**BW Exhibit 8**

BADGER WIND FARM

# Sound Assessment

## Badger Wind, LLC

**Document No.:** 10306372-HOU-R-01
**Issue:** D, **Status:** Final
**Date:** 7 June 2022

DNV

**IMPORTANT NOTICE AND DISCLAIMER**

1. This document is intended for the sole use of the Customer as detailed on the front page of this document to whom the document is addressed and who has entered into a written agreement with the DNV entity issuing this document (“DNV”). To the extent permitted by law, neither DNV nor any group company (the "Group") assumes any responsibility whether in contract, tort including without limitation negligence, or otherwise howsoever, to third parties (being persons other than the Customer), and no company in the Group other than DNV shall be liable for any loss or damage whatsoever suffered by virtue of any act, omission, or default (whether arising by negligence or otherwise) by DNV, the Group, or any of its or their servants, subcontractors, or agents. This document must be read in its entirety and is subject to any assumptions and qualifications expressed therein as well as in any other relevant communications in connection with it. This document may contain detailed technical data which is intended for use only by persons possessing requisite expertise in its subject matter.
2. This document is protected by copyright and may only be reproduced and circulated in accordance with the Document Classification and associated conditions stipulated or referred to in this document and/or in DNV’s written agreement with the Customer. No part of this document may be disclosed in any public offering memorandum, prospectus, or stock exchange listing, circular, or announcement without the express and prior written consent of DNV. A Document Classification permitting the Customer to redistribute this document shall not thereby imply that DNV has any liability to any recipient other than the Customer.
3. This document has been produced from information relating to dates and periods referred to in this document. This document does not imply that any information is not subject to change. Except and to the extent that checking or verification of information or data is expressly agreed within the written scope of its services, DNV shall not be responsible in any way in connection with erroneous information or data provided to it by the Customer or any third party, or for the effects of any such erroneous information or data whether or not contained or referred to in this document.
4. Any forecasts, estimates, or predictions made herein are as of the date of this document and are subject to change due to factors beyond the scope of work or beyond DNV’s control or knowledge. Nothing in this document is a guarantee or assurance of any particular condition or energy output.

| | | |
|---|---|---|
| Project name: | Badger Wind Farm | DNV Energy USA Inc. |
| Report title: | Sound Assessment | 9665 Chesapeake Dr., Suite 435, San |
| Customer: | Badger Wind, LLC | Diego, CA 92123 USA |
| | 401 N Michigan Ave, Suite 501 | Tel: +1 619 340 1800 |
| | Chicago, IL 60611 | Enterprise No.: 23-2625724 |
| Contact person: | Sarah Aftergood | |
| Date of issue: | 7 June 2022 | |
| Project No.: | 10306372 | |
| Proposal Reference: | 218998-HOU-P-01-B | |
| Document No.: | 10306372-HOU-R-01 | |
| Issue/Status: | D/Final | |

Task and objective:
This report presents the results of a sound analysis conducted by DNV on behalf of Badger Wind, LLC.


| Prepared by: | Verified by: | Approved by: |
|---|---|---|
| Justin Puggioni<br>Siting and Acoustics Engineer, Environment and Permitting Services | Aren Nercessian<br>Project Siting Engineer, Environment and Permitting Services | Gabriel Constantin<br>Senior Team Leader, Environment and Permitting Services |




Distribution:

☐ OPEN. Unrestricted distribution, internal and external.

☐ INTERNAL use only. Internal DNV document.

☐ CONFIDENTIAL. Distribution within DNV according to applicable contract.*

☐ SECRET. Authorized access only.

