

OAH No. 3-2500-21662-2, MPUC Dkt No. IP6701/WS-08-1233

**STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS
FOR THE MINNESOTA PUBLIC UTILITIES COMMISSION**

**IN THE MATTER OF THE APPLICATION BY AWA GOODHUE WIND, LLC
FOR A SITE PERMIT FOR A LARGE WIND ENERGY CONVERSIONS SYSTEM FOR A 78 MW
WIND PROJECT IN GOODHUE COUNTY**

DIRECT TESTIMONY

OF

MARK WARD

MESA POWER GROUP, LLC

ON BEHALF OF

AWA GOODHUE, LLC

JANUARY 28, 2011

DIRECT TESTIMONY OF MARK WARD
TABLE OF CONTENTS

1 I. INTRODUCTION AND QUALIFICATIONS 1
2 II. OVERVIEW AND SUMMARY OF AWA GOODHUE DIRECT TESTIMONY 1
3 III. PROJECT OVERVIEW 3
4 IV. PROJECT REGULATORY APPROVALS; DEVELOPMENT OF COUNTY
5 STANDARDS 4
6 V. GOOD CAUSE. 9
7 VI. CONCLUSION 13

1 **BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION**

2 **DIRECT TESTIMONY OF MARK WARD**

3 **I. INTRODUCTION AND QUALIFICATIONS**

4 **Q: Please state your name and business address.**

5 A: My name is Mark Ward and my business address is 8117 Preston Road, Suite 260,
6 Dallas, Texas 75225. I am testifying on behalf of AWA Goodhue, LLC (AWA Goodhue), the
7 applicant in this proceeding.

8 **Q: By whom are you employed and what is your position?**

9 A: I am employed by Mesa Power Group, LLC. I manage Mesa Power Group along with
10 my colleague Cole Robertson.

11 **Q: Please summarize your educational background and professional experience.**

12 A: I have a Bachelor of Science in Mechanical Engineering from the University of Alabama,
13 and I have also completed graduate studies towards a Master's Degree in Engineering
14 Management.

15 I have more than 28 years of professional experience that includes mid- to senior-level
16 management positions at investor-owned electric utilities Tampa Electric Company, Entergy, and
17 TXU. I was also Vice President for the Shaw Group's development business, Shaw Capital. My
18 experience in the power industry spans the last 15 years and includes resource planning,
19 regulatory affairs, business development and asset management.

20 I have served in my current role at Mesa Power since 2007.

21 **II. OVERVIEW AND SUMMARY OF AWA GOODHUE DIRECT**
22 **TESTIMONY**

23 **Q: Please provide an overview of AWA Goodhue's direct testimony in this proceeding.**

1 A: AWA Goodhue will be presenting eight witnesses in its direct testimony. Our testimony
2 will establish that the AWA Goodhue wind project meets or exceeds industry best practices, and
3 would comply with standards that the Minnesota Public Utilities Commission and the Office of
4 Energy Security regularly require of Minnesota wind farms. In addition, our testimony will
5 describe the impacts to our project if the MPUC were to apply the Goodhue County's Wind
6 Energy Conversion System (WECS) Ordinance to this project. Last, our testimony demonstrates
7 why there is good cause for the MPUC not to apply the County's more stringent standards.

8 My own testimony is intended to do two things: (1) provide background information on
9 the project, and (2) discuss why there is good cause not to apply the County's WECS Ordinance.

10 My colleague at Mesa Power, Cole Robertson, will discuss the financial impacts to the
11 project if the Commission were to apply the County's standards to the project, in response to the
12 ALJ's directive in paragraph 5 of the Second Prehearing Order.

13 Next, we present the testimony of Mr. Charles Burdick with National Wind, LLC, a
14 Minnesota-based wind developer retained by AWA Goodhue to complete development of the
15 project. As the person with the primary responsibility for the project's development, Mr.
16 Burdick will address the siting impacts to the project should the MPUC apply the County's
17 standards, also in response to the ALJ's directive in paragraph 5 of the Second Prehearing Order.
18 Mr. Burdick also testifies on the issue of good cause.

