1. Call to Order:

2. Roll Call: Blake Parsons, Don Tolan, Ansel Burditt, Dave Meinhold, Bill Cardin

3. Approval of Monthly claims:

4. Approval of March 15, 2022 minutes:

5. Review of Executive Session
   a) Approval of Nov 13, 2008 Executive Session minutes:
   b) Approval of Feb 10, 2009 #1 Executive Session minutes:
   c) Approval of Feb 10, 2009 #2 Executive Session minutes:
   d) Approval of Mar 10, 2009 Executive Session minutes:

6. Public Input:

7. Unfinished Business:

8. New Business:
   a) Minonk Wind Annual Reports
   b) Minonk Wind Decommissioning Report

9. Planning and Zoning Issues:

10. Executive session (if necessary)

11. Any action coming out of Executive Session:

12. Adjournment
1. Call to Order:
Mr. Parsons called the meeting to order at 6:15 p.m.

2. Roll Call: Blake Parsons, Bill Cardin, Dave Meinhold, and Ansel Burditt and were present.
   Don Tolan was excused.

3. Approval of Monthly claims:
Mr. Burditt made the motion to approve the monthly claims, seconded by Meinhold. Motion Carried.

4. Approval of February 7, 2022 minutes:
Mr. Burditt made the motion to approve the minutes, seconded by Cardin. Motion Carried.

5. Public Input: None

6. Unfinished Business: None
   a) Resolution Authorizing an Alternate Plat Officer
      Mr. Cardin asked if there are any concerns with having someone besides Ms. Jording signing plats. Ms. Jording explained that the statute allows the County Board to designate signers on their behalf. Mr. Parsons asked if the Plat act requires Zoning to sign the Plat. Ms. Jording explained that the Plat Act does not reference zoning as some Counties do not have zoning. Mr. Burditt asked about the fact that the Zoning Administrator shall administer the Subdivision Code. Ms. Jording noted the Zoning Ordinance states that the Zoning Administrator shall ensure all the enforcement activities also but there are staff to assist.
      Ms. Jording noted the intent of the alternate is to accommodate the public when the primary is out of the office.
      Mr. Burditt made the motion to approve and send to the Board, seconded by Cardin. Motion Carried.
   
      b) Appointment of Primary and Alternate Plat Officer
      Mr. Meinhold made the motion to approve and send to the Board, seconded by Burditt. Motion Carried.

7. Adjournment
Motion to adjourn made by Burditt at 6:20 pm, seconded by Cardin. Motion Carried.

_______________________________  ______________________________
Lisa Jording, Secretary          Blake Parsons, Chairman

______________________________
Date
2021 Annual Inspection Report

Minonk Wind Farm

2856 County Road 2000N
Minonk, IL

Report Date: 3/28/2022

Summary

In accordance with the Minonk Wind Special Use Permit dated July 20th 2010, Algonquin Power Co. (APCo) is required to submit an annual inspection report to the Woodford and Livingston County Zoning Enforcement Officers to certify that the Minonk Wind Farm is in good working condition and not a hazard to the general public and/or participating landowners of the project.
The Minonk Wind Farm consists of 100 Gamesa G90 wind turbines located in both Woodford and Livingston Counties. Each unit is connected through a series of underground cables which all lead back to the site’s substation located beside the main office just off County Road 2000N. Although the site is owned by Algonquin Power Co. (now consolidated under one name - Liberty), Siemens Gamesa Renewable Energy (formally Gamesa Wind US) performs all maintenance and troubleshooting tasks throughout the wind farm with daily oversight provided by APCo.

Wind Turbines

Blades:

During the spring/summer storm season it is not uncommon for a wind turbine or wind turbine blade to be struck by lightning. Each wind turbine is equipped with a Lightning Protection System (LPS) which provides a path to ground for the lightning strike. Effective July 4th 2014 as a proactive and precautionary measure, Liberty performs inspections within 72 hours on any turbine(s) that may have been struck by lightning during a lightning storm, we use various weather services that track cloud to ground strikes in proximity to mapped turbines. We utilize a Canon T3i camera with 500mm lens to perform these inspections, which allows us to determine if the blade or turbine sustained any damage.

In 2021 a complete site blade inspection via drone was completed through April and May by SGRE drone blade inspection technicians. All reports were reviewed by the Siemens Gamesa Blade Engineering Department and these inspections led to proactive repairs of 39 turbines and 2 turbine blade replacements. If damage is noted that could be considered hazardous to the public, landowners, employees, or the Wind Turbine Generator (WTG), the affected turbine would be immediately removed from service until adequate evaluation and repairs are able to be performed. Otherwise, any damage noted by Liberty personnel is sent to Siemens Gamesa blade engineers for further evaluation and repair recommendations.

Major/Minor Maintenances:

As the turbine supplier and maintenance contractor, Siemens Gamesa has outlined an annual (major) and semi-annual (minor) maintenance plan for each WTG. This means that every 6 months a team of maintenance personnel visit each turbine to perform either the major or minor maintenance which consists of the following: various electrical checks, cleaning, torque/tension checks of all bolts, lubrication checks/replacement, visual checks throughout the WTG, oil samples, air filter changes, oil filter changes, clearance inspections etc.

Minor Maintenances were performed between January 2021 and July 2021. Major Maintenance were performed between July 2021 and December 2021. During the 2021 maintenances there were no deficiencies found that would be considered a hazard to the public, landowners, employees, or facilities.
Foundation Bolt Inspection/Maintenance:

In 2021 Siemens Gamesa performed a visual and mechanical inspection on all WTG foundation base bolts which is separate from the Annual and Semi-Annual maintenances outlined above. This inspection was to help ensure proper anchoring of the WTG to the concrete foundation.

The inspection consisted of performing a 10% tension check at 90% post tension value on all 100 WTGs. The inspections took place over the course of one week during September 20th through 23rd. There were no anomalies noted during the inspection.

Substation

Monthly Inspection:

Each week Siemens Gamesa performs a visual inspection on a number of components located within the substation and substation control house. These monthly visual inspections survey for the following conditions: cracking on any electrical components, electrical arcing, rodent entry and/or nests, bulging of capacitors and transformers, oil levels, gas pressures, lighting checks, breaker positions, static line sagging, fences/gates, locks on all equipment, warning/danger/High Voltage signage, etc. Also, during these monthly inspections all fire extinguishers, eye wash stations, First Aid Kits, the tornado shelter and AEDs in the substation and operations building/office are inspected.

During these monthly inspections there were no abnormal issues found that would pose a hazard to the public, landowners, employees, or facilities.

Annual Inspection/Maintenance:

The annual substation inspection and maintenance is a much more detailed inspection than the standard monthly inspections outlined above. In addition to the items inspected during the monthly inspections, Siemens Gamesa also performs the following on an annual basis: cleaning behind breakers/panels, oil samples and analysis, infrared scans, downloading/analyzing protective relay data, load tap changer testing/functionality, backup power for control house and protective relays, rodent entry repair behind protective relays (as required), and HMI functionality testing. The 2021 outage was the 10 year outage so it consisted of a full scope electrical testing on nearly all substation components.

The annual substation inspection occurred over a span of 4 days, September 20th through 23rd, while the Infrared scan occurred on March 10, 2021. There were no deficiencies noted from either the annual substation inspection or the infrared scanning that would pose a hazard to the public, landowners, employees, or facilities.

Environmental

Tier II Reporting:
The Minonk Wind Farm is required to submit annual Tier II Chemical Inventories to each respective county (Woodford County and Livingston County) pursuant to Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) Section 312. The purpose of this report is to provide State and local officials and the public with information on the general hazard types and locations of hazardous chemicals present at the Minonk Wind Farm during the previous calendar year.

The Tier II Chemical Inventory for Woodford County can be found in “Exhibit A” of this report. The Tier II Chemical Inventory for Livingston County can be found in “Exhibit B” of this report.

Emergency Drills

Facility Drills:

Minonk Wind Farm Personnel participate in annual drills consisting of fire, tornado, and spill drills. All drills were completed in a timely fashion with the correct procedures followed. The SPCC Plan (Spill Prevention, Control, and, Countermeasure Plan) is reviewed annually with site personnel to ensure all employees are trained in the handling of spills to minimize impact to the environment.

Due to Covid we did not do any drills with the local Emergency Responders as we are trying to limit exposure to our technicians and general public. Drills are being coordinated however for 2022 now that restrictions are lessoning.
February 28, 2022

Woodford County LEPC  
c/o Woodford County EMA  
Attn: Mr. Kent McCanless  
303 South Main Street  
P.O. Box 290  
Roanoke, IL 61561

Re: Algonquin Power Co  
Minonk Wind Farm  
2021 EPCRA Section 312 Tier II Report

Dear Mr. McCanless

Algonquin Power Co. (Liberty) hereby submits the enclosed information for Minonk Wind Farm, pursuant to EPCRA Section 312 and resulting requirements.

This compliance package includes the following information:
  • 2021 Tier II Chemical Inventory Reporting Form  
  • Corresponding SDS’  
  • Facility layout map

Please feel free to contact our Environmental Director, Derek Tomka at (777)-627-2903 or myself at (815)-257-8550 if you have any questions regarding this information.

Sincerely,

Myles Gautschy  
Site Manager, Minonk Wind Farm  
Algonquin Power Co (Liberty)

cc: Cindy Falls, APCo  
    Derek Tomka, APCo  
    Woodford County LEPC
**CERTIFICATE OF LIABILITY INSURANCE**

**DATE(MM/DD/YYYY):** 07/13/2021

**HOLDER IDENTIFIER:**

**HOLDER IDENTIFIER:**

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

**INSURED:**

2856 County Road 2000 North
woodford county IL 61760 USA

**INSURER**

National Fire & Marine Ins Co
AA3190004 Assoc Electric & Gas Ins Serv Ltd -AEGIS

**COVERAGES**

**CERTIFICATE NUMBER:** 570088443317

**Revision Number:**

**THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.**

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**DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)**

**DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES:**

**SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.**

**AUTHORIZED REPRESENTATIVE:**

**ACORD 25 (2016/03)** The ACORD name and logo are registered marks of ACORD

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### ADDITIONAL REMARKS SCHEDULE

**Agency**
Aon Risk Services Northeast, Inc.

**Named Insured**
Minonk Wind, LLC

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<th>POLICY NUMBER</th>
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**Effective Date:**

### ADDITIONAL REMARKS

This additional remarks form is a schedule to ACORD form.

