

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

**In the Matter of Union Electric Company's)
2008 Utility Resource Filing)
Pursuant to 4 CSR 240 - Chapter 22) Case No. EO-2007-0409**

**MISSOURI DEPARTMENT OF NATURAL RESOURCES
ENERGY CENTER REVIEW OF
AMEREN UE
DEMONSTRATION OF COMPLIANCE WITH STIP FOR Case No. EO-2006-
0240
DATED MAY 9, 2008
and
INTEGRATED RESOURCE PLAN FILING
DATED FEBRUARY 5, 2008**

Filed June 18, 2008

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Introduction

On February 5, 2008, AmerenUE filed its 2008 Integrated Resource Plan (the IRP filing). On May 9, 2008, AmerenUE filed a supplementary "Demonstration of Compliance" (the Demonstration) intended to demonstrate compliance with the requirements of the Stipulation and Agreement (the Stipulation) that resolved AmerenUE's 2005 IRP filing (Case No. EO-2006-0240). The Stipulation, in addition to setting a February 2008 filing date for AmerenUE's next IRP filing, required AmerenUE to work with interested stakeholders in developing its 2008 IRP filing. The Stipulation included numerous additional requirements including requirements related to demand side management (DSM) and renewable generation that are discussed in these Comments.

As a signatory to the Stipulation, the Missouri Department of Natural Resources (the department) is providing comments on the IRP filing's compliance with the Stipulation as well as its compliance with the requirements of 4 CSR 240-22.010 through 4 CSR 240-22.080 (the IRP rule), as modified by the waivers granted by the Commission in Case EO-2007-0409.

To assist in analysis of the IRP filing and preparation of comments on compliance with 4 CSR 240-22.010 through 4 CSR 240-22.080, the department contracted with Synapse Energy Economics (Synapse) and its subcontractor Optimal Energy (Optimal). Synapse and Optimal are well-established consulting firms specializing in energy, economic and environmental topics and in energy efficiency and renewable energy portfolio planning and management, respectively. Synapse reviewed multiple aspects of the 2008 IRP filing and identified deficiencies in three areas: (1) DSM analysis and implementation; (2) economic analysis of wind resources; and (3) risk analysis and strategy selection. The department is submitting the Review of AmerenUE February 2008 Integrated Resource Plan prepared by Synapse that provides detailed discussion of the deficiencies identified in these three areas and proposes remedies for these deficiencies, a copy of which is attached hereto and by this reference incorporated herein,.

Comments on Stakeholder Process

As already noted, one requirement of the Stipulation was that AmerenUE conduct a participatory stakeholder process prior to and following the February 5, 2008 filing date. As a signatory to the Stipulation, the department has participated fully in the stakeholder process. In addition to participating in numerous face-to-face meetings, conference calls and electronic correspondence to review and provide comments on various aspects of the analysis required by the IRP rule, staff of the department's Energy Center provided review and recommendations in AmerenUE's efforts to contract for outside expertise for DSM analysis, implementation and evaluation. The participatory stakeholder process contributed to the quality of the filing and also was valuable in identifying issues related to the IRP analysis and, in some cases, resolving the issues.

Based on our experience in this and other IRP cases, we believe that a participatory stakeholder process should be a standard feature of future Missouri IRP filings.

That having been said, the participatory process has not resolved all issues related to the IRP analysis. Development of an IRP filing in compliance with the IRP rule requires completion of a complex multi-stage analytic process, and AmerenUE's schedule was tight in order to meet the February 2008 filing deadline. When a consensus of all parties could not be reached, AmerenUE proceeded in order to meet the filing deadline. Examples of issues in which this occurred are (1) analysis of wind generation costs and (2) interpretation of the Stipulation's requirements to define and include an "aggressive" DSM portfolio in the integrated analysis.

In addition, the vigorous stakeholder process did not include full stakeholder review and discussion of all aspects of the analysis. Some issues could not be addressed until after the IRP filing when work papers and responses to data requests became available. AmerenUE's response to all five required components of the Resource Acquisitions Strategy prescribed in 4 CSR 240-22.070(10) was not available to the parties until after the IRP filing.

Finally, the department wishes to emphasize that its comments and proposed remedies are based on what is actually included in the IRP filing and not on verbal statements that may have been made during the participatory process. A significant example that could influence the timing of proposed remedies is the question of major supply-side commitments that might occur prior to the next IRP filing. On at least one occasion during the stakeholder process, AmerenUE staff stated that the company would not commit to any major new supply side acquisition, such as a nuclear plant, prior to the next round of IRP filing and comments. However, this statement does not appear in the IRP filing or elsewhere in written form. Instead, the filing states (4 CSR 240-22.070(9) at page 101) that "...to remain on schedule to obtain a Nuclear PTC, a decision to proceed with the project needs to be made in late 2010 or early 2011." This statement is referenced in 4 CSR240-22.070(10) B) on page 103, making it a component of AmerenUE's officially adopted Resource Acquisition Strategy. For this reason, the department is compelled to base its comments on the statement in the IRP filing, rather than on statements that may have been made during the participatory stakeholder process.

