waterfowl Feeding and Resting Areas, or National Audubon Society Important Bird Areas within 10 miles of any routing option.[1035]

813. The Iron Horse Prairie SNA is located south of Hayfield, approximately 0.5 miles east of the Highway 56 Route (EA Route Segment 3). The 35-acre site was protected from cultivation due to its location between two railroad spurs that are now abandoned and represents the largest contiguous example of mesic tallgrass prairie in the southeastern portion of the state.[1036]

814. Various conservation easements can be established on private lands to provide for establishment and protection of temporary and long-term wildlife habitats. The Applicant has not identified any lands currently enrolled in federal or state conservation easement programs within any of the route alternatives for the HVTL.[1037]

815. Direct impacts to habitat are anticipated to be minimal.[1038]

4. Fauna

816. According to the EA, impacts depend on species type, but overall impact intensity to both species and habitat is expected to be minimal. Potential impacts will be short- and long-term and can be mitigated.[1039]

817. Wildlife using the local vicinity are common species associated with disturbed habitats and are accustomed to human activities associated agriculture, roads, and rural homesteads. Wildlife species in the area include white-tailed deer, racoon red and gray fox, Virginia opossum, and squirrels. A variety of avian species are likely to use the habitats present along the route. Aquatic species, both vertebrate (fish, turtles, snakes, frogs, and toads) and invertebrate (mussels) are present where the route alternatives cross streams.[1040]

818. Construction activities that generate noise, dust, or disturbance of habitat may result in short-term indirect impacts on wildlife.[1041] During construction, fauna would generally be displaced within the transmission line ROW. Clearing and grading activities could also affect small mammals that may not be able to avoid equipment. Because other suitable habitat is available in and near the Transmission Project area, potential

[1035] *Id*. at 197.
[1036] *Id*.
[1037] *Id*.
[1038] *Id*.
[1039] *Id*. at 196.
[1040] *Id*.
[1041] Ex. DCW-118 at 98 (Amended Route Permit Application).

temporary impacts to fauna are not expected to cause permanent change in local populations.[1042]

819. Because most of the transmission route alternatives are proposed to be located within existing road ROW, construction of the Project is unlikely to result in significant long-term adverse impacts on wildlife due to loss, conversion, or fragmentation of habitat.[1043]

820. Birds are susceptible to electrocution from transmission lines. Electrocution is a risk if the conductors or ground wires are close enough together that a bird can touch two conductors simultaneously with its wings or other body parts. Although the propensity for electrocution is influenced by a combination of factors, transmission design is an important factor.[1044] To minimize this likelihood, DCW will design the Project to follow the appropriate suggested practices outlined by the Avian Power Line Interaction Committee collision manual.[1045]

821. Independent of the risk of electrocution, birds might be injured or killed by colliding with transmission line structures and conductors. According to the EA, waterfowl, especially larger waterfowl such as swans and geese, are more likely to collide with transmission lines. The frequency of collisions increases when a transmission line is placed between agricultural fields that serve as feeding areas and wetlands or open water, which serve as resting areas. In these areas, it is likely that waterfowl and other birds would be traveling between different habitats, increasing the likelihood of collision.[1046]

822. Beyond conductor configuration, bird collisions with transmission lines can also be mitigated using bird flight diverters. Diverters enable birds to better see conductors during flight and avoid collisions with them. Bird flight diverters have been successful in reducing the strike and electrocution of a variety of bird species in several different habitat types.[1047]

823. Section 5.3.16 of the proposed Route Permit requires DCW to coordinate with MnDNR on the placement of avian flight diverters. This section also requires the line to be designed using best management practices for conductor spacing and shielding as codified in Avian Power Line Interaction Committee standards.[1048]

824. Section 6.1 of the proposed Route Permit is a special condition that requires use of wildlife-friendly erosion control. The special condition is based on recent MnDNR

[1042] Ex. DOC-160 at 196 (Environmental Assessment).
[1043] *Id*.
[1044] *Id*.
[1045] Ex. DCW-118 at 99 (Amended Route Permit Application).
[1046] Ex. DOC-160 at 197 (Environmental Assessment).
[1047] *Id*.
[1048] *Id*. at 198.

recommendations for large energy facilities.[1049] DCW indicated it is amenable to this condition.[1050]

F. Effects on Rare and Unique Natural Resources

825. Minn. R. 7850.4100(F) requires consideration of the Transmission Project's effects on rare and unique resources.

826. Construction and operation of transmission lines can impact rare and unique resources. Adverse impacts include the taking or displacement of individual plants or animals, invasive species introduction, habitat loss, reduced community size, and, for avian species, collision with conductors or electrocution.[1051]

827. MnDNR classifies rare plant or animal communities across the state. These include SNAs, High Conservation Value Forest, MBS Native Plant Communities, and MBS Sites of Biodiversity Significance. [1052] The respective impacts for the three route alternatives are as follows:

- Highway 56 Route: There are four MBS sites ranked as "below" and one MBS site ranked as "moderate" within the local vicinity of the Highway 56 Route. The "below" ranked MBS sites are located within EA Route Segments 3 and 4. The MBS site ranked as moderate is along Highway 56. Although outside of the local vicinity of the route alternatives, several rare species of plants (Sullivant's milkweed, Indian plantain, wild quinine, edible valerian) are present at the Iron Horse Prairie SNA. The SNA is ranked as an outstanding MBS site and is located approximately one mile south of Hayfield, approximately one-half mile east of the Highway 56 Route, near EA Route Segment 3.[1053]

- County Road Alternative and Hybrid Route Alternative: With the exception of one "below" ranked MBS site identified along Segment 4 (discussed above), there are no MBS sites or identified native prairie located in the local vicinity of either the County Road Alternative or Hybrid Route Alternative.[1054]

828. DCW has identified two federally listed species as present in the general area: the NLEB and the Prairie Bush Clover.[1055]

[1049] *Id*.
[1050] Ex. DCW-139 at 28 (Corbett Direct).
[1051] Ex. DOC-160 at 198 (Environmental Assessment).
[1052] *Id*. at 199.
[1053] *Id*.
[1054] *Id*. at 200.
[1055] *Id*.; Ex. DCW-118 at 99, 101 (Amended Route Permit Application).

829. The NHIS review for the routes evaluated in this EA identified records for two additional federally listed species within one mile of the evaluated route alternatives: the Poweshiek Skipperling and the Western Prairie Fringed Orchid.[1056]

830. In addition to these species, a ground survey identified one active bald eagle nest in the vicinity of the route (east of the intersection of 690th Street and MN 56 in Dodge County.[1057] Although not identified in the NHIS record search, the tri-colored bat was observed in field surveys at the wind site and the species has been found regularly in low numbers in caves and mines in the southeastern part of Minnesota.[1058]

831. The NHIS search identified six state-listed species within one mile of the route proposed in the application: Suckermouth minnow, a state-listed species of concern; the Redfin shiner, a state-listed species of special concern; the Loggerhead shrike, a state-listed endangered species; the wild quinine, a state listed endangered species; the rattlesnake master, a state-listed species of special concern; and Sullivant's Milkweed, state listed as threatened.[1059,1060]

832. The NHIS desktop review for the EA identified several additional state-listed species with records within one mile of the route alternatives: Tuberous Indian plantain, a state-listed threatened plant species; edible valerian, a state-listed threatened plant species; Bells' vireo, a state-listed bird species of special concern; and the Ozark minnow, a state-listed fish species of special concern.[1061]

833. In Minnesota, the bald eagle nesting season is generally January through early July. Bald eagles are primarily found near rivers, lakes, and other waterbodies in remote and, more recently, within metropolitan areas. Bald eagles and nests can be directly impacted by HVTL construction activities if they are within or adjacent to the project alignment.[1062]

834. DCW evaluated the northwestern portion of the route alternatives (nearer to the Wind Project) for active raptor nests by helicopter in April 2020.[1063] That survey identified one occupied active bald eagle nest east of the intersection of 690th Street and Trunk Highway 56, near EA Route Segments 1, 2, and 5. The nest was confirmed to be occupied during ground-based surveys in December 2020 and March 2021.[1064] No other bald eagle nests were documented within one mile of DCW's initially proposed route.[1065]

[1056] Ex. DOC-160 at 200-01 (Environmental Assessment).
[1057] Ex. DCW-118 at 97 (Amended Route Permit Application).
[1058] Ex. DOC-160 at 201 (Environmental Assessment).
[1059] *Id*.; Ex. DCW-118 at 100 (Amended Route Permit Application).
[1060] The Iron Horse Prairie SNA location in Dodge County hosts a protected population of the species. The species was also observed along 180th Street in a July 2021 survey; that (?) route segment is no longer under consideration as a route alternative. Ex. DOC-160 at 201 (Environmental Assessment).
[1061] Ex. DOC-160 at 201-02 (Environmental Assessment).
[1062] *Id*. at 202.
[1063] Ex. DCW-118 at 100 (Amended Route Permit Application).
[1064] *Id.*
[1065] *Id*.; Ex. DOC-160 at 202 (Environmental Assessment).

835. No bald eagles or bald eagle nests are anticipated to be directly impacted from the construction of the HVTL.[1066]

836. Techniques for minimizing impacts to wildlife and vegetation also minimize impacts to rare species. Avoiding identified areas of species occurrence or preferred habitat is the preferred mitigation measure.[1067]

837. The proposed Route Permit contains two special conditions related to the NLEB and the Loggerhead Shrike. Section 6.5 requires DCW to comply with the USFWS guidance and requirements in effect regarding NLEB, including tree clearing restrictions if applicable. Section 6.6 requires the permittee to avoid tree and shrub removal within suitable Loggerhead Shrike habitat during the April through July breeding season, and to coordinate with MnDNR if tree and shrub clearing will occur during the breeding season to identify potentially suitable habitat and ensure that a qualified surveyor inspects the trees/shrubs for active nests prior to removal.[1068]

G. Application of Various Design Considerations

838. Minn. R. 7850.4100(G) requires consideration of whether the applied design considerations maximize energy efficiencies, mitigate adverse environmental effects, and could accommodate expansion of transmission or generating capacity.

839. The record demonstrates that the Transmission Project has been designed in a way that maximizes energy efficiencies, mitigates adverse environmental effects, and potentially could accommodate expansion of transmission, though such expansion is not anticipated by DCW at this time.