**Form Number:** ACORD 25  **Form Title:** Certificate of Liability Insurance

Additional Insured

**AGENCY CUSTOMER ID:** 570000059483

**LOC #:**

---

**AGENCY**

Aon Risk Services Northeast, Inc.

**NAMED INSURED**

Minonk Wind, LLC

---

**POLICY NUMBER**

See Certificate Number: 570088443317

**CARRIER**

See Certificate Number: 570088443317

---

**ADDITIONAL REMARKS SCHEDULE**

---

**ADDITIONAL REMARKS**

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,

**FORM NUMBER:** ACORD 25

**FORM TITLE:** Certificate of Liability Insurance

---

**CONT'D**

## Tier II Emergency and Hazardous Chemical Inventory

**Facility Name:** Minonk Wind Farm (M78 Wind Turbine)  
**State ID:** 016461

**Reporting Period:** From January 1, 2021 to December 31, 2021

### Facility Identification

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<td>Facility Name</td>
<td>Minonk Wind Farm (M78 Wind Turbine)</td>
</tr>
<tr>
<td>Company Name</td>
<td>Algonquin Power Company</td>
</tr>
<tr>
<td>Physical Location</td>
<td>County Road 2900 East, Minonk, IL 61760</td>
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<tr>
<td>County</td>
<td>Woodford</td>
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<td>Fire Department</td>
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<td>FTE</td>
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### Owner/Operator Details

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<tr>
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<tbody>
<tr>
<td>Name</td>
<td>Myles Gautschy</td>
</tr>
<tr>
<td>Address</td>
<td>2856 County RD 2000 Minonk, IL 61760, United States</td>
</tr>
<tr>
<td>Phone</td>
<td>309-432-3381</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:myles.gautschy@algonquinpower.com">myles.gautschy@algonquinpower.com</a></td>
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### Parent Company Details

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<tr>
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</tr>
<tr>
<td>Address</td>
<td>354 Davis Rd Oakville, ON L6J 2-X, Canada</td>
</tr>
<tr>
<td>Phone</td>
<td></td>
</tr>
<tr>
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### Tier II Information Contact

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<tr>
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<tbody>
<tr>
<td>Name</td>
<td>Derek Tomka</td>
</tr>
<tr>
<td>Title</td>
<td>Director Environmental</td>
</tr>
<tr>
<td>Phone</td>
<td>774-827-2903 24 Hr.Phone: 508-817-6352</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:Derek.Tomka@libertyutilities.com">Derek.Tomka@libertyutilities.com</a></td>
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### Mailing Address

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<td>Algonquin Power Co</td>
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<tr>
<td>Attention</td>
<td>Adam Loudon</td>
</tr>
<tr>
<td>Street Address 1</td>
<td>2856 county road 2000</td>
</tr>
<tr>
<td>City</td>
<td>Minonk</td>
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<td>Zip</td>
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<td>Country</td>
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### Facility Emergency Planning Coordinator

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<tbody>
<tr>
<td>Name</td>
<td>Myles Gautschy</td>
</tr>
<tr>
<td>Title</td>
<td>Site Manager Wind</td>
</tr>
<tr>
<td>Phone</td>
<td>815-257-8550 24 Hr.Phone: 815-257-8550</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:Myles.gautschy@algonquinpower.com">Myles.gautschy@algonquinpower.com</a></td>
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### Emergency Contacts

<table>
<thead>
<tr>
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<th>24 Hr.Phone</th>
<th>Email</th>
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<tbody>
<tr>
<td>Adam Loudon</td>
<td>Regional Manager</td>
<td>309-428-0178</td>
<td>309-428-0178</td>
<td><a href="mailto:adam.loudon@algonquinpower.com">adam.loudon@algonquinpower.com</a></td>
</tr>
<tr>
<td>Travis McMillan</td>
<td>Operations Site Manager</td>
<td>815-674-3125</td>
<td>215-970-4142</td>
<td><a href="mailto:travis.mcmillan@siemensgamesa.com">travis.mcmillan@siemensgamesa.com</a></td>
</tr>
<tr>
<td>Myles Gautschy</td>
<td>Site Manager</td>
<td>815-257-8550</td>
<td>815-257-8550</td>
<td><a href="mailto:myles.gautschy@algonquinpower.com">myles.gautschy@algonquinpower.com</a></td>
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</table>

### Certification

Certification: I certify under penalty of law that I have personally examined and am familiar with the information submitted in pages one through 8, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

Derek Tomka, Director Environmental  
2/28/2022 12:27:00 PM 774-627-2903

Name and official title of owner/operator or authorized representative  
Date Signed  
Telephone Number  
Signature

### Optional Attachments

- Site Plan
- Site Coordinate Abbreviations
- Other Safeguard measures
- Facility Emergency Response Plan
## Tier II Emergency and Hazardous Chemical Inventory

**Facility Name:** Minonk Wind Farm (M78 Wind Turbine)  
**State ID:** 016461  
**Reporting Period:** From January 1, 2021 to December 31, 2021

<table>
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<th>Physical Hazards</th>
<th>Health Hazards</th>
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<td>Chemical ID: 1169200</td>
<td>☐ Combustible dust</td>
<td>☐ Acute toxicity (any route of exposure)</td>
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<td>Check if Chemical Information is changed from the last submission: ☐</td>
<td>☐ Corrosive to metal</td>
<td>☐ Aspiration hazard</td>
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<tr>
<td>CAS #: N/A</td>
<td>☐ Explosive</td>
<td>☐ Carcinogenicity</td>
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<tr>
<td>Trade Secret: ☐</td>
<td>☐ Flammable (gases, aerosols, liquids, or solids)</td>
<td>☐ Germ cell mutagenicity</td>
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<td>Chemical Name: Envirotemp FR3 Fluid</td>
<td>☐ Gas under pressure</td>
<td>☐ Hazard Not Otherwise Classified (HNOC)</td>
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<td>EHS: ☐ Contains EHS: ☐ Exceeds TPQ: ☐</td>
<td>☐ Hazard Not Otherwise Classified (HNOC)</td>
<td>☐ Reproductive toxicity</td>
</tr>
<tr>
<td>EHS Name: ☐ Pure ☑ Mix ☐ Solid ☑ Liquid ☐ Gas</td>
<td>☐ In contact with water emits flammable gas</td>
<td>☐ Respiratory or skin sensitization</td>
</tr>
<tr>
<td>☘</td>
<td>☐ Organic peroxide</td>
<td>☐ Serious eye damage or eye irritation</td>
</tr>
<tr>
<td>☘</td>
<td>☐ Oxidizer (liquid, solid or gas)</td>
<td>☐ Simple asphyxiant</td>
</tr>
<tr>
<td>☘</td>
<td>☐ Pyrophoric (liquid or solid)</td>
<td>☘ Skin corrosion or irritation</td>
</tr>
<tr>
<td>☘</td>
<td>☐ Pyrophoric gas</td>
<td>☐ Specific target organ toxicity (single or repeated exposure)</td>
</tr>
<tr>
<td>☘</td>
<td>☐ Self-heating</td>
<td>☘</td>
</tr>
<tr>
<td>☘</td>
<td>☐ Self-reactive</td>
<td>☘</td>
</tr>
</tbody>
</table>

### Inventory

- **Max Daily Amt (lbs):** 25312  
- **Max Daily Amt Code:** 07  
- **Avg Daily Amt (lbs):** 25312  
- **Avg Daily Amt Code:** 07  
- **Max Amt in Largest Container (lbs):** 3616  
- **No of days onsite:** 365

### Storage Codes & Location

<table>
<thead>
<tr>
<th>Container Type</th>
<th>Pressure</th>
<th>Temperature</th>
<th>Storage Location</th>
<th>Description</th>
<th>Lat/Long</th>
<th>Max Amt At Location(lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑ Above ground tank</td>
<td>☑ Ambient pressure</td>
<td>☑ Ambient temperature</td>
<td>Grounding Transformer</td>
<td>/</td>
<td>25312</td>
<td></td>
</tr>
</tbody>
</table>
## Tier II Emergency and Hazardous Chemical Inventory

**Facility Name:** Minonk Wind Farm (M78 Wind Turbine)  
**State ID:** 016461  
**Reporting Period From:** January 1, 2021 to December 31, 2021

<table>
<thead>
<tr>
<th>Chemical Description</th>
<th>Physical Hazards</th>
<th>Health Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical ID: 1169197</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS #: N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trade Secret:</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Chemical Name:</strong> Ergon HyVolt II - Mineral Oil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EHS:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contains EHS:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exceeds TPQ:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EHS Name:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mix</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liquid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MSDS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SDS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- ☐ Combustible dust
- ☐ Corrosive to metal
- ☐ Explosive
- ☐ Flammable (gases, aerosols, liquids, or solids)
- ☐ Gas under pressure
- ☐ Hazard Not Otherwise Classified (HNOC)
- ☐ In contact with water emits flammable gas
- ☐ Organic peroxide
- ☐ Oxidizer (liquid, solid or gas)
- ☐ Pyrophoric (liquid or solid)
- ☐ Pyrophoric gas
- ☐ Self-heating
- ☐ Self-reactive
- ☐ Acute toxicity (any route of exposure)
- ☑ Aspiration hazard
- ☐ Carcinogenicity
- ☐ Germ cell mutagenicity
- ☐ Hazard Not Otherwise Classified (HNOC)
- ☑ Reproductive toxicity
- ☐ Respiratory or skin sensitization
- ☐ Serious eye damage or eye irritation
- ☐ Simple asphyxiant
- ☐ Skin corrosion or irritation
- ☐ Specific target organ toxicity (single or repeated exposure)

### Inventory

- **Max Daily Amt (lbs):** 122116
- **Max Daily Amt Code:** 10
- **Avg Daily Amt (lbs):** 122116
- **Avg Daily Amt Code:** 10
- **Max Amt in Largest Container (lbs):** 122116
- **No of days onsite:** 365

<table>
<thead>
<tr>
<th>Container Type</th>
<th>Pressure</th>
<th>Temperature</th>
<th>Storage Location</th>
<th>Description</th>
<th>Lat/Long</th>
<th>Max Amt At Location (lbs)</th>
</tr>
</thead>
</table>
### Chemical Description