☒ CUSTOMER'S DISCRETION

*Specify distribution: Orsted Onshore North America, LLC

Keywords:
Sound, Badger Wind, North Dakota

| Issue | Date | Reason for Issue | Prepared by | Verified by | Approved by |
|---|---|---|---|---|---|
| A | 31 December 2021 | Draft | J. Puggioni | A. Nercessian | K. Rogers |
| B | 2 February 2022 | Layout update | J. Puggioni | A. Nercessian | G. Constantin |
| C | 16 February 2022 | Substation update | J. Puggioni | A. Nercessian | G. Constantin |
| D | 7 June 2022 | Layout update | J. Puggioni | A. Nercessian | G. Constantin |

DNV

# Table of contents



# Appendices



# List of tables



# List of figures

# EXECUTIVE SUMMARY

DNV Energy USA Inc. ("DNV") has conducted a sound assessment for the Badger Wind Farm (the "Project") located in Logan County and McIntosh County, North Dakota. The Project consists of 79 wind turbine generators (WTGs) and two step-up transformers within the substation. There are no neighboring wind farms or solar farms near the Project. Only 74 of the 79 turbines are planned to be constructed.

44 sound receptors, representing inhabited residences or community buildings, within one mile of a WTG or substation transformer have been included in this report.

The sound pressure level (SPL) at each receptor for the aggregate of all WTGs and transformers was calculated based on the ISO 9613-2 method.

The calculated results include a +2 dB adjustment to the published wind turbine sound power level (PWL).

The loudest cumulative SPL is 47.5 dBA at participant receptor 263. One non-participant receptor (259) exceeds 45.0 dBA, but currently has a waiver in place.

Calculations were performed at the receptor location and at a distance of 100 feet from the respective noise sensitive building in the loudest direction as per North Dakota Administrative Code Section 69-06-08-01.

DNV

# 1 INTRODUCTION

Badger Wind, LLC ("Badger" or the "Customer") requested that DNV Energy USA Inc. ("DNV") perform a noise analysis for the Badger Wind Farm (the "Project") located in Logan County and McIntosh County, North Dakota.

The Project layout considered for the noise analysis includes 79 GE3.4-140 wind turbine generators (WTGs) with a hub height of 322 ft (98 m) and two step-up transformers within the substation. Only 74 of the 79 turbines in this analysis are planned to be constructed.

The objective of this assessment was to predict the sound levels generated by the Project WTGs and substation transformers at all receptors within one mile of the Project's sound emitting equipment using the International Organization for Standardization (ISO) standard 9613-2 sound propagation model [1].

# 2 ENVIRONMENTAL SOUND BACKGROUND

Sound levels are expressed in the decibel unit and are quantified on a logarithmic scale to account for the large range of acoustic pressures to which the human ear is exposed. A decibel (dB) is used to quantify sound levels relative to a 0 dB reference. The reference level of 0 dB is defined as a sound pressure level of 20 micropascals (μPa), which is the typical lower threshold of hearing for humans.

Sound levels can be presented both in broadband (i.e., sound energy summed across the entire audible frequency spectrum) and in octave band spectra (i.e., audible frequency spectrum divided into bands). Frequency is expressed in the Hertz unit (Hz), measuring the cycles per second of the sound pressure waves. The audible range of humans spans from 20 to 20,000 Hz. Since the human ear does not perceive every frequency with equal loudness, spectrally varying sounds are often adjusted with a weighting filter. The A-weighting filter is applied to closely approximate the human ear's response to sound. This scale is commonly used in environmental and industrial sound. Sound expressed in the A-weighted scale is denoted dBA. This is used as the weighting in this report.

A sound source has a certain sound power level rating, which describes the amount of sound energy per unit of time. This is a basic measure of how much acoustical energy it can produce and is independent of its surroundings. Sound pressure is created as sound energy flows away from the source. The measured sound pressure level (SPL) at a given point depends not only on the power rating of the source and the distance between the source and the measurement point (geometric divergence), but also on the amount of sound energy absorbed by environmental elements between the source and the measurement point (attenuation). Sound attenuation factors include meteorological conditions such as wind direction, temperature, and humidity, sound interaction with the ground, atmospheric absorption, terrain effects, diffraction of sound around objects and topographical features, and foliage.

