

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

In re: Union Electric Company's)	
2008 Utility Resource Filing pursuant to)	Case No. EO-2007-0409
4 CSR 240 – Chapter 22.)	

**JOINT FILING AND PARTIAL
STIPULATION AND AGREEMENT**

COME NOW Union Electric Company, d/b/a AmerenUE (AmerenUE), the Staff of the Missouri Public Service Commission (Staff), the Office of the Public Counsel (OPC), the Missouri Department of Natural Resources (DNR), Missouri Industrial Energy Consumers (MIEC), Missouri Energy Group (MEG) and the Sierra Club, Missouri Coalition for the Environment, Mid-Missouri Peaceworks and the Association of Community Organizations for Reform Now (collectively, Sierra Club) and for their Joint Filing and Partial Stipulation and Agreement, as required by 4 CSR 240-22.080(8), of the Commission's Chapter 22 Integrated Resource Plan (IRP) filing, state as follows:

1. AmerenUE made its Chapter 22, 4 CSR 240-22, Integrated Resource Plan (IRP) filing on February 5, 2008.
2. Since that time, parties in this case filed pleadings alleging certain deficiencies with AmerenUE's IRP filing. The parties filing comments were the Staff (June 19, 2008), OPC (June 19, 2008), DNR (June 18, 2008), MIEC (June 18, 2008), and Sierra Club (June 18, 2008). There were other parties to this case, including MEG and Noranda, which did not file a report but have participated in meetings and telephone conferences in an attempt to reach a plan to remedy the identified alleged deficiencies, as required by the Commission's IRP rules.
3. AmerenUE and the parties have discussed those alleged deficiencies and reached a resolution on most issues. Some issues were resolved by AmerenUE placing additional

information in the record. The requested additional information is included in AmerenUE's Supplemental Filing, made concurrently with this filing.

4. AmerenUE's agreement to take any particular action or to provide any particular analysis does not constitute an admission on the part of AmerenUE that its current filing contains any deficiencies.

5. AmerenUE's next IRP filing is required to be filed on April 5, 2011, as per the terms (paragraph 2, page 1) of the Non-Unanimous Stipulation and Agreement in Case No. EO-2006-0240.

DOCUMENT ORGANIZATION

6. Order of items contained within this document:

- I. Agreed Upon Remedies to Alleged Deficiencies
 - Load Analysis – Page 2
 - Supply-Side Resources Analysis – Page 4
 - Demand-Side Resource Analysis – Page 6
 - Risk Analysis and Strategy Selection – Page 12
 - Case No. EO-2006-0240 Stipulation and Agreement Issues – Page 15
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I. AGREED UPON REMEDIES TO ALLEGED DEFICIENCIES

4 CSR 240-22.030 Load Analysis and Forecasting

7. In what Staff labels "Staff Concern A," Staff requests clarification of AmerenUE's plans for serving wholesale customers in the future and how this may impact the load forecast. *Staff Report on AmerenUE's Integrated Resource Planning Compliance Filing*, June 19, 2008, p. 7. (Staff Report)

The requested clarification is provided in AmerenUE's Supplemental Filing and Request for Commission to Accept Supplemental Filing (Supplemental Filing) in paragraph 6 on

pages 4-5. AmerenUE agrees to provide its plan for serving wholesale customers as a part of its next IRP filing.

8. Staff Concern B noted gaps and inconsistencies in certain databases used by AmerenUE and requested an explanation of why these data anomalies occurred and how they were handled in forecasting. *Staff Report*, p. 8.

AmerenUE provides the explanation in its Supplemental Filing in paragraph 7 on pages 5-6. AmerenUE agrees to identify and explain any data anomalies as part of its next IRP filing.

9. Staff Concern C deals with documentation of the source of the exponents on the variables used to calculate the Heat Use, Cooling and Other variables in the Residential and Commercial Statistically Adjusted End-Use (SAE) models. *Staff Report*, p. 8.

AmerenUE is providing the requested explanation in its Supplemental Filing in paragraph 8 on pages 6-9. AmerenUE agrees to document the source of the exponents on the variables used to calculate the Heat Use, Cooling and other variables in the Residential and Commercial SAE models as part of its next IRP filing.

10. Staff Concern D is its view that AmerenUE had not quantified or explained the statement “some level of energy efficiency improvement” (page 266) that is used in the base load analysis. *Staff Report*, p. 8.

