

March 19, 2018

Daniel P. Wolf, Executive Secretary  
Minnesota Public Utilities Commission  
127 7th Place East, Suite 350  
St. Paul, MN 55101-2147

**Re: Application for Site Permit Repowering**  
Trimont Wind Project  
Docket No. IP6907/WS-13-258

Dear Mr. Wolf:

Attached are the comments of the Minnesota Department of Commerce Energy Environmental Review and Analysis (EERA) staff on Permit Amendment approval in the following matter:

**The Application of Trimont Wind I, LLC for a Large Wind Energy Conversation System Site Permit Amendment for Repowering the 100.5 MW Trimont Wind Project in Martin and Jackson Counties**

Trimont Wind I, LLC has submitted a Site Permit Amendment Application pursuant to Minnesota Rule 7854.1300 to retrofit the existing Trimont Wind Project and repower the Project as an 107.2 MW LWECS.

This filing was made on December 21, 2017, by:

Adam Sokolski  
Avangrid Renewables  
527 Marquette Avenue, Suite 1600  
Minneapolis, MN 55402

EERA submits that a repowering “retrofit” of the Trimont Wind Farm is in the best interest of the state, as per legislative and Commission policy. However, EERA is concerned the Site Permit Amendment Application does not contain all the information necessary for the Commission to approve exempting its wind access buffer standard. Either the Applicant could make such information available for further review by the Commission, or a modified version of the Applicant’s requested amendments could be approved and implemented. EERA staff is available to answer any questions the Commission may have.

Sincerely,



David Birkholz, Environmental Review Manager  
Energy Environmental Review and Analysis  
(651) 539-1838 | [david.birkholz@state.mn.us](mailto:david.birkholz@state.mn.us)

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COMMENTS AND RECOMMENDATIONS OF THE  
MINNESOTA DEPARTMENT OF COMMERCE  
ENERGY ENVIRONMENTAL REVIEW AND ANALYSIS

DOCKET NO. IP6907/WS-13-258

Date .....March 19, 2018  
EERA Staff..... David Birkholz (651) 539-1838

**In the Matter of the Application of Trimont Wind I, LLC for an LWECS Site Permit Amendment to Repower the 100.5 MW Trimont Wind Project in Martin and Jackson Counties**

**Issues Addressed:** *These comments and recommendations address:*

1. *Whether a site permit amendment should be issued; and*
2. *What conditions need to be updated from the current permit*

**Additional documents and information can be found at**

<https://mn.gov/commerce/energyfacilities/Docket.html?Id=5208> or on eDockets at <http://www.edockets.state.mn.us/EFiling/search.jsp> (Year 13, Number 258).

This document can be made available in alternative formats; e.g., large print or audio tape by calling (651) 539-1530.

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## Introduction and Background

Trimont Wind I, LLC (Trimont Wind or Applicant), a subsidiary of Avangrid Renewables, LLC (formerly Iberdrola), currently operates a 100.5-megawatt (MW) Large Wind Energy Conversion System (LWECS) located in Martin and Jackson counties. Trimont Wind received a Certificate of Need (CN) from the Minnesota Public Utilities Commission (Commission) on June 2, 2004. The Minnesota Environmental Quality Board (EQB) issued Trimont Wind a Site Permit on June 17, 2004 and amended it on October 21, 2004.<sup>1</sup> The Site Permit expires June 30, 2034. The facility includes 67 1.5 MW General Electric (GE) turbines and commenced commercial operation in December 2005.

On December 21, 2017, Trimont Wind I, LLC filed an Application to amend the Site Permit.<sup>2</sup> The Applicant intends to repower (retrofit, in its own terms) the LWECS to improve efficiency and extend the useful life of the facility beyond 2034. Trimont Wind has a power purchase agreement (PPA) with Great River Energy for the plant's current production. They would pursue a new PPA with a Minnesota customer when the current agreement expires.

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<sup>1</sup> Trimont Wind included a copy of the Site Permit as an attachment to the Application.

<sup>2</sup> "Site Permit Amendment Application," (Application) Trimont Wind I, LLC, December 21, 2017, <https://mn.gov/commerce/energyfacilities/resource.html?Id=34762>.

## Project Location

The Project is located approximately three miles west of the city of Trimont, in Cedar Township in Martin County and Kimball Township in Jackson County. The proposed Project boundaries are the same as those authorized in the 2004 Site Permit. The Project is located in an area that has seen extensive development of LWECS over the 12-plus years since The Trimont facility commenced operations; with Avangrid's own Elm Creek I and Elm Creek II projects immediately adjacent to the south and west, and ENEL's Odell Wind Project immediately adjacent to the North.

## Project Description

The current Facility Boundary, encompassing approximately 22,400 acres, would remain the same under an amended permit. The new Project would consist of retrofitting the existing turbines by:

- Replacing turbine blades, increasing the rotor diameter from 77 meters to 91 meters,
- Replacing equipment within the nacelles (e.g., gearboxes and drive shafts), and
- Updating the electronic controls.

The result would be to increase the output of each turbine from 1.5 to 1.6 MW, which would increase the nameplate capacity of the Facility from 100.5 MW to up to 107.2 MW. This would allow for greater efficiency in meeting the generation commitment at the interconnection point. There would be no changes to turbine locations, turbine towers, meteorological towers, or underground electrical collection system outside of the substation. The Applicant's goal is to commence construction of the Project on a schedule to achieve commercial operation by December 31, 2020.

