

LOUISVILLE GAS AND ELECTRIC COMPANY/KENTUCKY UTILITIES  
COMPANY (“LG&E/KU”)  
SHORT-TERM LOAD FORECAST METHODOLOGY

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The LG&E/KU Generation Dispatch Group produces the Short Term Load Forecast (meaning the load forecast for (i) each hour for each of the current day plus the six (6) following days and (ii) the peak for the day for each of the twenty-nine (29) days following seven (7) day period covered by the hourly load forecast) for LG&E/KU which includes load forecast for KU (including KU’s retail customers, KU’s wholesale municipal customers and Old Dominion Power), LG&E, and Owensboro Municipal Utilities (“OMU”).

Generation Dispatch typically prepares the Short Term Load Forecast each business day morning and often updates again in the afternoon or as base assumptions change. A revised Short Term Load Forecast is prepared on Saturdays and/or Sundays if the assumptions used on Friday for the Saturday, Sunday or Monday forecasts materially change.

The Short Term Load Forecast is developed using two different models: (1) the Edison Power Research Institute Advanced Neural Network Short Term Load Forecaster (“EPRI ANNSTLF”), which is a neural model that uses historical load and weather patterns to forecast future load values by region, and (2) the Pattern Recognition Technologies Similar Day Load Forecaster (“PRT SDLF”), which uses historical load database to best-matching similar days based on hourly temperature forecasts and previous day(s) actual hourly loads and temperatures. Each model produces a seven (7) day hourly load forecast (same day and six (6) days out). Input into these models includes previous day hourly actual loads, previous day hourly actual weather parameters, present day hourly actual loads (up to time of model run), present day hourly weather forecast parameters and six (6) day out forecasted hourly weather parameters. Actual and Forecasted weather parameters are obtained from a contracted weather service provider. In addition OMU supplies Generation Dispatch with their previous day hourly actual loads and a seven (7) day hourly load forecast of the OMU system.

Reviewing all the available scientific data and combining it into a single combined LG&E/KU Short Term Load Forecast requires both analytical expertise and human judgment. Generation Dispatch reviews the forecasted hourly load as generated from the load forecast models and compares the output to historical loads. Generation Dispatch uses its best judgment to develop and project hourly load for seven (7) days, Generation Dispatch then forecasts hourly loads twenty-nine (29) days beyond the initial seven (7) day forecast (for a total of thirty-six (36) days). Forecasting modeling for the additional twenty-nine (29) days is influenced by the seven (7) day Short Term Load Forecast, any known upcoming load changes, and long term predicted weather patterns.

Demand Side Management load reduction may not be reflected in the Short Term Load Forecast.