Catching Wind

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PSC Gives Go-Ahead to Glacier Hills Project

Milwaukee-based We Energies received permission in January from the Public Service Commission (PSC) to build what will likely become Wisconsin's largest windpower facility. Known as Glacier Hills, the 162-megawatt (MW) installation, located in Columbia County about 35 miles northeast of Madison, withstood extensive scrutiny on public health and safety issues as well as hostile testimony from a citizen group opposed to new wind energy development in Wisconsin.

With this approval, Glacier Hills will be the third windpower project larger than 100 MW to be erected in Wisconsin. Construction should begin this spring, and completion is expected in fall 2011.

Notwithstanding We Energies' agreement with Danish turbine manufacturer Vestas to purchase 90 V-90 1.8 MW turbines, the PSC reviewed and approved four other turbine models that could be constructed at Glacier Hills. The Commission's approval gives We Energies the flexibility to build between 135 MW and 207 MW, depending on the turbine model selected. If all 90 turbines are erected, construction costs could range from $335 million to $435 million.

As noted by PSC Chair Eric Callisto, the Glacier Hills project represents a significant expansion of Wisconsin's fleet of utility-scale wind generating capacity. Moreover, the PSC noted the importance of Glacier Hills to We Energies' future renewable energy requirements. Between 2010 and 2015, We Energies must increase the percentage of renewable energy in its overall system resource mix to 8.27% by 2015.

Intervening in opposition to We Energies' application was the Coalition for Wisconsin's Environmental Stewardship (CWESt), a network of antiwind groups. CWESt contended that the project design of Glacier Hills would endanger the health of neighboring residents. The Commission reviewed the CWESt submissions and found insufficient evidence to support a claim that the project would cause adverse health effects. Indeed, the PSC concluded that building Glacier Hills "will promote the public health and welfare and is in the public interest."

Ruling on Setbacks

In approving Glacier Hills, the PSC attached several conditions designed to mitigate the physical impacts of the turbines on neighboring residents. The most significant of these conditions directs the utility to increase minimum setback distances between turbines and nonparticipating neighbors from 1,000 feet to 1,250 feet. Other setback distances proposed by We Energies were approved without modification.

As noted in the PSC's order, "increasing the setback distance from non-participating residences would reduce the level of impacts on non-participating residents, primarily from noise and shadow flicker." The order clearly states that the increased distances would apply to Glacier Hills only and are not intended to serve as a statewide standard for future projects.

Of the 90 turbines approved for construction, as many as 15 were within 1,250 feet of a non-participating residence. As the PSC observed, "affected turbines could either be moved to meet the increased setback, moved to an alternative turbine location that meets the increased setback, or in the worst case, would be eliminated, unless other arrangements could be made with the owner of the non-participating residence."

According to PSC staffer Deborah Erwin, "other arrangements" can include a written waiver from a neighboring property owner consenting to a turbine placed within 1,250 of the residence. As of presstime, We Energies had not disclosed whether it would be able to find suitable locations within the project area for all 90 turbines.

Mitigation Measures

The PSC also modified the maximum permissible sound limit proposed by We Energies. Though it accepted a maximum of 50 dBa as the prevailing standard for

Please see "Glacier Hills Approved," p. 2

From the PSC's Order on Glacier Hills

Public Health & Welfare

As the Wisconsin Supreme Court declared in *Clean Wisconsin,* 2005 WI 93 ¶ 35, issuing a CPCN is a legislative determination involving public policy and statecraft. The Power Plant Siting Act assigns to the Commission the role of weighing and balancing many factors which often compete and conflict. When rendering a decision, the Commission must ultimately determine whether a CPCN will promote the public health and welfare.

WEPCO's [We Energies'] wind-powered electric generating facility is a renewable resource that offers significant benefits to the state of Wisconsin. The air pollution and greenhouse gas emissions it avoids, the lack of solid waste, and the fact that it consumes virtually no water are important environmental benefits. This project will support the state's goal of increasing its reliance upon renewable resources and will help diversify Wisconsin's pool of electric generating facilities. It fits well with existing land uses, will help preserve the agricultural nature of the project area, will impose no reliability, safety, or engineering problems upon the electric system, and will create no undue adverse impacts on environmental values. After weighing all the elements of WEPCO's project, including the conditions imposed by this Final Decision, the Commission finds that issuing a CPCN will promote the public health and welfare and is in the public interest. The Commission also finds that, while members of the public are concerned about possible health effects associated with the project, there is not sufficient evidence in the record to conclude that the project would cause adverse health effects. (Page 45 of the Order, Docket 6630-CE-302.)

Milwaukee Reels In 270 Jobs With New Wind Generator Manufacturing

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Continuing a trend of wind power supply chain manufacturers opening production facilities in the U.S., Ingeteam selected a brownfield site in Milwaukee, Wis., to open the company's first U.S. facility, which will produce wind power generators and converters as well as solar power inverters for the North American market.

