



ELECTRIC THERMAL STORAGE WATER HEATING POSITION

Background

Electric thermal storage (ETS) water heating programs incorporate large capacity electric resistance water heaters that are “charged” in the night time hours using low-cost, off-peak electricity to heat enough water for the following day’s use.

According to a new Department of Energy (DOE) standard, electric water heaters with a rated storage capacity greater than 55 gallons must have an efficiency factor of 200 percent. To meet this new standard, electric water heaters greater than 55 gallons will have to be heat pump water heaters.

How it Affects Great River Energy

As part of its demand-side management program, Great River Energy offers an ETS water heating program to cooperative members in Minnesota. While the new DOE standard should deliver significant energy savings nationwide it will effectively terminate ETS water heating programs and overlook their benefits to the state’s energy goals.

ETS water heaters essentially act as “batteries” that store low-cost off-peak energy including renewable energy. Electricity demand plummets in the overnight hours, which is often when wind turbines generate the most power. Because electricity must be consumed at the precise moment it is generated, ETS water heaters provide a means of storing that electricity and compensating for the volatility of wind generation and reducing electricity demand peaks.

Great River Energy’s Position

Great River Energy encourages the DOE to provide an exemption to its ban on electric resistance water heaters larger than 55 gallons in size if they are part of a utility-sponsored off-peak or ETS program.