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A New Dawn: The Beginning of the Beginning for Solar in Minnesota

Posted by Mike Bull | Date April 22, 2014 | Comments 0

Three amazing things happened at the Minnesota Public Utilities Commission a couple of weeks ago, in a proceeding to fill a generation capacity need identified by Xcel Energy its 2010 Upper Midwest Resource Plan.

1) A distributed solar project was one of the projects under consideration.

Geronimo Energy proposed a 100 megawatt project to fill that capacity need. We don't generally think of solar as a capacity resource; traditionally conflating "dispatchability," the ability to flip a switch and turn on a generation plant, with capacity. Solar energy is not dispatchable – it's available when the sun is out. However, the Geronimo folks proposed an innovative project designed to maximize the capacity value of the solar project, to be most available during Xcel Energy's peak demand.

The Aurora project was considered in comparison to a natural gas turbine proposed by Calpine at an existing plant in Mankato, two natural gas turbines proposed by Invenergy at Cannon Falls and Hampton, and Xcel Energy's proposal for new natural gas plants at Black Dog and in North Dakota.

2) The Administrative Law Judge assigned to the docket recommended the Aurora project over these natural gas projects.

That recommendation was based on three key factors:

- The modular nature of the proposed solar project, in that it could be sized to meet Xcel's need as that need became clearer. There was evidence in the administrative record that reflected a much smaller and more uncertain capacity need than Xcel Energy's forecast had demonstrated.
- A "value of solar" type analysis, incorporating the cumulated value of infrastructure investments that Xcel Energy could defer if the Aurora project was implemented, like transmission and distribution lines and components; and
- The application of state energy policy requirements such as the state's greenhouse gas emissions reduction goals and the "Renewable Preference" found in the state's integrated resource planning statute.

The "Renewable Preference" specifies that the commission "shall not approve a new or refurbished nonrenewable energy facility ... unless the utility has demonstrated that a renewable energy facility is not in the

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public interest." In the past, this public interest hurdle has been difficult for renewable projects to leap based on economics and performance, relative to non-renewable resources.

And, in fact, whether Geronimo's Aurora project cleared that hurdle in this case was a matter of some debate. The Minnesota Department of Commerce disagreed with the Administrative Law Judge's conclusion that Geronimo's project, combined with capacity credits from Great River Energy, would be sufficient to meet Xcel Energy's capacity need; and argued that choosing Geronimo's project over the natural gas projects was therefore not in the public interest. Geronimo noted, however, that the solar project was never intended to be a stand-alone option to meet Xcel's capacity needs, always intending that it be part of a larger portfolio that included other proposed projects.



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Through two days of hearing on the proposals, the Commission was persuaded that Geronimo's Aurora Project did, in fact, clear the public interest hurdle as part of a broader portfolio of generation resources, and was therefore deserving of the Renewable Preference.

3) The final decision – one that seemed very unlikely at the beginning of the Commission hearings – was unanimous among a bi-partisan group of commissioners appointed by both Governors Pawlenty and Dayton.

The decision wasn't "solar beats natural gas" as some commenters have opined. The solar project, on a direct economic basis, was slightly more expensive than the natural gas alternatives under the natural gas price assumptions used in the case. Nor was it a rejection of the Department of Commerce's advocacy as others have written.

In the end, the motion made by MN PUC Commissioner Nancy Lange that became the basis for the Commission's decision, was a blended one – "Solar Plus" as MN PUC Chair Beverly Heydinger referred to it. Commissioner Lange combined the best parts of the Department's recommendations with those of the Administrative Law Judge, first by ordering Xcel to negotiate a power purchase agreement with Geronimo for the 100 megawatt Aurora project. But then, Commission Lange's motion went further, directing Xcel to also negotiate agreements with the natural gas projects, thereby requiring those projects to compete against each other to fill the rest of the Xcel Energy's capacity need.



The commissioners reached this conclusion through a very deliberative process; thoroughly assessing potential ratepayer impacts, questioning parties regarding possible reliability concerns, and weighing the importance of Minnesota state energy policy provisions in the evaluation of these proposed projects.

The decision and discussion process followed by the Commission tracked very closely with the testimony given by Kevin Reuther of Minnesota Center for Environmental Advocacy to the Commission – clearly Kevin had an impact on the outcome. Both Geronimo's Betsy Engelking and Kevin Reuther are members of CEE's Policy Roundtable, and we congratulate them both for their great work in this proceeding.

The Commission's decision rewards Geronimo for their innovation and boldness in proposing this novel solar project in a capacity resource acquisition proceeding. Critical to the Commission's decision was that the reliability of Xcel Energy's system in the Upper Midwest would be ensured by selecting a portfolio of projects that includes both solar and natural gas generation.

In the end, it will be important for Xcel Energy and Geronimo to negotiate a power purchase agreement that is beneficial to Xcel's ratepayers, and for Geronimo to construct a project that meets the expectations that the Commission has set for it. Given the good working relationship between Xcel and Geronimo, and Geronimo's terrific track record for developing consistently reliable and economic projects, I'm entirely confident of success.

This decision is not the "Beginning of the End" for fossil fuels in Minnesota.

That arguably began long ago, with the enactment of policies like the Renewable Preference, which played such a pivotal role in this decision. Instead, the decision marks the day when solar arrived as a legitimate option for utilities to diversify their generation portfolios – the "Beginning of the Beginning" for solar energy in Minnesota. It's fitting, then, that this project is named Aurora, the Latin word for dawn.

Watch a CEE-hosted webinar, [Meeting Utility Resource Needs with Solar](#), to learn more.