840. The record shows that, with average spans of 500 to 800 feet, transmission line structures will be sited to avoid or minimize adverse impacts to sensitive resources. Where pole structures are spaced farther apart, there will generally be less visual impact than in locations where poles are spaced closer together.[1069] Also, HVTL will not create a new feature type within the landscape as existing overhead transmission and distribution lines are present within the surrounding landscape.[1070] Additionally, because most of the Transmission Project is planned within road and transmission line ROW, ample access to the HVTL ROW is anticipated, which will further reduce the potential for wetland and other ecological impacts.[1071]

841. The HVTL is proposed to operate at an appropriate voltage level that supports energy efficiency. The record demonstrates that a transmission line of a lower voltage would be less efficient than the proposed 161 kV line.[1072] Therefore, the lower

[1066] Ex. DOC-160 at 202 (Environmental Assessment).
[1067] *Id*. at 203.
[1068] *Id*.
[1069] Ex. DCW-118 at 66 (Amended Route Permit Application).
[1070] *Id*.
[1071] *Id*. at 92; Ex. DCW-139 at 24 (Corbett Direct).
[1072] Ex. DOC-160 at 135 (Environmental Assessment).

voltage transmission line would result in greater line losses and a greater probability of curtailment of the wind energy production.[1073]

842. Comments from the public in this proceeding questioned whether the Transmission Project should be designed to interconnect at a substation other than the Pleasant Valley substation.[1074] DCW argues that the Pleasant Valley Substation is an optimal point of interconnection for two primary reasons. The first is location. The existing GRE Pleasant Valley Substation is located in a relatively proximate location to the DCW Substation, which allows for a more direct, and less obstructive, interconnection.[1075] Second, the existing GRE Pleasant Valley Substation site can accommodate the new 161 kV line and associated substation equipment, as well as the up to 252 MW generation capacity of the wind facility. Interconnection at the GRE Pleasant Valley Substation and the use of available interconnection capacity is a significant benefit to the Applicant, as no interconnection system upgrades or associated system upgrade costs are required.[1076] DCW claims that interconnection and upgrade costs made a previous iteration of the Project that was designed to interconnect at the Byron substation unworkable.[1077]

843. Commenters in the proceeding also questioned whether undergrounding the HVTL would be appropriate.[1078] The record demonstrates, however, that three principal factors weigh against burial of the transmission line. First, buried line can cause a prolonged outage due to its inaccessibility relative to above-ground line. While an underground line, properly tested during commissioning, would have fewer expected outages than an overhead option due to weather events, the inherent challenge with determining and resolving an underground fault can prolong the outage.[1079] Second, due to the specialized cable, equipment, labor, longer construction timeline, and greater requirements for materials like concrete, undergrounding 161 kV transmission lines are estimated to be 6-8 times more expensive than an overhead option in rural areas. For DCW, this could increase the estimated Transmission Project costs from $35 - $45 million to $210 - $360 million if required for the whole of the route.[1080] Third, the amount of ground disturbance and impact to underground facilities where larger lines are undergrounded could negatively impact the side of the road and ditches, and potentially cause utility conflicts.[1081] These factors weigh against undergrounding the HVTL.

[1073] *Id*.
[1074] *See, e.g.*, Kasson 1:00 p.m. Tr. at 91-92 (Dec. 19, 2023) (Anderson); Kasson 6:00 p.m. Tr. at 62-63 (Dec. 19, 2023) (Tempel); Remote Access 6:00 p.m. Tr. at 39 (Dec. 20, 2023) (Caspers).
[1075] Ex. DCW-138 at 28-29 (Cameron Direct).
[1076] *Id*. at 29.
[1077] Ex. DOC-160 at 135 (Environmental Assessment).
[1078] *See, e.g.*, Ex. DOC-123 Kasson 6:00 p.m. at 33 (May 10, 2022) (Tempel); Ex. DOC-140 at 2 (Marie McNamara Comments). Ex. DOC-141 (Compiled Public Scoping Comments Received through 9/22/22) (Molitor); Kasson 6:00 p.m. Tr. at 65-68 (Dec. 19, 2023) (Tempel).
[1079] Ex. DCW-142 at 22 (Koegel Direct).
[1080] *Id*. at 22-23.
[1081] Kasson 6:00 p.m. Tr. at 65-66 (Dec. 19, 2023) (Tempel).

844. DCW has no plans to expand the Transmission Project.[1082] It is a component of the overall Project and is being constructed for a very specific and limited purpose. That is, the 161 kV capacity of the HVTL is designed to support only the electrical output generated by DCW at the up to 252 MW Wind Project.[1083]

845. In all, the record demonstrates that with appropriate permit conditions, the Transmission Project is appropriately designed and accounts for the design considerations provided in Minn. R. 7850.4100(G).

H. Use or Paralleling of Existing Right-of-Way, Survey Lines, Natural Division Lines and Agricultural Field Boundaries

846. Minn. R. 7850.4100(H) requires consideration of the use or paralleling of existing ROW, survey lines, natural division lines, and agricultural field boundaries.

847. Sharing ROW with existing infrastructure or paralleling existing ROW minimizes fragmentation of the landscape and can minimize human and environmental impacts.[1084]

848. All route alternatives are collocated (double-circuited) with GRE's existing Pleasant Valley to North Austin 161 kV transmission line for approximately 13 percent of their respective route lengths. Existing road ROW are used for nearly 60 percent of both the Highway 56 Route and Hybrid Route Alternative, and more than 50 percent of the entire route length of the County Road Alternative uses existing road ROW.[1085] In total, The Highway 56 Route and the Hybrid Route Alternative make relatively better use of existing ROW, using existing ROW for a higher percentage of their routes (72 and 71 percent respectively) than the County Road Alternative (64 percent).[1086]

849. The record demonstrates that all routes parallel or use existing ROW, natural division lines, and agricultural field boundaries for most of their length.[1087]

850. Section 4 of the proposed Route Permit directs transmission lines to occupy and utilize the existing ROW to the maximum extent possible consistent with the criteria in Minn. R. 7850 and other requirements of the permit, and, to the extent applicable, MnDOT procedures for accommodating utilities in trunk highway ROW.[1088]

[1082] Kasson 1:00 p.m. Tr. at 89-90 (Dec. 19, 2023) (Cameron, Steinhauer).
[1083] Ex. DCW-142 at 22 (Koegel Direct).
[1084] Ex. DOC-160 at 203 (Environmental Assessment).
[1085] *Id*. at 167, 204.
[1086] *Id*. at 215.
[1087] *Id*.
[1088] *Id*. at 168.

I. Use of Existing Transportation, Pipeline, and Electrical Transmission System Right-of-Way

851. Minn. R. 7850.4100(J) requires consideration of use or paralleling of existing transportation, pipeline, and electrical transmission system rights-of-way.

852. As detailed above, existing road ROW are used for nearly 60 percent of both the Highway 56 and Hybrid routes, and more than 50 percent of the entire route length of the County Road Alternative uses existing ROW.[1089]

J. Electrical System Reliability

853. Minn. R. 7850.4100(K) requires consideration of electrical system reliability when selecting a route for a high voltage transmission line.

854. NERC has established mandatory reliability standards for the bulk power system in the United States. For new transmission lines, these standards require the utility to evaluate whether the grid would continue to operate adequately under various contingencies (e.g., weather events, equipment failure). Section 5.5.1 of the proposed Route Permit requires DCW to comply with NERC standards[1090], and DCW has indicated it will do so.[1091]

855. In developing the Transmission Project, DCW evaluated different voltages, different end points, and different possible routes for the HVTL. DCW analyzed whether these routes created reliability concerns and concluded that using the existing capacity at the Pleasant Valley Substation was feasible and did not adversely affect system reliability.[1092]

856. No adverse impacts to electric system reliability are anticipated.[1093]

K. Costs of Constructing, Operating and Maintaining the Facility

857. Minn. R. 7850.4100(L) requires consideration of the cost to construct proposed routes and the cost of operation and maintenance.

858. The cost of the Transmission Project is estimated be between $43 and $57 million.[1094] DCW indicates that the cost differences between the route alternatives would depend upon the length of the transmission line, the number of turns, and the amount of the route located in road ROW compared to private easements.[1095] Because the routes are similar with respect to these attributes, the cost differential between the

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[1089] *Id*. at 204.
[1090] *Id*. at 203.
[1091] Ex. DCW-118 at 24 (Amended Route Permit Application).
[1092] Ex. DOC-160 at 203 (Environmental Assessment).
[1093] *Id*.
[1094] Ex. DCW-138 at 14 (Cameron Direct).
[1095] Ex. DOC-160 at Appx. G DR 3, 24 (Environmental Assessment).

route alternatives is anticipated to be minimal. Annual inspection and maintenance costs are estimated at approximately $3,000 per mile.[1096]

L. Adverse Human and Natural Environmental Effects That Cannot be Avoided

859. Minn. R. 7850.4100(M) requires consideration of unavoidable human and environmental impacts. Even with mitigation strategies, there are adverse impacts of the Transmission Project which cannot be avoided including aesthetic impacts, temporary construction-related impacts, impacts to soils and agriculture, and certain impacts to the natural environment.

860. Transmission lines are large infrastructure projects that have adverse human and environmental impacts. These impacts are anticipated to occur for all route alternatives.[1097]

861. Aesthetic impacts cannot be avoided. The Transmission Project would introduce new transmission line structures and conductors into the area, disrupting existing viewsheds and creating an adverse aesthetic impact.[1098]

862. Temporary construction-related impacts, including construction-related noise and dust generation and disruption of traffic near construction sites, are also unavoidable.[1099]

863. The addition of the transmission structures and conductors will also constrain some agricultural spraying by aircraft.[1100]

864. Because the Project involves the installation of large poles, conduit, and other associated facilities, impacts to the natural environment cannot be avoided.[1101]

M. Irreversible and Irretrievable Commitments of Resources

865. Minn. R. 7850.4100(N) requires consideration of the irreversible and irretrievable commitments of resources that are necessary for the Transmission Project.

866. The commitment of a resource is irreversible when it is impossible or very difficult to redirect that resource for a different future use. An irretrievable commitment refers to the use or consumption of a resource such that it is not recoverable for later use by future generations. These types of commitments are anticipated to occur for all route alternatives and not vary significantly among alternatives.[1102]

[1096] *Id*. at 204-05.
[1097] *Id*. at 205.
[1098] *Id*.
[1099] *Id*.
[1100] *Id*.
[1101] *Id*.
[1102] *Id*.

867. There are few commitments of resources associated with the Transmission Project that are irretrievable. These commitments include the steel, concrete, and hydrocarbon resources committed to the HVTL, though it is possible that the steel could be recycled at some point in the future. Labor and fiscal resources required for the HVTL are also irretrievable commitments.[1103]

868. In general, lands in the ROW for large infrastructure projects such as railroads, highways, and transmission lines remain committed to these projects for a relatively long period of time. Although long-term, the commitment of land for transmission ROW is not considered to be an irreversible commitment of resources. Transmission line ROW can be returned to a previous use by the removal of structures and structure foundations to a depth that supports a different.[1104]

XVI. RECOMMENDED ROUTE

869. Of the three routes selected for review by the ATF, there is considerable disagreement among the counties and townships over which route is best, and significant opposition from residents who will be impacted by the HVTL. Mower County and DCW, as evidenced by the December 12, 2023 MOU, prefer the Hybrid Route Alternative. Dodge County prefers the Highway 56 Route.[1105] The support for the County Road Alternative appears minimal in the record, and DCW has indicated that the County Road Alternative is not viable because DCW cannot obtain the necessary landowner agreements to support it.[1106] For these reasons, the task in determining which route should be selected by the Commission requires a determination as to whether the Hybrid Route Alternative or the Highway 56 Alternative is best.