The requested explanation is provided in AmerenUE’s Supplemental Filing in paragraph 9 on page 9 and in Exhibit 2 to the filing. AmerenUE agrees to provide the level of energy efficiency improvement used in its base load analysis as part of its next IRP filing.

11. 4 CSR 240-22.030(2)(A). Staff states the filing lacks an explanation for the assumptions necessary for including driver variables that are shown to be statistically insignificant. *Staff Report*, p. 8.

The requested explanation is provided in AmerenUE's Supplemental Filing in paragraph 4 on pages 1-4. Should this situation occur again, AmerenUE agrees to provide the assumptions necessary for including driver variables that are shown to be statistically insignificant as part of its next IRP filing.

12. 4 CSR 240-22.030(5)(B)1.B. Staff states that AmerenUE failed to compare the forecasts of the number of units for each major class to historical trends. *Staff Report*, p. 9.

The requested information is provided in AmerenUE's Supplemental Filing in paragraph 5 on page 4 and in Exhibit 1 to the filing. AmerenUE agrees to compare forecasts of the number of units for each major class to historical trends as part of its next IRP filing.

13. 4 CSR 240-22.030(6). Staff states that the rules require a high-case load forecast as well as the base-case and low-case forecasts provided. *Staff Report*, p. 9.

In its next IRP filing, AmerenUE will develop a high-case forecast. To the extent a high-case forecast cannot be developed, AmerenUE will request a waiver of this rule.

4 CSR 240-22.040 Supply-Side Resources Analysis

14. 4 CSR 240-22.040(1). DNR states that AmerenUE's supply-side resource analysis over-estimates the costs of generation from new wind turbine capacity. Synapse Review attachment to *Missouri Department of Natural Resources Energy Center Review of AmerenUE Demonstration of Compliance with Stip [sic] for Case No. EO-2006-0240 Dated May 9, 2008 and Integrated Resource Plan Filing Dated February 5, 2008. (DNR Report, Synapse Attachment)*, p. 24.

During the preparation of its next IRP filing, AmerenUE will:

- Demonstrate that its assumptions regarding capacity factors are consistent with the most recent data on capacity factors for the best commercially available wind sites;
- Demonstrate that its assumptions regarding the timing of transmission capacity upgrades, and the allocation of the costs associated with those upgrades, are based

on the most recent system planning studies and currently effective transmission cost allocation principles;

- Present scenarios for acquiring wind resources that identify the region being considered utilizing multi-county areas, with a characterization of the wind resources available for each. To make a meaningful comparison of the regions under consideration, the information presented should include estimates at various turbine hub heights (e.g., 80, 100 or 120 meters, where practical) of wind density, transmission upgrades required and the levelized cost of energy per MWh under a Purchase Power Agreement and/or an ownership arrangement.

15. 4 CSR 240-22.040(1), (6) and (7). OPC states that AmerenUE failed to analyze transmission upgrades that could alleviate the transmission outlet capacity constraints which limit the bulk power sales AmerenUE can make from its Audrain gas-fired generating facility. *Review of Union Electric Company Electric Utility Resource Planning Compliance Filing* (OPC Report), p. 4.

AmerenUE is providing additional explanation of the status of its analysis of transmission upgrades at AmerenUE's Audrain gas-fired generation facility in its Supplemental Filing in paragraph 10 on pages 9-10 as a supplement to its supply-side implementation plan. AmerenUE agrees to update stakeholders (Staff, OPC and the intervenors in this case) on the status of both the Audrain and the Callaway 2 MISO transmission studies at its semi-annual IRP update meetings and reflect the results of the Audrain study, if available, in the supply-side screening in its next IRP filing.

16. Sierra Club offered a similar, more generic comment on a lack of transmission studies. *Sierra Club Report*, p. 4.

AmerenUE agrees to study transmission as part of any new supply-side resource in its preferred plan.

17. 4 CSR 240-22.040(7). Sierra Club states that AmerenUE failed to assess its transmission and distribution facilities or analyze loss-reduction measures as a supply-side

resource although the Company did describe a process for doing such analysis. *Sierra Club Report*, p. 4.

AmerenUE agrees to assess and analyze loss reduction measures for transmission and distribution facilities as part of its next IRP filing.

18. 4 CSR 240-22.040(8). Sierra Club points out the lack of a cross reference when estimates for non-nuclear resources are located elsewhere in the body of the IRP filing. *Sierra Club Report*, p. 6.

AmerenUE will provide cross references for information whenever possible in its next IRP filing.

