

**BEFORE THE
PUBLIC SERVICE COMMISSION OF WISCONSIN**

Application of Forward Energy LLC
for a Certificate of Public Convenience and
Necessity to Construct a Wind Electric
Generation Facility and Associated High
Voltage Electric Transmission Lines, to be
Located in Dodge and Fond du Lac Counties

Docket No. 9300-CE-100

DIRECT TESTIMONY OF JOHN L. KASPAR, Ph.D.

1 Q. Please tell the Commissioners your name and occupation.

2 A. My name is John L. or Jack Kaspar. I am an ornithologist by training and
3 professor emeritus at the University of Wisconsin-Oshkosh.

4 Q. Please describe your education and work experience.

5 A. I received three degrees from the University of Wisconsin-Madison. I earned my
6 BA in 1949, majoring in zoology. In 1951, I earned my MA in French and, in 1963, I
7 earned my PhD in animal behavior and graduated as an ornithologist.

8 I started teaching at UW-Madison as a graduate student and full time at UW-
9 Oshkosh in 1961. I continued to teach there for the next three decades.

10 Q. Could you elaborate on your academic and field-work experience?

11 A. For five years at UW-Madison, I taught ornithology with John T. Emlen, and one
12 year with Dean Amadon, as a graduate student. I started teaching at Wisconsin State
13 University-Oshkosh during the fall of 1961, and continued to teach there for the next
14 three decades. During that time I taught Ornithology yearly, built a bird skin collection
15 of over 1,000 specimens, and I am the only surviving member of a small group
16 of people who originated the Oshkosh Bird Club in the 1960s.

17 I am Vice-President of the Cedar Grove Ornithological Research Organization,
18 with which I've been associated since its inception in 1951, spending long periods of time
19 there particularly between 1951-1960, and again from the mid 70s to the present. The
20 Cedar Grove group spends over three months in residence each fall monitoring diurnal
21 and nocturnal migration, focusing on the capture, banding, and mensural data
22 accumulation of captured hawks and owls, and visual migration data of all bird species.
23 Over 150 papers published by Helmut Mueller and various members of the Cedar Grove

1 staff, including me, deal with various aspects of behavioral and physical bird biology,
2 originating from the Cedar Grove research. Among those 150 publications is a critical
3 (*sensu latu*) review in The Wilson Bulletin, of Paul Kerlinger's 1989 book on Strategies
4 of Hawk Migration.

5 From 1967 through 2004, I conducted Breeding Bird Surveys (BBS) for the US
6 Fish and Wildlife Service, and then the US Geological Survey when the jurisdiction
7 changed, in Bayfield County, WI on the 'Bayfield Count' (State Route 91005), and at Sam
8 Robbins' request, the Grandview WI route (St. Route 91004), also in Bayfield County,
9 following the Reverend Mr. Robbins from 1973 to the present.

10 In 1998 my wife and I formed the Kaspar Environmental Assessment, Inc LLC
11 and began 27 consecutive months of monitoring avian activity at the proposed Wind
12 Tower site on the Niagara Ridge and adjacent coastal plain in Calumet County, for
13 Madison Gas & Electric Co. The 9 publications resulting were sent to MG&E and
14 Braun Intertec, our business intermediary, and copies were to be transmitted to the
15 WDNR and the WPSC by Braun. Eight of the nine reports are listed in the Reference
16 Section of the Final Environmental Impact Statement in this proceeding.

17 Q. Do you keep a current resume?

18 A. No, I do not. Since taking emeritus status, I haven't felt that it was necessary.

19 Q. Have you been hired as an expert to testify in this proceeding?

20 A. Yes, Horicon Marsh System Advocates, Inc. hired me.

21 Q. And, what were you asked to do for them?

22 A. I was asked to review the proposed project and evaluate its impact, based on my
23 knowledge and experience, on avian life.

1 Q. What materials have you reviewed?

2 A. The relevant parts of the project description, the relevant parts of the EIS, many
3 letters and comments regarding the EIS pertaining to avian life, my studies related to
4 Calumet County, Paul Kerlinger's testimony. I'm sure that there were other materials, as
5 well.

6 Q. Essentially, you believe that you've reviewed the relevant portions of the record
7 regarding the impact to avian life from the proposed project.

8 A. That's right.

9 Q. Based on your education, experience and review of the record in this proceeding,
10 have you formed any opinions, to a reasonable degree of scientific certainty, regarding
11 the avian impact of the proposed project?

12 A. I have.

13 Q. Would you please share those opinions with the Commissioners?

14 A. Certainly. The proposed project could to have a profound negative impact on
15 avian life in and around the project. The proximity of the proposed project to the
16 Horicon and Theresa Marshes, the reported potential for negative impacts to avian life
17 and the inadequacies of the surveys done to date all lead to one minimal conclusion: this
18 project must not be permitted to go forward absent rigorous pre-construction study. As
19 described, I share the DNR and USFWS "concerns that the applicant has not adequately
20 addressed potential impacts on birds in the project area in relation to Horicon Marsh."
21 FEIS at 63. In short, this project is not compatible with the proposed site.

22 Everyone involved in this proceeding agrees that the entire region (the Horicon
23 and Theresa Marshes, the Neda bat mine and all of the other state and federal lands

1 managed for the protection and proliferation of avian life) represent some of, if not the,
2 most important avian sanctuaries in America. The Horicon Marsh is internationally
3 recognized as “a globally important bird area.” FEIS at 63. Despite this knowledge,
4 Forward’s initial surveys consisted of a mere 45 days. “Forward conducted bird surveys
5 in the project area for 12 days in the spring and 33 days in the fall of 2004.” FEIS at
6 XVI. This is an insufficient survey time. In Calumet County, for example, we spent nine
7 seasons.