19 We also sponsor the testimony of several expert witnesses. Mr. Pete Malamen, an
20 electrical engineer with Consulting Engineers Group, addresses why the County's stray voltage
21 testing requirements are unreasonable. Mr. Tim Casey of HDR Engineering, Inc. (HDR)
22 discusses the noise analysis conducted for the project. Mr. Scott Zilka of HDR discusses the
23 shadow flicker analysis HDR conducted which demonstrates that the project causes only a few

1 hours of shadow flicker per year on nearby residences. Mr. Ronald Peterson of Westwood
2 Professional Services discusses AWA Goodhue's efforts to identify and avoid wetlands, and why
3 the County's WECS Ordinance with respect to wetlands is unreasonable.

4 Finally, Mr. Chris Kalass, a landowner in the project, discusses his participation in the
5 wind project and how application of the County WECS Ordinance would adversely affect him.

6 **III. PROJECT OVERVIEW**

7 **Q: Provide a general description of the project.**

8 A: The project is a 78 MW wind farm in Goodhue County, Minnesota, west of the City of
9 Goodhue and north of the City of Zumbrota. The project as proposed consists of 50 1.5
10 megawatt (MW) GE xle or 1.6 MW GE xle wind turbine generators in such combination as
11 necessary to yield 78 MW. The project will also include gravel access roads, an underground
12 electrical collection system, two permanent meteorological towers, an operation and maintenance
13 facility, two project substations, and step-up transformers at the base of each turbine. We have
14 retained the engineering, procurement and construction services of Minnesota-based contractor
15 Carstensen Contracting, Inc. The capital cost to design and construct the AWA Goodhue project
16 is expected to be \$179 million. An overview depiction of the project is attached to my testimony
17 as AWA Ex. 1-A.

18 In October 2009, the project executed two 39 MW, 20-year power purchase agreements
19 (PPAs) with Northern States Power Company d/b/a Xcel Energy (Xcel Energy). Together, the
20 PPAs represent purchases of the full expected project output. The MPUC approved the PPA's
21 on April 28, 2010 as being consistent with the public interest.

22 The project is structured as a Community Based Energy Development (C-BED) project.
23 As a C-BED project, it is structured so that 51% of the project's gross revenues will flow to

1 Minnesota residents, thereby assuring that the community impacted by the project shares in part
2 of its economic benefits.

3 The project is intended to help Xcel Energy fulfill its obligations under Minnesota's
4 renewable energy policies.

5 **Q: Please describe the project ownership structure.**

6 A: The project was originally developed by National Wind, LLC, a Minneapolis-based wind
7 development company. AWA Goodhue purchased the project's development assets in
8 December 2009. At that time, AWA Goodhue was a special purpose entity owned by the
9 American Wind Alliance, LLC (AWA), a joint venture between Mesa Power Group and General
10 Electric. Subsequently, Mesa Power acquired 100% ownership of AWA. Upon commercial
11 operation, AWA Goodhue will be owned jointly by AWA and Ventem Energy, LLC, an entity
12 comprised of the area residents and landowners who originally invested money in the project.

13 **Q: Describe the relationship between AWA Goodhue and National Wind.**

14 A: Because of National Wind's familiarity with the project as its original developer, AWA
15 Goodhue contracted National Wind to act as the project's primary developer.

16 **IV. PROJECT REGULATORY APPROVALS; DEVELOPMENT OF COUNTY**
17 **STANDARDS**

18 **Q: Please provide a general timeline of the project's regulatory approval process and**
19 **development.**

20 A: The regulatory approval process for this project began in earnest in the fall of 2009 under
21 four separate MPUC dockets.

22 On October 15, 2009, AWA Goodhue filed a certificate of need application, which was
23 accepted as substantially complete on November 30, 2009.

1 On October 19, 2009, AWA Goodhue filed an amended application for a site permit (the
2 original site permit was filed on October 24, 2008).

3 On November 20, 2009, Xcel Energy filed for approval of the two PPAs (using separate
4 dockets for each PPA), which the MPUC approved on April 28, 2010.

5 On May 3, 2010, the MPUC denied a request by Goodhue Wind Truth for a contested
6 case, and on May 6, 2010, the MPUC issued a draft site permit for the project.