## Regulatory Process and Procedures

A site permit from the Commission is required to construct an LWECS, which is any combination of wind turbines and associated facilities with the capacity to generate five megawatts or more of electricity. This requirement became law in 1995. The Minnesota Wind Siting Act is found at Minnesota Statutes Chapter 216F. The rules to implement permitting requirements for LWECS are in Minnesota Rule 7854. The Statute and Rule are designed to guarantee LWECS are sited "in an orderly manner compatible with environmental preservation, sustainable development, and the efficient use of resources."<sup>3</sup>

Over the past year, the Commission and the Minnesota Department of Commerce Energy Environmental Review and Analysis (EERA) staff have been meeting together, and with interested utilities, to discuss repowering existing windfarms. Repowering is a means to fulfill all three tenets of the law's purpose by rebuilding on a previously impacted site, preserving the existing compatible land uses of agriculture and energy production, and utilizing and improving upon facilities that have already been determined by the Commission as making efficient use of resources.

The current docket is for "partial repowering," rather than a "full repowering." Full repowering consists of decommissioning the existing turbines and replacing them with new turbines on new towers within the site boundary. In this case, (partial repowering), the existing turbines would be retrofitted on the same towers to improve efficiency and extend their life cycle.

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<sup>3</sup> Minnesota Statute [216F.03](#); Minnesota Rule [7854.0200](#)

The Commission has authority to amend a Site Permit at any time if it has good cause.<sup>4</sup> The process for an amendment generally includes a comment period and a hearing before the Commission. Commission and EERA staffs agreed that the additional step of a public meeting in the Project area would be beneficial in this and other cases of repowering. As discussed by staffs, and presented at a Commission Planning Meeting in 2017, a similar Process was outlined to review either full or partial repowering. The current review process has been effectuated reasonably within anticipated time parameters:

Planned Review Process		Actual
Day	Process Step	Executed
0	Amendment Application Filed	12/21/17
10	EERA Recommendations on Application Completeness and Process	01/05/18
15	Commission Notice for Public Information Meeting and Comment Period	01/24/18
40	Public Information Meeting	02/06/18
50	Public and Agencies Comments Due	02/21/18
-	Reply Comments	02/28/18
-	Extended Comment Period Variance	03/09/18
64	EERA Recommendations on the Permit Amendment	03/19/18
85-100	Commission Agenda Meeting for Decision	TBD

### Amendment Application

Commission and EERA staffs agreed that an Amendment Application for repowering should provide the same information that would be required for current Site Permit applications.<sup>5</sup> This guarantees the Applicant will have updated any environmental information from its original application and conducted all required surveys and modeling expected by applicants for new sites.

Trimont developed its Amendment Application with the assistance of the EERA guidance document<sup>6</sup> for LWECS permits. This guidance for site permitting provides applicants and preparers of LWECS applications with information on how to prepare a complete site permit application, including information on the permitting process, pre-application consultation, current policies, guidelines and expectations as to necessary study standards and how to submit an application.

Trimont submitted a draft Application for review and met with EERA on October 17, 2017, to discuss the need for any additional information. EERA also reviewed a second draft and met with the Applicant on November 3, 2017, to provide additional comments and recommendations. The Applicant edited and supplemented the Application following EERA's reviews before making their official filing on December 21, 2017. EERA found the efiled Application addressed the comments and recommendations provided to the Applicant. EERA confirmed in a filing<sup>7</sup> that requirements discussed among Commission and EERA staff had been met and recommended that the Application be reviewed as per the review process for repowering mentioned above.

<sup>4</sup> Minnesota Rule [7854.1300 Subp. 2](#)

<sup>5</sup> Minnesota Rule [7854.0500](#)

<sup>6</sup> [Application Guidance for Site Permitting of Large Wind Energy Conversion Systems in Minnesota](#), Department of Commerce EERA, August 5, 2010.

<sup>7</sup> Comments and Recommendations on Completeness and Process, EERA, January 05, 2018, eDocket no. [20181-138685-01](#).

## Public Meeting and Comments

The Commission noticed a public information meeting<sup>8</sup> which was held in Trimont, MN on February 06, 2018, and hosted by Commission and EERA staff. The Applicant also presented and was available to answer questions from the group of approximately 20 attendees. The public was able to submit comments<sup>9</sup> at the meeting, and a public comment period was open through February 21, 2018.

**Public Meeting Comments.** The meeting comments were generally restricted to logistics. For example, the Jackson County Highway department wanted assurance there would be a road use and public drainage agreement in place. The permit requires the Permittee to make satisfactory arrangements with the appropriate government bodies with jurisdiction over the roads used for construction of the project to ensure maintenance and repair of the roads that may be used to transport equipment and project components.<sup>10</sup> There will also be a required MNPCA Stormwater Pollution Prevention Plan (SWPPP).<sup>11</sup>

A representative for Project landowners made a statement that all 67 participating landowners were either explicitly or by implication, having signed lease extensions, supportive of the repowering project, noting satisfaction with the cooperation between landowners and Avangrid.

