

Gas storage could add value to wind

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Adding natural gas storage capacity could go a long way toward combating sharp price declines that have cost the state in excess of \$100 million in potential annual revenue some years.

In addition, more natural gas storage capacity could also elevate the value of Wyoming's wind resource.

Wyoming Pipeline Authority executive director Brian Jeffries said there's no immediate rush to expand gas storage capacity and pair natural gas-fired turbines with wind farms. But it would be a wise strategy to pursue as Wyoming continues to increase both forms of energy exports.

"It's not a problem that needs to be solved tomorrow. But it's something to keep in mind as we move forward," Jeffries said.

A wind farm built with 100 megawatts of total generating capacity, for example, will likely only generate at full capacity 35 percent to 38 percent of the time on average. That's why 1 megawatt of coal-fired electricity is said to provide enough energy to power about 700 homes, whereas 1 megawatt of wind power is enough to power about 300 homes.

But with access to ready natural gas supplies that are not committed to pipeline deliveries, Jeffries said wind farms in Wyoming could be paired with natural gas turbines in order to provide a certain amount of electrical generation 100 percent of the time.

Jeffries said some utilities have watched their wind generation drop 66 percent within one hour when the wind stops blowing. Similarly, utilities have seen wind generation increase 80 percent within an hour.

Unlike a coal-fired power plant, a natural gas turbine or "peaker" can be cranked on and off much faster. However, there currently does not exist enough gas storage in the region to pair wind and natural gas electrical generation.

One prospect in Wyoming could be SourceGas' Oil Springs gas storage facility near Laramie. Len Mize, SourceGas director of corporate communications, said the facility has a capacity of 22 billion cubic feet, which currently offers about 1 billion cubic feet of gas for short-term delivery.

He said there is room for expansion, but "so far we have not found a case economic for expansion."

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