

Buckeye Power to control load during extreme heat throughout eastern United States

Demand for electricity is expected to be excessive throughout the PJM Interconnection system through Thursday, July 8, according to Craig Grooms, director of resource planning for Buckeye Power, Inc. Grooms says, "Tuesday appears to be the most critical day, but we will closely monitor load through Thursday."

Grooms said Buckeye will be in full control mode from 2 PM through 6 PM today (Tuesday).

A peak of electrical demand is set when consumers of a particular electric utility use — or "demand" — more electricity than at any other time in the past.

When a new peak is set, each of the 25 distribution Cooperatives in Ohio is assigned a new demand charge on their bill from Buckeye Power, Inc. The consumer's power bill is directly affected by this demand charge. If a distribution cooperative is paying more for power, it's very likely that the cooperative will have to adjust its rates to cover increased costs at some point.

Buckeye Power was one of the first electric utilities in the United States to recognize the potential value of shaving peaking load as an alternative to building new electric generating capacity. The Buckeye load management system, which became operational in 1973, has grown steadily and undergone major technical enhancements over the years. Every Ohio electric distribution cooperative participates in this state-of-the-art, satellite-based load management program designed to prevent new peak demands.

Based in Columbus, the system uses a powerful computer network, weather monitoring points throughout the state, satellite signals and special radio-controlled switches (RCS) to monitor and control load. It is estimated that the load management program has saved approximately \$150 million in energy costs for electric co-op members in Ohio over its long history.

Buckeye adopted a new demand response strategy in 2008 as it implemented a fundamental change in rate design to recognize the importance of the PJM Interconnection market in Buckeye's costs. PJM is the regional transmission organization that coordinates the movement of wholesale electricity in all or parts of 13 states and the District of Columbia. The PJM region includes 51 million people and 20 percent of the U.S. economy. Buckeye is also a member of the Midwest ISO Regional Reliability Area.

Instead of using demand response resources to keep Buckeye's members from setting a new Peak of Record, Buckeye now responds to reduce demand during PJM's five highest load hours and when either of the two transmission zones where Buckeye's load is located are experiencing peak conditions independent of the full PJM region. By responding during these peak load periods, Buckeye reduces its capacity and transmission costs. This, in turn, reduces members' costs while helping the regional grid operator maintain system reliability.

PJM forecasts a peak demand of 135,750 megawatts (MW) of electricity this summer. (One megawatt is enough electricity to serve 800 to 1,000 homes.)

“PJM and our members are ready to handle the expected summer conditions,” said Michael J. Kormos, PJM senior vice president of operations. “However, until transmission additions can relieve congestion, we expect we will continue to reschedule generation to accommodate peak load conditions.”

PJM expects to have 162,903 MW of generation available. Consumers’ voluntary reductions in usage (known as demand response) are expected to reduce the peak electricity use by 8,525 MW – equivalent to 10 large power plants.

The demand forecast is based on normal weather conditions. If the summer’s temperatures are unusually hot, use of air conditioners could drive demand for electricity to 144,612 MW. PJM’s all-time record use of electricity of 144,644 MW occurred in 2006.

Peak electricity use in the PJM region is driven by high temperatures and economic conditions. PJM’s forecast looks at a range of possible conditions to allow for variation in weather conditions. The forecast is based on typical peak weather conditions experienced over the past 35 years. Actual electricity demand will vary as temperatures vary from normal.

PJM Interconnection ensures the reliability of the high-voltage electric power system serving 51 million people in all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia. PJM coordinates and directs the operation of the region’s transmission grid, which includes 6,038 substations and 56,500 miles of transmission lines; administers a competitive wholesale electricity market; and plans regional transmission expansion improvements to maintain grid reliability and relieve congestion.

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