A Martin County commissioner raised the question of the impact on non-participating landowners; about protecting the setback regulations while expanding the rotor diameter. EERA staff addresses this issue in detail below. No letters or comments were received from non-participating landowners during the open comment period.

**Mankato Building Trades (MBCTC).** The construction trade organization submitted a letter requesting the Commission approve the retrofit application, providing that Avangrid “commit to commercially reasonable efforts to maximize employment of local skilled labor.”<sup>12</sup> The Council “would like to know more” about the Applicant’s intentions to provide opportunities for local construction workers. EERA generally supports the MBCTC comments. However, staff has not recommended a corresponding permit condition. EERA recommends against permit conditions for which compliance metrics are not available or enforceable.

**Minnesota Department of Natural Resources.** The DNR made three observations in their comment letter.<sup>13</sup> They note the Application states if construction disturbs wetlands, “those impacts will be permitted.” DNR wants the language changed to “then a permit application will be submitted” with the applicable agencies. Regardless, EERA notes the Application does not need to be altered, because the issue is already resolved in a permit condition.<sup>14</sup> The potential wetland impacts are accounted for with the statement that any such disturbance is “subject to permits and approvals by the Minnesota Department of Natural Resources,” et al. The permit resolves any semantic issues.

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<sup>8</sup> Notice Of Public Information Meeting and Comment Period on the Trimont Wind I Project Site Permit Amendment Application, Commission, January 24, 2018, eDocket no. [20181-139279-01](#).

<sup>9</sup> Public Information Meeting Record, Janet Shaddix Elling, February 6, 2018, eDocket no. [20182-140412-01](#)

<sup>10</sup> Generic Permit, Section 5.2.12

<sup>11</sup> Generic Permit, Section 5.2.6

<sup>12</sup> MBCTC comments, February 21, 2018, eDocket no. [20182-140379-01](#).

<sup>13</sup> DNR Comments, February 21, 2018, eDocket no. [20182-140352-01](#).

<sup>14</sup> Generic Permit, Section 4.6

A second issue is DNR's concern that Trimont's voluntary strategy of feathering turbines to reduce bat fatalities uses a shorter time period than is usual in current permits. The DNR recommends that "the current feathering language used for new site permits granted by the Public Utilities Commission also be used for the Trimont Wind I repowering project." EERA provided input to DNR on this condition over time and agrees with the DNR that it should be consistent across permits to help combat bat fatalities.

As to the issue of wind access buffers, DNR speculates that the reason landowners are non-participating is that they "did not want the project on or near their land." DNR also stated that they "do not support exemptions to wind access buffers being applied to DNR administered Lands." However, they did not offer evidence that the specific changes to turbine height, rotor diameter and rotor swept zone at this repowering site would be likely to increase bat fatalities. Finally, the DNR stated that there should be "a clear policy on exemptions to existing (permitted) wind access buffers before allowing them on any project."

## EERA Staff Analysis

EERA believes the Applicant makes and supports the arguments that their repowering request fulfills the Legislature's policy on "environmental preservation, sustainable development, and the efficient use of resources." Retrofitting existing turbine locations helps lessen the environmental impact of new construction. Repowering the existing facility allows for extending the life of that facility and continues the existing harvest of the wind resource without altering the current land use for wind or agriculture. In the end, the upgrade investment provides returns on life of project or reduced need for new facilities (economics) and capacity factor (efficiency) allowing the Permittee to better meet the demands of its power purchase agreement. The Project metrics appear favorable and could provide a good first example of the benefits of repowering existing LWECS.

### Wind Access Buffers

EERA believes the key issue in deciding whether to amend the Trimont permit for this retrofitting project is determining whether it is appropriate to exempt a number of the existing turbine locations from the current 3x5 rotor diameter (RD) development buffers from the property lines of non-participating landowners. Upgrading the turbines blades from 77 to 91 meters would result in up to 21 of the 67 turbine locations exceeding that 3x5 restriction between 16 and 226 feet on the prevailing wind axis.<sup>15</sup> The viability of any solution to this conundrum is open to interpretation.

***Exemption to Exceed the Wind Access Buffer.*** One argument is that "exempting" the locations from the 3x5 RD setback means the turbine buffers would be allowed to encroach on the wind rights of the neighboring landowner. EERA assumes the Commission does not have authority to allow the Permittee to utilize wind rights to which it does not hold lease, no matter how many or few feet a turbine location would "exceed" its buffer. Under this interpretation of exemption, any enhancement of the turbine blades would result in a number of turbines exceeding their buffers. Denying these exceedances would eliminate many advantages of the retrofit. The Applicant would have to re-evaluate the economics of proceeding with the improvement of only two-thirds of the project.

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<sup>15</sup> Application, Table 7 at p. 13

**Exemptions to the Wind Access Buffer.** The other point of view would be to interpret the exemptions as relief from the existing standard. This would not be an allowance for the 3x5 buffer to encroach on unleased property; it would be an adjustment of the standard to accommodate the upgrades and to avoid requiring construction of new turbines on conforming locations (raising a significant question of economic viability). The validity of this interpretation would lie in showing that this is legally allowable and would not have a significant impact on the wind development rights of neighboring landowners.