# 3 APPLICABLE REGULATIONS

Sound emanating from the Project is subject to the *North Dakota Administrative Code Section 69-06-08-01* [2]. The regulations state:

> *a wind energy conversion facility site must* ***not include*** *a geographic area where, due to operation of the facility, the* ***sound levels within one hundred feet*** *of an inhabited residence or a community building* ***will exceed forty-five dBA.*** *The sound level avoidance area criteria may be waived in writing by the owner of the occupied residence or the community building.*

The applicable sound regulation is therefore 45 dBA within 100 feet of an inhabited residence or a community building that is not subject to a waiver.

# 4 DESCRIPTION OF THE PROJECT SITE

## 4.1 Site description

The Project is situated in relatively simple terrain, consisting of flat farmland, with project equipment base elevations ranging from approximately 2,000 to 2,200 feet above sea level. The ground cover on and near the site is primarily composed of farmland or open fields. Dwellings are interspersed throughout the Project site.

The Project is located in Logan County and McIntosh County, west of the town of Wishek, North Dakota.

## 4.2 Project layout

The Project consists of 79 GE3.4-140 WTGs with a hub height of 322 ft (98 m). Two step-up transformers were included at the Project substation. Only 74 of the 79 turbines in this analysis are planned to be constructed.

The coordinates of the Project equipment included in the modeling are presented in Appendix A. The turbine layout and substation transformer locations were provided by the Customer [3] [4].

## 4.3 Neighboring wind farms

There are no neighboring operational wind or solar farms near the Project.

## 4.4 Receptor locations

A list of 348 receptors was provided by the Customer [5], most of which were clustered in the nearby town of Wishek over 1 mile from the nearest turbine. Of the total number of identified receptors, results for 44 receptors within one mile of the Project equipment were included in this assessment. Coordinates of each receptor point are presented in Appendix B.

# 5 SOUND ASSESSMENT

## 5.1 Description of the sound sources

The sources of sound considered in this analysis are the WTGs and substation transformers. Sound associated with other sources in the vicinity of the Project, such as construction activities, have not been considered in this report.

### 5.1.1 Project turbines

Project specific total broadband and octave band sound power levels for the General Electric GE3.4-140 WTG at a hub height of 322 ft (98 m) are contained in the manufacturer documentation [6]. The maximum sound power level for the GE3.4-140 turbine model was 106.8 dBA. A +2 dB adjustment was applied to ensure conservatism in the assessment for a total modeled sound power level of 108.8 dBA. The sound power levels used in the analysis were at hub height wind speeds of 10-15 m/s, which were reported to have the same octave band sound levels for each wind speed within that range. Low Noise Trailing Edge Technology (LNTE) is included in this model as per the manufacturer documentation [6].

Table 5-1 shows the octave band sound power levels associated with the turbines used in this analysis.

**Table 5-1 WTG sound power levels [dBA]**

| WTG Model | Frequency [Hz] | | | | | | | | | Broadband |
|---|---|---|---|---|---|---|---|---|---|---|
| | 31.5 | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | |
| GE3.4-140 (+2dB) | 81.7 | 90.3 | 94.2 | 98.1 | 101.2 | 104.2 | 103.5 | 95.7 | 76.9 | 108.8 |

### 5.1.2 Substation transformers

There are two transformers planned at the Project substation, each one is conservatively assumed to be rated at 167 MVA with a voltage of 230 kV on the high voltage side.

A total broadband sound power level of 111.8 dBA was estimated for each transformer according to the Institute of Electrical and Electronics Engineers Standards Association (IEEE) standard C57.12.90-2015 [7], based on an audible sound level of 83 dBA each [8] and transformer dimensions [9] provided by the Customer. A tonality penalty of 5 dB is included in this value in accordance with ISO-1996-2 [10].