- **Chemical ID:** 1169198
- **Check if Chemical Information is changed from the last submission:** Yes
- **CAS #:** N/A
- **Trade Secret:** No
- **Chemical Name:** RANDO HDZ 46
- **EHS:** Yes
- **Contains EHS:** Yes
- **Exceeds TPQ:** No
- **EHS Name:**
  - **Type:** Pure
  - **Mix:** No
  - **Solid:** Yes
  - **Liquid:** Yes
  - **Gas:** Yes
- **MSDS:** Yes
- **SDS:** Yes
- **Chemical Added On:**
- **Check if the chemical is below reporting threshold:** No

### Physical Hazards

- Combustible dust
- Corrosive to metal
- Explosive
- Flammable (gases, aerosols, liquids, or solids)
- Gas under pressure
- Hazard Not Otherwise Classified (HNOC)
- In contact with water emits flammable gas
- Organic peroxide
- Oxidizer (liquid, solid or gas)
- Pyrophoric (liquid or solid)
- Pyrophoric gas
- Self-heating
- Self-reactive

### Health Hazards

- Acute toxicity (any route of exposure)
- Aspiration hazard
- Carcinogenicity
- Germ cell mutagenicity
- Hazard Not Otherwise Classified (HNOC)
- Reproductive toxicity
- Respiratory or skin sensitization
- Serious eye damage or eye irritation
- Simple asphyxiant
- Skin corrosion or irritation
- Specific target organ toxicity (single or repeated exposure)

### Inventory

- **Max Daily Amt (lbs):** 44393
- **Max Daily Amt Code:** 07
- **Avg Daily Amt (lbs):** 44393
- **Avg Daily Amt Code:** 07
- **Max Amt in Largest Container (lbs):** 592
- **No of days onsite:** 365

<table>
<thead>
<tr>
<th>Container Type</th>
<th>Pressure</th>
<th>Temperature</th>
<th>Storage Location</th>
<th>Description</th>
<th>Lat/Long</th>
<th>Max Amt At Location (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Above ground tank</td>
<td>Ambient</td>
<td>Ambient</td>
<td>Turbine Pendulum Unit (Combined)</td>
<td>/</td>
<td>/</td>
<td>44393</td>
</tr>
</tbody>
</table>
## Tier II Emergency and Hazardous Chemical Inventory

**Facility Name:** Minonk Wind Farm (M78 Wind Turbine)  
**State ID:** 016461  
**Reporting Period From:** January 1, 2021 to December 31, 2021

### Chemical Description

<table>
<thead>
<tr>
<th>Chemical ID:</th>
<th>1169196</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS #:</td>
<td>N/A</td>
</tr>
<tr>
<td>Trade Secret:</td>
<td></td>
</tr>
<tr>
<td>Chemical Name:</td>
<td>Renolin Unisyn CLP 320</td>
</tr>
<tr>
<td>EHS:</td>
<td>Contains EHS:</td>
</tr>
<tr>
<td>Pure</td>
<td>Mix</td>
</tr>
<tr>
<td>Chemical Added On:</td>
<td>Check if the chemical is below reporting threshold:</td>
</tr>
</tbody>
</table>

### Physical Hazards

- ☐ Combustible dust
- ☐ Corrosive to metal
- ☐ Explosive
- ☐ Flammable (gases, aerosols, liquids, or solids)
- ☐ Gas under pressure
- ☐ Hazard Not Otherwise Classified (HNOC)
- ☐ In contact with water emits flammable gas
- ☐ Organic peroxide
- ☐ Oxidizer (liquid, solid or gas)
- ☐ Pyrophoric (liquid or solid)
- ☐ Pyrophoric gas
- ☐ Self-heating
- ☐ Self-reactive

### Health Hazards

- ☐ Acute toxicity (any route of exposure)
- ☐ Aspiration hazard
- ☐ Carcinogenicity
- ☐ Germ cell mutagenicity
- ☑ Hazard Not Otherwise Classified (HNOC)
- ☐ Reproductive toxicity
- ☐ Respiratory or skin sensitization
- ☐ Serious eye damage or eye irritation
- ☐ Simple asphyxiant
- ☐ Skin corrosion or irritation
- ☐ Specific target organ toxicity (single or repeated exposure)

### Inventory

<table>
<thead>
<tr>
<th>Max Daily Amt (lbs):</th>
<th>65990</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Daily Amt Code:</td>
<td>08</td>
</tr>
<tr>
<td>Avg Daily Amt (lbs):</td>
<td>65990</td>
</tr>
<tr>
<td>Avg Daily Amt Code:</td>
<td>08</td>
</tr>
<tr>
<td>Max Amt in Largest Container (lbs):</td>
<td>811</td>
</tr>
<tr>
<td>No of days onsite:</td>
<td>365</td>
</tr>
</tbody>
</table>

### Storage Codes & Location

<table>
<thead>
<tr>
<th>Container Type</th>
<th>Pressure</th>
<th>Temperature</th>
<th>Storage Location</th>
<th>Description</th>
<th>Lat/Long</th>
<th>Max Amt At Location(lbs)</th>
</tr>
</thead>
</table>
## Tier II Emergency and Hazardous Chemical Inventory

**Facility Name:** Minonk Wind Farm (M78 Wind Turbine)  
**State ID:** 016461  
**Reporting Period From January 1, 2021 to December 31, 2021**

<table>
<thead>
<tr>
<th>Chemical Description</th>
<th>Physical Hazards</th>
<th>Health Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical ID: 1169199</td>
<td>☐ Combustible dust</td>
<td>☐ Acute toxicity (any route of exposure)</td>
</tr>
<tr>
<td>Check if Chemical Information is changed from the last submission: Yes</td>
<td>☐ Corrosive to metal</td>
<td>☐ Aspiration hazard</td>
</tr>
<tr>
<td>CAS #: N/A</td>
<td>☐ Explosive</td>
<td>☐ Carcinogenicity</td>
</tr>
<tr>
<td>Trade Secret: No</td>
<td>☐ Flammable (gases, aerosols, liquids, or solids)</td>
<td>☐ Germ cell mutagenicity</td>
</tr>
<tr>
<td>Chemical Name: <strong>Shell Tellus S2 V 32</strong></td>
<td>☐ Gas under pressure</td>
<td>☐ Hazard Not Otherwise Classified (HNOC)</td>
</tr>
<tr>
<td>EHS: No Contains EHS: No Exceeds TPQ: No</td>
<td>☐ In contact with water emits flammable gas</td>
<td>☐ Reproductive toxicity</td>
</tr>
<tr>
<td>EHS Name: Pure Mix Solid Liquid Gas MSDS SDS</td>
<td>☐ Organic peroxide</td>
<td>☐ Respiratory or skin sensitization</td>
</tr>
<tr>
<td>Chemical Added On: Check if the chemical is below reporting threshold: No</td>
<td>☐ Oxidizer (liquid, solid or gas)</td>
<td>☐ Serious eye damage or eye irritation</td>
</tr>
<tr>
<td></td>
<td>☐ Pyrophoric (liquid or solid)</td>
<td>☐ Simple asphyxiant</td>
</tr>
<tr>
<td></td>
<td>☐ Pyrophoric gas</td>
<td>☐ Skin corrosion or irritation</td>
</tr>
<tr>
<td></td>
<td>☐ Self-heating</td>
<td>☐ Specific target organ toxicity (single or repeated exposure)</td>
</tr>
<tr>
<td></td>
<td>☐ Self-reactive</td>
<td></td>
</tr>
</tbody>
</table>

### Inventory

<table>
<thead>
<tr>
<th>Container Type</th>
<th>Pressure</th>
<th>Temperature</th>
<th>Storage Location</th>
<th>Description</th>
<th>Lat/Long</th>
<th>Max Amt At Location(lbs)</th>
</tr>
</thead>
</table>

| Max Daily Amt (lbs): 24923 |
| Max Daily Amt Code: 06 |
| Avg Daily Amt (lbs): 24923 |
| Avg Daily Amt Code: 06 |
| Max Amt in Largest Container (lbs): 400 |
| No of days onsite: 365 |
## Tier II Emergency and Hazardous Chemical Inventory

**Facility Name:** Minonk Wind Farm (M78 Wind Turbine)  
**State ID:** 016461  
**Reporting Period From January 1, 2021 to December 31, 2021**

<table>
<thead>
<tr>
<th>Chemical Description</th>
<th>Physical Hazards</th>
<th>Health Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical ID: 1169195</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS #: 7664-93-9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trade Secret:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemical Name: Sulfuric Acid</td>
<td>□</td>
<td>✓ Acute toxicity (any route of exposure)</td>
</tr>
<tr>
<td>EHS: yes Contains EHS: no Exceeds TPQ: yes</td>
<td>□</td>
<td>□ Aspiration hazard</td>
</tr>
<tr>
<td>EHS Name: Sulfuric acid</td>
<td>□</td>
<td>□ Carcinogenicity</td>
</tr>
<tr>
<td>Pure □ Mix □ Solid □ Liquid □ Gas □</td>
<td></td>
<td>□ Germ cell mutagenicity</td>
</tr>
<tr>
<td>Chemical Added On:</td>
<td>□</td>
<td>□ Hazard Not Otherwise Classified (HNOC)</td>
</tr>
<tr>
<td>Check if the chemical is below reporting threshold:</td>
<td>□</td>
<td>□ Reproductive toxicity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>□ Respiratory or skin sensitization</td>
</tr>
<tr>
<td></td>
<td></td>
<td>□ Serious eye damage or eye irritation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>□ Simple asphyxiant</td>
</tr>
<tr>
<td></td>
<td></td>
<td>□ Skin corrosion or irritation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>□ Specific target organ toxicity (single or repeated exposure)</td>
</tr>
</tbody>
</table>

### Inventory

<table>
<thead>
<tr>
<th>Container Type</th>
<th>Pressure</th>
<th>Temperature</th>
<th>Storage Location</th>
<th>Description</th>
<th>Lat/Long</th>
<th>Max Amt At Location(lbs)</th>
</tr>
</thead>
</table>

