

# Peak Performers

**A**S TEMPERATURES DIP IN THE WINTER AND SOAR IN the summer, electric cooperatives in the region see rises in the demand for the energy they provide.

Also on the rise is the overall baseload of the cooperatives, driven in part by larger industrial loads.

Electric cooperatives are also supporting the rapid growth of the ethanol industry in the state. With Prairie Ethanol starting production in December, cooperatives have constructed transmission lines and substations to serve six of the state's 12 ethanol plants. Three additional plants, now under construction, have chosen their local electric cooperative as their power supplier. These value-added agricultural processing plants are producing an environmentally-friendly fuel that is good for the local economy, vehicles, consumers, farmers and environment.

Ethanol plants and other large industrial loads

provide a constant, steady demand for electricity which contributes to a cooperative's overall stability in terms of baseload. A solid baseload helps distribute the fixed costs associated with maintaining a reliable system capable of meeting peak demands.

In eastern South Dakota and western Minnesota, East River Electric Power Cooperative and its member systems are seeing system load growth of more than 5 percent annually. This growth is slightly ahead of pace of all electric cooperative systems in South Dakota which saw just over 4.6 percent annual growth from 2002 to 2005.

Coupled with this steady growth of large users is an overall growth in electric usage by cooperative members throughout the area.

Some cooperatives near communities like Rapid City, Sioux Falls and Aberdeen have seen the creation and expansion residential subdivisions in

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cooperative territory, which has increased the amount of electricity bought by the cooperative.

Volatility in the prices of natural gas, propane and fuel oil have prompted many co-op members to look at the stable prices of electric heat, especially in the form of heat pumps. This also adds to a strong demand for electricity.

Colman, S.D.-based Sioux Valley Energy, serves two counties in southwestern Minnesota and several counties in South Dakota, including Minnehaha County on the south and Brookings County on the north. The Minnehaha County growth centers primarily on growth in the Brandon and east Sioux Falls area.

The cooperative is bracing itself for a 10-fold increase in its load in the area. By approximately 2025, the cooperative



anticipates that area will have a load of approximately 250 mw – nearly 2.5 times what the cooperative's entire load is currently.

On the southern side of Sioux Falls, Marion, S.D.-based Southeastern Electric Cooperative foresees similar growth.

This anticipated growth builds upon peak demand already being experienced by cooperatives.

Below zero temperatures across Basin Electric's nine-state service territory in late November resulted in a new winter peak in demand for electricity. Basin Electric provides a portion of the electricity used by cooperatives in South Dakota and western Minnesota. Additional energy comes from federal hydro-electric facilities on the Missouri River.

Basin Electric had set an all-time high back in July 2006, when cooperative members used more than 1,944 megawatts during a period of extreme heat.

In eastern South Dakota and western Minnesota, cooperatives also saw new peaks in energy demand in recent years. In October, East River and its member systems came close to exceeding the cooperative's peak demand of 400 megawatts established in December 2004. The systems set a record summer demand of 396 mw in July 2006.

Electric cooperatives have anticipated this growth and are prepared to meet the demands of their members, providing reliable electric service for decades to come.

**Left:** Large industrial loads such as this ethanol plant are providing a strong baseload for electric cooperatives in the area. **Above:** Residential electric use is also on the increase, due in part to new housing developments in electric service territories.