

FDNM's Community Perspective Article

- Submitted by GVEA on behalf of GVEA's Chairman Rick Schikora
- Ran in the FDNM on April 19, 2017

The Hidden Costs of Wind Power

Most people assume wind power is the cheapest, greenest power Golden Valley Electric Association generates. But if wind power is not carefully balanced with other power sources, it can actually drive up your electric bill – and greenhouse gas emissions.

GVEA's board has been very cautious about adding more wind. Here's an anecdote that explains why more wind could lead to higher emissions and higher bills.

Let's suppose it's a nice, windy day north of Healy, and the Eva Creek Wind Farm is producing power. Then the wind dies off. Suddenly, 25 megawatts of generation disappears. To prevent a power outage, GVEA must have an oil-fired power plant available to pick up the generation that was lost. As the wind fluctuates, the plant must be regulated – rev'd up or down – in sync with the wind.

Therefore, every megawatt of wind power the Eva Creek Wind Farm generates requires an oil-fired power plant to be running in the background. Our oil-fired units are the only ones that can react fast enough to match the changing output of the wind turbines. Coal-fired plants and purchased natural-gas power are not able to assist in regulating wind-generated power. Our coal-fired power plants are the least expensive source of power and are operated at full load; this is called a base load plant. Gas-fired generation from Anchorage is scheduled a day in advance, thus, not making it available for regulation.

Oil is more expensive than coal and natural gas. But burning oil is one of the least-thought of costs (both economic and environmental) associated with operating the Eva Creek Wind Farm.

In December, GVEA received a request for interconnection from Delta Wind Farm Inc. (DWF) for a proposed 13.5-megawatt wind generating facility. After GVEA carefully considered both the benefits and costs associated with the project, we filed a Notice of Denial of Interconnection with the Regulatory Commission of Alaska.

An independent, third-party analysis showed that DWF would increase fuel costs for our members, as well as plant maintenance costs. It also had the potential to increase emissions of greenhouse gases. While our power plants have scrubbers and produce less than 5 percent of the emissions that contribute to the PM 2.5 issues in North Pole, any increase of pollutants in sensitive areas needs careful consideration. GVEA's own Eva Creek Wind Farm (25 MW) is specifically sized for GVEA's system. There are times (especially in the summer months) when we can't even use all the available power from Eva Creek, because our oil-fired plants are already operating at their lowest levels.

GVEA continues to be the greenest utility in the Railbelt. When conditions are right, we generate up to 20 percent of our peak load from renewable resources. We're currently exploring a solar demonstration project. And we're evaluating a proposal from Cook Inlet Region, Inc.'s (CIRI) Fire Island Wind, Phase II Project that could provide us with additional wind power – regulated by Alaska's southern utilities before it's shipped north over the Intertie.

Given the generation mix we currently have, DWF's 13.5-MW project is not a wise choice for our members. Adding this much wind power would significantly increase our fuel and maintenance costs, jeopardize our reliability and could actually increase our fossil fuel emissions.

If you'd like to learn more about your electric co-op, please join us at our Annual Members' Meeting, Thursday, May 4, at 6:30 p.m. at Lathrop High School's Hering Auditorium. Admission is free.