- The 3x5 RD setback has been standardized in current LWECs permits but has not been universally applied over time. For example, the original Trimont Site Permit<sup>16</sup> in 2004, established 5 RD setbacks, which has been adjusted over time to reflect the importance of the impact of wind direction on wake loss.
- Access buffers from non-participating landowners have been applied in permits in order to protect wind development rights, assuring wake loss from one project doesn't negatively impact production in a separate project. The 3x5 setback buffers apply to both developers, meaning turbines from competing projects would be at least 6-10 RD separated. An exemption of 16-226 feet less of a separation could arguably be considered *de minimus*.
- Turbine manufacturers adjust their warranties based on wake impact, a direct result of proximity to other turbines. According to an Avangrid email,<sup>17</sup> GE (the manufacturer of the existing turbines and the planned upgrades) performed a Mechanical Loads Analysis supporting the retrofit 1.6-91 for the project. According to an Avangrid meteorologist, wake losses after repowering will actually be less than current wake losses due to the shape and thrust curve of the replacement blades.
- Wind Access Buffers are not a legal description. Again, they have been generally standardized in current permits. However, it should be noted that a standard has not been codified. As for most permit conditions, they have been applied as reasonable and supportable by Commission experience and decisions, much as other standard permit guidelines. But neither statute nor rule dictate a required setback. This allows the Commission to make adjustments as they gather more data, or to make appropriate *ad hoc* decisions.

These are a sampling of reasons EERA believes the Commission could be justified in making allowances for exceptions to the wind access buffer for the 21 turbines in question without encroaching on or negatively impacting neighboring wind development opportunities. The final interpretation will be the Commission's, but EERA does not believe exemptions would *necessarily* violate established wind access protections.

## EERA Staff Comments and Recommendations

In reviewing the Application and the record, EERA suggests the petitioned repowering "retrofit" of the Trimont Wind Farm is in the best interest of the state, as per legislative and Commission policy.

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<sup>16</sup> Trimont Wind Site Permit, Minnesota Environmental Quality Board, June 17, 2004, Section III.C.1, <https://mn.gov/commerce/energyfacilities/documents/EQBFileRegister/03-72-LWECs-Trimont/TrimontSitePermit.pdf>

<sup>17</sup> Adam Sokolski (Avangrid) email, February 22, 2018



However, without additional explanation, EERA does not support granting the requested wind access buffer exemptions at this time, for the reasons described below:

- The Commission would need to determine if making exemptions to the wind access buffers in this case would compromise its commitment to the 3x5 setbacks set in its general standards and in other and upcoming permits.
- The Application provides ample argument of why the repowering is beneficial; it does not necessarily present sufficient technical argument that it should be allowed exemptions to the wind access buffer in order to do so.
- The Application does not describe any outreach to nonparticipating landowners.

EERA suggests the Commission could revisit the issue under the following conditions:

- The Applicant should provide technical evidence that the retrofitted blades would perform as stated. If newer blades can actually be proven to create less downstream wake loss, it improves the argument for adjusting the wind access buffer commensurately.
- The Applicant should describe its efforts to coordinate with landowners of affected parcels, or develop a plan to do so. No comment was received from this quarter during the review period, but that doesn't of itself inform the Commission of consent or understanding.

The Commission has at least four options at this point:

1. Deny the Amendment request.
2. Approve the Amended Permit with the exemptions.
3. Approve the Amended Permit without the exemptions (permit the Project retrofits, but only allowing the larger blade replacement on the 46 conforming turbine locations).
4. Ask the Applicant for additional information concerning the setbacks (as per above) before reconsidering the Amendment request.

EERA recommends either no. 3 or no. 4.

## Recommended Site Permit

To issue a permit amendment, the conditions of the 2004 permit must also necessarily be updated to meet the current requirements of LWECS site permits. As requested by EERA, Trimont submitted a draft permit updating the conditions.<sup>18</sup> This is based on the Commission’s latest site permit template. Trimont also filed a copy of the updates using their original permit.<sup>19</sup> This is valuable as an examination of the evolution of LWECS site permits since the Commission assumed permitting responsibility.

EERA recommends working with the template updated with amendments in order to produce an Amended Site Permit that is as consistent as possible with the conditions of contemporary permits. EERA has the following comments about, and recommends the following changes and edits to the Applicant’s submitted amendments.<sup>20</sup> **EERA recommended permit language is in red type.**

Section	Applicant Recommended Edits	EERA Comments
Title Page	The Permittee is authorized by this site permit to construct and operate 107.2-Megawatt nameplate capacity Large Wind Energy Conversion System on the site identified in this site permit and in compliance with the conditions contained in this permit. The construction, operation, and maintenance of necessary associated facilities is also authorized by this site permit.	The Applicant’s description is apt, as the existing turbine locations will not change.  If the Permittee were allowed to upgrade only the turbines that did not require exemption from the 3x5 setback, the size would be 105.1 MW. However, upgrading the nacelles but not the blades on the 12 turbines in question might produce another, unknown number. So EERA supports using the 107.2 nameplate capacity.
1.0 Site Permit	The Minnesota Public Utilities Commission (Commission) hereby issues this site permit to Trimont Wind I, LLC (Permittee) pursuant to Minnesota Statutes Chapter 216F and Minnesota Rules Chapter 7854. This permit authorizes the Permittee to retrofit their existing wind plant and operate the Trimont Wind Project (Project), a 107.2 megawatt (MW) nameplate capacity Large Wind Energy Conversion System (LWECS) and associated facilities in Martin and Jackson Counties (Project). The LWECS and associated facilities shall be built within the site identified in this permit and as identified in the attached official site permit map(s), hereby incorporated into this document.	

