

September 5, 2023

**VIA E-MAIL AND HAND DELIVERY**

Mr. Steven Kahl  
Executive Secretary  
North Dakota Public Service Commission  
600 E. Boulevard, Dept. 408  
Bismarck, ND 58505-0480


**Re: Otter Tail Power Company  
Amend – Ashtabula I Wind Energy Facility Upgrade Project  
Siting Application – Barnes County  
Case No. PU-23-252**

Dear Mr. Kahl:

In connection with the above-referenced matter, Otter Tail Power Company encloses for filing an electronic copy of its presentation for the September 6, 2023 informal hearing. We will bring hard copies of the presentation to the informal hearing.

If you have any questions, please let me know.

Sincerely,



MOLLIE M. SMITH

MMS/80063787  
Enclosure

cc: Lisa McFarland (w/ enclosure, via e-mail)  
Bryce Haugen (w/ enclosure, via e-mail)



# INFORMAL HEARING CASE NO. PU-23-252

Ashtabula I Wind Energy Facility Upgrade

September 6, 2023



# SUMMARY OF REQUEST



## Filing Request of the Commission:

- Certification of the Ashtabula I Wind Equipment Upgrade, supported by:
  - Environmental and regulatory compliance memorandum, with:
    - Appendix A - Acoustic Assessment Results and Sound Waivers
    - Appendix B - Shadow Flicker Assessment Results
    - Appendix C - FAA Filings
    - Appendix D - Microwave Beam Path Study
    - Appendix E - Cultural Resource Report and Unanticipated Discoveries Plan; and
    - Appendix F - IPaC Resource List.
- Amendment Request
  - Removal of the MW limitation in prior Order and Certificate of Site Compatibility.

# EQUIPMENT UPGRADES DESCRIBED

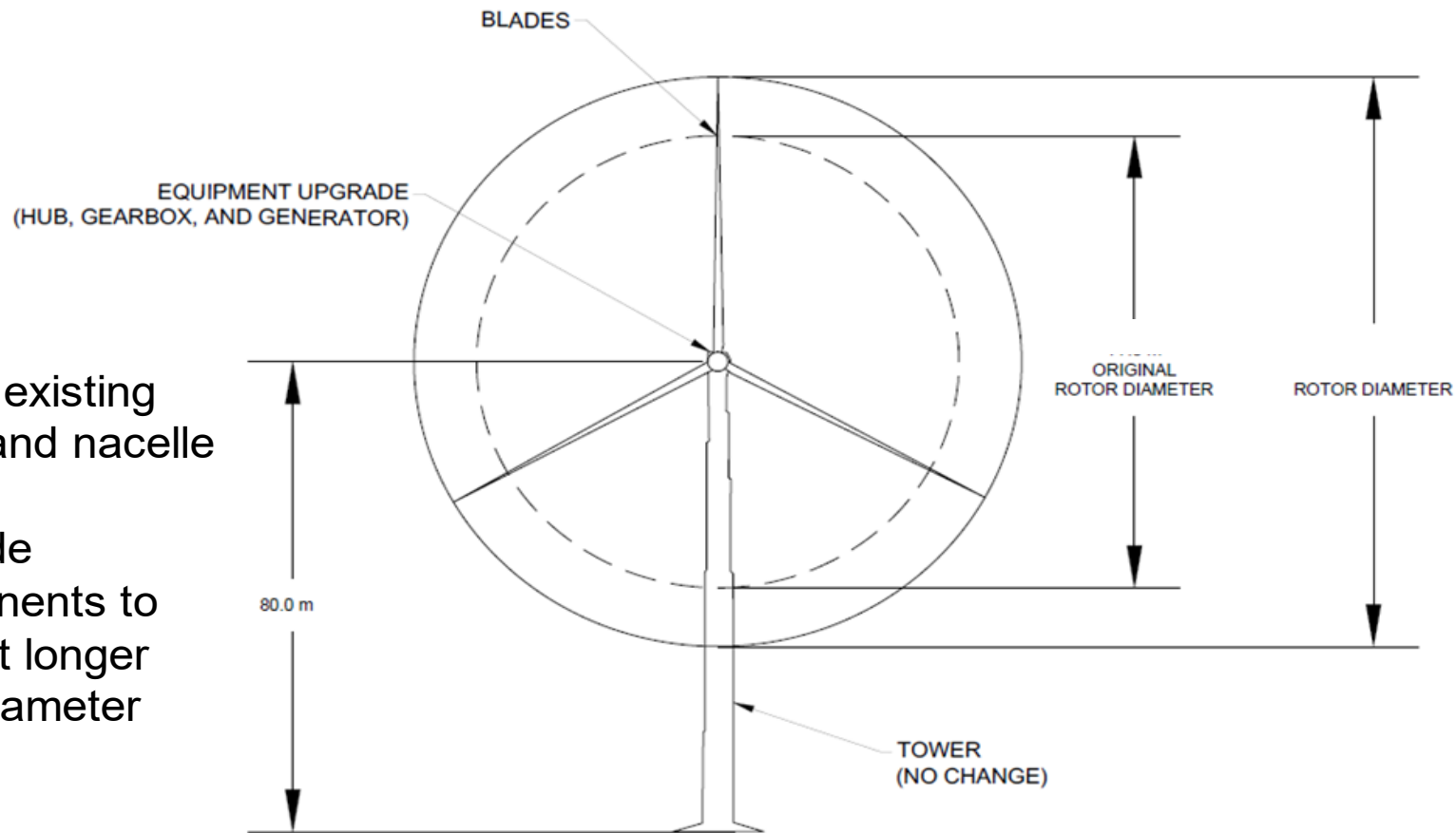
- Wind turbines are improved through use of existing towers and nacelles by replacing or refurbishing components to support longer blades to maximize energy generation at the existing facility.
- Ashtabula I project:
  - Component replacement target Q3 2025
  - Existing towers and foundations remain
  - No changes to underground collection, substation
  - New hub and rotors to support longer blades
  - 77 meter rotor diameter increases up to 91 meter rotor diameter
  - Component, electrical, and software upgrades within nacelle