A typical transformer octave band distribution [11] was used. The octave band sound power levels of the Project transformers are shown in Table 5-2.

**Table 5-2 Transformer sound power levels [dBA]**

| Transformer | Frequency [Hz] | | | | | | | | | Broadband |
|---|---|---|---|---|---|---|---|---|---|---|
| | 31.5 | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | |
| 167 MVA - 230 kV | 69.0 | 88.2 | 100.3 | 102.8 | 108.2 | 105.4 | 101.6 | 96.4 | 87.3 | 111.8 |

A 15 foot tall two-sided sound barrier has been included in the model to provide additional attenuation of the transformer sound emissions. The south and east sides of the two transformers will be shielded by the acoustic barrier, in such a manner that covers the width and length of both transformers. The barrier should have a surface density of at least 20 kg/m$^2$ and have a closed surface free of gaps and cracks [1].

## 5.2 Assessment methodology

The sound pressure level at each receptor for the aggregate of all WTGs and transformers associated with the Project was calculated using CadnaA acoustic modeling software based on the ISO 9613-2 method [1]. The simulation was performed using the maximum sound power level of the turbines and transformers, including upward corrections or safety margins. The Project's turbines were modeled with a 322 ft (98 m) hub height. Substation transformers were modeled at a height of 4.4 m (14.4 ft).

The ISO 9613-2 standard provides a prediction of the equivalent continuous SPL at a distance from one or more point sources. The method consists of octave-band algorithms (i.e., with nominal mid band frequencies from 31.5 Hz to 8 kHz) for calculating the attenuation of the emitted sound. The algorithm takes into account the following physical effects:

- Geometrical divergence – attenuation due to spherical spreading from the sound source
- Atmospheric absorption – attenuation due to absorption by the atmosphere
- Ground absorption – attenuation due to the acoustical properties of the ground

The ISO 9613-2 standard calculates attenuation "under meteorological conditions favorable to propagation from sources of sound emission." These meteorological conditions are for "downwind propagation or, equivalently, propagation under a well-developed moderate ground-based temperature inversion, such as commonly occurs at night". In other words, though a physical impracticality, the ISO 9613-2 standard treats every receptor as being downwind from every source of sound emission (i.e., transformers and turbines).

The ISO 9613-2 standard accounts for ground absorption by assigning a numerical coefficient (G) with a value ranging from 0 to 1. A value of G = 0 represents hard ground (e.g., paving, water, ice, concrete, tamped ground, and other ground surfaces with a low porosity), while a G = 1 value represents porous ground (e.g., ground covered by grass, trees, or other vegetation, and other ground surfaces suitable for the growth of vegetation such as farming land). Though the ground use on and around the site is farming, a mixed (i.e., semi-reflective) global ground factor of G = 0.5 was used in this assessment.

Additionally, temperature, barometric pressure, and humidity parameters were selected to represent typical local annual averages, and topographical information to accurately represent terrain in three-dimensions was included in this assessment.

Specifically, the ISO 9613-2 parameters were set as follows:

- Ambient air temperature: 50º F (10º C)
- Ambient barometric pressure: 101.32 kPa
- Humidity: 70%
- Overall ground factor: 0.5
- Topography included (10 m elevation intervals)

Additional attenuation from foliage was not considered in this assessment, implying that lower sound levels are expected in areas where there is foliage present in the line of sight between any turbine and a sound receptor. Similarly, because the model assumes every receptor is downwind of every sound source at all times, lower sound levels are expected at times when a receptor is upwind of any sound source.

# 6 RESULTS

A detailed map illustrating predicted sound pressure levels at receptors located in the vicinity of the Project is presented in Figure 6-1, at 4 m height only, representing the receptor location.

The predicted sound levels at each of the receptors located within 1 mile of the Project equipment are presented in Appendix B.