7 On July 21-22, 2010, Administrative Law Judge Eric Lipman conducted a public hearing
8 in the City of Goodhue to gather comments from members of the public regarding the project
9 and the conditions in the draft site permit. More than 50 persons testified at the hearing. ALJ
10 Lipman's Summary of Public Testimony is already in the record at edockets document number
11 20109-54181-01.

12 During these periods, the project, primarily through National Wind, continued to work
13 with other affected local, state and federal agencies, including the Federal Aviation
14 Administration, the U.S. Fish & Wildlife Service, the Minnesota Department of Natural
15 Resources, townships, and Goodhue County.

16 **Q: Assuming site permit approval from the MPUC, when would the project intend to**
17 **begin construction?**

18 A: Our PPAs with Xcel Energy require that the project be commercially operable no later
19 than December 31, 2011. We were prepared to begin construction last fall, and were working to
20 finalize project financing. Once the MPUC sent the matter to the OAH for development of a
21 record on the County WECS Ordinance, however, we had to halt that work and focus on the
22 hearing. We are prepared to move forward with engineering, procurement and construction
23 immediately upon securing the MPUC site permit and certificate of need.

1 **Q: How long does it take to physically construct a project like this?**

2 A: Once we have a final permit in hand and can provide our construction contractor with a
3 notice to proceed, it generally takes 6-9 months to construct a project such as this one. Of
4 course, there are many factors which could influence that time-frame, including weather, labor
5 and equipment lead time and availability, etc.

6 **Q: Let's discuss the County's standards. What role did AWA Goodhue play in the**
7 **development of the County standards?**

8 A: Goodhue County has a formal planning advisory commission, comprised of nine
9 members. When a group of landowners began to publicly criticize the project within the County,
10 the planning advisory commission created a subcommittee to look at the issue of wind project
11 development within the County, and in particular to respond to petitions from citizens to adopt
12 specific land use or zoning restrictions aimed at this and possibly other wind projects.

13 National Wind attended most if not all of the subcommittee and planning advisory
14 commission meetings. Although we attended the meetings, we were allowed only limited
15 opportunities to participate in the discussion and none of our recommendations were adopted by
16 the subcommittee. At the time the subcommittee was working on developing recommendations,
17 our understanding was that the ordinance applied only to wind projects 5 MW and below, and
18 not to larger projects such as ours. We regularly communicated that understanding to the
19 subcommittee and planning advisory commission members.

20 **Q: Did the planning advisory commission propose a draft WECS ordinance to the**
21 **County Board?**

1 A: The subcommittee met periodically over several months through August 2010. The
2 subcommittee ultimately developed a draft WECS ordinance, which the planning advisory
3 commission approved with significant amendments on September 28, 2010.

4 **Q: What specifically did the planning advisory commission recommend to the County**
5 **Board?**

6 A: The planning advisory commission recommendations were performance-based, with a
7 focus on protecting against turbine noise and shadow flicker. The recommendation did not
8 include a 10 RD setback for non-participating dwellings. The planning advisory commission
9 presented its draft WECS ordinance to the County Board for approval at the October 5, 2010
10 County Board meeting.

11 **Q: If the planning advisory commission recommendation did not include a 10 RD**
12 **setback, how is that the County ended up adopting a 10 RD setback for non-participating**
13 **landowners?**

14 A: From my discussions with County Commissioners Samuelson and Rehtzigel, there
15 wasn't any specific factual basis for the adoption of a 10 RD setback. Instead, it appears that it
16 was a political compromise on the part of the County Board. Toward the conclusion of the
17 County Board meeting on October 5, Commissioner Samuelson made a motion to amend the
18 WECS ordinance by substituting a 10 RD standard for the performance-based standard proposed
19 by the planning advisory commission.

20 In addition, Commissioner Samuelson subsequently told me that the reason he proposed a
21 10 RD standard is because he thought that the MPUC would never follow or apply it for
22 LWECS. It is my understanding that he also subsequently communicated this to project
23 landowners.

