

# Building on a **BIGGY**

*By Erin Huntimer*

The clanging of cold steel. The slop of wet concrete. The roar of the dozer. The sights and sounds of big-time construction can be found all over Basin Electric. The cooperative is experiencing a flurry of construction activity not seen in decades. Basin Electric currently has nine construction works in progress, ranging from building new generation or transmission facilities, to maintaining existing facilities. It's also awaiting the completion of other projects from which the cooperative will purchase power. All of the projects are needed to meet the membership's growing demand for electricity. Following are highlights from a busy year building up the cooperative.

## **Dry Fork Station** *Gillette, WY*



The Dry Fork Station proudly sports its "Basin Blue" siding in this aerial photo taken in September 2009. As of Oct. 1, the project was about 75 percent complete, including engineering, procurement and construction activities.



Chairat Phutphong of ABB and Mike Koenig, lead substation electrician from the Wheatland Transmission System Maintenance outpost, prepare to pull vacuum in the reserve auxiliary transformer at the Dry Fork Station.



The combined high pressure and intermediate pressure and separate low pressure rotors have been installed at the Dry Fork Station. The power plant is on track for commercial operation in 2011.

# FEAR at Basin Electric



## NextEra's Wilton Wind Energy Center Phase II

*Wilton, ND*

One of the final rotors is lifted into place at the second phase of the Wilton Wind Energy Center. The project's 33 new turbines are slated to be online by early November 2009. The project is owned and operated by NextEra Energy; Basin Electric purchases the output.

## PrairieWinds 1 and Minot 2

*Minot, ND*

Construction on two PrairieWinds ND 1 projects began in August 2009. PrairieWinds 1 will be a 77-turbine, 115.5-megawatt project. Minot 2 (pictured here) will be a three turbine, 4.5-megawatt project. Both projects are slated to be complete by late 2009 or early 2010.



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## Belfield-to-Rhame Transmission Project

*Rhame and Belfield, ND*

Contractors pull conductor on the 230-kilovolt Belfield-to-Rhame transmission line. As of Oct. 1, about one-third of the line had been strung and sagged for the 74-mile line. It's scheduled to be complete by the end of the year.



## Culbertson Generation Station

*Culbertson, MT*

Jan Fasching, Basin Electric assistant transmission line superintendent, communicates with crews building the 4.5-mile 115-kilovolt transmission line that will tie the Culbertson Generation Station to the transmission grid. Construction on the new peaking power plant began in July 2009. The transmission line segment was completed late that month. The power plant is scheduled to be complete in 2010.



## Hughes Transmission Project

*Gillette, WY*

Timberline Construction prepares to string conductor on the Dry Fork-to-Hughes segment of the Hughes Transmission Project near the Dry Fork Station in March 2009. The first two segments of the 136-mile 230-kilovolt transmission line were energized in August 2009. The remaining two segments are scheduled to be energized by the end of November 2009.



## Rhame Substation

*Rhame, ND*

At the 230/115-kilovolt Rhame substation, workers are installing five 230-kilovolt power circuit breakers to connect the new transmission line to the Belfield substation and the existing Baker-to-Bowman transmission line. This is a joint project with Basin Electric members Upper Missouri Generation & Transmission Cooperative and Slope Electric Cooperative. It's one of nine substation projects to be energized by the end of the year.

## Antelope Valley Station Lime Slaking Project

*Beulah, ND*

Construction on the new lime slaking system for Antelope Valley Station began in August 2009. The project is seen here in a bird's eye view of the foundation from the top of the lime silo. The slakers add lime slurry to Antelope Valley's scrubbers. The old slakers will remain in service as backup, doubling the system's capacity. The project will be ready for operation in mid 2010.



## Leland Olds Station Scrubbers

*Stanton, ND*

A section of fiberglass stack liner, called a "can," is prepped to be hoisted into place inside the new chimney at the Leland Olds Station. The chimney houses two flues, one for each unit, to accommodate the power plant's new scrubbers. Unit 2's scrubber will come online in 2010, and Unit 1's in 2011.



## Recovered Energy Generation Phase II

*Culbertson, MT*

Construction on a new recovered energy generation (REG) project, owned by OREG2, began this summer near Culbertson, MT (top of photo). Contracts to purchase the energy output of this 5.5 MW unit and another near Garvin, MN, will bring the total to eight REG units along the Northern Border Pipeline, or 44 MW, by late this year. (Bottom of photo: Culbertson Generation Station construction.)