A. Coordination Between the Applicant, the Counties, and MnDOT

870. Although Dodge and Mower counties have not coalesced around a route preference, both maintained communication with DCW concerning pole spotting and staking. Both counties have participated in the development of both the Hybrid Route Alternative and the Highway 56 Alternative.[1107] During the timeframe of September 2023 through December 2023, both Dodge and Mower Counties were communicating with DCW concerning pole placements associated with both routes and were analyzing placements presented by DCW.[1108]

871. DCW has also consulted with MnDOT. The record shows that DCW has been coordinating with MnDOT concerning the Transmission Project for years. DCW also has been in routine contact with MnDOT representatives since the completion of the ATF process. On November 7, 2023, DCW provided MnDOT with ROW mapping and monitoring map books for the Hybrid Route Alternative. On November 16, 2023, DCW

[1103] *Id*.
[1104] *Id*. at 206.
[1105] Comment by Dodge County (Jan. 22, 2024) (eDocket No. 20241-202433-01).
[1106] Ex. DCW-142 at 15 (Koegel Direct).
[1107] *Id*. at 18-20.
[1108] Remote Access 6:00 p.m. Tr. at 24-26 (Dec. 20, 2023) (Koegel).

provided the same for the Highway 56 Route Alternative. In addition, on December 6, 2023, DCW provided MnDOT with a Utility Accommodation Early Notification Memorandum and Supplemental Checklist including supporting data and maps for the Hybrid Route Alternative, the County Road Alternative, and the Highway 56 Route Alternative.[1109]

872. MnDOT recognized in its comments that DCW has been in close coordination with MnDOT in recent months, including coordination on potential HVTL impacts and downstream permitting requirements/mapping. MnDOT indicated that it anticipated close coordination to continue throughout the remainder of the Commission's permitting process and well into the state agency permitting phase.[1110]

873. MnDOT has not indicated preference for a particular route.

B. Comparative Impacts of the Hybrid Route Alternative and the Highway 56 Route

874. The Hybrid Route Alternative and the Highway 56 Route have varying impacts on the communities through which they pass.

875. One significant difference between the Hybrid Route Alternative and the Highway 56 Route is that the Hybrid Route Alternative avoids utilizing 66-foot township ROW, the use of which has been questioned or opposed by the ATF,[1111] Dodge County,[1112] Mower County,[1113] Hayfield Township,[1114] Waltham Township,[1115] and members of the public.[1116] The Highway 56 Route Alternative, on the other hand, requires use of 66-foot township ROW.[1117] The avoidance of the township road ROW afforded by the Hybrid Route Alternative allows that route alternative more flexibility to avoid constraints, maintain clear zones, and reduce other impacts of pole spotting. DCW has acknowledged in the proceeding that while it may be technically feasible from design and construction perspectives to place the HVTL within the township road ROW associated with the Highway 56 Route, public safety and hydrology concerns voiced by Mower County and township representatives have prompted DCW to focus on the Hybrid Route Alternative.[1118] The compromise to focus on the Hybrid Route Alternative is reasonable.

[1109] Ex. DCW-142 at 17-18 (Koegel Direct).
[1110] Comment by MnDOT (Jan. 23, 2024) (eDocket No. 20241-202516-02).
[1111] Ex. DOC-153 at 7 (ATF Report).
[1112] Ex. DOC-116 (Guy Kohlnhofer, Dodge County Engineer – Comment 5-6-22).
[1113] *See, e.g.*, Ex. DOC-144 at 1-2 (Comments by Dodge County); Ex. DOC-116 at 1 (Comments by Dodge County Engineer); Ex. PUC-159 at 1-2 (Comments by Mower County); Ex. DOC-131 at 1-2 (Comments by Mower County Highway Engineer).
[1114] *See, e.g.*, Comments by Hayfield Township (Feb. 27, 2023) (eDocket No. 20232-193423-03).
[1115] *See, e.g.*, Comment by Jeremy Kiefer (Dec.r 20, 2023) (eDocket No. 202312-201377-03).
[1116] *See, e.g.*, Ex. PUC-160 (Comments by John Kreuger); Ex. DOC-123 Kasson 6:00 p.m. at 83 (May 10, 2022) (Tempel); Ex. DOC-126 (Marie McNamara Comments).
[1117] Ex. DCW-142 at 14-15 (Koegel Direct).
[1118] *Id.*

876. The Hybrid Route Alternative also utilizes wider 100-foot county and MnDOT ROW, which allows for more space to install and maintain a transmission line structure while minimizing impacts to public safety.[1119]

877. While many of the impacts associated with the Hybrid Route Alternative and the Highway 56 Route are similar[1120], there are several key differences. For example, the Highway 56 Alternative is routed closer to more residences in the area. The Hybrid Route Alternative runs near approximately 40 residences, compared to 112 residences near the Highway 56 Route. Both the Highway 56 Route and the Hybrid Route Alternative pass residences within 100 feet along segments common to both alternatives; however, the Highway 56 Route also passes within 100 feet of other additional residences (along EA Route Segment 3), whereas the Hybrid Route Alternative does not.[1121]

878. The Highway 56 Route is the only route to pass through an urban expansion area.[1122] The Highway 56 Route also is generally closer in proximity to sites of moderate Biodiversity Significance, has the largest amount of wetland complexes, and crosses surface waters slightly more times than the other alternatives.[1123] MnDNR has taken note of the relative impacts of the proposed routes, recognizing that "[t]he Hybrid Route Alternative avoids most rare features and communities and is therefore preferred by the DNR."[1124]

879. At the December 19 and 20, 2023 hearings, the Environmental Service Director for Dodge County provided a map showing feedlots in Dodge County in vicinity of the HVTL. It was entered into the record as Hearing Exhibit 3. The map showed how the various route alternatives pass in near proximity to feedlots in Dodge County. The map shows that both the Hybrid Route Alternative and the Highway 56 Route pass within 1,000 feet of four feedlots with 30 or more animal units in the northern part of the route in Dodge County, and that the Hybrid Route Alternative passes by seven more in Dodge County.[1125] However, the map provided by Dodge County as Hearing Exhibit 3 does not extend into Mower County. In Mower County, the Highway 56 Route passes within 1,000 feet of five feedlots, whereas the Hybrid Route Alternative passes by one in Mower County.[1126] While overall, the Hybrid Route Alternative has one more feedlot nearby than does the Highway 56 Route, both routes pass by many.

[1119] *Id*. at 14; Ex. DOC-160 at 141 (Environmental Assessment).
[1120] Ex. DOC-160 at 211-13 (Environmental Assessment).
[1121] *Id*. at 152.
[1122] *Id*. at 163; Ex. DCW-139 at 22 (Corbett Direct).
[1123] The Hybrid Route crosses 29 water crossings, compared to 30 water crossings along the Highway 56 Route. *See* Ex. DCW-139 at 22 (Corbett Direct).
[1124] Comment by MnDNR (Feb. 1, 2024) (eDocket No. 20242-202994-01).
[1125] Kasson 1:00 p.m. Tr. at 80-81 (Dec. 19, 2023) (Chockel); Ex. PUC-201 (Public Ex. 3).
[1126] *See* Hearing Reply Comments by Dodge County Wind at Attachment 2 (Feb. 15, 2024) (eDocket No. 20242-203500-04).

C. Comparison of Route Alternatives Considering Routing Factors

880. Having analyzed the unique impacts or features of the routing options, impacts should next be considered in the context of the Route Permit routing factors. The record shows that potential impacts do not to vary significantly among route alternatives for the following routing factors and elements:

- Impacts on human settlements (property values, electronic interference, cultural values, zoning and land use compatibility, railways, public utilities, emergency services, or airports).
- Impacts on public health and safety (electric and magnetic fields, implantable medical devices, stray voltage, induced voltage, and air quality).
- Impacts on land-based economies (forestry, mining, and recreation and tourism).
- Impacts on archaeological and historic resources).
- Impacts on natural resources (air quality, soils, surface water, topography, vegetation, wetlands, wildlife, habitat).
- Impacts on electric system reliability.[1127]

881. Any new transmission line will introduce new transmission infrastructure into the area. Potential impacts to aesthetics are expected to be minimal to moderate for those with low viewer sensitivity, such as passing motorists along Minnesota Highways 56 or 30. For those with high viewer sensitivity, such as residents near the transmission lines, the impact intensity level is anticipated to be moderate to significant.[1128] Because the Highway 56 Route passes the most residences, it would have a heightened visual impact on residents.

882. Distinct noises are associated with the different phases of HVTL construction. These impacts will be the same among route alternatives and will be temporary and intermittent and range from negligible to significant depending on the construction equipment used and the location of the listener.[1129]

883. Temporary road or lane closures will be required during the construction of all route alternatives to ensure safety of the construction crews and the traveling public. With respect to the Highway 56 Route, Mower County and others have expressed

[1127] Ex. DOC-160 at 214 (Environmental Assessment).
[1128] *Id.*
[1129] *Id.*

concern that placement of additional structures within township road ROWs, such as 320th Street, may compromise ditches and drainage patterns.[1130]

884. The underlying geology of the region can affect the stability of project substructures siting above shallow karst features that may be present in the underlying bedrock. Direct and indirect impacts to groundwater are anticipated to be minimal to moderate.[1131]

885. Although impacts to rare and unique natural resources are expected to be minimal for all route alternatives due to their location in public road ROW, the Highway 56 Route is generally in closer proximity to sites of moderate Biodiversity Significance.[1132]

886. All routes parallel or use existing ROW, natural division lines, and agricultural field boundaries for most of their length. All route alternatives will co-locate with GRE's existing 161 kV transmission line for 3.5 miles. The Highway 56 Route and the Hybrid Route Alternative make relatively comparable use of existing road ROW (59 and 58 percent respectively) and consequently use comparable existing ROWs for a higher percentage of their routes (72 and 71 percent respectively).[1133]

887. The cost of the Transmission Project, exclusive of GRE's improvements to the Pleasant Valley Substation, is estimated be between $43 and $57 million. Because all route alternatives are similar with respect to the factors that influence these costs the cost to build each alternative is expected to be similar.[1134]

D. Recommendation of Hybrid Route Alternative

888. On the basis of the record, the Judge finds that the Hybrid Route Alternative is the optimal route for the Transmission Project. I reach this conclusion having found that:

- The MOU strongly evidences a preference among DCW and Mower County for the Hybrid Route Alternative.
- Though not Dodge County's preferred route, the County has tentatively acknowledged that the Hybrid Route Alternative is acceptable.
- The Hybrid Route Alternative avoids utilizing the disfavored and narrow 66-foot township ROW, whereas the Highway 56 Route requires its usage.
- The Hybrid Route Alternative runs near approximately 40 residences, compared to 112 residences near the Highway 56

[1130] *Id*.
[1131] *Id*.
[1132] *Id*. at 215.
[1133] *Id*.
[1134] *Id*.

