**Missouri IRP Document No. 5 Updates**
The updates reflect an update in the peak forecasting methodology documentation. The documentation related to MetrixLT will be replaced with the documentation consistent with the methodology used in the IRP process.

1. The "Peak Demand Forecast" section starting on Page 10 was replaced with the following text.

**Peak Demand Forecast**
The AmerenUE summer peak forecast is comprised of two major components: the peak growth and the starting point to which the growth is applied. The peaks for the months other than the peak summer month are developed using forecasted sales and average load factors for each month. The methodology to develop a monthly peak forecast for AmerenUE is described in detail below.

**Summer Peak Methodology**
The first component in the AmerenUE summer peak forecast is determining the starting point to which growth is applied. The first input to this analysis is the compilation of non-holiday weekday minimum and maximum temperatures. The minimum and maximum temperatures are averaged to a daily average temperature. Using a weighting of two-thirds for the current day and one-third for the previous day, two-day weighted average daily temperatures are computed. These temperatures are plotted against the non-holiday weekday net system loads. Since the analysis is related to the summer peak, only the summer months are included (June, July, and August). An "S-Curve" is fitted to the plot of weather versus load. The functional form of the "S-Curve" is 3$^{rd}$ degree polynomial in nature. Where this curve crosses the AmerenUE system design temperature of 89 degrees Fahrenheit is the starting point to which the peak growth is applied.

The second component to the summer peak forecast is the peak growth rate. The AmerenUE peak growth is calculated using two methodologies: trend analysis and multiple linear regression. The slope of the trend analysis shows the peak growth over time with no other explanatory factors. This is used as an indicator of what historical peak growth has been. The Multiple linear regression technique identifies explanatory factors that contribute to system peaks. Once the relationship between peak load and each explanatory factor is determined based on the respective historical response, forecasted values of the explanatory factors are used to forecast peak demand. In the case of this analysis, the AmerenUE-Missouri and AmerenUE-Illinois total was used and the Illinois portion of the load was separated out based on its historical contribution at the time of system peak, leaving a peak forecast for AmerenUE-Missouri.

**Monthly Peak Forecast**
The AmerenUE monthly peak forecast is completed using the relationship between load factor and sales. An average load factor for each month was calculated using 2003 and 2004 monthly peaks and sales. To calculate the peak demand for each month the monthly forecasted sales are divided by the monthly average load factor scaled for the number of hours in each month. This technique is used on every month except the summer peak month, which is computed using the AmerenUE Summer Peak Methodology.

2. The text in the "Summer and Winter Peak Demand Forecasts" section on Page 17 was replaced with the following text.

**Summer and Winter Peak Demand Forecasts**

The peak demand forecast is utilized in the planning of generating capacity or its alternatives, generating unit maintenance, and short-term power transactions. In addition, the peak demand forecast is used in determining future transmission and distribution facility requirements.

The peak demand forecast begins with the preparation of historical demand data. Each historical year's peak demand is adjusted to a peak demand consistent with normal weather conditions.

The peak demand was forecast by performing various time series and linear regressions and projecting demand based on the model with the best predictive power. The time series models employed were various forms of exponential smoothing and Box-Jenkins, and linear regressions. Judgment was also used to incorporate adjustments to the forecast. For a complete description of this process review the Peak Demand Forecast section.

Currently, AmerenUE makes use of plots of peak making energy versus two day weighted mean temperatures to predict the peak for the system. The forecasts of summer and winter peak demand are prepared separately, but follow a similar procedure. For purposes of this document, the methodology refers to both summer and winter peak demands, except where noted.