<sup>18</sup> Draft Site Permit\_Amended from Generic Template, Avangrid, March 13, 2018, eDocket no. [20183-141159-01](#).

<sup>19</sup> Draft Site Permit\_Amended from 2004 Original, Avangrid, March 13, 2018, eDocket no. [20183-141159-02](#).

<sup>20</sup> This comparison reviews the final suggested language from the Applicant. See the “Draft Site Permit\_Amended from Generic Template” to note the red-line changes from the template.

Section	Applicant Recommended Edits	EERA Comments
2.0 Project Description	<p>The 107.2-MW LWECS Project authorized to be constructed in this Permit is referred to as the Trimont Wind Project (“Project”). The Project will consist of up to 67 turbines, using 1.6 MW GE wind turbines with a maximum nameplate capacity of 107.2 MW. Turbines are interconnected by communication and electrical power collection facilities within the wind farm. These facilities will include transformers and underground collection lines and overhead feeder lines that will deliver wind-generated power to GRE’s Martin County Substation located in Section 19 in Cedar Township in Martin County. The retrofit turbine blades will have a 91 meter rotor diameter. There will be no changes to the Facility boundary, turbine locations, turbine towers, meteorological towers, or underground electrical collection system outside of the substation. Trimont Wind would establish and maintain settings in the Facility’s SCADA and windfarm management system to ensure the Facility does not exceed the net 105 MW limit at the point of interconnection. In the future, Trimont Wind may make a MISO interconnection request to increase its interconnection rights at the Facility to accommodate the 107.2 MW pursuant to processes and standards established in the MISO Tariff.</p>	<p>EERA questions whether the last section in the Applicant’s amendment is necessary.</p> <p>The Application states the 107.2 MW will allow the Project to meet the requirements of its current power purchase agreement (PPA) more efficiently and predictably. However, ostensibly, approval of the larger nameplate capacity would allow for the possibility of a larger PPA in its next iteration.</p> <p>Regardless of the terms of any future PPA, the Commission has not historically addressed the details of MISO interconnection agreements in their site permits, and it’s not clear that it needs to do so here.</p>
2.1 Associated Facilities	<p>There will be no changes to electrical equipment, collector and feeder lines, and other associated facilities. Existing access roads may have temporary construction to widen and add turning radii for deliveries and these access road improvements will be removed after construction.</p>	
2.2 Project Location	<p>The Project is located in the following:</p> <p>Jackson County, Kimball T104 R34 11, 12, 13 14, 22, 23, 25, 26, 27, 28, 34, 36</p> <p>Martin County, Cedar T104 R33 7, 17, 18, 19, 20, 21, 29, 30</p>	<p>There is no change from the original Project location.</p>

Section	Applicant Recommended Edits	EERA Comments
3.0 Designated Site	<p>The site designated by the Commission for the Trimont Wind Project is the site depicted on the official site permit maps attached to this permit.</p>	<p>The permit should include Figure 2. (Project Area and Facilities) from the Application (see attached).</p>
3.1 Turbine Layout	<p>The wind turbine and associated facility layouts are shown on the official site maps attached to this permit. Trimont Wind is not proposing to modify the turbine layout as a result of the proposed retrofitting activities. The Trimont Wind site layout was originally developed to minimize the overall potential human and environmental impacts of the Project, which were evaluated in the permitting process. The location of each wind turbine and associated facilities is located within the Project boundary.</p> <p><del>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.</del></p>	<p>The language in this section was edited (and the second paragraph deleted) from the template by the Applicant to reflect the turbine layout has already been established and will not change under an amendment.</p> <p>Both the edits and the deletion are appropriate.</p>

Section	Applicant Recommended Edits	EERA Comments
4.1 Wind Access Buffer	<p>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.</p> <p>Trimont Wind has stated that, as a result of the retrofit and increasing the rotor diameter from 77 meters to 91 meters, 21 turbines would not meet the wind access buffer setbacks. The distance of each turbine’s setback exceedance and the status of the adjacent non-participating parcel are detailed in Trimont Wind’s application for a site permit amendment. Because the wind access buffer setback exceedances for these turbines would not materially impair the wind or land rights of the adjacent parcels to which the applicant does not hold wind rights, the Commission grants the requested exceptions for turbines 1, 4, 6, 7, 12, 16, 22, 23, 24, 25, 34, 46, 47, 48, 52, 53, 55, 56, 57, 58, and 59.</p>	<p>The first paragraph is part of the generic template and should stand.</p> <p>The Applicant added the second paragraph to address the wind access buffer of the retrofit larger turbine blades. Unless the Commission decides to support exemptions from the 3x5 setbacks from non-participating landowners, this language should not be included in the Amended Permit.</p>
4.3 Noise	<p>The wind turbine towers shall at all times, continue to comply with noise standards established by the Minnesota Pollution Control Agency as of the date of this permit and at all appropriate locations. ...</p>	<p>The first sentence of this section was edited to note that turbine placement is already completed, but compliance with noise standards will still be required.</p>
4.9 Wind Turbine Towers	<p>Structures for wind turbines shall be self-supporting tubular towers. The towers may be up to 80 meters (262 feet) above grade measured at hub height.</p>	<p>This is unchanged from the original permit.</p>
4.10 Turbine Spacing	<p>The turbine towers are within the site boundary as shown in the official 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.</p>	<p>The only change was to indicate the towers are already sited and constructed.</p> <p>The standing language arguably gives the Applicant flexibility to allow for greater setbacks due to larger turbine blades, providing these occur on Permittee controlled parcels.</p>