4 CSR 240-22.050 Demand-Side Resource Analysis

19. 4 CSR 240-22.050(1)(A). Staff states that AmerenUE did not include a discussion of source materials for its “interruptible” measures. *Staff Report*, pp. 11-12.

AmerenUE is providing this reference as part of its Supplemental Filing, in Exhibit 4.

20. 4 CSR 240-22.050(1)(D). DNR states that AmerenUE did not consider technology that is a substitute for electricity, such as solar hot water systems and daylighting designs. *DNR Report, Synapse Attachment*, p. 12. The Sierra Club makes a very similar comment. *Sierra Club Report*, pp. 7-8.

AmerenUE will include technologies that do not generate electricity in its screening of energy sources and energy technologies that substitute for electricity at the point of use in its next IRP filing.

21. 4 CSR 240-22.050(3)(C). DNR states that AmerenUE erred in its calculation of the levelized cost of saved energy because the levelized cost of saved energy should be calculated in nominal dollars for each program year. *DNR Report, Synapse Attachment*, p. 14.

AmerenUE agrees to calculate the levelized cost of saved energy in nominal dollars for each program year in its next IRP filing. For each program year “n” AmerenUE will first express the demand-side management (DSM) program expenditures in that year as a levelized annual cost using the estimated life (time horizon or years) over which the measures installed in year “n” will produce annual energy savings. AmerenUE will then calculate the levelized cost per unit of saved energy for program year “n” by dividing the levelized annual cost for program year “n” by the annual energy savings from the measures installed in year “n.” After AmerenUE has calculated the levelized cost of saved energy in nominal dollars for each program year, it will then calculate a total average cost of saved energy for all program years, using annual energy savings by program years as a weighting factor.

22. 4 CSR 240-22.050(3) and (7). OPC states that AmerenUE failed to analyze street lighting retrofits as an end use measure and as a demand-side program. *OPC Report*, p. 4.

For its next IRP filing, AmerenUE agrees to analyze the cost effectiveness of street light retrofits and replacements as a demand-side measure and provide the results of this analysis to stakeholders by December 31, 2008. If street light retrofits/replacements are determined to be a cost effective measure, AmerenUE will (1) review information on the street lights in its service territory to assess the potential for retrofits and replacement of old street light technologies (e.g., mercury vapor lights) with more efficient technologies (e.g., high pressure sodium), (2) develop a street lighting program design and (3) assess the cost-effectiveness, demand impacts, and energy impacts of the program and provide these three items to stakeholders by February 1, 2009.

23. 4 CSR 240-22.050(5). Staff states that although AmerenUE identified areas of need for research, the Company did not conduct that research. *Staff Report*, p. 12. The Sierra

Club sets forth a similar concern, noting that AmerenUE did no primary research in this area. *Sierra Club Report*, p. 8.

AmerenUE will engage contractors prior to its next IRP filing to conduct market assessments that support both the implementation of the current AmerenUE portfolio of DSM programs and the design and implementation of future portfolios. Two important aspects will include documentation of customers' decision making processes for energy efficiency investments/expenditures and a benchmarking of residential, commercial and industrial electricity consumption by end use. AmerenUE will incorporate, to the extent feasible, service territory specific end-use information in its demand-side analysis, load analysis and forecasting work in its next IRP filing. In addition, AmerenUE will do additional research regarding the peak demand contributions of certain energy efficiency measures, most notably weather sensitive measures, such as ceiling insulation and air conditioning units with variable speed compressors.

24. 4 CSR 240-22.050(6) and 4 CSR 240-22.070(9). DNR states that AmerenUE's DSM analysis assumes promotion of measures that are or will be sub-optimal, baseline or code requirements within the 20-year planning period. *DNR Report, Synapse Attachment*, p. 21.

The issue arises in situations where there are two similar energy efficient technologies (e.g., T-8 vs. Super T-8 lighting) but one technology is more efficient than the other. AmerenUE believes that to the extent that both technologies are cost effective and reduce customers' electric consumption relative to the status quo, customers should be given the option to choose either technology depending on what works best for the customer. However, to the extent that total marginal benefits exceed total marginal costs for a higher efficiency alternative, AmerenUE will incorporate this fact into its program design (e.g., greater incentives for the higher efficiency alternative). As part of the process leading up to its next IRP filing, AmerenUE

encourages stakeholders to bring their concerns relative to whether certain technologies should be included in the AmerenUE portfolio to the AmerenUE energy efficiency team.