1 **Q: The County adopted its ordinance on October 5, 2010. Prior to that date, how long**
2 **had AWA Goodhue's certificate of need and site permit been pending with the MPUC?**

3 A: National Wind made the original site permit application in October 2008, but the full
4 MPUC permitting process began in earnest in October 2009 after the project filed an amended
5 application. Between the fall of 2009 and October 2010, AWA Goodhue participated in at least
6 six public hearings and meetings conducted as part of the combined certificate of need and site
7 permit processes, including one before an ALJ.

8 During that time, AWA Goodhue spent approximately \$7.5 million developing the
9 project based on the MPUC's General Permit Standards for wind projects..

10 **Q: Did the project interact with the County in other ways during this period?**

11 A: We spent considerable time and resources working with the County, through its Land Use
12 Planning staff, and also with the County Attorney's office, in negotiating and preparing a
13 Development Agreement.

14 Project representatives also met regularly throughout 2010 with County elected officials
15 and officials and staff with the City of Goodhue, the City of Zumbrota, and affected townships to
16 hear and address concerns and interests regarding the project.

17 **Q: What is the Development Agreement?**

18 A: The Development Agreement specifies the commitments made by both AWA Goodhue
19 and the County to assure the project is built to the standards required by the County; it governs
20 matters such as construction standards and practices, public roadway protection and repair,
21 minimum insurance requirements, fees, inspections, etc. The agreement is attached to my
22 testimony as AWA Ex. 1-B.

1 **Q: Is AWA Goodhue still willing to execute and be subject to the Development**
2 **Agreement in its current form?**

3 A: Yes. We assume that if the project goes forward, the Development Agreement will be
4 executed by both parties in its existing form.

5 **V. GOOD CAUSE.**

6 **Q: What is your understanding of what the Commission is looking for on the issue of**
7 **good cause?**

8 A: As the ALJ stated in the Second Prehearing Order, the Commission is interested in the
9 development of a record on the question of the term “good cause” as it appears in Minn. Stat. §
10 216B.081, for the purpose of the parties making recommendations on whether there is good
11 cause not to apply the County’s WECS ordinance to this project.

12 **Q: What is your understanding of what the term good cause means as it is used in the**
13 **statute?**

14 A: I am not a lawyer, but my sense is that it means what it says. If the MPUC believes there
15 are good reasons why it shouldn’t apply the County’s ordinance against this project, then it need
16 not.

17 **Q: Do you have an opinion on whether there is good cause for the MPUC not to follow**
18 **the County’s standards?**

19 A: Yes. I believe there are a number of good reasons why the MPUC should not apply the
20 County’s WECS Ordinance against this project.

21 **Q: What are those reasons?**

22 A: From my perspective, the reasons can be grouped into three categories. The first reason
23 not to apply the County’s more stringent standards is because they are excessive – they don’t

1 regulate the project, they prohibit it. Second, applying the County's standards against our project
2 would be extremely unfair to AWA Goodhue. And third, the MPUC ought not apply the
3 County's standards because they are inherently ill-conceived and inconsistent.

4 **Q: Why is the County WECS Ordinance excessive?**

5 A: It is excessive because the County's WECS Ordinance, if applied against our project,
6 would not just regulate the project to address health and safety concerns, it would prevent us
7 from building the project altogether. The map in AWA Ex. 1-C illustrates the cumulative effect
8 of applying each of the County's more stringent setback standards. As shown on the right side of
9 that map, applying all of the County's setback standards excludes 32,622 acres, or 99.8%, of the
10 project area and would eliminate all 50 of our proposed turbine sites. Application of the County
11 standards not only prevents us from siting any commercial wind project within our project
12 boundary, but it likely prevents construction of a commercial wind project anywhere in Goodhue
13 County.

14 **Q: Why would application of the County ordinance be unfair?**

15 A: What we have done is adhere to and follow the MPUC's existing rules for wind projects
16 in Minnesota. We actively participated in the certificate of need and site permit applications,
17 and spent a tremendous amount of time and money in those processes. The fact is that those
18 processes took far longer than we had expected, and even longer than the amount of time that the
19 statutes allow. But we were familiar with the standards and permit conditions the MPUC applied
20 in site permits for other similar wind projects in Minnesota, and therefore believed we
21 understood the framework for designing, building, and, importantly, permitting a large wind
22 project in Minnesota.