Section	Applicant Recommended Edits	EERA Comments
5.2 Construction and Operation Practices	<p>The Permittee shall comply with the construction practices, operation and maintenance practices, and material specifications described in the Trimont Wind I LLC Project’s Site Permit Application dated December 2017, and the record of the proceedings unless this permit establishes a different requirement in which case this permit shall prevail.</p>	<p>This updates to the current Amendment Application rather than the original.</p>
5.2.2 Site Manager	<p>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.</p> <p><del>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 commercial operation of 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 commercial operation of the facility. The Permittee may change the site manager at any time upon notice to the Commission, affected landowners, residents, local government units and other interested persons.</del></p>	<p>EERA does not agree with deleting the second paragraph of this standard language. While true the Permittee already has a site manager, there is benefit to re-informing the affected public when the changes go online. This language also preserves the requirement to notice the affected public when there is a change in site manager. EERA supports preserving the deleted language:</p> <p>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 commercial operation of 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 commercial operation of the facility. The Permittee may change the site manager at any time upon notice to the Commission, affected landowners, residents, local government units and other interested persons.</p>

Section	Applicant Recommended Edits	EERA Comments
<p>5.2.9 Application of Pesticides</p>	<p>The Permittee shall restrict pesticide use to those pesticides and methods of application approved by the Minnesota Department of Agriculture, Minnesota Department of Natural Resources, and the U.S. Environmental Protection Agency. All pesticides shall be applied in a safe and cautious manner. The landowner may request that there be no application of pesticides on any part of the site within the landowner's property.</p>	<p>There doesn't appear to be any justification for eliminating elements of this section. EERA recommends retaining the standard language:</p> <p>The Permittee shall restrict pesticide use to those pesticides and methods of application approved by the Minnesota Department of Agriculture, Minnesota Department of Natural Resources, 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 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.</p>
<p>5.2.10 Invasive Species</p>	<p>The Permittee shall employ best management practices to avoid the potential spread of invasive species on lands disturbed by project construction activities.</p>	<p>The Applicant has eliminated the requirement to develop an Invasive Species Prevention Plan, presumably because the level of construction disturbance would be minimal compared to installing new turbine towers.</p>
<p>5.2.11 Noxious Weeds</p>	<p>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. <del>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.</del></p>	<p>There doesn't appear to be any justification for eliminating the second part of this condition. EERA recommends retaining the standard language:</p> <p>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.</p>



Section	Applicant Recommended Edits	EERA Comments
5.2.13 Turbine Access Roads	<p>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. Access roads shall be constructed in accordance with all necessary township, county or state road requirements and permits.</p>	<p>EERA is not certain why the section concerning fish passage was deleted, especially if no new access roads will be required. If any construction is planned, it seems unusual to delete this condition in particular. EERA would add back:</p> <p>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.</p>
5.2.16 Interference	<p><del>television and radio signal reception,</del></p>	<p>The Applicant performed these assessments when siting the turbine locations, none of which will change.</p>
5.4 Electrical Collector and Feeder Lines	<p><del>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.</del></p>	<p>The Applicant recommended eliminating this last sentence of the condition. This is reasonable as all feeder lines have already been constructed.</p>
7.1 Biological and Natural Resource Inventories	<p><del>The Permittee, in consultation with the Commission and the Department of Natural Resources, 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.</del></p>	<p>The Application describes the evaluations of current conditions done in addition to the preconstruction surveys performed in 2004. This condition could be considered redundant.</p>



Section	Applicant Recommended Edits	EERA Comments
7.3 Wake Loss Study	At least 14 days prior to the pre-construction meeting, the Permittee shall file with the Commission the final tower locations and an estimate of total project wake losses.	<p>EERA agrees with deleting references to micro-siting in this condition. The Applicant has offered no reason why it should be exempted from the remaining standardized requirement for all permittees. EERA would add back in:</p> <p>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.</p>

Section	Applicant Recommended Edits	EERA Comments
<p>7.5.1 Avian and Bat Protection</p>	<p><del>The Permittee shall comply with the provisions of the Avian and Bat Protection Plan (ABPP) submitted for this project, and revisions resulting from the annual audit of ABPP implementation. The first annual audit and revision will be filed with the Commission 14 days before the preconstruction meeting and revisions should 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.</del></p> <p>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 Department of Natural Resources and to the U.S. Fish and Wildlife Service at the time of filing with the Commission.</p>	<p>EERA understands that the Permittee has a corporate-wide protection plan in place that should make the first paragraph of this condition unnecessary or redundant. However, there is nothing in the plan that nullifies the Commission’s expectation that permit holders conduct an annual audit of the plan and file its findings. EERA recommends retaining the second portion of the standard permit language:</p> <p>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 Department of Natural Resources and to the U.S. Fish and Wildlife Service at the time of filing with the Commission.</p>