Route. Both route Alternatives have residences within 100 feet of the route along segments common to both alternatives. The Highway 56 Route also passes by residences within 100 feet along EA Route Segment 3, which is unique to this alternative, whereas the Hybrid Route Alternative does not.[1135]

- The Hybrid Route Alternative is the preferred route of MnDNR due to its avoidance of most rare features and communities.

- The Highway 56 Route Alternative also is generally closer in proximity to sites of moderate Biodiversity Significance, has the largest amount of wetland complexes, and crosses surface waters slightly more times than the other alternatives.

- The number of feedlots in proximity to the routes negligibly affects what constitutes the most reasonable routing option, given that feedlots are not anticipated to be impacted by the HVTL.

XVII. ROUTE PERMIT CONDITIONS

889. Having concluded that the Hybrid Route Alternative is the appropriate route for the Project, it is necessary to determine the appropriate Route Permit conditions with which the Transmission Project must comply.

890. On September 1, 2023, the Commission issued the September 1 Order issuing a preliminary DRP. This DRP included all alternative routes proposed at that time, along with applicable ROW width, and alignments for each route segment.[1136] The DRP included a large number of proposed permit conditions, many of which were established as part of previous Route Permit proceedings before the Commission.[1137] The DRP issued with the September 1 Order did not contain any special conditions unique to the Transmission Project.

891. The EA, which was filed by DOC-EERA on November 30, 2023, contained a modified DRP.[1138] This version of the DRP contained six special conditions that reflected comments received by the Commission.[1139] The six special conditions added to the DRP included in the EA were as follows:

[1135] *Id*. at 152.
[1136] Ex. DOC-150 at 1 (EERA Comments and Draft Route Permit).
[1137] *Id*. at 2-5.
[1138] Ex. DOC-160 at Appx. C (Environmental Assessment).
[1139] *See* Ex. DOC-127 at 3-4 (DNR Comments); Ex. PUC-166 at Attachment 1, pp. 1-5 (MnDOT Comments).

6.1 Wildlife-Friendly Erosion Control

The Permittee shall use only “bio-netting” or “natural netting” types of erosion control materials and mulch products without synthetic (plastic) fiber additives.

6.2 Dust Control

The Permittee shall minimize and avoid, if possible, the use of chloride-based dust control chemicals (i.e., calcium chloride, magnesium chloride).

6.3 Snowmobile Trails

The Permittee shall coordinate with local snowmobile groups regarding potential project related impacts to the snowmobile trails in Dodge and Mower counties. Coordination with local snowmobile groups shall include discussions of potential construction timing and activities that could impact the trail and potential trail rerouting needs.

6.4 Karst Geology

At least 14 days prior to the pre-construction meeting, the Permittee shall file with the Commission a geotechnical report and engineering recommendation for transmission structures using concrete foundations. The geotechnical report shall be prepared under the direction of a geotechnical engineer licensed in the State of Minnesota. The submittal shall also include a letter from the Permittee summarizing the geotechnical report recommendations to be implemented on the project.

6.5 Northern Long-Eared Bat

For Project construction, the Permittee shall comply with the U.S. Fish and Wildlife Service guidance and requirements in effect regarding NLEB, including tree clearing restrictions if applicable.

6.6 Loggerhead Shrike

The permittee shall avoid tree and shrub removal within suitable Loggerhead Shrike habitat during the April through July breeding season. If tree or shrub removal will occur during the breeding season, the permittee shall coordinate with DNR to identify potentially suitable habitat and ensure that a qualified surveyor inspects the trees/shrubs for active nests prior to removal.

892. In its reply comments, DOC-EERA proposed two additional conditions in response to hearing comments:

6.7 Road and Ditch Improvements

The Permittee shall implement, at its own expense, such road or ditch improvements required as a condition of road right-of-way permits, agreements, or authorizations that are entered into by the Permittee and MnDOT, Dodge County, or Mower County for the project.

6.8. Unanticipated Discoveries Plan

Prior to construction, the Permittee shall survey areas of construction activity within undisturbed land that have not been surveyed. The Permittee shall develop an Unanticipated Discoveries Plan (UDP) to identify guidelines to be used in the event previously unrecorded archeological or historic properties, or human remains, are encountered during construction, or if unanticipated effects to previously identified archaeological or historic properties occur during construction. This is in addition to and not in lieu of any other obligations that may exist under law or regulation relating to these matters. The UDP shall describe how previously unrecorded, non-human burial, archaeological sites found during construction shall be marked and all construction work must stop at the discovery location. The Permittee shall file the UDP with the Commission at least 14 days prior to the preconstruction meeting.[1140]

893. DCW indicated during the proceeding that it was amenable to the special conditions related to wildlife-friendly erosion control[1141], dust control[1142], snowmobile trails[1143], the loggerhead shrike[1144]. Subsequently, DCW agreed to accept each of them in its February 15, 2024 reply comments.[1145]

894. Section 4 of the DRP issued with the EA specified a permanent ROW of 100 feet for the Transmission Project, instead of the 150-foot ROW specified in the DRP accepted by the Commission in the September 1 Order.[1146] With regard to this change, DCW stated in testimony that it anticipates that a 100-foot ROW as suggested in the proposed DRP would accommodate transmission infrastructure along straightaways, but a wider ROW of up to 250 feet may be needed at intersections, depending on final design. To address this, DCW recommended that the final Route Permit be revised to indicate a permanent ROW of 100 feet, except where appurtenances such as supporting guy wires may be needed. In these locations, DCW states, the needed ROW may be as wide as 250 feet.[1147] The modification to Section 4 as proposed by DCW is reasonable and should be included in the proposed Route Permit

[1140] Hearing Reply Comments by DOC-EERA (February 29, 2024) (eDocket No. 20242-203500-04).
[1141] Ex. DCW-139 at 28 (Corbett Direct).
[1142] *Id*.
[1143] Ex. DCW-129 at 14 (Comments – Response to Environmental Assessment Scoping).
[1144] Ex. DCW-139 at 30 (Corbett Direct).
[1145] Hearing Reply Comment by Dodge County Wind (Feb. 15, 2024) (eDocket No. 20242-203500-04).
[1146] Ex. DOC-160 at Appx. C, p. 7 (Environmental Assessment).
[1147] Ex. DCW-139 at 24-25 (Corbett Direct).

895. The conditions provided in the DRP attached to the EA, including the special conditions provided in Section 6.0 of the DRP, represent reasonable conditions and the Judge recommends their inclusion in the Route Permit issued to DCW. The Judge also finds DCW's proposed modification to Section 4 of the DRP to be reasonable and should be adopted. Further, the two additional special conditions proposed by DOC-EERA in its hearing comments are reasonable and their inclusion in the Route Permit issued to DCW is recommended.

896. Other parties proposed permit conditions at, and following, the December 19 and 20, 2023 public hearings. Dodge County requested in comments to add a condition to DCW's Route Permit requiring DCW to have an operations plan, regardless of route selected, to adequately respond to flooding, drainage, and weed issues.[1148] In reply comments, DCW pointed out that there are multiple authorities that oversee roadway maintenance in accordance with local permitting conditions with which DCW will comply. DCW also noted that proposed Route Permit Sections 5.3.10 (Vegetation Management), 5.3.11 (Application of Pesticides), 5.3.12 (Invasive Species), and 5.3.13 (Noxious Weeds) address Transmission Project ROW activities required of DCW, and suggested that those conditions obviate the need for a unique operations permit condition.[1149] Further, to the extent that agricultural impacts have not been fully addressed, the condition requiring development of an AIMP can provide further assurances.

897. Given the local permitting requirements that will be applicable to the Transmission Project and the Route Permit conditions governing activities in ROW, the Judge does not find an additional operations condition as proposed by Dodge County to be required.

898. Dodge County also recommended a Route Permit condition requiring a stormwater impact bond and that the MPCA review DCW's NPDES permit and SWPPP on a monthly basis during construction.[1150] In reply comments, DCW indicated that it was agreeable to coordinating the appropriate stormwater security mechanism as part of its road use agreement with the County, but did not believe it was appropriate to obligate a state agency (MPCA) to review DCW's NPDES permit and SWPPP on a monthly basis.[1151]

899. The Judge accepts DCW's agreement to coordinate with Dodge County on the appropriate stormwater security mechanism as part of its road use agreement with the County. The Judge finds that a specific Route Permit condition concerning the security Dodge County seeks to be prudent. The Judge further concludes that MPCA should be requested, but not required, to review DCW's NPDES permit and SWPPP on a monthly basis during construction.

[1148] Comments by Dodge County at 2 (Jan. 22, 2024) (eDocket No. 20241-202433-03).
[1149] Hearing Reply Comment by Dodge County Wind (Feb. 15, 2024) (eDocket No. 20242-203500-04).
[1150] Comment by Dodge County at 2 (Jan. 22, 2024) (eDocket No. 20241-202433-03).
[1151] Hearing Reply Comment by Dodge County Wind (Feb. 15, 2024) (eDocket No. 20242-203500-04).

900. Dodge County also proposed a permit condition requiring that, at the end of the Project's life, DCW completely remove all Project facilities and cabling, not just down to a depth of four feet.[1152] As part of this condition, Dodge County proposed a requirement to not subtract salvage value in determining the amount of the Project's decommissioning bond. DCW indicated in reply comments that such a condition is not appropriate given that landowners often prefer to leave cabling underground at the end of a project's life (instead of having crops or fields excavated for removal) and make arrangements with the developer based on that preference. DCW instead indicated in its reply comments its commitment to provide a Project-wide (wind and transmission) decommissioning plan consistent with the recommendations provided in DOC-EERA's February 1, 2024 comments[1153] and update that plan on a five-year schedule consistent with the requirements of Section 11.1 of DCW's proposed Site Permit.[1154]

901. The Judge finds that it is reasonable for DCW to decommission Project facilities in accordance with the terms of Section 11.1 of the proposed Site Permit and subject to the recommendations provided in DOC-EERA's February 1, 2024 comments. No additional condition concerning decommissioning or salvage value calculation is necessary.

