Ameren Services

One Ameren Plaza
1901 Chouteau Avenue
PO Box 66149
St. Louis, MO 63166-6149
314.621.3222
314.554.2514
314.554.4014 (fax)
tbyrne@ameren.com

August 4, 2007

Secretary of the Commission
Missouri Public Service Commission
Governor Office Building
200 Madison Street
Jefferson City, MO 65101

RE: Union Electric Company's 2005 Utility Resource Filing Pursuant to 4 CSR 240 – Chapter 22.

Dear Sirs:

In compliance with the Missouri Public Service Commission's order of July 25, 2006, AmerenUE is filing, as a public document, unredacted versions of the following pages of its IRP:

Document No. 1, Page 6;
Document No. 3, Page 200; and
Document No. 9, Page 15.

Thank you for your attention in this regard.

Sincerely,

Thomas M. Byrne
Managing Associate General Counsel

Attachments

Highly Confidential

Document No. 1

Integrated Resource Plan

Executive Summary

Corporate Planning Department

December 2005

established to create the vision and strategies, evaluate opportunities, identify barriers, and develop action and implementation plans to achieve meaningful levels of cost effective demand response, energy efficiency and renewable energy. AmerenUE also encourages the state of Missouri to consider the development of a Missouri sustainable energy plan to further encourage the development of energy resource options.

Developing sustainable energy efficiency and demand response initiatives call for a regulatory compact. Section 139 of the Energy Policy Act of 2005 lends support to the notion of a regulatory compact as it directs the Secretary of Energy, in association with the National Association of Regulatory Utility Commissioners (NARUC) and the state energy offices, to study the impact of state policies that encourage energy efficiency including:

1. performance standards for achieving energy use and demand reduction targets;
2. funding sources, including rate surcharges;
3. infrastructure planning approaches (including energy efficiency programs) and infrastructure improvements;
4. the costs and benefits of consumer education programs conducted by State and local governments and local utilities to increase consumer awareness of energy efficiency technologies
5. and measures; and
6. methods of:
    a. removing disincentives for utilities to implement energy efficiency programs;
    b. encouraging utilities to undertake voluntary energy efficiency programs; and
    c. ensuring appropriate returns on energy efficiency programs.

An important element of AmerenUE's integrated resource plan is to implement a sustainable energy component consisting of the addition of renewable energy sources as early as 2009. AmerenUE's integrated resource plan includes a capacity expansion portfolio option where 100 MW of Missouri wind generation may be added at AmerenUE as early as 2009. The plan includes other capacity expansion portfolio options with meaningful levels of potential new demand response and energy efficiency initiatives to supplement AmerenUE's substantial base of existing sustainable energy initiatives. The sustainable energy plan requires a systemic approach to developing and executing renewable energy, energy efficiency and demand response strategies that are aligned with the program goals set by all stakeholders. A critical success factor in the development of a sustainable energy plan for AmerenUE, and for the entire state of Missouri, should involve a regulatory compact where AmerenUE, the Missouri Public Service Commission and all stakeholders collaborate to design program parameters and agree on cost recovery mechanisms.

Highly Confidential

Document No. 3

Integrated Resource Plan

Integrated Resource Analysis

Corporate Planning Department

December 2005

9.3 PLAN SUMMARY – RENEWABLE ENERGY

AmerenUE will continue its evaluation of renewable energy. The Ameren Corporation operating companies, including AmerenUE, formed a group dedicated to renewable energy options research, development and implementation. In conjunction with the formation of the Renewable Energy Team, Ameren formed several supporting teams consisting of Ameren subject matter experts to support the Renewable Energy Team in the development of recommendations for renewable energy projects.

On-going projects in the renewable energy area include:

- Collaborative with Missouri DNR to assess Missouri wind speed at various heights
- Meetings with wind developers on potential wind development opportunities
- Economic analysis of landfill gas opportunities
- Economic analysis of anaerobic digestor systems
- Grant of $350,000 through June 2007 to study photovoltaic systems
- Turbine upgrades at the Keokuk and Osage hydro-electric facilities

AmerenUE analyzed the economics of adding 100 MW of Missouri wind type projects in 2009 in its capacity expansion plans. Although the current economic analysis of Missouri wind generation appears marginal, advancements in technology are providing a basis for AmerenUE to continue in its efforts regarding the development of 100 MW of wind generation in its 20-year resource plan. The timing and location of future wind projects depend on the results of current studies and data acquisition efforts as well as potential future Missouri renewable resource portfolio guidelines.

In a manner identical to AmerenUE's proposal to develop demand response and energy efficiency resources, AmerenUE proposes that the Missouri Public Service Commission establish a statewide policymaking forum to develop renewable energy resources to meet the energy needs of Missouri investor owned electric utilities (IOUs), protect the environment and increase diversity in the Missouri fuel mix to produce electricity. A statewide strategic approach to the orderly development of cost effective renewable energy resources, DR, and EE will assist in the development of meaningful long-term, sustainable initiatives.

The systemic approach and the proposed schedule developed in the DR and EE implementation plan section could also apply to renewable energy. In fact, the renewable initiative can be rolled into the demand response and energy efficiency initiative as part of a comprehensive statewide energy policy designed to promote sustainable energy development.

Highly Confidential Document No. 9

Integrated Resource Plan

Risk & Uncertainty Analysis Briefing

Corporate Planning Department December 2005

To perform the stratified sampling, the cumulative probability (100 percent) is divided into segments or strata, one for each iteration of the Monte Carlo simulation. A probability is randomly picked within each strata using a uniform distribution, and then mapped to the correct representative value within the variable's actual distribution. AmerenUE utilized 10 strata for each of five simulated variables, representing a total of 50 sets of multipliers that are incorporated into the MIDAS chronological dispatch modeling process.

The use of Latin Hypercube sampling decreases the computational time required to perform Monte Carlo variable draws while capturing enough events across the distribution to ensure a comprehensive representation of potential outcomes. It ensures that results remain consistent with the descriptive distribution variables while achieving a smooth distribution that would otherwise require additional Monte Carlo simulations. Figure 5.2 above illustrates the sampling distributions inherent in the Monte Carlo vs. Latin Hypercube processes.

5.4.2 General Parameters Describing Simulation Variables in MIDAS Risk Analyst

The parameters used to describe individual variables within the Risk Analyst simulation process include time horizon, distribution type, variance methodology, and correlations. Each of these parameters will be discussed in greater detail. The parameters are used to describe the input variables that will be randomly drawn and reflected in the simulated results. As previously discussed, there are 5 simulation variables that were identified and determined to represent the key risk drivers: natural gas prices, coal prices, SO_2 prices, and peak demand and energy. For each of these variables, the simulation parameters reflect the characteristics and expectations of price behavior relative to the global attributes and expectations of each variable.

Time Horizon

Risk Analyst segments the timeframe of parameters into short-term (hourly), mid-term (monthly), and long-term (annual) time intervals for descriptive and modeling purposes. To reflect a meaningful amount of granularity, capturing seasonality and other observable attributes, a monthly time horizon was assumed for each variable in the simulation process.

Distribution Type

While there are multiple types of distributions that describe data and events, historical analyses of commodity price behavior reflect lognormal distributions of data. Lognormal distributions are observed in situations where values are positively skewed from the mean and cannot become negative. Commodity prices tend toward lognormal distributions since infrequent but extreme price spikes create tails that are positively skewed and commodity prices do not fall below a value of zero (for any significant period of time). AmerenUE utilized a lognormal distribution to describe