1 You have to remember that the County only passed its ordinance on October 5, 2010,
2 after all MPUC public comment periods had closed and virtually on the eve of when our matter
3 was scheduled before the MPUC for a final vote on the merits. So we trust the MPUC can
4 appreciate our frustration that after spending more than one year in the site permit and certificate
5 of need process, after participating in good faith in a half dozen public meetings and twice as
6 many private meetings with concerned citizens and other stakeholders, and after spending more
7 than \$7.5 million on developing the project, the idea that the MPUC might now deviate from its
8 General Permit Standards and apply wholly different, and prohibitive, setback standards against
9 our project, but not against other wind projects in the state, strikes us as a little more than a bit
10 unfair.

11 **Q: In what ways do you believe the County WECS Ordinance is ill-conceived and**
12 **inconsistent?**

13 A: The ordinance is ill-conceived because it possible that, under the County WECS
14 ordinance, a developer could site turbines using a 10 RD setback but nonetheless still generate
15 significantly more noise than our project's turbines will. This is possible simply by using
16 smaller turbines with shorter rotors. The shorter the rotor diameter, the faster the rotor spins, and
17 the more noise it may generate. Thus, if the County was trying to protect against turbine noise
18 by adopting a 10 RD standard, the approach appears misguided.

19 There are also two glaring inconsistencies within the County's neighboring dwelling
20 setback standard. First, the County ordinance creates separate setbacks for participants and non-
21 participants – requiring a 750 foot setback for participating residences and a 10 RD (2,707 foot
22 in our case) setback for non-participants. By doing so, the County is allowing essentially zero
23 exposure to the non-participants but far greater exposure to participants. This appears to be a

1 disingenuous double-standard. If the County really believes that a 10 RD buffer – over one-half
2 mile for our project – is necessary to protect against perceived health risks from wind turbines, it
3 seems disingenuous on its part to allow any of its residents to be closer than one-half mile,
4 voluntarily or not.

5 A 10 RD setback is also inconsistent with how the County regulates other activities
6 within its borders. The County doesn't ban other commercial activity simply because it has
7 some incidental impact. As we documented in a report prepared by HDR, existing conditions in
8 the County already often exceed the MPCA's noise limits. The County doesn't ban or otherwise
9 prohibit the causes of these noises, however.

10 Second, the County's setback for non-participants treats altogether consistent WECS
11 inconsistently. That is, the setback from non-participating residences for a "non-commercial
12 WECS," a turbine less than 1 MW, is 750 feet. The same setback for a "commercial WECS," a
13 WECS greater than 1 MW, however, is 10 RD, even though there may be no material difference
14 between the two turbines in terms of their impacts. If we consider two similarly-sized turbine
15 models as examples, it seems obvious that there is little to no health or safety justification for a
16 10 RD setback. We know, for instance, that a Gamesa G58/850 wind turbine generator rated at
17 850 kW (0.85 MW) with a rotor diameter of 190.3 feet produces a maximum noise level of 104
18 dBA. Because it is less than 1 MW, it would be considered a "non-commercial WECS" under
19 the County Ordinance, and thus subject only to a 750 foot setback from non-participants. In
20 contrast, a 1 MW Nordic Windpower N1000-59 a rotor diameter of 193.6 feet, produces the
21 same maximum noise level of 104 dBA. Because the Nordic turbine is rated 1 MW, it would be
22 considered a "commercial WECS" under the County Ordinance, and thus subject to a 10 RD
23 (1,936 ft) setback from non-participants.

1 In this example, the Nordic turbine, with just a three foot longer rotor but with the same
2 sound characteristics is required to be setback more than 2.5 times in length and more than 6
3 times the land area than the other turbine. It is difficult to understand the health and safety
4 justification in such a dramatic inconsistency. Indeed, looked at in this manner, the 10 RD
5 setback looks arbitrary.

6 **VI. CONCLUSION**

7 **Q: Does this conclude your testimony?**

8 **A: Yes.**