902. Dodge County also proposed a Route Permit condition requiring stray voltage baseline monitoring and posting of a surety bond to cover post-installation stray voltage testing.[1155] Mower County similarly requested a Route Permit condition requiring stray voltage monitoring.[1156] DCW responded in reply comments that, as the EA recognized, transmission lines do not, by themselves, create stray voltage because they do not connect to businesses or residences. DCW added that the Transmission Project does not interconnect to businesses or residences and does not change local electrical service, and as a result, impacts to residences or farming operations from stray voltage attributable to the Transmission Project are not anticipated. Available studies are not in complete agreement on the risks. Since induced voltage is possible, and associated with electric transmission, EF and MFs levels must be managed in accordance with applicable standards.[1157] While the concerns of Dodge and Mower Counties are not without merit, the DRP conditions are likely sufficient as drafted.

903. The Commission has historically imposed a maximum EF limit of 8 kV/m measured at 1 meter above the ground, and that limit is reflected in Section 5.4 of DCW's proposed Route Permit. The Transmission Project's associated EF is calculated to be no greater than 5.0 kV/m at 1 meter above the ground within the line's ROW.[1158]

[1152] Comment by Dodge County at 3 (Jan. 22, 2024) (eDocket No. 20241-202433-03).
[1153] *See* Comment by DOC-EERA at 1-3 (Feb. 1, 2024) (eDocket No. 20242-202977-01).
[1154] Hearing Reply Comment by Dodge County Wind (Feb. 15, 2024) (eDocket No. 20242-203500-04).
[1155] Comment by Dodge County at 2 (Jan. 22, 2024) (eDocket No. 20241-202433-03).
[1156] Comment by Mower County at 5 (Jan. 29, 2024) (eDocket No. 20241-202869-01).
[1157] Hearing Reply Comment by Dodge County Wind (Feb. 15, 2024) (eDocket No. 20242-203500-04).
[1158] Ex. DCW-141 at 22 (Gauger Direct).

904. While there is no Minnesota or federal standard regarding MFs, the IEEE C95.6 standard provides that MF fields should not exceed 904 mG within or at the edge of the ROW. The Transmission Project's MFs will not exceed 500 mG within the ROW,[1159] which satisfies this standard.

905. The proposed Route Permit also contains safeguards that may keep the Transmission Project operating within appropriate parameters. For example, Section 5.4.1 of the proposed Route Permit establishes that the maximum induced steady-state short-circuit current must be no more than five milliamperes root mean square. DCW will be subject to this condition. Additionally, that same section of the permit provides that in a circumstance in which there are induced current problems DCW must "address and rectify" them. In addition, Section 5.4.2 of the proposed Route Permit captures the maximum EF limit of 8 kV/m limit mentioned above.

906. For these reasons, the Judge concludes that a monitoring condition, as proposed by Dodge and Mower counties and many area residents, is not supported by the record.

907. MnDOT recommended revision to Section 5.3.10 of the draft Route Permit to define "tall growing" and "low growing" vegetation.[1160] DCW replied that it does not believe that such a condition is necessary, as Section 5.3.10 Route Permit section is not specific to MnDOT ROW. DCW acknowledged MnDOT's authority over the use of state trunk ROW and stated that it will obtain the appropriate permits from MnDOT including a Utility Accommodation Permit to construct the facility in MnDOT ROW.[1161]

908. The record supports DCW's reasoning; no adjustment to Section 5.3.10 of the proposed Route Permit is warranted.

XVIII. CRITERIA FOR A CERTIFICATE OF NEED

909. Minn. Stat. § 216B.243 dictates that a CON is required for a "large energy facility" as that term is defined in Minn. Stat. § 216B.2421. A large energy facility includes "any electric power generating plant or combination of plants at a single site with a combined capacity of 50,000 kilowatts or more and transmission lines directly associated with the plant that are necessary to interconnect the plant to the transmission system."[1162] The Project constitutes a large energy facility and requires a Certificate of Need from the Commission before construction can take place.[1163]

[1159] *Id*.
[1160] Ex. PUC-166 at Attachment. 1, p. 3 (MnDOT Comments).
[1161] Hearing Reply Comment by Dodge County Wind (Feb. 15, 2024) (eDocket No. 20242-203500-04).
[1162] Minn. Stat. § 216B.2421, subd. 2(1).
[1163] In its September 1 Order, the Commission noted ambiguity about whether new legislative language included in Minn. Stat. § 216B.243, subd. 8(a)(7), granting an exemption to the CON process for certain windfarms and "associated facilities," applies to the Project's transmission line. However, since DCW stated that it would pursue a CON for the Project, the Commission declined to address this issue in its Order. Ex. PUC-185 at 10 (Order Accepting Draft Route Permit, Authorizing Environmental Assessment, Requesting Route Analysis, and Providing Further Instructions).

910. DCW bears the burden of proving the need for the Project and demonstrating that the statutory criteria have been met.[1164]

911. Minn. Stat. § 216B.243, subd. 3, prescribes the CON statutory requirements for large energy facilities[1165] and generally aligns with the criteria included in Minn. R. 7849.0120. That subdivision states that "no proposed large energy facility shall be certified for construction unless the applicant can show that demand for electricity cannot be met more cost effectively through energy conservation and load-management measures and unless the applicant has otherwise justified its need." Also, in assessing the need for the Project, the Commission must evaluate:

> (1) the accuracy of the long-range energy demand forecasts on which the necessity for the facility is based;
>
> (2) the effect of existing or possible energy conservation programs or other federal or state legislation on long-term energy demand;
>
> (3) the relationship of the proposed facility to overall state energy needs, as described in the most recent state energy policy and conservation report prepared under section 216C.18, or, in the case of a high-voltage transmission line, the relationship of the proposed line to regional energy needs, as presented in the transmission plan submitted under section 216B.2425;
>
> (4) promotional activities that may have given rise to the demand for the facility;
>
> (5) benefits of this facility, including its uses to protect or enhance environmental quality, and to increase reliability of energy supply in Minnesota and the region;
>
> (6) possible alternatives for satisfying the energy demand or transmission needs including but not limited to potential for increased efficiency and upgrading of existing energy generation and transmission facilities, load-management programs, and distributed generation;
>
> (7) the policies, rules, and regulations of other state and federal agencies and local governments;
>
> (8) any feasible combination of energy conservation improvements, required under section 216B.241, that can (i) replace part or all of the

[1164] *See* Minn. Stat. § 216B.243, subd. 3.

[1165] Minn. Stat. § 216B.243, subd. 3(a) and (b) are inapplicable since the Project involves a renewable energy facility.

energy to be provided by the proposed facility, and (ii) compete with it economically;

(9) with respect to a HVTL, the benefits of enhanced regional reliability, access, or deliverability to the extent these factors improve the robustness of the transmission system or lower costs for electric consumers in Minnesota;

(10) whether the applicant is in compliance with applicable provisions of sections 216B.1691 and 216B.2425, subd. 7, and have filed or will file by a date certain an application for certificate of need under this section or for certification as a priority electric transmission project under section 216B.2425 for any transmission facilities or upgrades identified under section 216B.2425, subd. 7;

(11) whether the applicant has made the demonstrations required under subdivision 3a; and,

(12) if the applicant is proposing a nonrenewable generating plant, the applicant's assessment of the risk of environmental costs and regulation on that proposed facility over the expected useful life of the plant, including a proposed means of allocating costs associated with that risk.

912. Minn. R. 7849.0120 provides that a CON must be granted if it is determined that specific criteria are met:

A. the probable result of denial would be an adverse effect upon the future adequacy, reliability, or efficiency of energy supply to the applicant, to the applicant's customers, or to the people of Minnesota and neighboring states, considering:

1) the accuracy of the applicant's forecast of demand for the type of energy that would be supplied by the proposed facility;

2) the effects of the applicant's existing or expected conservation programs and state and federal conservation programs;

3) the effects of promotional practices of the applicant that may have given rise to the increase in the energy demand, particularly promotional practices which have occurred since 1974;

4) the ability of current facilities and planned facilities not requiring certificates of need to meet the future demand; and

5) the effect of the proposed facility, or a suitable modification thereof, in making efficient use of resources;

B. a more reasonable and prudent alternative to the proposed facility has not been demonstrated by a preponderance of the evidence on the record, considering:

1) the appropriateness of the size, the type, and the timing of the proposed facility compared to those of reasonable alternatives;

2) the cost of the proposed facility and the cost of energy to be supplied by the proposed facility compared to the costs of reasonable alternatives and the cost of energy that would be supplied by reasonable alternatives;

3) the effects of the proposed facility upon the natural and socioeconomic environments compared to the effects of reasonable alternatives; and,

4) the expected reliability of the proposed facility compared to the expected reliability of reasonable alternatives;

C. by a preponderance of the evidence on the record, the proposed facility, or a suitable modification of the facility, will provide benefits to society in a manner compatible with protecting the natural and socioeconomic environments, including human health, considering:

1) the relationship of the proposed facility, or a suitable modification thereof, to overall state energy needs;

2) the effects of the proposed facility, or a suitable modification thereof, upon the natural and socioeconomic environments compared to the effects of not building the facility;

3) the effects of the proposed facility, or a suitable modification thereof, in inducing future development; and

4) the socially beneficial uses of the output of the proposed facility, or a suitable modification thereof, including its uses to protect or enhance environmental quality; and,

D. the record does not demonstrate that the design, construction, or operation of the proposed facility, or a suitable modification of the facility, will fail to comply with relevant policies, rules, and regulations of other state and federal agencies and local governments.