AmerenUE will analyze technologies specified by the stakeholders (such as replacement of T-12s with Super T-8s). AmerenUE will investigate a range of measures and welcomes participation by external consulting firms that have been engaged by the stakeholders to actively contribute in the participatory portion of this process so that their insights can be incorporated into modeling activities and thoroughly vetted prior to AmerenUE filing its next IRP.

25. 4 CSR 240-22.050(6)(B). Staff states that AmerenUE's evaluation plans did not include a study of the interactive effects for the demand-side resources in its current preferred resource plan. *Staff Report*, p. 12.

This is resolved through the information provided in AmerenUE's Supplemental Filing in paragraph 4 on pages 1-4.

26. 4 CSR 240-22.050(6)(B). DNR states that the AmerenUE screening process limited its consideration of interactive effects to the measure level, did not consider bundled measures that would optimize overall systems and ignored the significant benefits achievable with better design and custom opportunities. *DNR Report, Synapse Attachment*, p. 13.

AmerenUE will work collaboratively with stakeholders to consider interactive effects for the DSM analysis in its next IRP filing. AmerenUE recognizes that interactive efforts take many forms. For example, there are weather sensitive interactive effects where more efficient electric lighting can decrease energy used for air conditioning. This analysis is provided in the Supplemental Filing in paragraph 10 on pages 10-11. There are also dual fuel interactive effects where energy efficiency improvements to a building can save both electricity and natural gas. Although AmerenUE has the modeling capability to analyze the reduced energy

consumption of both fuels, the Missouri IRP rules limit the consideration of non-electric benefits and costs in DSM measure and program screening. Finally, there is an interactive effect commonly referred to as “co-benefits and co-costs” associated with DSM initiatives, which are difficult to quantify (effects associated with increased comfort, improved health, lower emissions, changing quality of lighting, changing levels of O&M costs, etc.) These effects are often difficult to quantify but AmerenUE will work with stakeholders to evaluate how to best quantify these effects when assessing DSM penetration and achievable potential.

27. 4 CSR 240-22.050(7)(A)(1). DNR states that the DSM analysis contains methodological deficiencies that are not consistent with use of best practices and best available information. DNR states that the estimates of penetration rates are deficient in three respects: they are subjected to arbitrary constraints; they are inappropriately based on customer pay-back periods; and penetration rates for bundled measures are inappropriately disaggregated. DNR further states that the DSM analysis uses flawed assumptions about costs and benefits. Specifically, DNR states AmerenUE inappropriately used default net-to-gross ratios based on the State of California’s practice rather than on program-specific analysis; may have inappropriately applied net-to-gross ratios to measure screening; and failed to consider non- electric benefits and costs that should have been included for compliance with 4 CSR 240-22.050 (3)(C) 2. *DNR Report, Synapse Attachment*, pp. 14-19.

AmerenUE agrees that it will use best available data and best practices for DSM analysis in its next IRP filing. AmerenUE agrees that in the DSM analysis for its next IRP filing, the analytic issues and proposed remedies raised by DNR identified above will be considered. Although AmerenUE believes it used the best available data at the time of modeling, the Company agrees there are additional measures that can be included. These additional measures can enhance its evaluation and, ultimately, selection of its portfolio of energy efficiency

programs. AmerenUE intends to perform potential studies and assess the actual impact of energy efficiency programs to further refine its analysis within the next IRP process. AmerenUE also agrees that a more detailed DSM load shape could be developed with hourly impacts which could be applied to the MIDAS model of system energy within the analysis although it is unsure of whether or not this will result in an added benefit to the project. AmerenUE will do this work to assess the benefit or detriment that the introduction of this more detailed DSM impact information will have on the overall PVRR analysis. AmerenUE will analyze the actual response to energy efficiency programs by AmerenUE's customers to more accurately determine costs and benefits in its next IRP filing.

28. 4 CSR 240-22.050(7)(A). DNR states that the DSM screening omitted several measures from the DSM screening. DNR identified four categories with examples for each: "best practice measures," "emerging technology measures," "improved design and custom opportunities achieved by bundling," and "targeted measures." *DNR Report, Synapse Attachment*, pp. 13-14.

AmerenUE will screen a comprehensive list of cost-effective measures in its next IRP filing and agrees to consider and screen measures from the four categories, including the specific examples identified in DNR's comments.