For each receptor, the following information is provided:

- ID
- Coordinates in UTM projection and NAD83 Datum
- Closest noise generating equipment
- Distance to the closest noise generating equipment
- Sound pressure levels (SPL) in dBA for each receptor

Two sets of results were calculated for each receptor:

1. At a distance of 100 feet from the receptor in the loudest direction, at a height of 5 ft (1.5 m)

2. At the building location at a height of 13 ft (4 m).

The greater of the two sound levels was reported in the results in Appendix B for each receptor and compared to the prescribed sound level limits in accordance with North Dakota Administrative Code Section 69-06-08-01.

The highest modelled sound level throughout the Project area is 47.5 dBA at participant receptor 263.

Only one non participant receptor (259) has a sound level higher than 45 dBA. It is understood that a waiver is currently in place at this location.

**BW Exhibit 8**

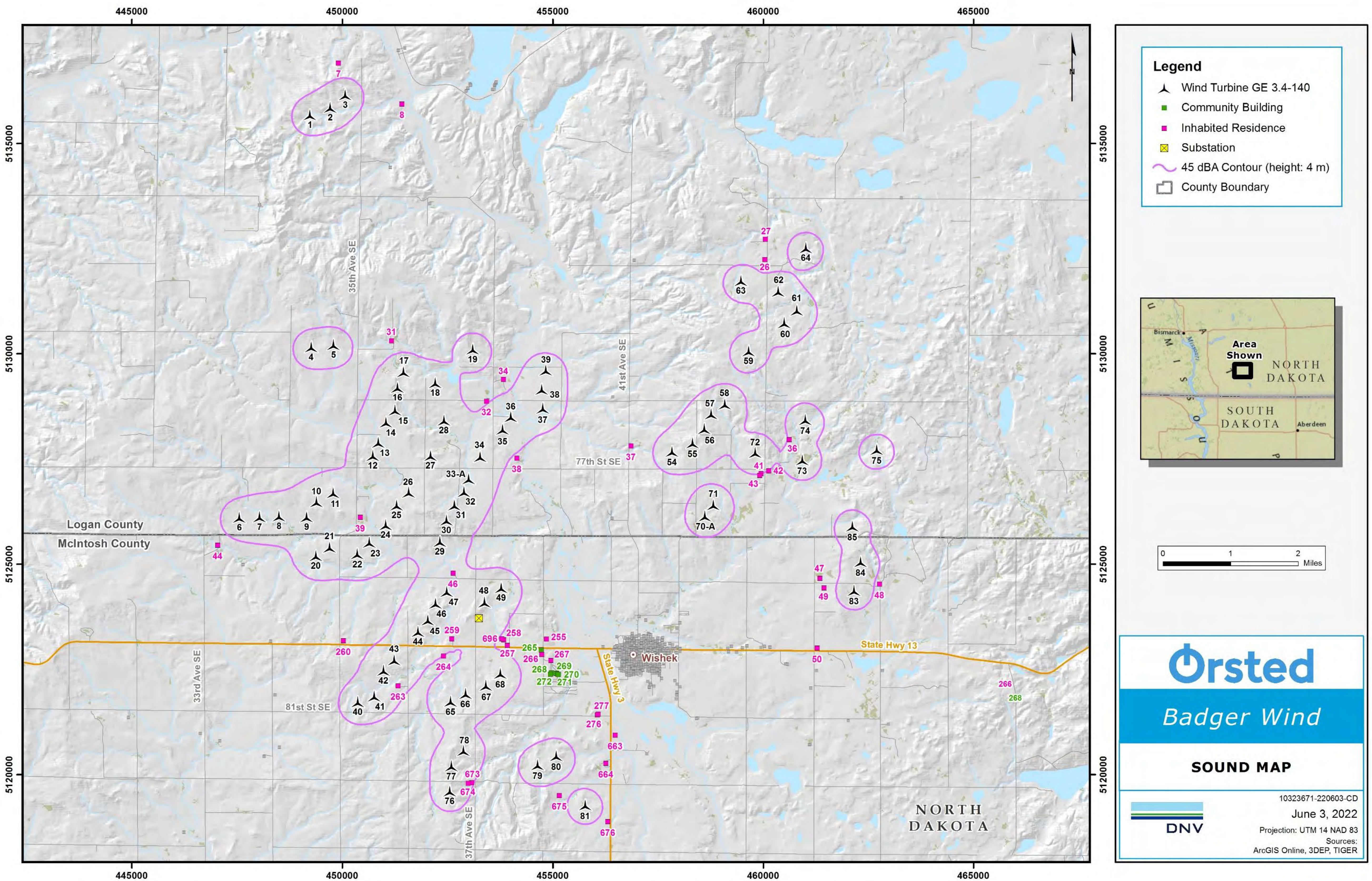


**Figure 6-1 Modeled sound levels at the Badger Wind Farm**

# 7 CONCLUSION

DNV has conducted an analysis to determine the maximum predicted sound levels at receptors in the vicinity of the Badger Wind Farm in Logan County and McIntosh County, North Dakota. The Project equipment considered in the analysis were 79 GE 3.4-140 WTGs with a hub height of 322 ft (98 m) and two step-up transformers within the substation. Only 74 of the 79 turbines in this analysis are planned to be constructed. Sound levels in this report may be overestimated in areas where no turbines will eventually be built.

Results are presented for receptors within one mile of a sound source. The loudest cumulative sound pressure level is 47.5 dBA at participant receptor 263. One non-participant receptor (259) exceeds 45.0 dBA, but currently has a waiver in place.