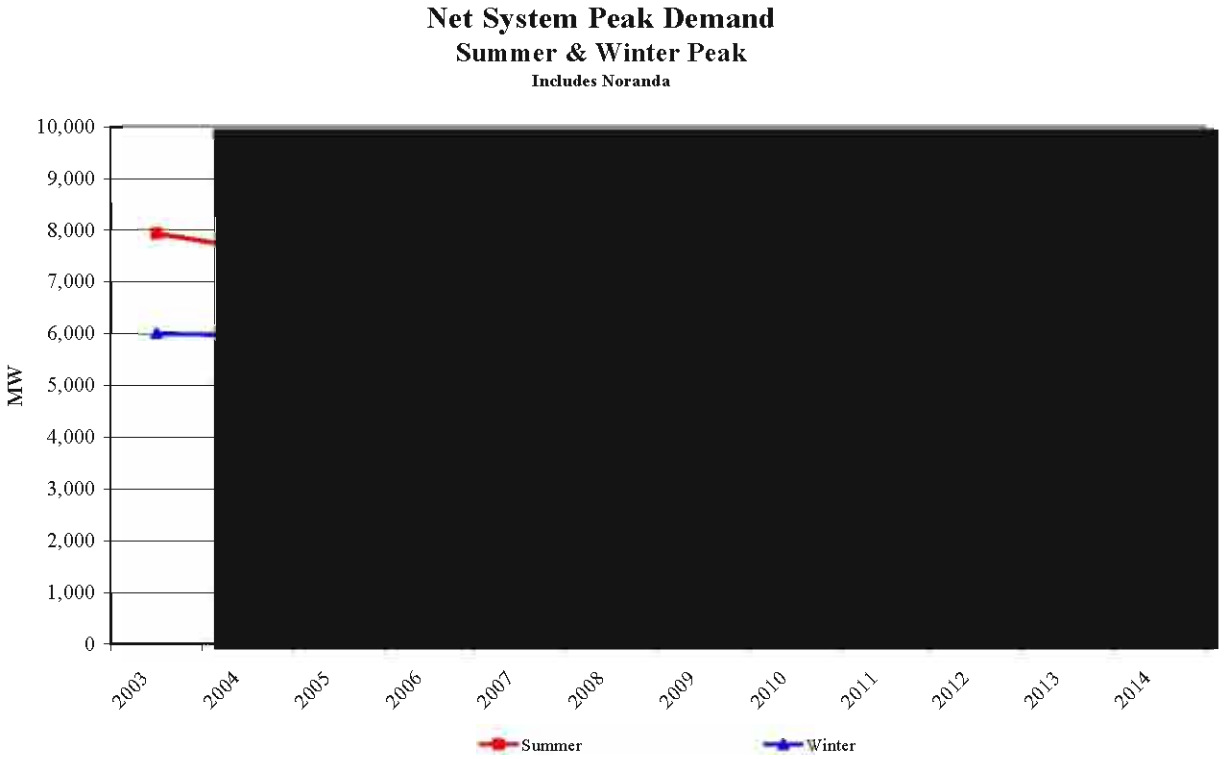
3. The **Net System Peak Demand** table on Page 67 was replaced with the following table.

| Year | January | February | March | April | May | June | July | August | September | October | November | December | Year-to-Year Annual Peak Growth |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 6,021 | 5,519 | 5,126 | 4,471 | 5,304 | 6,805 | 7,251 | 7,938 | 5,916 | 4,474 | 4,804 | 5,312 | |

[redacted]

forecast period.

4. The **Net System Peak Demand** chart on Page 68 was replaced with the following chart.




5. The following tables and charts referencing MetrixLT results were removed: Pages: 69,70,71,72,73,74,75,86,87,88,89,90,91,92,93,94,104,105,106,107,108,109,110,111,112, 118,119,120,121,122,123,124,130,131,132,133,134,135,136,142,143,144,145,146,147,148,154,155,156,157,158,159,160,166,167,168,169,170,171,172,178,179,180,181,182,183, 184,185,186,191,192,193,194,195,196,197,205,206,207,208,209,210,211,212,213,219,220,221,222,223,224,225,231,232,233,234,235,236,237,243,244,245,246,247,248,249,255, 256,257,258,259, 260,261