XIX. APPLICATION OF STATUTORY AND RULE CRITERIA

A. Minn. R. 7849.0120 Criteria

1. The Probable Result of Denial Would be an Adverse Effect on the Future Adequacy, Reliability, or Efficiency of Energy Supply to the Applicant, to the Applicant's Customers, or to the People of Minnesota and Neighboring States, Considering Minn. R. 7849.0120(A)

a) *Accuracy of the Applicant's Forecast of Demand for the Type of Energy that Would be Supplied by the Proposed Facility. Minn. R. 7849.0120 (A)(1).*

913. DCW does not have a service area or system in which it serves customers. Instead, the Project is needed to assist GRE in maintaining renewable energy standard (RES) compliance and adding to its portfolio of power generation resources, to deliver reliable and affordable wholesale electricity to the regional electricity market and its member-owner cooperatives. Denying DCW's application would require GRE and its member-owners energy to find a replacement renewable resource. This resource would count toward maintaining GRE's RES requirements and meeting its 50 percent by 2030 goal, as well as assisting in further decarbonizing its overall power supply portfolio.[1166]

914. GRE has indicated its expectation that it will experience a compounded annual growth rate of 1.3 percent in energy, and a growth rate of 1.0 percent in demand over the 2018–2032 planning period.[1167]

915. As pointed out in comments filed by DOC-DER, both GRE's interim resource plan and 2023-2037 integrated resource plan (IRP) included the Project as part of GRE's preferred resources plan, and the Project was locked in as a resource because GRE has committed to the purchase. Based on DOC-DER's review of the IRP it concluded that GRE has committed to the purchase and believes it to be an economically efficient choice.[1168]

b) *Effects of the Applicant's Existing or Expected Conservation Programs. Minn. R. 7849.0120(A)(2).*

916. DCW is not a utility, and does not have a system or retail customers, nor does DCW maintain a conservation program. The Commission thus granted DCW an exemption from Minn. R. 7849.0290, which requires an applicant to describe its energy and conservation plans, including load management, and the effect of conservation in reducing the applicant's need for new generation and transmission facilities.[1169]

[1166] Ex. DCW-115 at 7 (Amended Application for Certificate of Need).
[1167] *Id*. at 24-25.
[1168] Ex. DOC-165 (Comments by DOC-DER at 6).
[1169] Ex. DCW-115 at 27 (Amended Application for Certificate of Need); Ex. PUC-105 (Order).

c) *Effects of Promotional Practices of the Applicant That May Have Given Rise to the Increase in the Energy Demand. Minn. R. 7849.0120 (A)(3).*

917. The Commission granted DCW a partial exemption from Minn. R. 7849.0240, subp. 2 (B), requiring that it request the purchaser, GRE, to provide equivalent data on promotional activities.[1170] According to GRE, it has not conducted any promotional activities associated with the Project.[1171]

d) *The Ability of Current Facilities and Planned Facilities Not Requiring a Certificate of Need to Meet the Future Demand. Minn. R. 7849.0120 (A)(4).*

918. Use of current facilities alone will not allow GRE to progress in meeting its RES mandates and renewable energy goals.[1172]

919. As an independent power producer, DCW executed a PPA with GRE, with GRE determining that the Project was well-suited to meeting its renewable energy needs. Smaller facilities that do not require a CON would not be able to economically provide the amount of electricity that GRE is seeking, and, therefore, GRE chose the Project as the best solution for its needs. DOC-DER also concluded that current and planned facilities not requiring a CON have not been demonstrated to be more reasonable than the proposed Project.[1173]

e) *The Effect of the Proposed Facility, or a Suitable Modification Thereof, In Making Efficient Use of Resources. Minn. R. 7849.0120(A)(5).*

920. The record demonstrates that the renewable characteristics of the Project will provide significant natural and societal benefits. By operating as a zero-emission energy resource, the Project has positive attributes on the natural environment, including beneficial electrification, when compared to fossil generating plants. For example, the operating Project will not discharge emissions that can affect the environment, such as particulate matter, mercury, or carbon dioxide.[1174]

921. During operations, the Project will also not need water resources to generate electricity and will not discharge pollutants into any water body.[1175]

922. The land area impacted by the Project is also significantly less than other renewable technologies such as solar. While the Wind Project site encompasses approximately 28,348 acres, active agricultural land will only be removed from crop production on a total of approximately 62 acres for the turbine pads, and the acreage

[1170] Ex. PUC-105 (Order).
[1171] Ex. DCW-115 at 5, 24 (Amended Application for Certificate of Need).
[1172] *See Id.* at 5.
[1173] Ex. DOC-165 at 14 (Comments by DOC-DER).
[1174] Ex. DCW-115 at 9 (Amended Application for Certificate of Need).
[1175] *Id.*

necessary for the related Project components. In addition, as a renewable natural resource, wind power does not require the extraction, processing, or combustion of fuel as does a fossil fuel plant or biomass facility. DCW has sought input from the MnDNR, the Minnesota SHPO and USFWS to assist with the design of the Project to minimize any potential impact on cultural resources, sensitive natural features, birds, bats, and wildlife habitat.[1176]

f) *Effect of Denial. Minn. R. 7849.0120(A)(6).*

923. GRE's commitment to renewable energy and surpassing its RES requirements is supported by its 28 member-owner distribution cooperatives with a combined population of nearly 1.7 million people and providing power to approximately 700,000 homes and businesses across Minnesota and Wisconsin.[1177]

924. The Project's ability to deliver wind energy also advances the goal of adding zero-carbon generation resources to Minnesota's energy mix in keeping with the state's long-term plans to reduce greenhouse gas emissions. Accordingly, the Project will improve the adequacy, reliability, and efficiency of renewable wind energy supply to GRE; assist GRE in meeting its RES requirements as well as its voluntary renewable goal; and advance Minnesota's long-term plans to reduce greenhouse gas emissions statewide and reach 100 percent renewable energy by 2040. Without the Project, both GRE and electric customers in Minnesota would need to identify alternative renewable resources to meet these needs.[1178]

925. The Judge finds that the probable result of denial would be an adverse effect on the future adequacy, reliability, and efficiency of energy supply to GRE and the people of Minnesota and neighboring states.

2. A More Reasonable and Prudent Alternative to the Proposed Facility Has Not Been Demonstrated by a Preponderance of the Evidence on the Record. Minn. R. 7849.0120(B)

926. The Commission must consider alternatives to the proposed Project.[1179] In addition to evaluating alternatives and their impacts, a "no build" option must also be evaluated.

a) Wind Project

927. The EA considered the following potential alternatives to the Wind Project: (i) a 259 MW wind generation plant sited elsewhere in Minnesota; (ii) a 259 MW solar facility; and (iii) a "no build" alternative.[1180]

[1176] *Id*.
[1177] *Id*. at 7-8; Ex. DCW-138 at 6-8 (Cameron Direct).
[1178] Ex. DCW-115 at 7-8 (Amended Application for Certificate of Need).
[1179] Minn. R. 7849.0120(B).
[1180] Ex. DOC-160 at 35 (Environmental Assessment).

928. With regard to a wind generation facility sited elsewhere, the EA pointed out that while potentially viable, it likely would be subject to transmission constraints, which have been an issue in developing wind energy in Minnesota.[1181] The Project addresses this potential constraint. The interconnection to the Pleasant Valley Substation will be considered under the MISO Surplus Interconnection process, which, in turn, provides DCW with greater certainty that there is sufficient capacity to cost-effectively interconnect.[1182]

929. The EA indicated that while a 259 MW Solar Farm is potentially feasible, a site with adequate space and interconnection to the grid has not been identified as part of the review process.[1183] From a land-use perspective, a MW of solar requires more land to be temporarily used for the life of the project to achieve the same number of MW. Additionally, crop production with the proposed Project would not be significantly impacted, whereas with a solar facility a large area of land would be taken out of production for the life of the plant.[1184] The Applicant also noted in its Amended CON Application that the cost and reliability of wind power continues to be more favorable than for solar power despite recent substantial reductions in cost for solar.[1185]

930. The "no build" alternative, while feasible, is also undesirable. As the EA notes, the Project has been proposed to meet growing electric demand in Minnesota and growing demand for additional renewable resources in Minnesota and neighboring states. Recently, the state established a carbon-free standard for each electric utility to provide 100 percent carbon-free electricity to retail customers by 2040. In addition to Minnesota's renewable energy objective, the EA notes that there is a regional need and desire for wind energy.[1186]

b) Transmission Project

931. The EA also evaluated alternatives for the Transmission Project in a fashion similar to the evaluation undertaken of the Wind Project. For the Transmission Project, the EA evaluated the following potential alternatives: (i) the "no build" alternative; (ii) transmission lines of a different size; (iii) underground transmission lines; (iv) double circuit transmission; (v) direct current (DC) transmission lines; and (vi) alternative endpoints.[1187]

932. Under the "no build" alternative, the Transmission Project would not be constructed. The no build alternative would not meet the need for the Project. If a transmission line is not built the generation would have no outlet and the Wind Project would not be viable. This alternative would avoid all human and environmental impacts but would also halt the construction and operation of a renewable resource in the state of

[1181] *Id*. at 122.
[1182] Ex. DCW-115 at 43-44 (Amended Application for Certificate of Need).
[1183] Ex. DOC-160 at 122 (Environmental Assessment).
[1184] *Id.* at 122-23 (Environmental Assessment); Ex. DCW-115 at 19 (Amended Application for Certificate of Need).
[1185] Ex. DCW-115 at 19 (Amended Application for Certificate of Need).
[1186] Ex. DOC-160 at 123 (Environmental Assessment).
[1187] *Id*. at 135-38.

Minnesota and negate GRE's opportunity to receive renewable power from the Wind Project. [1188]

933. Transmission lines with differing voltage levels also would not be a desirable alternative. The EA points out that while transmission lines with voltages other than 161 kV are feasible, alternatives with voltages greater than 161 kV are anticipated to have greater costs and impacts than the one proposed. Also, although capital costs for a 115 kV transmission line would likely be lower than those of the proposed HVTL, a 115 kV transmission line would be less efficient than the proposed 161 kV line, resulting in greater line losses, a greater probability of curtailment of the Wind Project's production.[1189] Additionally, to the extent that a route would pass through agricultural fields, agricultural impacts are likely to be slightly greater for a 115 kV line, due to the greater number of structures required in the field.[1190]

934. As detailed earlier in these Findings, the record demonstrates that undergrounding the high-voltage transmission lines is generally not considered feasible for cost, ground disturbance, and reliability reasons. Undergrounding offers aesthetic and environmental benefits. However, the complexity, and cost, of undergrounding increases as the voltage increases. As a result, undergrounding is seldom used for transmission facilities of the size of the Project.[1191] While overhead lines are subject to more frequent outages than underground cables, service is usually quickly restored by the automatic re-closing of circuit breakers. The lower incidence of outages with underground cables is offset by the fact that the outages can be much longer in duration.[1192]

935. According to the EA, double-circuiting is not an available alternative. There is no existing transmission line between the DCW collector substation and the Pleasant Valley Substation, so a double circuit of existing transmission lines for the entire length of the Transmission Project is not feasible.[1193]

936. The EA also indicates that DC transmission lines are not a viable alternative. DC transmission lines are typically used to deliver generation over a long distance (generally hundreds of miles) to a load center. The DC technology is not a feasible solution to deliver power from the Wind Project to a nearby substation, such as the Pleasant Valley Substation, located less than 30 miles from the power source.[1194]

937. DCW proposes to connect the Project to the grid at the Pleasant Valley Substation due to the relative proximity and the available capacity at the Pleasant Valley Substation. DCW ultimately selected the Pleasant Valley Substation as the point of interconnection because of the lower cost of interconnection, the available transmission

[1188] *Id*. at 135.
[1189] *Id*.
[1190] *Id.* at 136.
[1191] *Id*. at 137.
[1192] *Id*. at 136-37; Ex. DCW-130 at 4-5 (Response to EERA Request for Additional Information Regarding Route Alternatives); Ex. DCW-142 at 22-23 (Koegel Direct); Kasson 6:00 p.m. Tr. at 65-66 (Dec. 19, 2023) (Koegel).
[1193] Ex. DOC-160 at 137 (Environmental Assessment).
[1194] *Id*.

capacity, and it being the preference of GRE. Although the interconnection will require some upgrades to the Pleasant Valley Substation, the available transmission capacity at the substation means that no upgrades to the larger transmission system will be required.[1195]

c) Appropriateness of the Size, Type, and Timing of the Proposed Facility Compared to those of Reasonable Alternatives. Minn. R. 7849.0120(B)(1).