Calculations were performed at the receptor location and at a distance of 100 feet from the building in the loudest direction as per North Dakota Administrative Code Section 69-06-08-01. Badger Wind has obtained or is in the process of obtaining waivers from the owners of receptors modeled above the 45 dBA sound limit.

# 8 REFERENCES


[1] International Organization for Standardization. *ISO 9613-2: Acoustics – Attenuation of Sound During Propagation Outdoors – Part 2: General Method of Calculation*. 15 December 1996.

[2] North Dakota Administrative Code Section 69-06-08-01 Energy Conversion Facility Siting Criteria item 4 Additional Avoidance Areas for Wind Energy Conversion Facilities

[3] Turbine locations provided by Badger Wind, filenames "*V18_Turbines_PRIMARYS.shp*" and "*V18_Turbines_ALTS.shp*"

[4] Substation location sent by email on 9 February 2022, filename "*20220208_BADGER_SUBSTATION.kmz*"

[5] Receptor locations sent by email, by Orsted to DNV on 23 September 2021, "*Badger_ReceptorSurvey_FieldVerify.zip*" with some subsequent minor updates.

[6] One-third octave band sound power levels sent by email, by Orsted to DNV on 22 September 2021, "*2.3 - Noise_Emissions_Sierra 140-60Hz_IEC_EN_r05.pdf*"

[7] C57.12.90-2015 IEEE Standard Test Code for Liquid-Immersed Distribution, Power, and Regulating Transformers. 11 March 2016.

[8] NEMA TR-2013, Transformers, Step Voltage Regulators and Reactors. National Electrical Manufacturers Association, 2014.

[9] Transformer dimensions and specifications sent by email, by Orsted on 9 February 2022.

[10] International Organization for Standardization. *ISO 1996-2: Acoustics – Description, measurement and assessment of environmental noise -Part 2: Determination of sound pressure levels*. July 2017

[11] *Handbook of Acoustics*. Edited by Malcolm J. Crocker. John Wiley & Sons. 1998.