8 Even if Forward had spent that necessary number of seasons conducting surveys,
9 its survey methodology was improper. “The surveys consisted of driving surveys in an
10 eastern and western sampling area plus 30-minute point counts at one location in each of
11 the two sampling areas.” Id. The surveys that we conducted in Calumet County
12 followed the US Breeding Bird Survey (“BBS”) protocol. This protocol was developed
13 in the 1960s for use by the Fish & Wildlife Service for their nationwide population
14 censusing starting in 1965.

15 Q. Could you further describe the BBS protocol to the Commissioners?

16 A. Yes. Once the area to be studied is chosen, one needs to determine route of
17 approximately 25 miles through the area. Stops are then marked along that route every ½
18 mile. This provides 50 sites at which observations are made. At each of the 50 sites, the
19 surveyor waits and observes for three minutes. During those three minutes, the surveyor
20 notes every bird seen or heard within ¼ mile.

21 BBS has been used at over 3,000 sites in the US. I've been surveying birds for at
22 least 38 of the 40 years of the FWS project. BBS is a good model. The work of Howe et

1 al. uses the same essential protocol. In fact, their work is an offshoot of the work we did
2 in Calumet County.

3 Q. And, could you further describe your work in Calumet County?

4 A. We adapted the BBS format to the needs of Calumet County. We used 25
5 reference sites as well as the 25 primary sites. We also added 6 areas that were chosen
6 where good exposure suggested the possibility of wind turbine construction. At each site,
7 we surveyed using 30-minute watches covering one-half of a mile. We monitored
8 species and flight height.

9 Q. What kind of weather conditions would the surveyor want?

10 A. The surveyor would prefer ideal weather conditions for seeing and hearing birds.
11 Rain and snow would impair surveys. Also, winds of 10 mph or less would be preferred.
12 Greater wind velocities reduce activity and make sound identification difficult.

13 One of the reasons that we added the six additional sites in Calumet County was
14 to allow for a broader range of survey results, including a variety of weather conditions.
15 Basically, we were trying to get an idea of the avian life present at the proposed site.
16 Noise is not conducive to surveying, nor is inclement weather. However, reports of wind
17 turbine impacts on avian life include elements of inclement weather. So, it is important
18 to survey in a broader range of weather conditions.

19 Additionally, and particularly where the Horicon Marsh is concerned, it is
20 imperative to analyze inter-year variability. Further, all four seasons must be surveyed at
21 least once. Absent analysis of inter-year variability and data from all four seasons, it
22 would not be possible to make rational decisions about additional survey needs. All of
23 this must be done before any construction starts on the project.

1 Q. Would that mean that you strongly advocate for at least two years (or eight
2 straight seasons) of study before construction?

3 A. Absolutely. We must know exactly what is going on at Horicon Marsh before
4 building the project. Otherwise, we are not in a position to attempt to mitigate any
5 potential negative impacts. I should add that it would be preferable, particularly due to
6 the importance of the Horicon Marsh, to have at least three years or twelve straight
7 seasons of survey and study.

8 Q. Could you describe for the Commissioners what inter-year variability is?

9 A. Changes in numbers of individuals and species inherent in varying environmental
10 conditions between years. This would include environmental factors both locally, and
11 within wider areas of the species' range – as well as population changes and migratory
12 route changes between years.

13 Q. And could you describe why all four seasons must be studied?

14 A. Because unless you repudiate the idea that investigation before construction is
15 necessary to know what the possibilities are, only year-round surveillance can give the
16 required information. It is built into this type of scientific research. Otherwise, we would
17 be breaking the fundamental tenants of the protocol and perhaps even scientific method.
18 We can't logically say that what we are building is safe in each season, if we don't have
19 any baseline data to even compare to.

20 Q. Getting back to the work that has been done to date on this project, do others
21 agree with your critique of the inadequacies of Forward's survey?

22 A. Yes, both the PSC and DNR agree with me. To quote the FEIS, "The agencies
23 have concluded that the methodology used by Forward in its 2004 studies was less

1 rigorous than other Wisconsin wind farm avian studies, and the practices recommended
2 by the Wisconsin Department of Natural Resources (DNR), U.S. Fish and Wildlife
3 Service (USFWS), and the National Wind Coordinating Committee (NWCC). The
4 differences included: 1) defining a study area that excluded the western-most project area
5 where bird abundance is the greatest; 2) study timing that missed peak migrations of
6 specific bird groups; 3) collecting data for only two seasons, too short of a duration to
7 identify variations in populations; 4) lack of assessment of the potential impacts to rare
8 birds; and 5) minimal data collected on passerines, including the largest category of
9 Wisconsin passerines, night-migrating songbirds. Finally, the Forward 2004 bird surveys
10 did not address the importance of Horicon Marsh's effect on bird use within the project
11 area." FEIS at XVI.

12 Q. Do you have any additional critiques of the Kerlinger study?

13 A. One other thing that stood out was that we don't know who actually did the
14 survey work. A specific question that remains is what is the surveyors' experience. We
15 need authentication of the surveyors in order to evaluate the study and its data.

16 Basically, we have not seen adequate evidence justifying the potential risk to the
17 Horicon Marsh. We need to do proper studies and we need to know that the people doing
18 the studies are well-qualified.

19 Q. Is that the end of your pre-filed written testimony?

20 A. Yes.