938. The Project is intended to help satisfy the RES needs of GRE and the state's carbon reduction goals, which can only be satisfied by eligible energy technologies that will reduce carbon emissions. The Commission therefore granted DCW an exemption from Minn. R. 7849.0250(B) with respect to evaluating fossil fuel alternatives because such alternatives do not meet the Project's objective of providing energy to GRE that will satisfy the RES and other clean energy standards.[1196] Of the remaining eligible technologies, wind energy is the most proven and low-cost resource at the size contemplated for the Project, and a resource that can be in commercial operation by the fourth quarter of 2025. Therefore, the type of resource, a wind generation facility, is appropriate to help meet GRE's RES requirements and the transition of the production of energy to zero-based emissions. The U.S. Energy Information Administration (EIA) Annual Energy Outlook for 2021 estimates the levelized cost of new electric generators that would enter service in 2023 for onshore wind and solar to be $25.55 per MWh and $25.89 per MWh respectively. No other renewable technology had similarly low costs in the EIA Annual Energy Outlook for 2021.[1197] Similarly, the size and timing of the development of the Project is congruent with GRE's stated needs over the planning period in its last resource plan and advances the clean energy goals of Minnesota.[1198] Specifically, GRE's IRP update shows it intends to use the output from the Project to help replace the approximately 1,151 MW Coal Creek power plant and that the Project fits into GRE's current preferred plan at its proposed size. In addition, DOC-DER concluded that the Project's size is reasonable compared to alternative sizes.[1199] DOC-DER also concluded that the timing of the Project is appropriate as the Project will take advantage of extended tax credits and can contribute toward renewable and carbon free goals.[1200]

939. Therefore, the size, type, and timing of the Project is appropriate compared to reasonable alternatives.

d) The Cost of the Proposed Facility and the Cost of the Energy to be Supplied by the Proposed Facility compared to the costs of Reasonable Alternatives and the Cost of Energy that would

[1195] *Id*. at 137-38.
[1196] Ex. PUC-105 (Order).
[1197] Ex. DOC-165 at 9 (Comments by DOC-DER).
[1198] Ex. DCW-115 at 8 (Amended Application for Certificate of Need).
[1199] Ex. DOC-165 at 9 (Comments by DOC-DER).
[1200] *Id.* at 11.

be Supplied by Reasonable Alternatives. Minn. R. 7849.0120(B)(2).

940. The Project will provide renewable electricity to GRE at a cost that is likely lower than other renewable technologies.[1201] The PPA associated with DCW is the result of an arms-length negotiation between GRE and DCW, and, thus, the price and other terms were attractive to GRE given its needs. Also, the Project will likely generate electricity at a lower cost per kilowatt hour than would other possible renewable energy options, such as solar and biomass. Therefore, the Project will provide competitively priced wind energy at a lower cost than other renewable energy resource alternatives.[1202]

941. In addition, the Project would not be subject to fluctuations in fuel costs, such as those experienced during Winter Storm Uri, which caused a massive spike in natural gas prices from around $3 per MMBtu to a peak of $23.86 per MMBtu at the Henry Hub distribution point.[1203]

942. DOC-DER concluded that the cost of the Project and the cost of energy to be supplied by the Project is reasonable compared to the costs of reasonable alternatives and other similar projects.[1204]

e) The Effects of the Proposed Facility Upon the Natural and Socioeconomic Environments Compared to the Effects of Reasonable Alternatives. Minn. R. 7849.0120(B)(3).

943. As previously articulated in these Findings, the record demonstrates that the renewable characteristics of the Project will provide natural and societal benefits. By operating as a zero-emission energy resource, the Project has positive attributes on the natural environment when compared to fossil generating plants.[1205]

944. From a socioeconomic perspective, the Project will provide benefits to participating landowners in the form of a supplementary source of income for easements to site wind turbines and obtain wind rights.[1206] Changes in agricultural equipment maneuvering routes around turbine structures will be required, but with the development of an AIMP, the effect on overall production should be minimal.[1207]

945. During construction of the Project and associated facilities, approximately 440 temporary construction personnel will be required. Over the duration of construction (approximately five to seven months), these personnel will reside in or around Dodge, Steele, and Mower Counties.[1208] DCW should commit to employing at least 60 percent local labor during construction and to use union workers for skilled roles such as

[1201] Ex. DCW-115 at 8 (Amended Application for Certificate of Need).
[1202] *Id*. at 8-9.
[1203] Ex. DOC-165 at 15 (Comments by DOC-DER).
[1204] *Id.* at 16.
[1205] Ex. DCW-115 at 9 (Amended Application for Certificate of Need).
[1206] *Id*.
[1207] *Id*.
[1208] *Id*. at 6.

engineering and electrical construction.[1209] During the operations phase of the Project, which is expected to be 30 years, approximately five to eight permanent O&M staff will support Project operations locally. Wages and salaries paid to contractors and workers will contribute to the total personal income of the region. At least part of the wages paid to temporary and permanent Project workers will be circulated and recirculated within the counties and the state. Expenditures made by the Applicant for equipment, fuel, operating supplies, and other products and services may also benefit businesses in the counties and the state.[1210]

946. Moreover, the communities near the Project are also expected to receive economic benefits as construction will create numerous temporary and a few full-time positions, which help develop a skilled clean-energy workforce. Also, tax revenue for the counties in which the Project is situated will increase as a result of the Project.[1211]

947. These various contributions represent benefits for the natural and socioeconomic environments that would not be made available without the Project.

f) The Expected Reliability of the Proposed Facility Compared to the Expected Reliability of Reasonable Alternatives. Minn. R. 7849.0120(B)(4).

948. The projected annual net capacity factor for the Project is expected to be approximately 38.9 to 46.5 percent. DOC-DER noted in its comments that the U.S. Department of Energy's Land-Based Wind Market Report for 2023 shows that the average capacity factor for wind projects built between 2013 and 2021 was 40 percent, which is within the Applicant's estimated capacity factor range.[1212] The projected average annual output for the Project is approximately 885,900 to 1,059,100 megawatt-hours.[1213] DCW estimates that the Project will be available approximately 80 to 90 percent of the year.[1214] The HVTL will also be reliable, as the average annual availability of transmission infrastructure is very high, in excess of 99 percent.[1215]

949. DOC-DER found that the Applicant's reliability estimates fall within the range of industry standards.[1216]

950. The Judge finds that a more reasonable and prudent alternative to the proposed Project has not been demonstrated by a preponderance of the evidence on the record.

[1209] *Id*.; Ex. DCW-117 at 30 (DCW Amended Site Permit Application); Ex. DCW-141 at 5 (Gauger Direct).
[1210] Ex. DCW-115 at 9 (Amended Application for Certificate of Need).
[1211] *Id*. at 9-10.
[1212] Ex. DOC-165 at17 (Comments by DOC-DER).
[1213] Ex. DCW-115 at 10 (Amended Application for Certificate of Need).
[1214] *Id*. at 23.
[1215] Ex. DCW-118 at 49 (Amended Route Permit Application); Ex. DOC-160 at 133 (Environmental Assessment).
[1216] Ex. DOC-165 at 17 (Comments by DOC-DER).

3. By A Preponderance Of Evidence on the Record, the Proposed Facility Will Provide Benefits to Society in a Manner Compatible With Protecting the Natural and Socioeconomic Environments, Including Human Health, Considering Minn. R. 7849.0120(C)

a) The Relationship of the Proposed Facility, or Suitable Modification thereof, to Overall State Energy Needs. Minn. R. 7849.0120(C)(1).

951. As explained earlier in these Findings, the Project addresses two state energy needs: (1) the RES requirement; and (2) the reduction in statewide carbon emissions.[1217] Additionally, as evidenced by the enactment of House File 7, which passed in 2023, the Governor and the state legislature have indicated a clear policy and legislative intent to achieve 100 percent clean electricity in Minnesota by 2040. The Project advances this goal because it will supply GRE – and the customers it serves – with the renewable energy generated by the Project for 30 years.[1218] DOC-DER also provided comments concluding that the Project supports the State's overall energy needs.[1219] Based on these reasons, the Project is compatible with Minnesota's energy needs.

952. In addition to these state objectives, the EA identifies a regional need and desire for wind energy.[1220]

b) The Effects of the Proposed Facility, or a Suitable Modification thereof, Upon the Natural and Socioeconomic Environments Compared to the Effects of Not Building the Facility. Minn. R. 7849.0120(C)(2).

953. As addressed above, the Project provides significant socioeconomic benefits while minimizing the impact on the natural environment. A "no build" alternative would not provide these same socioeconomic benefits to the local community, and, also, would not provide the benefit of increasing the amount of renewable energy generation in the state. [1221]

954. While the "no build" alternative would result in no additional direct impacts to the natural environment, the option does not progress the state toward meeting its renewable objectives or the projected growth in demand for energy. As the EA notes, the Project has been proposed to meet growing electric demand in Minnesota and growing demand for additional renewable resources in Minnesota and neighboring states. In support of the natural environment, the state established a carbon-free standard for each electric utility to provide 100 percent carbon-free electricity to retail customers by 2040. In addition to Minnesota's renewable energy objective, the EA notes that there is a

[1217] Ex. DCW-115 at 10 (Amended Application for Certificate of Need).
[1218] Ex. DCW-138 at 2 (Cameron Direct); Ex. DOC-160 at 37 (Environmental Assessment).
[1219] Ex. DOC-165 at 6 (Comments by DOC-DER).
[1220] Ex. DOC-160 at 37 (Environmental Assessment).
[1221] Ex. DCW-115 at 9-10 (Amended Application for Certificate of Need).

regional need and desire for wind energy.[1222] A "no build" option would therefore deny the state a renewable energy resource.

955. Therefore, the Project has significant socioeconomic and other benefits and minimal impact on the environment in comparison to a no-build alternative.

c) The Effects of the Proposed Facility, or a Suitable Modification Thereof, in Inducing Future Development. Minn. R. 7849.0120 C(3).

956. The Project is not expected to directly induce development in Dodge, Steele, and Mower Counties. However, as described above, the Project will provide benefits to the local economy and local landowners, which, in turn, may induce future development in the counties.[1223]

d) The Socially Beneficial Uses of the Output of the Proposed Facility, or a Suitable Modification Thereof, Including its Uses to Protect or Enhance Environmental Quality. Minn. R. 7849.0120(C)(4).