Max Daily Amt Code: 04  
Max Daily Amt: 1438  
Avg Daily Amt Code: 04  
Avg Daily Amt: 1438  
Max Amt in Largest Container: 22  
No of days onsite: 365
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<th>#</th>
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<th>Amount Range</th>
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<tr>
<td>1</td>
<td>01</td>
<td>[01] 0-99</td>
</tr>
<tr>
<td>2</td>
<td>02</td>
<td>[02] 100-499</td>
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<tr>
<td>3</td>
<td>03</td>
<td>[03] 500-999</td>
</tr>
<tr>
<td>4</td>
<td>04</td>
<td>[04] 1,000-4,999</td>
</tr>
<tr>
<td>5</td>
<td>05</td>
<td>[05] 5,000-9,999</td>
</tr>
<tr>
<td>6</td>
<td>06</td>
<td>[06] 10,000-24,999</td>
</tr>
<tr>
<td>7</td>
<td>07</td>
<td>[07] 25,000-49,999</td>
</tr>
<tr>
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<td>08</td>
<td>[08] 50,000-74,999</td>
</tr>
<tr>
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<td>09</td>
<td>[09] 75,000-99,999</td>
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<tr>
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<td>[10] 100,000-499,999</td>
</tr>
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<td>12</td>
<td>12</td>
<td>[12] 1,000,000-9,999,999</td>
</tr>
<tr>
<td>13</td>
<td>13</td>
<td>[13] 10,000,000- Greater than 10 million</td>
</tr>
</tbody>
</table>
MINONK WIND, LLC
WIND ENERGY CONVERSION SYSTEM
DECOMMISSIONING REPORT

ORIGINAL: February 2009
REVISED: May 2009
REVISED: May 2010
UPDATED: May 2013
UPDATED: May 2016
UPDATED: April 2019
UPDATED: March 2022

Prepared for: Minonk Wind, LLC
Liberty Power
354 Davis Road, Suite 100
Oakville, Ontario, Canada L6J 2X1

Prepared by: Fehr Graham
101 West Stephenson Street
Freeport, Illinois 61032

Project No. 22-266
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Exhibits

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Exhibit B - Technical Summary G90/2.0MW 60Hz Wind Turbine
Exhibit C - Foundation Design for G90 Wind Turbine
Exhibit D - Access Roadway Details
Exhibit E - Access Roadway Lengths / Construction Material Requirements
Exhibit F - Cable Wire and Trench Construction Details
1.0 MINONK WIND ENERGY CONVERSION SYSTEM (WECS)

System Description

The Minonk Wind Energy Conversion System (WECS) is an approximate 200-Megawatt wind energy conversion system, which was constructed in Woodford and Livingston Counties just southeast of the Village of Minonk, Illinois (see Exhibit A), and consists of the following key components:

- Wind Turbines: 100 Each
- Turbine Foundations: 100 Each
- Access Roadways: 138,800 Linear Feet
- Crane Pads: 100 Each
- Medium Voltage Cable: 831,804 Linear Feet
- Ground Cable: 277,268 Linear Feet
- Fiber Optic Cable: 187,949 Linear Feet

Decommissioning Sequence

In the event the Minonk WECS requires decommissioning, the sequence for removal of the system components would be: Wind Turbines, Turbine Foundations and Structures, Turbine Appurtenances, Crane Pads, and Access Roadways. The remainder of the decommissioning would involve earthwork and topsoil restoration. As such, this decommissioning plan will outline any dismantle, removal, and salvage activities in the same general sequence.

2.0 MAPPING: SPECIAL USE PERMIT REQUIREMENTS AND REPORT

This report is an update to previous decommissioning reports for the Minonk WECS. It is consistent in methodology and scope with the earlier reports.

This section, included in the May 2016 report update, is provided in this update to map the requirements of the Woodford County and Livingston County Special Use Permits (“SUP”) for the Minonk WECS to the contents of this report.

The Special Use Permits contain the following specific language related to the decommissioning scope:
From Page 7 of the Woodford SUP, Page 8 of the Livingston County SUP:

*Decommissioning of the Project or of individual wind turbines and other components shall require removal of all wind energy turbines, structures and appurtenances, and removal of all above ground and below ground electrical lines, removal of all access roads constructed for the Project or an individual wind turbine and removal of all substations, except as further set forth herein.*

From Page 8 of both the Woodford County and Livingston County SUPs:

*Pursuant to the Ordinance, Company shall update the estimate of decommissioning costs every three years or at such other times as determined by the Zoning Administrator which update shall include an analysis of the salvage value of the improvements.*

The following table maps the language of the SUP to the report:

<table>
<thead>
<tr>
<th></th>
<th>Report Reference</th>
<th>Decommissioning Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Removal of Wind Energy Turbines</td>
<td>Section 3</td>
</tr>
<tr>
<td>2</td>
<td>Removal of Wind Energy Structures</td>
<td>Section 4</td>
</tr>
<tr>
<td>3</td>
<td>Removal of Wind Energy Appurtenances</td>
<td>Section 5 (1)</td>
</tr>
<tr>
<td>4</td>
<td>Removal of above ground electrical lines</td>
<td>Section 8 (2)</td>
</tr>
<tr>
<td>5</td>
<td>Removal of below ground electrical lines</td>
<td>Section 8 (3)</td>
</tr>
<tr>
<td>6</td>
<td>Removal of all access roads for the project</td>
<td>Section 7 (4)</td>
</tr>
<tr>
<td>7</td>
<td>Removal of all access roads for the individual wind turbines</td>
<td>Section 6, Section 9</td>
</tr>
<tr>
<td>8</td>
<td>Removal of the substations</td>
<td>Section 10 (5)</td>
</tr>
<tr>
<td>9</td>
<td>Salvage Value</td>
<td>Section 11 (6)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total per WTG</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Notes:

(1) While some wind projects are constructed with permanent crane pads that are installed during project construction and remain in place during the life of the project, and, therefore, must be decommissioned at the end of the project, which is not the case for the Minonk wind project. Instead the temporary construction crane pads were removed post WEC installation and must be reinstalled each time a crane is required for ongoing operation and maintenance. Therefore, there are no decommissioning costs for crane pads as there are no permanent crane pads. The cost of installation and removal of the temporary crane pads that would be required for decommissioning are included in the costs presented in Section 3.

(2) The project electrical lines, from the WECS to the collection substation, are underground.

(3) The nature and depth of the below ground electrical lines are such that physical removal is not necessary as part of the project decommissioning.

(4) The only access roads for the project are for the individual wind turbines for which decommissioning costs are presented in Section 6 and Section 9.

(5) As per previous reports, no consideration is given to the decommissioning costs or salvage value of the substations. The project consists of two substations, a collection substation owned by the Minonk WECS that is located on property owned by Minonk WECS and an interconnection substation owned by Commonwealth Edison that is located on property owned by Commonwealth Edison. It is noted that if the substations were to be included in the analysis it would lower the overall decommissioning total as the salvage value of the substation equipment exceeds the decommissioning costs.

(6) As per previous reports, the only salvage value considered is the value associated with the salvageable steel components of the G90/2.0MW 50/60Hz wind turbines. As per previous reports, the salvage value is based on current scrap steel pricing. Current pricing is lower than long-term pricing and the previous reports and updates. Current scrap steel salvage rates are $175 per Ton as compared to the previous update, April 2019, when the steel salvage rate was $157 per Ton.

3.0 REMOVAL OF WIND ENERGY TURBINES

Wind Turbine Technical Data and Decommissioning

The Minonk WECS was constructed using one hundred (100) G90/2.0MW 50/60Hz Wind Turbines, manufactured by Gamesa Eolica, Ltd. for a system capacity of approximately 200 Megawatts. A complete technical summary of the G90 wind turbine is included as Exhibit B of this plan.

The modular nature of wind turbine towers, blades, and generators allows for relative ease in the removal and salvage of individual wind turbine components. The
procedure and time to dismantle wind turbines is essentially the reverse sequence as the erection; consisting of blade, hub, nacelle, and tower removal. Although there is an active resale market for wind energy conversion system components, this report is not considering any resale value as it is feasible that technology advancements may actually outpace the resale market potential. The only salvage value that has been considered within this report is the actual salvage of the tower and nacelle components of each wind turbine.

Multiple crane service companies were contacted to establish an estimated cost of crane services necessary to complete the dismantling of the wind turbines. The crane service companies were selected based upon their experience in the erection and/or dismantling of wind turbines. These contacts have indicated that the most appropriate estimate for wind turbine removal was approximately $39,145 per turbine. Similarly, transportation service companies were contacted to establish an estimated cost associated with transportation of the wind turbine components to a suitable salvage yard. These transportation companies also have particular experience in the transport of wind turbine components and estimate the cost of transportation at approximately $32,620 per turbine. As a result, the cost to completely dismantle and transport each of the wind turbines is estimated at $71,765 per turbine.

There are very likely to be some ancillary costs associated with the removal and transportation of the wind turbines. These costs may include minor road improvements to facilitate transport, or any inefficiency that may occur due to having to break the crane down in lieu of walking from site to site. To account for these ancillary costs, a factor of 20 percent was added to the removal and transportation costs for this report. As a result, the estimated cost to dismantle and transport each turbine is $86,118 for a total cost of $8,611,800 for 100 turbines. This represents a very conservative figure as actual use of crane services for the complete dismantling of turbines may not be necessary in a scrap salvage scenario.

Certainly, there are other items associated with the wind turbines that have some associated salvage or resale value; however, these costs were not considered in the completion of this report. The purpose of this decommissioning report is to assure that there is adequate financial assurance provided to cover any costs associated with
potential wind farm decommissioning activities. By using the most conservative figure for salvage value versus resale value, and including an additional safety factor in the estimated costs associated with dismantling and transporting the components to a salvage facility, it is felt that the estimates provided in this report are extremely conservative and represent a worst-case scenario condition. The remainder of this plan will address the estimated decommissioning costs for those remaining WECS components.

4.0 REMOVAL OF WIND ENERGY STRUCTURES

Wind Turbine Foundation Construction and Decommissioning

The wind turbine foundations for the Minonk WECS, as constructed, consist of a solid concrete pedestal with dimensions of 18-foot Diameter by 3 feet, over a roughly 59.5 foot by 59.5 foot by 7 foot spread concrete footing. There are 100 turbine foundations as part of the Minonk Wind Farm project, and the spread footing and pedestal foundation design is included as Exhibit C. The final design of the turbine foundations is completed by a licensed professional geotechnical engineer and were based upon specific site location conditions.

Due to the nature of turbine foundations constructed for the Minonk WECS project, there is essentially no salvage value able to be determined. The removal and disposal of each spread footing foundation to the required depth of four (4) feet would be labor intensive. Two independent contractors, each with demolition experience, reviewed the foundation design details and provided estimates for demolition and removal costs. This plan has used the higher of these estimates with a unit cost of $20,247/turbine, or a total cost of $2,024,700 for the removal of concrete foundations should decommissioning be required.