29. Although it was not tied back to a specific portion of the IRP rule, MIEC expressed concerns about AmerenUE's reliance on data from other states in designing its energy efficiency programs. It noted that estimates of the efficacy of the various energy efficiency programs, including costs to implement, marketing techniques, required level of incentives and customer response are based on experience in other states and may or may not be representative of Missouri customers. *Report of the Missouri Industrial Energy Consumers on AmerenUE's Integrated Resource Plan* (MIEC Report), p. 1.

AmerenUE recognizes this concern but believes that its experience in the implementation of the large-scale DSM programs in 2009 and 2010 will provide information specific to its customers and that information will be used as part of its next IRP filing.

30. MIEC states that the models employed by AmerenUE did not correctly calculate the revenue losses resulting from the energy efficiency programs with the result that the impact on rates is understated in the Rate Impact Measure (RIM) test calculation. *MIEC Report*, p. 2.

AmerenUE agrees to obtain more granular (hourly) data in order to more accurately capture potential lost revenues used in the calculation of the RIM test, including revenue losses associated with potential decreased demand charges due to both energy efficiency and demand response initiatives. This additional information will also be considered in developing incentives for participants.

4 CSR 24-22.070 Risk Analysis and Strategy Selection

31. 4 CSR 24-22.070(9)(C). DNR states that the absence of any plan on biomass research is a deficiency. *DNR Report, Synapse Attachment*, p. 31.

AmerenUE's plan for biomass research is provided in Exhibit 3 to its Supplemental Filing. This biomass action plan will be included as part of the renewables assessment report, which is now expected to be completed by June of 2009.

32. 4 CSR 240-22.070(2). DNR states that the subjective assessment of load transformation by CRA (AmerenUE's consultant) was based upon input from only one individual from AmerenUE. *DNR Report, Synapse Attachment*, p. 29.

To resolve this, AmerenUE agrees that it will use more than one opinion in developing this information.

33. 4 CSR 240-22.070(2). DNR states that the range of values for each factor assumed from modeling purposes tends to exclude values that may have a low probability but an extremely high value. *DNR Report, Synapse Attachment*, p. 29.

To resolve this concern, AmerenUE agrees to consider extreme outcomes with their associated probabilities when analyzing uncertain factors in its next IRP's risk assessment. AmerenUE agrees to review and consider the use of available measurement techniques such as Value at Risk for appropriate uncertain factors when addressing the risk associated with extreme outcomes.

34. 4 CSR 240-22.070(2). DNR states that the probability distributions assumed for the uncertain factors do not appear to be based upon analyses of the historical values of each factor, including analyses of correlations between these factors. *DNR Report, Synapse Attachment*, p. 29.

In its next IRP filing, AmerenUE will provide detailed documentation supporting the values and associated probabilities for each uncertain factor and will clearly indicate where the documentation can be found.

35. 4 CSR 240-22.070(2). DNR states that the IRP underestimated the range of future capital costs of new nuclear capacity in its evaluation of its candidate portfolios. *DNR Report, Synapse Attachment*, p. 30. DNR also states that AmerenUE should have included capacity costs as a factor in the first ("deterministic") stage of risk analysis. *DNR Report, Synapse Attachment*, pp. 30-31.

As provided for in the Commission rules governing this section, AmerenUE will, in its next IRP filing, provide detailed documentation supporting the values and associated probabilities for each uncertain factor, including construction costs, and will clearly indicate where the documentation can be found.

In addition, in its next IRP filing, if AmerenUE decides to comply with the risk and uncertainty analysis requirements of 4 CSR 240-22.070 using an approach identical or similar to that set forth in the waiver for filing (Attachment D, Waiver Requests Related to Risk Analysis and Strategy Selection), AmerenUE agrees to (1) review the uncertain factors used in Step 1 of the risk analysis to build the “probability tree” and to consider selecting a different set of uncertain factors for this purpose, which may include considering nuclear plant construction costs as one of the uncertain factors used in Step 1; and (2) similar to the stakeholder input process obtained for its February 5, 2008 filing, involve stakeholders in considering the uncertain factors to be used in Step 1; and (3) similar to the process used for its February 5, 2008 filing in Step 2, when assessing top resource plans under each scenario and determining the final set of resource plans that will be subjected to probabilistic analysis, to determine a final set of resource plans that include diverse supply-side options. If an alternative approach to risk and uncertainty analysis is used, AmerenUE agrees to work with the stakeholders to address how nuclear capacity costs are incorporated into the risk and uncertainty analysis.