An April groundbreaking is scheduled on the $15 million, 100,000-square-foot production facility and office complex, and the company is targeting December for completion. Ingeteam, which plans to begin manufacturing operations in January 2011, will employ approximately 275 workers at the facility by 2015. At full capacity, the Milwaukee plant will supply equipment capable of producing 7,500 MW of electricity each year. Ingeteam, based in Bilbao, Spain, specializes in highly engineered electrical and electronic equipment and services.

The announcement of the plant and its location on a brown-field site in Milwaukee illustrates the industry's affinity for a wide range of locales across the country, including current and historic U.S. manufacturing hubs. In selecting Milwaukee, the company considered the city's location in proximity to the distribution of its products as well as its "solid industrial base from which Ingeteam can source materials," said Ander Gandiaga, the company's corporate director for international development.

"Milwaukee also has a labor pool experienced in electrical manufacturing," said Aitor Sotes, CEO of Ingeteam's U.S. operations. "In addition, the area boasts prestigious universities with some of the highest-ranked engineering departments in the country that offer specific courses in renewable energy, which will be very useful when it comes to finding specialized staff."

AWEA Director of Business Development Jeff Anthony said that during the event announcing the plant, Ingeteam officials and others cited the anticipated growing demand for wind power in Wisconsin and nearby states as a key consideration in choosing Milwaukee. Wisconsin has a renewable electricity standard (RES) of 10% by 2015, and legislation championed by Governor Jim Doyle is pending to boost the standard to 20% by 2020 and 25% by 2025. Other nearby states, meanwhile, have adopted renewable targets as well, creating an attractive wider market for Ingeteam. As the push for a federal RES has heated up in recent months, wind energy advocates have been pointing to the huge impact that strong and stable renewable policy can have on job creation. The Ingeteam announcement is further proof of the link between a strong RES and jobs, they said.

"The creation of well-paying jobs in an industrial section of Milwaukee that is undergoing redevelopment is what we need to see happen all over the U.S. as a continuing trend," said Anthony. "As several speakers mentioned in their remarks at this event, strengthening the state RES in Wisconsin and creating a federal RES will encourage more companies like Ingeteam to locate manufacturing facilities in the U.S. and grow the number of clean energy jobs in this country."

The combined effort of city and state officials was coordinated by the seven-county economic development agency for southeastern Wisconsin, the Milwaukee 7 group. Gale Klappa, chairman, president and CEO of Wisconsin Energy Corp. and co-chairman of Milwaukee 7, noted that the firm selected the Menomonee Valley and Milwaukee largely for the city's manufacturing roots and know-how. "We're delighted that after a nationwide search Ingeteam has chosen Milwaukee as the site for its first-ever manufacturing plant in the U.S.," said Klappa. ✷

Glacier Hills Approved

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the project, the PSC's order specifies a 45 dBa standard during summer nighttime hours, defined as 10:00 PM to 6:00 AM between April 1 and October 30. The stricter standard is designed as a mitigation measure to take effect when a neighbor files a complaint with We Energies. The PSC order does mention operational curtailment as an acceptable technique for complying with prevailing sound limits.

Another condition placed upon We Energies is a requirement to mitigate households which are experiencing more than 25 hours of shadow flicker or are projected to experience that level of exposure. As with sound limits, this requirement is structured as a mitigation measure that is activated when a complaint regarding shadow flicker is filed. Installation of blinds and plantings at We Energies' expense would be an appropriate mitigation technique.

In addition to sound and shadow flicker mitigation, the order requires We Energies to:

- Maintain a complaint log;
- Test for stray voltage at all dairy operations within one-half mile of any project facility;
- Coordinate with air ambulance services and first responders on emergency evacuation plans; and
- Correct or mitigate interference affecting radio, television and cellular communications.

The PSC identified two households where the number of turbines within one-half mile would cause "undue individual hardships to those residents." We Energies must file a plan for minimizing the hardships before construction can begin.

The issue of the recently opened rulemaking proceeding (Docket 1-AC-231) to develop uniform permitting standards for wind turbines came up more than once during the PSC's January 11 discussion of the Glacier Hills record. A local representative of CWESt urged the PSC to apply any new rules from that proceeding to Glacier Hills. The PSC rejected that recommendation. The PSC encouraged We Energies to follow any new provisions resulting from the rulemaking proceeding, to the extent practicable.

Thus far in 2010, there has been little official action on the wind siting rulemaking proceeding mandated by 2009 Act 40. It's possible that the PSC will issue a draft rule in March, as well as announce the names of the individuals selected for the 15-member Wind Siting Advisory Council. The Council is directed to submit a report to the Legislature addressing health-related research and regulatory developments by 2014. ✷