# APPENDIX A – SOUND SOURCE LOCATIONS

| ID | UTM Zone 14, NAD 83 Datum | | ID | UTM Zone 14, NAD 83 Datum | | ID | UTM Zone 14, NAD 83 Datum | |
|---|---|---|---|---|---|---|---|---|
| | Easting [m] | Northing [m] | | Easting [m] | Northing [m] | | Easting [m] | Northing [m] |
| TR1 | 453247 | 5123735 | T26 | 451577 | 5126667 | T57 | 458765 | 5128526 |
| TR2 | 453246 | 5123700 | T27 | 452098 | 5127542 | T58 | 459095 | 5128759 |
| T1 | 449232 | 5135639 | T28 | 452421 | 5128376 | T59 | 459657 | 5130026 |
| T2 | 449715 | 5135813 | T29 | 452324 | 5125495 | T60 | 460506 | 5130695 |
| T3 | 450072 | 5136112 | T30 | 452479 | 5126005 | T61 | 460804 | 5130994 |
| T4 | 449261 | 5130118 | T31 | 452664 | 5126362 | T62 | 460359 | 5131442 |
| T5 | 449789 | 5130171 | T32 | 452894 | 5126680 | T63 | 459474 | 5131694 |
| T6 | 447551 | 5126070 | T33-A | 453003 | 5126987 | T64 | 461020 | 5132473 |
| T7 | 448036 | 5126080 | T34 | 453276 | 5127510 | T65 | 452577 | 5121697 |
| T8 | 448497 | 5126099 | T35 | 453813 | 5128161 | T66 | 452929 | 5121877 |
| T9 | 449154 | 5126085 | T36 | 454004 | 5128462 | T67 | 453416 | 5122072 |
| T10 | 449387 | 5126438 | T37 | 454764 | 5128664 | T68 | 453759 | 5122358 |
| T11 | 449782 | 5126653 | T38 | 454742 | 5129113 | T70-A | 458619 | 5126099 |
| T12 | 450729 | 5127537 | T39 | 454835 | 5129567 | T71 | 458816 | 5126368 |
| T13 | 450861 | 5127853 | T40 | 450371 | 5121682 | T72 | 459815 | 5127608 |
| T14 | 451042 | 5128333 | T41 | 450761 | 5121823 | T73 | 460934 | 5127436 |
| T15 | 451257 | 5128621 | T42 | 450983 | 5122435 | T74 | 461003 | 5128392 |
| T16 | 451315 | 5129161 | T43 | 451235 | 5122677 | T75 | 462699 | 5127680 |
| T17 | 451454 | 5129529 | T44 | 451804 | 5123359 | T76 | 452558 | 5119564 |
| T18 | 452210 | 5129271 | T45 | 452037 | 5123629 | T77 | 452597 | 5120163 |
| T19 | 453100 | 5130066 | T46 | 452217 | 5124027 | T78 | 452882 | 5120526 |
| T20 | 449377 | 5125160 | T47 | 452482 | 5124307 | T79 | 454642 | 5120186 |
| T21 | 449699 | 5125357 | T48 | 453381 | 5124054 | T80 | 455082 | 5120402 |
| T22 | 450360 | 5125201 | T49 | 453779 | 5124395 | T81 | 455774 | 5119232 |
| T23 | 450646 | 5125479 | T54 | 457835 | 5127638 | T83 | 462165 | 5124334 |
| T24 | 451033 | 5125893 | T55 | 458325 | 5127835 | T84 | 462316 | 5125016 |
| T25 | 451295 | 5126363 | T56 | 458602 | 5128176 | T85 | 462125 | 5125862 |

Transformer IDs (TR1 and TR2) have been arbitrarily added for the purpose of this report.