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobilization / Excavation</td>
<td>$ 3,318 / Foundation</td>
</tr>
<tr>
<td>Concrete Demolition / Disposal</td>
<td>$ 12,992 / Foundation</td>
</tr>
<tr>
<td>Backfill / Restoration</td>
<td>$ 3,937 / Foundation</td>
</tr>
<tr>
<td>Subtotal</td>
<td>$ 20,247 / Foundation</td>
</tr>
<tr>
<td><strong>Total Cost</strong></td>
<td>$2,024,700 (100 Foundations)</td>
</tr>
</tbody>
</table>
5.0 REMOVAL OF WIND ENERGY APPURTEANCES

Turbine Electrical Transformer Components and Decommissioning

The Minonk WECS utilizes nacelle mounted electrical transformers in lieu of ground mounted electrical transformers. As a result, no decommissioning of the transformer components has been broken out. The electrical transformer decommissioning has been included in the decommissioning process for the individual wind turbines as described in Section 3.

Crane Pad Construction and Decommissioning

Each crane pad was constructed as an approximate 100 foot by 100-foot square, with an overall area of 10,000 square feet per crane pad. The method of construction was compaction of the native soil and use of removable crane mats. The existing soils were excavated, shaped, and graded to a fairly level and compacted subgrade prior to temporary crane pad placement.

The decommissioning process for crane pads involved the removal of the temporary crane pad mats, and then the soils were once again excavated, shaped, and graded to promote positive drainage and re-use.

As a result of the use of removable crane pad mats, no appreciable decommissioning costs are associated with this work. Any decommissioning costs are adequately covered within the crane services and ancillary costs estimates.

6.0 REMOVAL OF ALL ACCESS ROADS FOR THE INDIVIDUAL WIND TURBINES

Access Roadway Construction and Decommissioning

The Minonk WECS involved approximately 138,800 lineal feet, or 26.28 miles, of access roadway construction. The typical access roadway detail, as constructed, is included as Exhibit D of this report. The roadways are approximately 16-feet wide and widen slightly at the turbine, crane pad, and connecting roadway locations. The existing soils were excavated, shaped, and graded to a fairly level and compacted subgrade prior to roadway construction. The roadway construction consists of a 12-inch cement stabilized subgrade, with an initial 2-inch lift of compacted pit-run gravel followed by a final 2-inch lift of compacted crushed gravel surfacing.
Calculations used to estimate the construction materials used during construction are included in Exhibit E of this report, and are summarized below:

- **Cement Stabilized Subgrade**: 246,756 S.Y.
- **Pit-Run Gravel**: 13,709 C.Y.
- **Crushed Gravel**: 13,709 C.Y.

The decommissioning process for access roadways will involve excavation and transportation of the gravel materials to a nearby quarry or aggregate preparation site for reprocessing. The cement stabilized subgrade will be incorporated into subsoil material prior to additional earthwork and topsoil restoration. After reviewing the roadway decommissioning activities with two contractors, the following unit prices were used to estimate the access roadway decommissioning costs:

- **Cement Stabilized Subgrade Incorporation**: $5.75/S.Y.
- **Pit-Run Gravel Removal**: $12.50/C.Y.
- **Crushed Gravel Removal**: $12.50/C.Y.

Although there is no foreseen salvage value in the incorporation of the cement stabilized subgrade, there will be some salvage value in the removal of the aggregate materials if re-processed for future use. The surface materials (crushed gravel) represent the greater potential for recovery and reuse, while the pit-run gravel would most likely be used as future inert fill material. For purposes of evaluating the value of materials recovered from access roadways, a base material value of $16.00/C.Y. was used and recovery value factor of 75 percent (crushed gravel) and 50 percent (pit-run gravel) were applied. As a result, the following salvage values were determined for the items removed during access road decommissioning:

- **Cement Stabilized Subgrade**: $0/S.Y.
- **Pit-Run Gravel Salvage**: $8.00/C.Y.
- **Crushed Gravel Salvage**: $12.00/C.Y.

\(^1\) Salvage recovery factors based upon experience and actual bids for similar work on other projects.
As aggregate materials are abundant in the region of the Minonk WECS, the use of these materials as inert fill material may be selected in lieu of the actual recovery and reconditioning of these aggregates. The salvage value noted above would be offset by more economical removal techniques, lesser transportation costs, and some nominal value for the fill material. Thus, there is essentially no appreciable difference in the ultimate decommissioning costs under either scenario. As a result, the following estimate is provided for the access roadway decommissioning:

<table>
<thead>
<tr>
<th>Removal Item</th>
<th>Quantity</th>
<th>Removal</th>
<th>Salvage</th>
<th>Net Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cement Stabilized Subgrade</td>
<td>246,756 S.Y.</td>
<td>$ 1,418,847</td>
<td>$ 0</td>
<td>$ 1,418,847</td>
</tr>
<tr>
<td>Pit-Run Gravel</td>
<td>13,709 C.Y.</td>
<td>$ 171,363</td>
<td>$109,672</td>
<td>$ 61,691</td>
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<tr>
<td>Crushed Gravel</td>
<td>13,709 C.Y.</td>
<td>$ 171,363</td>
<td>$164,508</td>
<td>$ 6,855</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>$ 1,761,573</strong></td>
<td><strong>$ 274,180</strong></td>
<td><strong>$ 1,487,393</strong></td>
<td></td>
</tr>
</tbody>
</table>

7.0 REMOVAL OF ALL ACCESS ROADS FOR THE PROJECT

**Access Roadway Construction and Decommissioning**

The Minonk WECS construction utilized existing township, county and state roadways for access to the project. Use of the township and county roadways was, and is, subject to the Road Use Agreements in place with the applicable governing body. As a result of these Road Use Agreements, no decommissioning costs are included in this report and all associated costs shall be borne under the separate Road Use Agreements.

8.0 REMOVAL OF ELECTRICAL LINES

**Above Ground Electrical Line Construction and Decommissioning**

No above ground electrical lines were included as part of the WECS construction and as such, no details for construction are included in this report and no costs for decommissioning of such items is included.

**Below Ground Electrical Line Construction and Decommissioning**

The cable trench construction details are included as Exhibit F of this plan. In all instances, the cable trenches are a minimum of 60-inches in depth, with a minimum of 48 inches of cover over the cables. At least 36 inches of top cover consist of earthen materials and topsoil in all areas other than road crossings. Conduit was
provided for the cable trenches at road crossings only, with aggregate materials used as backfill. Additional details regarding the type and lengths of cable runs are also included in Exhibit F.

Due to the nature and depth of the cable trench construction, the physical removal of the cabling is not viewed as a necessary activity in the decommissioning of the Minonk WECS. In addition, Minonk Wind, LLC have land lease agreements with the landowners to allow abandonment-in-place of the collection system cabling upon decommissioning.

9.0 EARTHWORK AND TOPSOIL RESTORATION

With all of the aboveground and surface components removed, all that would remain in the decommissioning of the Minonk WECS would be the necessary earthwork and topsoil restoration to return the areas occupied by the project improvements to as near as practicable the same condition that existed prior to construction of the WECS. Soil replacement will be of a soil type compatible with the soil which existed prior to the project. Per the calculations in Exhibit E, it is estimated that approximately 27,417 CY earthwork and 27,417 CY of topsoil restoration will be required. Based upon experience with earthwork activities and bid amounts received on prior projects, the following estimate is provided for the earthwork and topsoil restoration needed at the conclusion of the decommissioning of this project:

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Unit Cost</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earthwork</td>
<td>27,417</td>
<td>$17.00/C.Y.</td>
<td>$466,089</td>
</tr>
<tr>
<td>Topsoil Restoration</td>
<td>27,417</td>
<td>$20.25/C.Y.</td>
<td>$555,194</td>
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<tr>
<td><strong>Totals</strong></td>
<td></td>
<td></td>
<td><strong>$1,021,283</strong></td>
</tr>
</tbody>
</table>

10.0 REMOVAL OF THE SUBSTATIONS

Substation Construction and Decommissioning

As per previous reports, no consideration is given to the decommissioning costs or salvage value of the substations. The project consists of two substations, a collection substation owned by the Minonk WECS that is located on property owned by Minonk WECS and an interconnection substation owned by Commonwealth Edison that is located on property owned by Commonwealth Edison. It is noted that if the
substations were to be included in the analysis it would lower the overall
decommissioning total as the salvage value of the substation equipment exceeds the
decommissioning costs.

11.0 SALVAGE VALUE

The G90/2.0MW 50/60Hz wind turbines, as manufactured by Gamesa Eolica,
include salvageable steel components of approximately 283 Tons in weight per wind
turbine. Based upon research into the current scrap steel market, it is estimated that
the scrap steel can currently be salvaged at a rate of $175 per Ton. As a result, the
salvage value assigned to each wind turbine for this report is $49,525 per turbine.
With a total of 100 wind turbines on this project, the total estimated salvage value
with consideration for scrap steel value only is $4,952,500.

12.0 SUMMARY OF DECOMMISSIONING COSTS

The following summary represents the total decommissioning cost less any
salvage value for the WECS:

DECOMMISSIONING COSTS:
Turbine Removal $ 8,611,800
Turbine Foundation Removal $ 2,024,700
Access Roadway Removal $ 1,487,393
Crane Pad Removal $ 0
Cable Removal $ 0
Earthwork & Topsoil $ 1,021,283
Subtotal $13,145,176

SALVAGE VALUE:
Turbine Salvage $ 4,952,500
(100 Turbines x $49,525/turbine)

DECOMMISSIONING LESS SALVAGE: $ 8,192,676
Total Decommissioning Cost per Turbine (100) Approx. $81,926 / Turbine

13.0 FINANCIAL ASSURANCE

Financial assurance in an amount sufficient to adequately perform the required
decommissioning per this plan and all local, state, and federal environmental
regulations will be secured by Minonk Wind, LLC. The mechanism for financial
assurance should be either a corporate guarantee, letter of credit, bond, or insurance policy. At the time financial assurance documents are provided, the triggering events for decommissioning and the procedures for the County to access the financial assurance for that purpose should be identified. The financial assurance should further provide that the terms of the Decommissioning Plan be binding upon Minonk Wind, LLC and any successors, assigns, or heirs; and that the County will have access to the site, pursuant to reasonable notice, to effect or complete the decommissioning, if required.