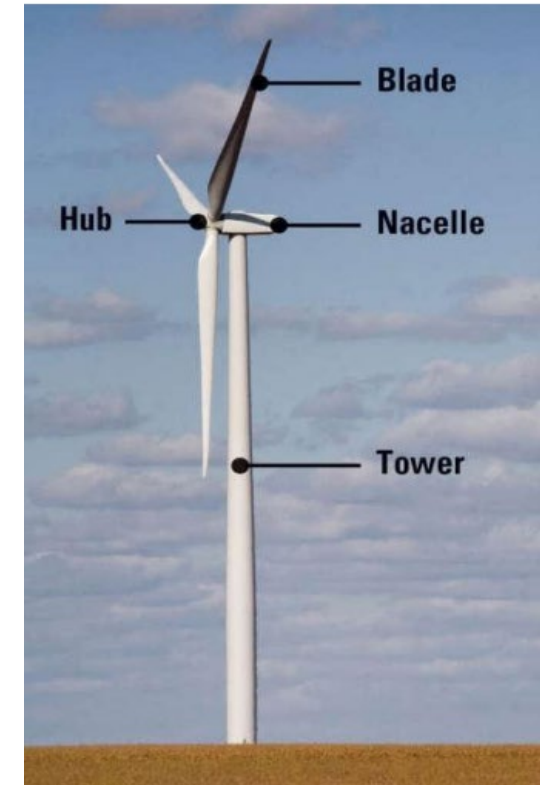
# FIGURE 2

## PROPOSED TURBINE UPGRADE

- ~20% more energy generated annually

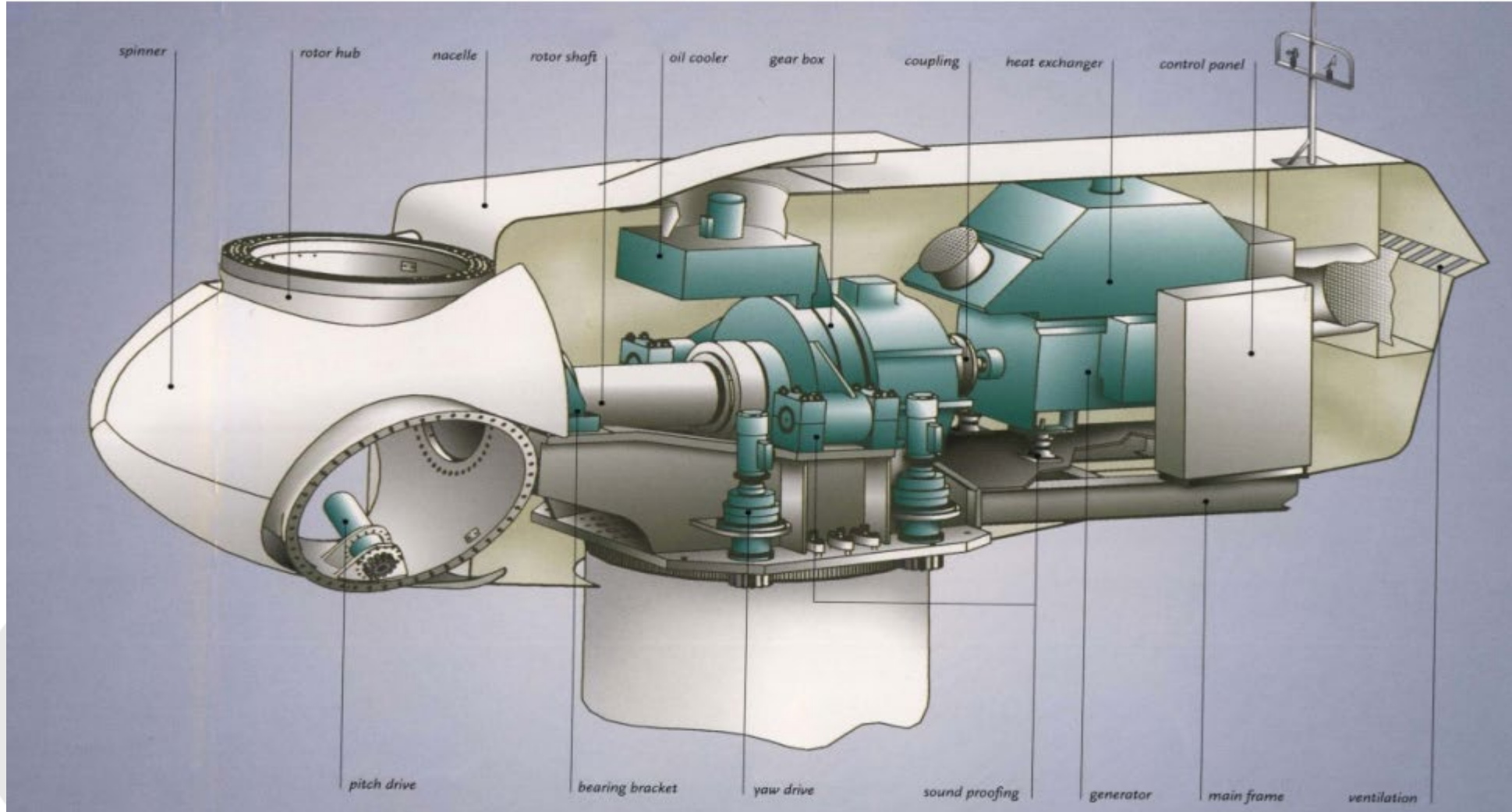


- Use of existing tower and nacelle
- Upgrade components to support longer rotor diameter