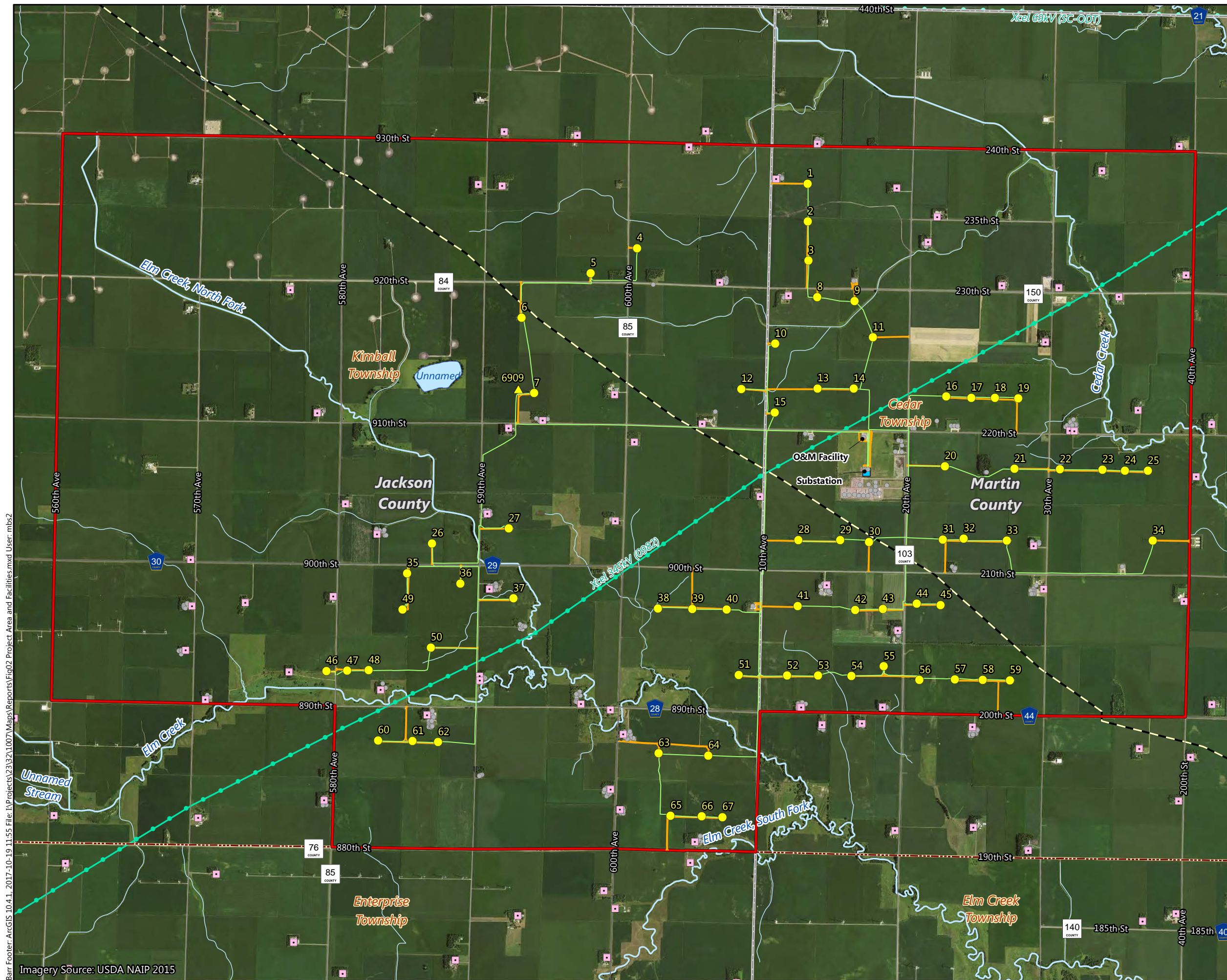
Section	Applicant Recommended Edits	EERA Comments
7.5.2 Quarterly Incident Reports	The Permittee shall submit <u>an annual</u> avian and bat report to the Commission commencing the day following retrofit commercial operation and terminating upon the expiration of this permit. ...	<p>The Applicant should be expected to meet the same reporting guidelines as any other permittee.</p> <p>The Permittee shall submit <u>quarterly</u> avian and bat reports to the Commission. <u>Quarterly reports are due by the 15th of January, April, July, and October</u> commencing the day following retrofit commercial operation and terminating upon the expiration of this permit. ...</p>
7.5.3 Immediate Incident Reports	<p>The Permittee shall notify the Commission, U.S. Fish and Wildlife Service, and the Minnesota Department of Natural Resources within <u>48</u> hours of the discovery of any of the following:</p> <ul style="list-style-type: none"> <li>(a) five or more dead or injured birds or bats within a five day reporting period;</li> <li>(b) one or more dead or injured state threatened, endangered, or species of special concern;</li> <li>(c) one or more dead or injured federally listed species; or</li> <li>(d) one or more dead or injured bald or golden eagle(s).</li> </ul> <p>In the event that one of the four discoveries listed above should be made, the Permittee must file with the Commission within <u>thirty</u> days, a compliance report identifying the details of what was discovered, where the discovery was made, a detailed log of agencies and individuals contacted, and current plans, <u>if any</u>, being undertaken to address the issue</p>	<p>The Applicant should be expected to meet the same notification guidelines as any other permittee.</p> <p>The Permittee shall notify the Commission, U.S. Fish and Wildlife Service, and the Minnesota Department of Natural Resources within <u>24</u> hours of the discovery of any of the following:</p> <ul style="list-style-type: none"> <li>(a) five or more dead or injured birds or bats within a five day reporting period;</li> <li>(b) one or more dead or injured state threatened, endangered, or species of special concern;</li> <li>(c) one or more dead or injured federally listed species, <u>including species proposed for listing</u>; or</li> <li>(d) one or more dead or injured bald or golden eagle(s).</li> </ul> <p>In the event that one of the four discoveries listed above should be made, the Permittee must file with the Commission within <u>seven</u> days, a compliance report identifying the details of what was discovered, <u>the turbine</u> where the discovery was made, a detailed log of agencies and individuals contacted, and current plans being undertaken to address the issue.</p>