Deficiencies in Complying with the Stipulation

The following discussion complements the discussion of deficiencies in Parts 3, 5 and 6 of the comments prepared by the department's consultant, Synapse Energy Economics. Specifically, the department is offering comments on AmerenUE's "demonstration of compliance" with paragraphs 11, 18, 25, 27 and 28 of the Stipulation.

The department recommends that the DSM implementation issues that are identified in Part 4 of the comments prepared by Synapse be fully discussed in stakeholder meetings following the submission of comments by the parties.

The department recognizes and supports AmerenUE's current effort to implement DSM programs. As Synapse comments, the program efforts planned for 2008-2010 represent a significant increase in efficiency efforts. Furthermore, AmerenUE, in stakeholder meetings and in its RFP to secure expertise in program implementation, has clearly stated an openness to proposals that would enhance program effectiveness and increase the resulting energy savings. The individuals who prepared the Synapse comments have significant experience and expertise in DSM program design and implementation. Their comments on these areas are offered as recommendations for changes that may significantly improve program design and help identify and achieve maximum savings.

In regard to AmerenUE's demonstration of compliance filing, the department provides the following comments:

Requirement 11: Wind Analysis

In its demonstration of compliance with paragraph 11 of the Stipulation, AmerenUE states that rather than rely in part on tall tower data in its evaluation of wind generation, the utility relied on the wind RFP. However, as noted in the Synapse comments, the cost and performance information for new wind capacity that AmerenUE presents in 4 CSR 240-22.040, starting at page 35, are inconsistent with the cost and performance information submitted by bidders in response to the wind RFP. Furthermore, the results of the RFP indicate that higher net capacity factors than those used by Black and Veatch (and presumably based on the RFP) can be achieved with higher towers or premium sites.

Requirement 18: Best Practices DSM Analysis

The Stipulation included specific tasks to be accomplished with respect to this provision of the Stipulation. AmerenUE's demonstration of compliance fails to review compliance with these specific tasks. As noted in Synapse's comments, one of these paragraphs, 5) a) 1, requires the DSM analysis to rely on industry best practices. Pages 11-18 of Synapse's comments identify and discuss methodological flaws in the DSM analysis that fall short of industry best practices. Synapse discusses these flaws in four categories: (i) omission of measures that should have been included in a comprehensive IRP analysis; (ii) errors in calculating levelized costs; (iii) erroneous assumptions about penetration rates; and (iv) inappropriate treatment of costs and benefits.

In many instances, the flaws discussed in the Synapse comments are deficient with respect to a specific portion of the IRP rule as well as deficient with respect to the "best

practices" requirement of the Stipulation. These additional deficiencies are documented in the Synapse comments.

Requirement 25: Aggressive DSM Portfolio

Pages 7-11 of Synapse's comments demonstrate that AmerenUE has underestimated the DSM achievable potential that exists in Missouri and has not met the Stipulation's requirement to analyze an aggressive DSM portfolio or the related provision in the waiver to 4 CSR 240-22.050(4), which requires that "an estimate of achievable potential shall be prepared for multiple portfolios of programs, where at least one portfolio represents a very aggressive approach to encouraging program participation." One remedy proposed by Synapse is that in its next IRP filing, AmerenUE should identify and analyze a "very aggressive" energy efficiency portfolio as described above. The department assumes that as part of this analysis, AmerenUE would include the "very aggressive" energy efficiency portfolio in some alternative resource plans subjected to integration analysis in its next IRP filing.

The department also noted that AmerenUE's preferred resource plan in 4 CSR 22.070(6) includes a 540 MW reduction in demand "through implementation of *energy efficiency programs...by 2025*." (p. 57) AmerenUE's statement of its preferred resource plan is not consistent with the projection of demand reduction in the DSM worksheet AmerenUE_Aggressive Portfolio_01.22.08.xls, which projects a *** reduction from *energy efficiency programs* and ***** from demand response programs by 2025. The department recommends that AmerenUE accurately represent the source of the projected demand reductions in its preferred resource plan and in public documents to be from energy efficiency programs and demand response programs, or demand side management programs.

Requirement 27: Best Practice Development of Risk Parameters

The demonstration of compliance indicates three sections of the filing that document the subjective assessment for the three uncertain factors that were used in the deterministic analysis of risk. However, the demonstration does not document subjective assessments for the other uncertain factors, one of which (capital cost) proved to be a critical uncertain factor.