14.0 CONCLUSION

I certify that this report is an accurate representation of the anticipated decommissioning costs (including salvage values) and was prepared in accordance with industry standard of good engineering principals and contains no intentional false statements or misrepresentations.

Signed:  
Paul D. Ertmer, P.E.
Exhibits
Exhibit A
Minonk Wind, LLC
Location Map
Exhibit B
Technical Summary
G90/2.0 MW 50/60 Hz Wind Turbine
RFI RESPONSE.

Request Date 05/10/2012
Response Date 05/17/2012
Created by Carlos Noe Del Angel Prior
Authorized by Mario A. Diaz
In response to RFI 034 WTG Component Weights 120425_OUT – Mortenson
Project Minonk
Subject G90 100m Turbine Specifications
Documents Included Original RFI from Mortenson

In response to your Request For Information in regards to the Main Components Data. I must inform you that according to the Documents

OP085418-en Rev:0
OP085405-en Rev:0
OP085382-en Rev:0
GD003664-en Rev:11
GD056122-R0

Tower Section Specifications:

<table>
<thead>
<tr>
<th>SECTION</th>
<th>GP Number</th>
<th>WEIGHT (kgs)</th>
<th>LENGTH (mm)</th>
<th>CG (Distance from Lower Flange) (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top</td>
<td>GP050476</td>
<td>51676</td>
<td>24367</td>
<td>15407</td>
</tr>
<tr>
<td>Upper Mid</td>
<td>GP050474</td>
<td>43632</td>
<td>23822</td>
<td>10847</td>
</tr>
<tr>
<td>Mid</td>
<td>GP050472</td>
<td>43620</td>
<td>16980</td>
<td>7161</td>
</tr>
<tr>
<td>Lower Mid</td>
<td>GP050470</td>
<td>53732</td>
<td>16961</td>
<td>7956</td>
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<tr>
<td>Base</td>
<td>GP050468</td>
<td>64155</td>
<td>15644</td>
<td>7191</td>
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Nacelle Specifications:

<table>
<thead>
<tr>
<th>Generator</th>
<th>Transformer (kVA)</th>
<th>Total Weight (kg)</th>
<th>Center of Gravity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>±500</td>
<td>Xcg(mm) ±50</td>
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<tr>
<td>Low Temp.</td>
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<td></td>
</tr>
<tr>
<td>ABB</td>
<td>&gt;30</td>
<td>72941</td>
<td>502</td>
</tr>
<tr>
<td>Other</td>
<td>&gt;30</td>
<td>73941</td>
<td>541</td>
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</table>
### Rotor

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diameter</td>
<td>90 m</td>
</tr>
<tr>
<td>Swept area</td>
<td>6,362 m²</td>
</tr>
<tr>
<td>Rotational speed</td>
<td>9.0 - 19.0 rpm</td>
</tr>
<tr>
<td>Rotational direction</td>
<td>Clock Wise (front view)</td>
</tr>
<tr>
<td>Weight (incl. Hub)</td>
<td>Approx. 36 T</td>
</tr>
<tr>
<td>Top head mass</td>
<td>Approx. 106 T</td>
</tr>
</tbody>
</table>

### Blades

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of blades</td>
<td>3</td>
</tr>
<tr>
<td>Length</td>
<td>44 m</td>
</tr>
<tr>
<td>Airfoils</td>
<td>DU (Delft University) + FFA-W3</td>
</tr>
<tr>
<td>Material</td>
<td>Preimpregnated epoxy glass fiber + carbon fiber</td>
</tr>
<tr>
<td>Total blade weight</td>
<td>5,800 kg</td>
</tr>
</tbody>
</table>

### Tubular Tower

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modular type</td>
<td>Height</td>
</tr>
<tr>
<td>3 sections</td>
<td>67 m²</td>
</tr>
<tr>
<td>4 sections</td>
<td>78 m</td>
</tr>
<tr>
<td>5 sections</td>
<td>100 m</td>
</tr>
<tr>
<td>Weight</td>
<td>153 T</td>
</tr>
<tr>
<td>203 T</td>
<td></td>
</tr>
<tr>
<td>255 T</td>
<td></td>
</tr>
</tbody>
</table>

* Available depending on the site

### Gearbox

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>1 planetary stage / 2 parallel stages</td>
</tr>
<tr>
<td>Ratio</td>
<td>1:100.5 (50 Hz)</td>
</tr>
<tr>
<td></td>
<td>1:120.5 (60 Hz)</td>
</tr>
<tr>
<td>Cooling</td>
<td>Oil pump with oil cooler</td>
</tr>
<tr>
<td>Oil heater</td>
<td>2.2 kW</td>
</tr>
</tbody>
</table>

### Generator 2.0 MW

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Doubly-fed machine</td>
</tr>
<tr>
<td>Rated power</td>
<td>2.0 MW</td>
</tr>
<tr>
<td>Voltage</td>
<td>690 V ac</td>
</tr>
<tr>
<td>Frequency</td>
<td>50 Hz / 60 Hz</td>
</tr>
<tr>
<td>Protection class</td>
<td>IP 54</td>
</tr>
<tr>
<td>Number of poles</td>
<td>4</td>
</tr>
<tr>
<td>Rotational speed</td>
<td>900:1,900 rpm (rated 1,680 rpm) (50 Hz)</td>
</tr>
<tr>
<td></td>
<td>1,080:2,280 rpm (rated 2,016 rpm) (60 Hz)</td>
</tr>
<tr>
<td>Rated Stator Current</td>
<td>1,500 A @ 690 V</td>
</tr>
<tr>
<td>Power factor (standard)</td>
<td>0.98 CAP - 0.96 IND at partial loads and 1 at nominal power.*</td>
</tr>
<tr>
<td>Power factor (optional)</td>
<td>0.95 CAP - 0.95 IND throughout the power range.*</td>
</tr>
</tbody>
</table>

* Power Factor at generator output terminals, at low voltage side before transformer input terminals.

### Mechanical design

Drive train with main shaft supported by two spherical bearings that transmit the side loads directly to the frame by means of the bearing housing. This prevents the gearbox from receiving additional loads, reducing malfunctions and facilitating its service.

### Brake

Aerodynamic primary brake by means of full-feathering blades. In addition, a hydraulically-activated mechanical disc brake for emergencies is mounted on the gearbox high speed shaft.

### Lightning protection

The Gamesa G90-2.0 MW wind turbine generator uses the "total lightning protection" system, in accordance with standard IEC 61024-1. This system conducts the lightning from both sides of the blade tip down to the root joint and from there across the nacelle and tower structure to the grounding system located in the foundations. As a result, the blade and sensitive electrical components are protected from damage.

### Control System

The Generator is a doubly fed machine (DFM), whose speed and power is controlled through IGBT converters and PWM (Pulse Width Modulation) electronic control. **Benefits:**

- Active and reactive power control.
- Low harmonic content and minimal losses.
- Increased efficiency and production.
- Prolonged working life of the turbine.

### Gamesa SCADA System

Gamesa SCADA System and its new generation Gamesa WindNet® (wind farm control systems), developed by Gamesa, that allow real-time operation and remote control of wind turbines, meteorological mast and electrical substation via satellite-terrestrial network. Modular design with control tools for active and reactive energy, noise, shadows and wake effects. TCP/IP architecture with a Web interface.

### SMP Predictive Maintenance System

Predictive Maintenance System for the early detection of potential deterioration or malfunctions in the wind turbine's main components. **Benefits:**

- Reduction in major corrective measures.
- Increase in the machine's availability and working life.
- Preferential terms in negotiations with insurance companies.
- Integration within the control system.
Noise control
Aerodynamic blade tip and mechanical component design minimize noise emissions. In addition, Gamesa has developed the Gamesa NR5® noise control system, which permits programming the noise emissions according to criteria such as date, time or wind direction. This achieves the goals of local regulation compliance as well as maximum production.

Grid connection
Gamesa's doubly-fed wind turbines and Active Crowbar and over sized converter technologies ensure the compliance with the most demanding grid connection requirements.
Low voltage ride-through capability and dynamic regulation of active and reactive power.

Power Curve Gamesa G90-2.0 MW
(for an air density of 1.225 kg/m³)

Power curve calculation based on DU (Delft University) and FFAW3 airfoils.
Calculation parameters: 50 Hz grid frequency; tip angle pitch regulated; 10% turbulence intensity and a variable rotor speed ranging from 9.0-19.0 rpm.
**CERTIFICADO TIPO TYPE CERTIFICATE**

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<tr>
<th>CÓDIGO:</th>
<th>GDD014620</th>
<th>REV: 01</th>
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<td>AUTOR/AUTOR:</td>
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<td>REVISADO/CHECKED:</td>
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<tr>
<td>APROBADO/APPROVED:</td>
<td>MBR</td>
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**INDICE / INDEX**

1 DECLARACIÓN DE CONFORMIDAD DE LA EVALUACIÓN DE DISEÑO ................................................ 2

1 STATEMENT OF COMPLIANCE FOR THE DESIGN ASSESSMENT .................................................. 2

**REGISTRO DE CAMBIOS/ RECORD OF CHANGES**

<table>
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<tr>
<th>Rev.</th>
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<th>Autor/ Author</th>
<th>Descripción</th>
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<td>ICM</td>
<td>Emisión inicial del Certificado de GL Wind Nr. WT 00-013A-2006 (5 05.06) de la Evaluación de Diseño para el Aerogenerador G90 EN IIIA 67, 78&amp;100 m (50/60 Hz)</td>
<td>Initial submission of the GL Wind's Statement of Compliance of the Design Assessment Nr. WT 00-013A-2006 (5 05.06) for the G90 EN IIIA 67, 78&amp;100 m Wind Turbine (50/60 Hz)</td>
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<td>30/08/06</td>
<td>ICM</td>
<td>Corrección de error en Certificado del &quot;cut cut wind speed&quot; (página 1/5 en Certificado-Main data.)</td>
<td>Correction of the mistake in Certificate of &quot;cut out wind speed&quot; (page 1/5 in Certificate-Main data).</td>
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Declaración de Conformidad de la Evaluación de Diseño

Statement of Compliance

GL Wind Statement No. WT 00-013A-2006, Revision 1

This Statement of Compliance for the Design Assessment of the Wind Turbine

Gamesa Eólica G90-2.0 MW 50 Hz / 60 Hz

is issued to

Gamesa Eólica S.A.
Ptoq. de Aguacete, calle A, sn
31013 Pamplona, Navarra, Spain.