Section	Applicant Recommended Edits	EERA Comments
7.5.4 Blade Feathering		<p>EERA suggests including this language as proposed by DNR and as included in recent Commission permits.</p> <p>All operating turbines at the facility must be equipped and operated with software enabling adjustment of turbine cut-in speeds. The Permittee shall operate all facility turbines so that all turbines are programmed to be locked or feathered at wind speeds up to the manufacturer’s standard cut-in speed, from one-half hour before sunset to one-half hour after sunrise, from April 1 to October 31 of each year of operation through the life of the project.</p>
10.3 Site Plan	<p>At least 14 days prior to the pre-construction meeting, the Permittee shall provide the Commission, the Department and the <del>[County in which site is located]</del> Environmental Office ...</p> <p>... the Permittee shall notify affected landowners and city and town clerks that the site plan is on file with the Commission and the <del>[County in which site is located]</del> Environmental Office ...</p>	<p>This language should be included to make the information conveniently available to local residents and local environmental officers.</p> <p>At least 14 days prior to the pre-construction meeting, the Permittee shall provide the Commission, the Department and the Martin and Jackson county Environmental Offices ...</p> <p>... the Permittee shall notify affected landowners and city and town clerks that the site plan is on file with the Commission and the Martin and Jackson county Environmental Offices ...</p>

Section	Applicant Recommended Edits	EERA Comments
10.3 Site Plan (cont.)	<p><del>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 Minnesota Pollution Control Agency, the Minnesota Department of Natural Resources, the [County in which site is located] Environmental Office, 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.</del></p>	<p>As all the turbine locations are established, it is appropriate to delete this requirement.</p>
10.4 Status Reports	<p><del>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 site restoration.</del></p>	<p>Not having to erect turbines does not diminish that this is a major construction project. The permit should include this provision for status reporting.</p> <p>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 site restoration.</p>
10.6 As-Builts	<p><del>Within 90 days after completion of construction, the Permittee shall submit copies of all final as built plans and specifications developed during the project.</del></p>	<p>As-Builts shouldn't be necessary, as the footprint, turbines and collector lines will not be altered.</p>

Section	Applicant Recommended Edits	EERA Comments
10.8 Project Energy Production	... This information shall be filed electronically and may be <u>trade secret</u> .	<p>The Permittee has a similar provision in its EQB issued Site Permit. The Commission, however, has consistently held that these data are public, especially at the summary level at which they are reported.</p> <p>... This information shall be considered <u>public</u> and must be filed electronically.</p>
10.9 Wind Resource Use	... This information shall be filed electronically and may be <u>trade secret</u> .	<p>The Commission has also been consistent on public data on wind resource use as well.</p> <p>... This information shall be considered <u>public</u> and must be filed electronically.</p>
10.10 Emergency Response	<p><del>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.</del></p>	<p>There is no Emergency Response Plan filed in eDocket 13-258. If one exists, it should be efiled. However, including this permit condition would account for that, make sure an up-to-date plan is in place, and provide the confirmation that the appropriate parties are informed.</p> <p>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.</p>





- Turbine Location
- ▲ Permanent Met Tower Location
- Collection Lines
- Access Road
- Substation
- O&M Facility
- Project Boundary (2004)
- Residence Location (6/6/2017)
- Other Structure
- 345kV Transmission Line
- 116kV - 500kV
- Approximate Natural Gas Pipeline
- NHD Watercourse
- PWI Watercourse
- PWI Basin
- Civil Township
- County Boundary

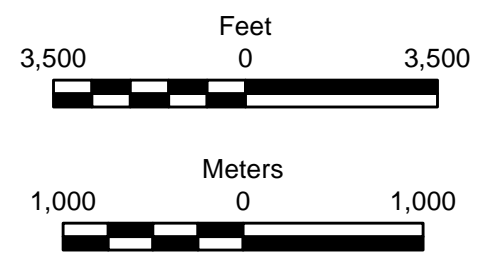


Figure 2

**PROJECT AREA AND FACILITIES**  
 Trimont Wind Project  
 Trimont Wind I, LLC  
 Jackson & Martin Co., Minnesota

Bar Footer: ArcGIS 10.4.1, 2017-10-19 11:55 File: I:\Projects\23132\1007\Maps\Reports\Fig02 Project Area and Facilities.mxd User: mbs2  
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