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GRE construction continues: Two years of cold, snowy weather have hampered efforts

SPIRITWOOD, N.D. — About 420 construction workers are building inside and out on Great River Energy's Spiritwood Station in a race to meet the Oct. 1 online date for the power plant.

And for the second winter, snow and cold weather hamper the work on the coal-fired power and heat plant near Spiritwood. Dennis Pozarnsky, GRE construction site manager, said within about 10 days, the number of workers will climb to more than 500 as temperatures begin to warm.

"The weather hasn't helped us and we've lost some time again," Pozarnsky said. "Since we started construction in late 2007, we've experienced two of the worst winters, two of the wettest falls and two of the wettest springs."

To get the job done by the Oct. 1 deadline, construction went to two shifts Jan. 1. The crews have already been working seven days a week since September, he said, and now it's 24-7.

Most of the plant's construction work is enclosed. Outdoors, crews are building the plant's environmental equipment such as the scrubber and spray dryer vessel for flue gas as well as the baghouse. The latest technology is being used to reduce or eliminate emissions, Pozarnsky said.

Workers outside are also constructing the train car building and conveyor belt. The belt transports coal brought by train and dumped in the building. From there it's conveyed to the concrete silo connected to the plant.

Inside the auxiliary building where treatment of the gray water from Cargill and Jamestown's Wastewater Treatment Plant takes place and the backup boilers are located, pipes are being tested for leaks. The building should be ready to go by mid-March.

The turbine building, which will turn the steam into electricity, is still seeing a lot of work as is the boiler building. A steam pipe sits waiting to be extended to Cargill Malt. The power plant will supply Cargill with 200,000 pounds of its waste steam for use in its production processes. The main boilers are being enclosed with water-carrying panels.

"The water walls are being welded together. Then they'll be insulated," Pozarnsky said Tuesday. "The water walls cool the boilers and also contain the heat of the boilers."

Throughout the plant are steam-carrying pipes. All of them must be tested carefully for leaks using water, Pozarnsky said, before any steam goes through them.

“This is 1,000-degree steam and you can’t see it,” he said. “If there was a leak in the pipe, the steam could cut you in half. That’s why all the testing of pipe.”

The staging area, once a huge area of material and equipment, fabricating and carpentry shops, looks more like a snow-covered ghost town now. The shops have been moved into what will be the warehouse and other presently open spaces in the buildings. The much-reduced amount of material is closer to the plant and most often buried in snow.

Pozarnsky said the design for the coal burning portion of the plant is new technology. He said at Coal Creek Station, GRE’s power plant in western North Dakota, coal is injected into the boiler creating a “spinning fireball.” At Spiritwood Station, the technology calls for coal added to a bed of limestone and sand for combustion. The advantage of this technology, Pozarnsky said, was its use for other fuel such as biomass.

“It’s much more complicated technology, but it’s also more efficient and you get a better burn,” he said. “It’s a very interesting concept.”

Spiritwood Station has nine permanent employees on board already. Pozarnsky said they’ve started interviewing for the other 15 permanent positions. They plan to get the new hires in place beginning in March and staggering start dates through the summer.

“We’ve received a good response — 150 applications — for the 11 operator positions,” he said. “There are a lot of people looking for work.”

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