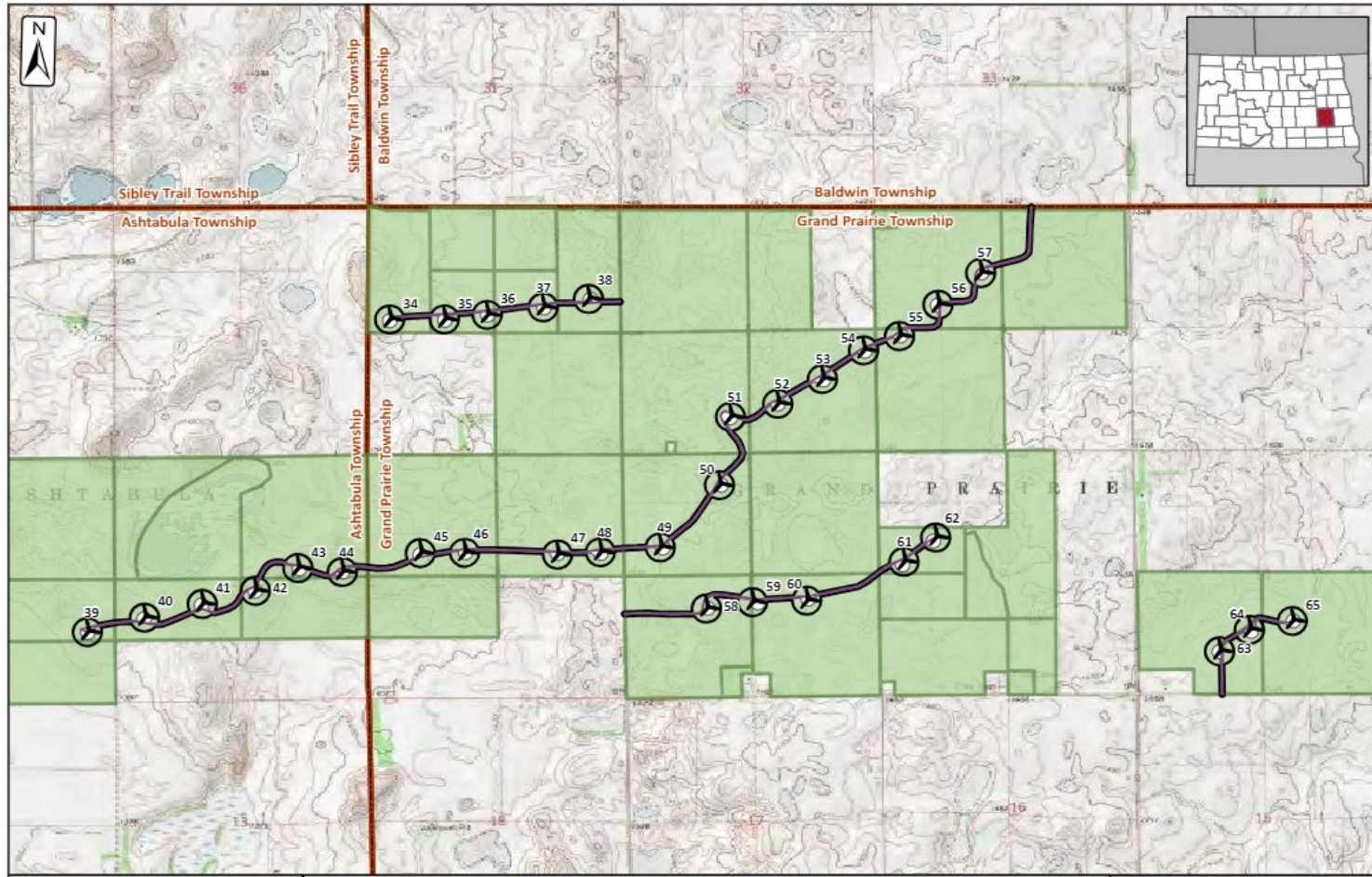


# COMPONENT REPLACEMENT ILLUSTRATION

- Hub, blade bearings and pitch cylinders will be replaced to accommodate the larger rotor
- Replacement of existing gearbox
- Refurbishment of generator
- Obsolete blades will be recycled



# ASHTABULA I WIND LOCATION AND LAYOUT



- Barnes County
- Ashtabula, ND
- Commissioned: 2008
- 32 turbines
- 48 MW facility
- No change to generator interconnect
- No changes to underground collection, substation

## **Improved performance of resources is always under evaluation:**

- Sourcing of blades expected to be from North Dakota.
- Additional state taxes paid by facility.
- The upgrades increase energy produced and reduces costs in the long term.

# COMPLIANCE WITH COMMISSION REQUIREMENTS

## Ashtabula I wind equipment upgrade:

- Certification is in Compliance with NDCC Section 49-22-03(3)(a):
  - Wholly within designated Project site
  - Improves the existing energy generation technology
  - Complies with the Commission's current exclusion area and avoidance area requirements, including:
    - Turbine setback requirements
      - Two property line setback variances request impacting four turbines
      - County roadway setback variance affecting one turbine
    - Sound requirement
    - Cultural and wetland avoidance – within previously surveyed/disturbed areas
  - Complies with Commission's prior Orders
- Amendment Request to remove the MW limitation in prior Order and Certificate of Site Compatibility is consistent with prior Commission orders for wind equipment upgrades.

# SUMMARY OF REQUESTS

## **Request of the Commission:**

- Certification of the Ashtabula I Wind Equipment Upgrade including non-participating property line setback variances for four turbines and a county roadway setback variance for one turbine.
- Amendment Request to remove the MW limitation in prior Order and Certificate of Site Compatibility.