957. The Project will produce affordable, clean renewable energy that will help GRE to meet its RES requirements and the energy demands of GRE and will further the state's goals of reducing carbon emissions. The Project will produce enough energy to meet the energy needs for approximately 70,000 average Minnesota households annually. In addition, as described above, the local economy will benefit from the landowner lease payments for turbines, production taxes, income from the additional jobs created, and local spending.[1224]

958. The Administrative Law Judge finds that the proposed facility will provide benefits to society in a manner compatible with protecting the natural and socioeconomic environments, including human health.

4. The Record Does Not Demonstrate that the Design, Construction, or Operation of The Proposed Facility Will Fail to Comply with Relevant Policies, Rules, and Regulations of Other State and Federal Agencies and Local Governments. Minn. R. 7849.0120(D).

959. The Project will meet or exceed the requirements of all applicable federal, state, and local environmental laws and regulations. DCW stated that it is committed to obtaining all necessary environmental and other approvals required under federal, state, and local requirements, and has provided a list of the permits it may potentially require.[1225]

[1222] Ex. DOC-160 at 123 (Environmental Assessment).
[1223] *Id*. at 10.
[1224] *Id*. at 11.
[1225] *Id*. at 13-15.

Moreover, Section 5.6.2 of the proposed Site Permit and Section 5.5.2 of the proposed Route Permit require compliance with applicable rules and regulations.

960. The record does not demonstrate that the design, construction, or operation of the proposed facility will fail to comply with relevant policies, rules, and regulations of other state and federal agencies and local governments.

961. Overall, DOC-DER recommended the Commission issue a CON for the Project should it find that the Project "will provide benefits to society in a manner compatible with protecting the natural and socioeconomic environments, including human health."[1226] The Judge finds the record demonstrates this.

B. Other Statutes

1. Distributed Generation, Minn. Stat. § 216B.2426

962. Minn. Stat. § 216B.2426 relates to whether an applicant has considered the opportunities for installation of distributed generation. The statute provides that "[t]he commission shall ensure that opportunities for the installation of distributed generation, as that term is defined in section 216B.169, subdivision 1, paragraph (c), are considered in any proceeding under section 216B.2422, 216B.2425, or 216B.243." No proposals for distributed generation as an alternative to the Project were filed in this proceeding.[1227]

963. Pursuant to Minn. Stat. § 216B.2426, the Commission is required to "ensure opportunities for the installation of distributed generation" are considered in CON proceedings. Distributed generation projects are less than 10 MW in size, and, therefore, do not offer the same economies of scale and efficiencies as a utility-scale facility like the Project. DOC-DER concluded that the requirement to consider distributed generation has been met.[1228]

2. RES Compliance, Minn. Stat. § 216B.243, subd. 3(10)

964. Minn. Stat. § 216B.243, subd. 3(10), states that the Commission shall evaluate "whether the applicant or applicants are in compliance with applicable provisions of sections 216B.1691 and 216B.2425, subdivision 7."

965. Minn. Stat. § 216B.1691 (RES) 465 apply to retail load serving entities and do not apply independent power producers such as DCW. As such, DOC-DER concluded that the Project complies with Minnesota Statutes § 216B.243, subd. 3(10).[1229]

[1226] Ex. DOC-165 at 24 (Comments by DOC-DER).
[1227] *Id*. at 18.
[1228] Ex. DOC-165 at 18 (Comments by DOC-DER).
[1229] *Id*. at 21.

3. Environmental Cost Planning, Minn. Stat. § 216B.243, subd. 3 (12)

966. Minn. Stat. § 216B.243, subd. 3 (12) states that the Commission shall evaluate "if the applicant is proposing a nonrenewable generating plant, the Applicant's assessment of the risk of environmental costs and regulation on that proposed facility over the expected useful life of the plant, including a proposed means of allocating costs associated with that risk." In this case, DCW is proposing a renewable generation facility. Therefore, this statute does not apply.

4. Transmission Planning Compliance, Minn. Stat. § 216B.243, subd. 3(10)

967. Minn. Stat. § 216B.243, subd. 3(10) requires the Commission to evaluate whether an applicant is compliant with the applicable provisions of section "216B.2425, subdivision 7, and have filed or will file by a date certain an application for certificate of need under this section or for certification as a priority electric transmission project under section 216B.2425 for any transmission facilities, or upgrades identified under section 216B.2425, subdivision 7." Section 216B.2425, subd. 7 requires that the owners or operators of transmission lines, except those that interconnect a single generating facility, must "determine necessary transmission upgrades to support development of renewable energy resources required to meet objectives under section 216B.1691 and shall include those upgrades in [their biennial] report."

968. DCW has filed for a route permit for the Transmission Project. Otherwise, DCW does not own any transmission lines. Since Minn. Stat. § 216B.2425 is applicable only to entities that own or operate electric transmission lines in Minnesota, and DCW only intends to own its HVTL, it appears that this statute does not apply in this case. Additionally, to obtain interconnection rights from MISO the Applicant must pay for any necessary transmission upgrades as determined in MISO's interconnection studies.

5. Carbon Dioxide Emissions, Minn. Stat. § 216H.03, subd. 3

969. Minn. Stat. § 216H.03, subd. 3 prohibits, with limited exceptions, construction of a new large energy facility that would contribute to statewide power sector carbon dioxide emissions. As a renewable energy facility, the proposed Project will generate carbon-free energy.

970. Based on the foregoing Findings of Fact and the record in this proceeding, the Administrative Law Judge makes the following:

CONCLUSIONS OF LAW

I. CONCLUSIONS APPLICABLE TO ALL APPLICATIONS

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

2. The Commission and the Administrative Law Judge have jurisdiction over the site permit and route permits applied for by DCW for the proposed Project pursuant to Minn. Stat. § 216F.04 and Minn. Stat. § 216E.03. The Commission and the Administrative Law Judge have jurisdiction over the certificate of need applied for by DCW for the proposed Project pursuant to Minn. Stat. § 216B.243.

3. The Commission determined that the Applications were substantially complete and accepted the Applications on March 8, 2022.

4. The Applicant, the Commission, and DOC-EERA provided all notices required under Minnesota Statutes and Rules for the Applications and have substantially complied with the procedural requirements of Minn. Stat. Ch. 216B, Minn. Stat. Ch. 216E, Minn Stat. Ch. 216F, and Minn. R. Ch. 7829, 7849, 7850 and 7854.

5. DOC-EERA has conducted an appropriate environmental analysis of the Project, and the EA satisfies Minn. R. 7850.3700, 7849.1800, subp. 2, and 7850.3900, subp. 2. Specifically, the EA and the record address the issues identified in the Scoping Decision to a reasonable extent considering the availability of information, the EA includes the items required by Minn. R. 7850.3700, subp. 4, and was prepared in compliance with the procedures in Minn. R. 7849.1900 and 7850.3700.

6. The Project, with the permit conditions identified herein, does not present a potential for significant adverse environmental effects pursuant to the Minnesota Environmental Rights Act or the Minnesota Environmental Policy Act.

7. Public hearings were held on December 19 and 20, 2023. Two public hearings were conducted near the proposed site and potential transmission line routes for the Project. Proper notice of the public hearing was provided. The public was given the opportunity to speak at the hearing and to submit written comments. All procedural requirements for the Site, Route, and CON Permits were met.

II. CONCLUSIONS APPLICABLE TO SITE PERMIT APPLICATION

8. The Commission has the authority under Minn. Stat. § 216E.04(d) to place conditions in a LWECS site permit.

9. The Draft Site Permit as modified herein contains a number of important mitigation measures and other reasonable conditions that adequately address the potential impacts of the Wind Project on the human and natural environments.

10. The record in this proceeding demonstrates that the Wind Project, subject to the permit conditions identified herein along with the conditions included in the Draft Site Permit as modified by DOC-EERA, satisfies the criteria for an LWECS site permit as set forth in Minn. Stat. Ch. 216F, Minn. Stat. § 216E.03, and Minn. R. Ch. 7854 and all other applicable legal requirements.

III. CONCLUSIONS APPLICABLE TO ROUTE PERMIT APPLICATION

11. The evidence in the record demonstrates that the Hybrid Route Alternative, is the most suitable route for the Transmission Project. The Commission has the authority under Minn. Stat. § 216E.03 to place conditions in an HVTL route permit.

12. The Draft Route Permit as modified herein contains important mitigation measures and other reasonable conditions that adequately address the potential impacts of the Transmission Project on the human and natural environments along the Hybrid Route Alternative.

13. The evidence in the record demonstrates that the Transmission Project, subject to the permit conditions identified herein along with the conditions included in the Draft Route Permit, satisfies the criteria for a route permit set forth in Minn. Stat. § 216E.04, subd. 8 (referencing Minn. Stat. § 216E.03, subd. 7) and Minn. R. 7850.4100, and all other applicable legal requirements.

IV. CONCLUSIONS APPLICABLE TO CERTIFICATE OF NEED APPLICATION

14. The record in this proceeding demonstrates that DCW has satisfied the criteria for a CON set forth in Minn. Stat. § 216B.243 and Minn. R. 7849.0120.

15. No party or person has demonstrated by a preponderance of the evidence that there is a more reasonable and prudent alternative to address those needs met by the Project.

16. No conditions on the CON are necessary.

17. Any of the foregoing Conclusions of Law which are more properly designated Findings of Fact are hereby adopted as such.

Based on the Findings of Fact and Conclusions of Law contained herein and the entire record of this proceeding, the Administrative Law Judge hereby makes the following recommendation:

RECOMMENDATION

The minimum legal requirements have been met for issuance of a Site Permit, Route Permit, and Certificate of Need to Dodge County Wind, LLC to construct and operate the up to 252 MW DCW wind project and the 161 kV interconnecting transmission line. If the Commission approves the Applications, the Site Permit and Route Permit

should contain the conditions as set forth in the foregoing Findings of Fact and Conclusions of Law.

Dated: March 29, 2024

KIMBERLY MIDDENDORF
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. 7829.1275, .2700 (2023), 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.

CERTIFICATE OF SERVICE

I, Mai Choua Xiong, hereby certify that I have this day, served a true and correct copy of the following document to all persons at the addresses indicated below or on the attached list by electronic filing, electronic mail, courier, interoffice mail or by depositing the same enveloped with postage paid in the United States mail at St. Paul, Minnesota.

Minnesota Public Utilities Commission
ORDER GRANTING CERTIFICATE OF NEED, ISSUING SITE PERMIT, AND ISSUING ROUTE PERMIT

Docket Number **IP-6981/CN-20-865 ; IP-6981/WS-20-866 ; IP-6981/TL-20-867**
Dated this 4th day of June, 2024

/s/ Mai Choua Xiong

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