## APPENDIX B – RECEPTOR RESULTS

| Receptor ID | UTM Coordinates Zone 14, NAD 83 Datum | | Nearest Sound Source [ID] | Distance to Nearest Sound Source [feet] | Sound Pressure Level at Receptor [dBA] |
|---|---|---|---|---|---|
| | Easting [m] | Northing [m] | | | |
| P7 | 449910 | 5136911 | T3 | 2675 | 39.4 |
| 8 | 451414 | 5135938 | T3 | 4440 | 34.0 |
| 26 | 460040 | 5132243 | T63 | 2587 | 42.2 |
| P27 | 460052 | 5132724 | T64 | 3281 | 39.1 |
| P31 | 451171 | 5130311 | T17 | 2729 | 41.5 |
| 32 | 453428 | 5128874 | T36 | 2320 | 44.6 |
| P34 | 453827 | 5129394 | T36 | 3113 | 43.1 |
| P36 | 460620 | 5127961 | T74 | 1893 | 45.2 |
| P37 | 456860 | 5127809 | T54 | 3246 | 39.2 |
| P38 | 454147 | 5127522 | T35 | 2368 | 44.1 |
| P39 | 450426 | 5126113 | T24 | 2119 | 47.0 |
| P41 | 459950 | 5127152 | T72 | 1562 | 44.9 |
| P42 | 460131 | 5127219 | T72 | 1645 | 44.8 |
| P43 | 459917 | 5127112 | T72 | 1663 | 44.4 |
| 44 | 447037 | 5125452 | T6 | 2635 | 40.2 |
| P46 | 452631 | 5124788 | T47 | 1652 | 46.8 |
| P47 | 461350 | 5124665 | 83 | 2887 | 39.9 |
| P48 | 462767 | 5124527 | T83 | 2073 | 43.2 |
| P49 | 461444 | 5124433 | T83 | 2389 | 40.8 |
| 50 | 461281 | 5123004 | T83 | 5239 | 32.0 |
| 255 | 454849 | 5123219 | T68 | 4559 | 38.6 |
| 257 | 453922 | 5123072 | T68 | 2402 | 43.9 |
| 258 | 453837 | 5123201 | TR1 | 2493 | 44.2 |
| 259 | 452598 | 5123225 | T45 | 2266 | 46.1 |
| 260 | 450024 | 5123180 | T42 | 3984 | 40.3 |
| P263 | 451329 | 5122110 | T42 | 1558 | 47.5 |
| 264 | 452406 | 5122819 | T44 | 2653 | 45.0 |
| 265 | 454729 | 5122962 | T68 | 3748 | 39.4 |
| 266 | 454738 | 5122856 | T68 | 3604 | 39.4 |
| 267 | 454957 | 5122712 | T68 | 4098 | 38.2 |
| 268 | 454969 | 5122422 | T68 | 3977 | 38.3 |
| 269 | 455092 | 5122408 | T68 | 4378 | 37.7 |
| 270 | 455124 | 5122382 | T68 | 4479 | 37.5 |
| 271 | 455138 | 5122382 | T68 | 4526 | 37.4 |
| 272 | 454951 | 5122389 | T68 | 3913 | 38.4 |
| 276 | 456064 | 5121418 | T80 | 4635 | 35.4 |
| 277 | 456081 | 5121438 | T80 | 4721 | 35.3 |
| 663 | 456482 | 5120937 | T80 | 4917 | 34.5 |
| P664 | 456265 | 5120265 | T81 | 3750 | 37.7 |
| P673 | 453076 | 5119807 | T76 | 1879 | 45.5 |
| P674 | 452989 | 5119794 | T76 | 1605 | 46.5 |
| 675 | 455159 | 5119498 | T81 | 2200 | 42.8 |
| 676 | 456308 | 5118878 | T81 | 2101 | 40.6 |
| 696 | 453790 | 5123224 | TR2 | 2372 | 44.5 |

Receptor IDs with a “P” prefix indicate a participating receptor.

## About DNV

DNV is a global quality assurance and risk management company. Driven by our purpose of safeguarding life, property and the environment, we enable our customers to advance the safety and sustainability of their business. We provide classification, technical assurance, software and independent expert advisory services to the maritime, oil & gas, power and renewables industries. We also provide certification, supply chain and data management services to customers across a wide range of industries. Operating in more than 100 countries, our experts are dedicated to helping customers make the world safer, smarter and greener.