This statement attests the compliance with the normative references given in the attached Annex concerning the design. The Design Assessment is based on the calculations and fabrication drawings listed in the relevant Certification Reports referenced below and the characteristic data given in the attached Annex.

Certification Report numbers and titles:
- 72065-1, Rev. 2 dated 20.01.2006 Load Assumptions according to EN 61400-1, class IIIA
  hub heights 67 m, 78 m and 100 m
- 72065-1, Rev. 2, Suppl. 1 dated 20.01.2006 Load Assumptions according to EN 61400-1, class IIIA
  hub heights 67 m, 78m and 100 m, 60 Hz version
- 72065-2, Rev. 2 dated 20.01.2006 Safety and Control System
- 72065-3, Rev. 1 dated 06.02.2006 Rotor Blade Gamesa Eólica 44.0 m
- 72065-4, Rev. 2 dated 06.05.2006 Machinery Components
- 72065-5, Rev. 1 dated 20.01.2006 Tubular Steel Tower, hub heights 67 m and 78 m,
  EN class IIIA
- 72065-5, Rev. 1, Suppl. 1 dated 20.01.2006 Tubular Steel Tower, hub height 78 m, modified tower,
  EN class IIIA
- 72065-5 dated 04.04.2006 Tubular Steel Tower, hub height 100 m (STDC), EN class IIIA
- 72065-6, Rev. 1 dated 27.10.2005 Electrical Equipment
- 72065-8 dated 18.08.2005 Commissioning

Changes in design are to be approved by Germanischer Lloyd WindEnergie GmbH, otherwise this statement loses its validity.

Hamburg, 27th June 2006

NHi

Germanischer Lloyd
# Statement of Compliance

## Annex

GL Wind Statement No. WT 00-013A-2006, Revision 1

## Normative references


## Technical specifications for Gamesa Eólica G90-2.0 MW

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## Statement of Compliance

### Annex

GL Wind Statement No. WT 08-013A-2006, Revision 1

### Blade

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**alternative 1**

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**alternative 2**

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<td>Ratio</td>
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</tbody>
</table>
Statement of Compliance

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27th June 2006

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Mechanical brakes
No. of callipers: 3
Position: High speed shaft of main gear
Manufacturer: Brembo
Type: P2.1.44
alternative
Manufacturer: Eurotubi

Connections
Main shaft - gearbox, type: Shrink disc, Stüwe HSD 530-23
alternative
Main shaft - gearbox, type: Shrink disc, SKF CKCK 530
Gearbox-generator, type: Composite coupling, VK420
alternative
Gearbox-generator, type: KTR, RADEX-N 165

Generator
Manufacturer, type: INTEGRAL, TAR-500 L/4
Rated power: 2000 kW
Rated frequency: 50 Hz
Rated speed: 1500 rpm
Insulation class: H/H
Degree of protection (IEC529): IP 54

alternative 1
Manufacturer, type: ABB, AMK500L4A BATYH
Rated power: 2000 kW
Rated frequency: 50 Hz
Rated speed: 1500 rpm
Insulation class: F
Degree of protection (IEC529): IP 54

alternative 2
Manufacturer, type: Cantarey Reinoso S.A., CR 20
Rated power: 2000 kW
Rated frequency: 50 Hz
Rated speed: 1500 rpm
Insulation class: F
Degree of protection (IEC529): IP 54

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Annex

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27th June 2006

alternative 3
Manufacturer, type
Winergy AG, JFRA-500MQ-04A
Rated power
2000 kW
Rated frequency
50 Hz
Rated speed
1500 rpm
Insulation class
F
Degree of protection (IEC529)
IP 54

alternative 4
Manufacturer, type
INDAR, TAR-500 L/4
Rated power
2000 kW
Rated frequency
60 Hz
Rated speed
1800 rpm
Insulation class
H/H
Degree of protection (IEC529)
IP 54

alternative 5
Manufacturer, type
Cantarey Reinosa S.A., CR 20
Rated power
2000 kW
Rated frequency
60 Hz
Rated speed
1800 rpm
Insulation class
F
Degree of protection (IEC529)
IP 54

Electrical Converter
Type
INGECON W
Manufacturer
INGETEAM

alternative
Type
DTC 50, 50 Hz / 60 Hz, ACS800-67
Manufacturer
ABB

PLC
Hardware
SISTEAM A
Software
INGETEAM

alternative
Hardware
Phoenix Contact, RFC 430 ETH-IS
Software
Phoenix Contact
Statement of Compliance

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Main frame
Type: Cast, monocoque construction
Material: EN-GJS 400-18U-LT
Drawing No.: GP000135 R0/R4, GP000045 R0

Yaw drive
Type: 4 yaw drives, slide block system with friction bearing
Manufacturer: Bonfiglioli Trasmital / Gamesa Eólica

Yaw gear
Manufacturer: Gamesa Eólica
Drawing No.: GP000245 R0

Tower
Tubular steel towers for EN class IIIA with drawing No.: Hub height 87 m: GD004678, Rev. 1, dated 02.03.2005
Hub height 78 m: GD004886, Rev. 1, dated 10.02.2005
Hub height 78 m (modified tower): GD008956, Rev. R0, dated 02.09.2005
Hub height 100 m: GD007542, Rev. 2, dated 16.02.2005

Foundation
Is not part of the assessment

Safety system
The turbine is equipped with both mechanical and aerodynamic brakes. The turbine has an independent emergency circuit which will be activated by an overspeed situation.

Controller
Gamesa Eólica G90-2.0 MW control system

End of Annex

Germanischer Lloyd
Exhibit C
Foundation Designs for
G90 Wind Turbine
FOUNDATION DESIGN LOADS
SCALE: 1/8" = 1'

DESIGN CRITERIA
1. FOUNDATION DESIGN LOADS
   EXTREME CHARACTERISTIC LOADS (UNFACTORED) LOCATED AT THE BOTTOM OF THE TOWER BASE FLANGE:
   - P = 777.3 kips (3,492.9 kN)
   - V = 781.1 kips (3,492.9 kN)
   - M = 92.25 kips-k (65,244.1 kN-m)

2. ESTIMATED STRUCTURAL MATERIAL QUANTITIES
   a. BASE CONCRETE: 462.0 cu. yds. (380.8 m³)
   b. PEDESTAL CONCRETE: 27.7 cu. yds. (22.3 m³)
   c. LEAF CONCRETE: 18.1 cu. yds. (14.4 m³)
   d. STEEL REINFORCEMENT (GRADE 60):
      - 0.004 in. (0.104 mm)
   e. STEEL REINFORCEMENT (GRADE 75):
      - 0.0025 in. (0.064 mm)

   NOTE: ESTIMATED MATERIAL QUANTITIES DO NOT INCLUDE ANY MATERIAL REQUIRED FOR INSTALLATION PURPOSES (STANDARDS, TOWELS, ETC.)

3. STRUCTURAL MATERIAL PROPERTIES
   a. BASE CONCRETE STRENGTH (28-DAY):
      - 5,000 psi (34.5 MPa)
   b. POZI CONCRETE STRENGTH (28-DAY):
      - 6,000 psi (41.4 MPa)
   c. LEAF CONCRETE STRENGTH (3-DAY):
      - 2,500 psi (17.2 MPa)
   d. CIRCUIT STRENGTH (28-DAY):
      - 13,750 psi (93.9 MPa)
   e. STEEL REINFORCEMENT (MINIMUM):
      - GRADE 60 (414 KSI)
   f. EMBEDMENT PLATE (A325):
      - 1/8", GRADE 8
   g. ANCHOR BOLT (A325):
      - 1/2", GRADE 8
   h. CONCRETE DENSITY RANGE:
      - 145 TO 150 PCF

4. GEOtechnical CONDITIONS
   a. MIN. NET ALLOWABLE BOREHOLE CAPACITY (1/2 - 3/8):
      - 3,000 PSI
   b. MIN. ALLOWABLE DISTANCE FROM TOP OF GRADE TO GROUNDWATER:
      - 10.0 FT.
   c. MIN. COMPACTION DRY BULK DENSITY:
      - 95 PCF
   d. MAX. COMPACTED WET BULK DENSITY:
      - 140 PCF

CONFIDENTIAL. THIS DRAWING IS THE PROPERTY OF RENEWABLE RESOURCE CONSULTANTS, LLC AND GAMESA ENERGY, LLC, AND NO REPRODUCTION MAY BE MADE IN WHOLE OR IN PART WITHOUT WRITTEN CONSENT.
BASE TOP REINFORCEMENT PLAN

SCALE: 3/16" = 1'

ANCHOR BOLTS
20 #8 EXTENDING TO FOUNDATION
END BARS: 0'-6" SPACING OUTER
RADIAL BARS

7/8" - 4'-0" LENGTH (TYP.)

BASE BOTTOM REINFORCEMENT PLAN

SCALE: 3/16" = 1'

#5 Bars
GRADE 75

NOTES:
1. REINFORCEMENT LAYOUT AND SPACING SHOWN IN ONE DIRECTION ONLY FOR
   CLARITY. FINAL REINFORCEMENT SHALL BE PLACED EACH WAY.

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3. TESTING AGENCY SHALL PROVIDE AIR AND WATER TESTING FOR FIRST THREE (3) PROCESSES BEGUN EACH DAY TO DETERMINE THAT PLANT COMPLIES & BEFORE THIS COMPLETION.

P. CONCRETE PLUGGED TESTS SHALL BE PERFORMED ON FIRST DAY OF EACH 12" ADJACENT MORTAR PLUGS, WITH ADJACENT MORTAR PLUGS STORED IN A WATER CEMENT MIXTURE WITH THEᵉᵗ UIPickerViewATÓS OF THE ADJACENT IS ALLOWED TO BE USED.

C. THE STRENGTH OF CONCRETE WILL BE CONSIDERED SATISFACTORY WHEN:

1. ALL TESTS OF A SET OF THREE CONCRETE COURT LAYOUT AS CEMENT-ADHESIVE MIXTURE IS PERFORMED IN ACCORDANCE WITH THE REQUIREMENT OF CEMENT-ADHESIVE MIXTURE OF 500 FT.