For load transformation, one of the factors used in the deterministic risk analysis, Synapse points out in its comments, page 28, that CRA consulted with only one AmerenUE subject matter expert. CRA's documentation of the subjective assessment appears in 4 CSR 240-22.030 (7). As Synapse notes, "Consideration of more than one opinion typically produces a wider range of values and substantially improves the validity of results based on expert assessments." This issue was discussed at a stakeholder meeting, and at that meeting AmerenUE indicated its willingness to commit to a more stringent standard for the subjective assessments in its next IRP filing. The Synapse comments include a proposed remedy to this effect.

The contingency planning requirements of 4 CSR 240-22.070(10)(C) through (E) rely on the premise that the utility has identified a normal range and "extreme values" for each critical uncertain factor, such that observation of extreme values would trigger consideration of a contingency plan. The "Resource Acquisition Strategy" of AmerenUE's filing [4 CSR 240-22.070(10)] seems to rely on the concept that uncertain factors will remain within a "reasonable range of probability" and provides no contingency planning for instances in which the value of uncertain factors might go beyond what had been assessed as "reasonable." AmerenUE's approach does not appear to meet the rule's intention that the utility should consider how it would respond to "extreme values" of uncertain factors should such values unexpectedly be observed in the future. Furthermore, there is little if any documentation in the filing of how this issue was addressed for uncertain factors such as capital costs that were not included in the deterministic risk analysis. As stated in Synapse's comments, consideration of extreme outcomes is a major objective of risk assessment, and methods exist to address the risk of extreme outcomes.

Requirement 28 - Contingency Planning as an Ongoing Process

AmerenUE's discussion of this point assumes that the preferred resource plan remains the preferred plan under most conditions. The exceptions would occur if the United States moves toward a carbon dioxide (CO₂) policy other than AmerenUE's "high price" scenario or a "persistent, sustainable trend toward higher capital costs." The filing provides little detail on how AmerenUE staff or decision makers would determine that the latter is occurring. As Synapse states in its comments, the description for monitoring capital cost and other uncertain factors "should identify what will be monitored, by whom, to whom the reports will be submitted and the corresponding schedules." (Synapse comments, p. 9.)

The department is proposing that AmerenUE revise its deterministic risk analysis to include capacity cost in the analysis. The revision would occur by early 2010, prior to a possible decision whether to commit to a nuclear plant. It should be recognized that the revision could result in significantly different alternative resource plans being preferred under the newly redefined scenarios. In its ongoing effort to monitor critical uncertain factors, AmerenUE should take this possibility into account.

WHEREFORE, the department submits its comments on AmerenUE's February 5, 2008, Integrated Resource Plan.

Respectfully submitted,

JEREMIAH W. (JAY) NIXON

Attorney General

/s/ Shelley A. Woods
Shelley A. Woods
Assistant Attorney General
P.O. Box 899
Jefferson City, Missouri 65102
Bar No. 33525
573-751-8795
573-751-8464 (fax)
shelley.woods@ago.mo.gov
**Attorneys for Missouri Department of Natural
Resources**

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing have been mailed, hand-delivered, transmitted by facsimile or e-mailed to all counsel of record this 18th day of June, 2008.

Lewis Mills
Office of Public Counsel
P.O. Box 2230, Suite 650
Jefferson City, Missouri 65102

Kevin Thompson
General Counsel
Missouri Public Service Commission
P.O. Box 2230
Jefferson City, Missouri 65102

James B. Lowry
Smith Lewis, LLP
P.O. Box 918
Columbia, Missouri 65205

Steven R. Sullivan
Sr. Vice President, General Counsel & Secretary
Ameren Services Company
P.O. Box 66149 (MC 1300)

St. Louis, Missouri 63166-6149

Thomas M. Byrne
Managing Associate General Counsel
Ameren Services Company
P. O. Box 66149 (MC 1310)
St. Louis, Missouri 63166-6149

Paul Boudreau
Brydon Swearingen
P.O. Box 456
Jefferson City, Missouri 65102

Henry B. Robertson
Bruce A. Morrison
Kathleen G. Henry
Great Rivers Law
705 Olive St., Suite 614
St. Louis, Missouri 63101

Lisa Langeneckert
Sandberg Phoenix & von Gontard, P.C.
One City Centre, 15th Floor
515 North Sixth St.
St. Louis, Missouri 63101-1880

Diana M. Vuylsteke
Byran Cave
211 N. Broadway
St. Louis, Missouri 63102

Douglas Healy
939 Boonville, Suite A
Springfield, Missouri 65802

Stuart W. Conrad
David L. Woodsmall
Finnegan Conrad & Peterson
3100 Broadway, Suite 1209
Kansas City, Missouri 64111

/s/ Shelley A. Woods
Shelley A. Woods