

# Update on ERCOT's Load Forecasting Methodology



## About the ERCOT load forecast

Electric Reliability Council of Texas (ERCOT) load forecasts are key to understanding future electric generation requirements and planning for the necessary resources to serve those needs, especially during peak demand periods. ERCOT has one of the nation's most modern power grids, and its planners seek to use the best available data to better recognize the diversity that exists across the state and plan for future needs in each region.

In the past, ERCOT has used weather and economic indicators, such as non-farm employment, to forecast future electric demand. However, the relationship between economic growth and electric demand has changed in recent years. While peak demand growth has slowed to about 1 percent annually, the economic forecasts and non-farm employment statistics used in recent load forecasts have resulted in growth forecast estimates of 2 to 3 percent in the two- to three-year outlook.

This recent trend implies a less direct correlation between these economic indicators and electric demand than in the past. To address this decoupling, ERCOT staff has developed a new load forecasting model that uses forecasted growth rates in customer accounts, or premises, to project future growth trends in each region served by the ERCOT grid.

The new forecast model will better capture the relationship between premise counts and specific economic factors, such as number of households, population, housing stock and regional trends, as well as the variations in energy use among residential, business and industrial consumers. A neural network, which ERCOT will use for its new forecasts, offers the flexibility to apply new premise count variables over time as needed to reflect changing conditions that could affect future growth in electric demand.

## Independent review of the load forecast model

The ERCOT Board of Directors and stakeholder groups have reviewed the proposed changes. Additionally, an independent review by Itron, a global technology company, confirmed the proposed premise count approach and provided additional suggestions, which ERCOT has incorporated into its methodology.

As part of the ongoing review process, ERCOT released a preliminary forecast based on its proposed methodology. The resulting forecast anticipates that peak demand, measured in megawatts, will grow by about 1.3 percent a year in the next 10 years, compared to actual increases of about 1.1 percent in the past 10 years and projected growth rates as high as 2.5 percent in some previous forecasts.

ERCOT also uses load forecasts to plan for annual energy consumption, measured in megawatt-hours, in coming years. The new forecast anticipates annual energy use will grow by about 1.8 percent a year in the 10-year horizon, compared to actual growth rates of about 1.5 percent in the past 10 years and previously projected growth rates as high as 2.4 percent.

ERCOT also directed Itron to create model-based premise forecasts for residential, business and industrial classes to address different growth patterns among those consumer groups. Each of those forecasts will reflect the unique characteristics that affect each consumer type.

## Next steps

[Itron's report](#), [premise forecasts](#), and a [preliminary load forecast](#) are now available for review by stakeholders, and a working group will discuss the results on Jan. 27. ERCOT plans to incorporate the new load forecast in the next Capacity, Demand and Reserves (CDR) report. Depending on input from the ERCOT board and stakeholders, the report could be released by late February.

**Access Working Group information and documents here:**

[www.ercot.com/calendar/2014/01/20140127-CDRWorkshop](http://www.ercot.com/calendar/2014/01/20140127-CDRWorkshop)