2. THE MODULUS STRENGTH TEST RESULTS shall be to the nearest 10% of the concrete's capability.

3. GROUT TESTS shall be performed according to the following:

A. FOR DRY COLLECTS, COMPRESSIVE STRENGTH shall be tested in accordance with AASHTO D-216.

B. FOR CEMENT BASED ADHESIVES, COMPRESSIVE STRENGTH shall be tested in accordance with AASHTO D-216.

C. TESTING AGENCY SHALL ISSUE CERTIFICATE FOR COMPRESSIVE STRENGTH TEST RESULTS ACCORDING TO AASHTO D-216. THE CERTIFICATE shall be tested at THE FOLLOWING TIMES:

1. ONE (1) MONTH FROM ADHESIVE PLANT RECEIPT.

2. UNLESS PRIOR TO RETENTION OF MORTAR AND JOINT.

3. TEST TO TAKE PLACE ON ACTUAL MATERIAL.

3. THERE IS SOME CORROSION (IF TESTED ONLY IF NEEDED).

3.1.1 AT LOCATION WHERE STRUCTURAL ACTIVITY IS REQUIRED AFTER THE INSTALLATION, THE TESTING AGENCY SHALL TEST CONSERVATION PARCEL BY PARCEL FROM TOP TO BOTTOM.

ANCHOR BOLT POST-TENSION MOUNTING GUIDELINES:

AV1. THE FOLLOWING CONSIDERATION SHALL POST-TENSION MOUNTING GUIDELINES AND PROCEDURE shall be followed:

A. DETERMINATION OF THE VIBRATION ON THE LENGTH OF EACH TENSION FLEXURE CABLE IS USING THE EQUAL NUMBER OF BOLTS PER CYCLE WITH THE FOLLOWING PROVISIONS:

1. ALL BOLTS AT EACH POST-TENSION FLEXURE CABLE SHAL BE CHECKED AT THE FOLLOWING TIMES:

2. 1 MONTH AFTER TENSIONING (SEVEN DAYS).

3. 12 MONTHS AFTER TENSIONING (SEVEN DAYS).

4. 2 YEARS OR MORE.

5. ALL BOLTS VERSATILE.

6. TENSION IS REPEATED EVERY 30 FEET POST-TENSION VALVE ON THE LEAST WATTS IN THE CYCLE. ALL WATTS WILL BE TIGHTENED.}<

AV2. A POST-TENSION VALVE SHALL BE USED FOR THE FOLLOWING TIMES:

1. DETERMINATION OF THE VIBRATION ON THE LENGTH OF EACH TENSION FLEXURE CABLE IS USING THE EQUAL NUMBER OF BOLTS PER CYCLE WITH THE FOLLOWING PROVISIONS:

2. 1 MONTH AFTER TENSIONING (SEVEN DAYS).

3. 12 MONTHS AFTER TENSIONING (SEVEN DAYS).

4. 2 YEARS OR MORE.

5. ALL BOLTS VERSATILE.

6. TENSION IS REPEATED EVERY 30 FEET POST-TENSION VALVE ON THE LEAST WATTS IN THE CYCLE. ALL WATTS WILL BE TIGHTENED.>
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### Notes:
1. Overdesign and replace with structural fill as described in the foundation design specifications.
2. Coordinate ground improvement requirements with geotechnical engineer of record.

---

**Foundation Locations**

- **Foundation Type:** R1
- **Foundation Size:** 100' x 100'
- **Foundation Method:** piles

---

**Project Information**

- **Project Name:** M91
- **Owner:** Gamea Energy, LLC
- **Architect:** REWIND Consulting, LLC
- **Engineer:** WOODFORD COUNTY ENGINEERING, INC.
- **Drawn By:** T. Kinnel
- **Checked By:** M. RDF
- **Project #:** 112241
- **Scale:** 1/80"=1'-0"
Exhibit D
Access Roadway Details
Exhibit E
Access Roadways Lengths / Construction
Material Requirements
Area of Access Roadways

\[ \text{Area}_{AR} = \text{Length} \times \text{Width} \]
Length of Access Roadways = 138,800 feet
Width of Access Roadways = 16 feet
\[ \text{Area}_{AR} = 138,800 \text{ feet} \times 16 \text{ feet} = 2,220,800 \text{ S.F.} \ (246,756 \text{ S.Y.}) \]

Cement Stabilized Subgrade

Area of Stabilization = Area of Access Roadway
\[ \text{Area}_{ST} = 246,756 \text{ S.Y.} \]

Pit-Run Gravel

Volume of Pit-Run = (Area of Access Roadway) \times (Depth of Pit-Run)
\[ \text{Volume}_{PR} = 246,756 \text{ S.Y.} \times 2 \text{ inches (yd/36 inches)} = 13,709 \text{ C.Y.} \]

Crushed Gravel

Volume of Crushed Gravel = (Area of Access Roadway) \times (Depth of Crushed Gravel)
\[ \text{Volume}_{CG} = 246,756 \text{ S.Y.} \times 2 \text{ inches (yd/36 inches)} = 13,709 \text{ C.Y.} \]

Earthwork and Topsoil (Each)

Volume = Area \times Depth
\[ \text{Volume} = 246,756 \times 4 \text{ inches (yd/36 inches)} = 27,417 \text{ C.Y.} \]
Exhibit F
Cable Wire and Trench
Construction Details
MEDIUM VOLTAGE CABLE
*One foot of trench length equals three feet of buried cable due to triplexed configuration

<table>
<thead>
<tr>
<th>Total Trench Length by Cable</th>
<th>L(m)</th>
<th>L(ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRXLP Cable</td>
<td>84,533</td>
<td>277,268</td>
</tr>
</tbody>
</table>

GROUND CABLE

<table>
<thead>
<tr>
<th>Cable</th>
<th>L(m)</th>
<th>L(ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/O Bare Copper Cable</td>
<td>84,533</td>
<td>277,268</td>
</tr>
</tbody>
</table>

FIBER OPTIC CABLE

<table>
<thead>
<tr>
<th>Cable</th>
<th>L(m)</th>
<th>L(ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multimode 62.5/125 um Fiber</td>
<td>57,301</td>
<td>187,949</td>
</tr>
</tbody>
</table>
GENERAL NOTES:
1. CABLES SHALL BE PLACED IN A MINIMUM 6" BEDDING CONSISTING OF ROCK-FREE MATERIAL, WHICH IS DEFINED AS NATIVE BACKFILL, THAT PASSES THROUGH A ¾" SCREEN.
2. SOIL SHALL BE COMPACTED TO A MINIMUM OF 90% STANDARD PROCTOR IN A MINIMUM 12" LIFT. TRENCH COMPACTING TESTING SHALL BE PERFORMED EVERY 500'
3. ALL FIBER SHALL BE 12-PER BEND IN 1 ½" INNER DUCT.
4. CABLE DEPTH SHALL NOT BE LESS THAN 48" FROM TOP OF CABLE TO SURFACE.
5. ALL CONDUITS SHALL BE SOL-40 HDPE OR 50XL 46 PVC RATED AT 90°C SUITABLE FOR DIRECT BURIAL.
6. USE HEAVY DUTY TIE WRAPS AS REQUIRED TO MAINTAIN TRENCH BUNDLE CONFIGURATION. ENSURE THAT TIE WRAPS ARE STRONG ENOUGH TO WITHSTAND BACKFILLING.
7. RUN A CONTINUOUS RED POLYETHYLENE WARNING TAPE 18" ABOVE EACH CIRCUIT IN THE TRENCH.
8. ANY EXTRA EXCAVATED MATERIAL AND SOL-40 REMOVED FROM THE TRENCH SHALL BE PROPERLY UTILIZED ELSEWHERE ON THE PROJECT INTO OR VARYING AWAY AND PROPERLY DISPOSED OF.
9. TYPE AND SIZE OF MEDIUM VOLTAGE CABLES TO BE INSTALLED BETWEEN TOWERS IS SPECIFIED IN MW-24-63.
10. SEE DRAWING MW-24-55 FOR MET TOWER TRENCH DETAIL.
GENERAL NOTES:

1. CABLES SHALL BE PLACED IN A MINIMUM 24" BEDDING CONSISTING OF ROCK, FREE NATIVE BACKFILL, SEE NOTES 1 & 2.
2. 350V CABLES SEE NOTE 4.
4. ROCK, FREE NATIVE BACKFILL, SEE NOTES 1 & 2.
5. NATIVE TOP SOIL.
6. UNSCREENED, EXCAVATED MATERIAL.
7. 20 COPPERWELD GROUND.
8. 6" BEDDING SEE NOTE 1.
9. 18" MIN.
10. 12'-0".

FIVE CABLE TRENCH

CABLE TRENCH DETAILS

1. CABLES SHALL BE PLACED IN A MINIMUM 24" BEDDING CONSISTING OF ROCK, FREE NATIVE BACKFILL, SEE NOTES 1 & 2.
2. 350V CABLES SEE NOTE 4.
4. ROCK, FREE NATIVE BACKFILL, SEE NOTES 1 & 2.
5. NATIVE TOP SOIL.
6. UNSCREENED, EXCAVATED MATERIAL.
7. 20 COPPERWELD GROUND.
8. 6" BEDDING SEE NOTE 1.
9. 18" MIN.
10. 12'-0".
GENERAL NOTES:
1. ROCK-FREE MATERIAL IS DEFINED AS NATIVE BACKFILL WHICH PASSES THROUGH A #4 SCREEN.
2. SOIL SHALL BE COMPACTED TO A MINIMUM OF 90%.
3. ALL FIBER SHALL BE 12-FIBER SINGLE MODE IN 1 1/4" INNERDUCT.
4. "TOP OF CABLES SHALL BE BURIED A MINIMUM OF 48" BELOW SURFACE.
5. CIRCUITS 1 & 2 CROSS OVER CIRCUIT 3.
6. CIRCUIT 4 CROSS OVER CIRCUIT 5.
NOTE:

1. Minimum crossing depth is to be 6 feet measuring from lowest point of row.
2. conduit sizes shall be 2½" RCH 40 PVC or RCH rated at 90°F suitable for direct burial.
3. conduit to extend no less than 3' from edge of right of way on both sides of road.
4. for multiple bores at rd crossings spacing between all sleeves should be a min of 12.
5. boring pits shall be located via GPS coordinates and a marker ball.
6. boring pit shall be seeded for splice and conduit entry.
7. contractor to make smooth transition from buried cable to conduit.
8. all road crossings shall conform to applicable permits.
9. Must erect permanent markers or appropriate signs at all places where cable crosses right of way.
10. Cable parallel to local road right-of-way must be at least 25' outside of right-of-way for Woodford County roads and at least 15' for all other township and county roads.