36. 4 CSR 240-22.070(10)(E). DNR states that the IRP discussion of the process for monitoring critical uncertain factors is deficient because it does not present any details on the process or describe the methods that AmerenUE will use to monitor and report on trends in the capital costs of new nuclear and coal capacity, carbon policy or other critical uncertain factors. *DNR Report, Synapse Attachment*, p. 7.

AmerenUE is providing the process it will use to monitor and report on trends in the critical uncertain factors in its Supplemental Filing in paragraph 12 on pages 12-13. AmerenUE agrees to provide these processes in its next IRP filing.

Stipulation and Agreement from Case Number EO-2006-0240

37. Staff noted that AmerenUE has not yet filed its “Recommendations for Changing the Missouri Chapter 22 DSM IRP Rule” as required by paragraph 18, task 8 of the Stipulation and Agreement in that case. *Staff Report*, p. 13.

AmerenUE agrees to file its suggestions for changes to 4 CSR 240-22.050 Demand-Side Resource Analysis by August 31, 2008.

38. AmerenUE has agreed to include in this Partial Stipulation and Agreement portions of the Stipulation and Agreement filed in Case No. EO-2006-0240. The request for the inclusion of this language is not tied to an alleged deficiency in this case (EO-2007-0409.) Specifically, AmerenUE agrees that:

A. AmerenUE will document the subjective assessments of probabilities by AmerenUE decision-makers for the likelihood of adverse outcomes for uncertain factors that are critical to the performance of the various alternative resource plans. The names and positions of these decision-makers will also be documented.

B. AmerenUE agrees to use the terms as defined within the IRP rules, in particular 4 CSR 240-22.020, or will identify and explain any differences.

C. AmerenUE will include in its next IRP filing a discussion of the rationale used by its decision-makers to judge the appropriate trade-offs among competing planning objectives, expected performance and risk. This discussion will include identification of the decision-makers by name and title.

D. AmerenUE will provide workpapers as created and used to develop its IRP plan. AmerenUE agrees to minimize the use of hard numbers (no formula linked to the number) and, in situations where hard numbers need to be used, AmerenUE will document the source of the number and/or explain how the number was derived. AmerenUE will request

consultants to indicate what is being quantified and the units of measure in workpapers which contain quantitative assumptions, estimates or data.

E. AmerenUE agrees to have all workpapers and other supporting documentation, including the workpapers of its consultants, available at the time of filing. AmerenUE will require all of the consultants that it hires to provide workpapers to AmerenUE. Further, AmerenUE agrees to encourage consultants to deliver their workpapers as soon as they can reasonably be delivered and to inform the stakeholders when workpapers become available. Stakeholders may request copies of any workpapers that are available prior to the time of filing and AmerenUE agrees to meet reasonable stakeholder requests.

F. AmerenUE agrees to provide verification that the Resource Acquisition Strategy has been officially approved by AmerenUE. This verification will include the name, position and signature of the AmerenUE employees who approved the Resource Acquisition Strategy for AmerenUE.

G. AmerenUE, Staff, OPC and the Signatories agree to work together to develop a process to provide the opportunity for public input into the IRP filing.

Other Issues

39. Staff points out some reference errors contained within the AmerenUE IRP filing. *Staff Report*, p. 14.

AmerenUE is providing this information as part of its Supplemental Filing in Exhibit 4.

40. AmerenUE agrees that, if it seeks any waivers for its next IRP filing, it will make a good faith effort to do so at least 12 months prior to the filing. In the event that AmerenUE is unable to request waivers at least 12 months in advance, AmerenUE will provide prompt notice of its determination to all stakeholders and file a waiver request with the Commission no later

than six months prior to its IRP filing. AmerenUE agrees it will seek waivers for any and all sections of the IRP rules with which its filing will not be in compliance.

41. AmerenUE and the Signatories agree to hold semi-annual resource planning meetings until AmerenUE's next IRP filing, with the initial meeting held six months after the filing of this Agreement. The meetings will be open to all stakeholders in this case. At these meetings, AmerenUE will provide an update on the incorporation of the terms of this Agreement into its next IRP filing. The meetings will also be used to facilitate discussion and gather input from participants on specific aspects of the IRP process.

42. This Partial Stipulation and Agreement does not restrict any Signatory from taking the position of its choice in any Commission case to review the Chapter 22 Electric Utility Resource Planning / IRP Rules or in any AmerenUE proceeding, including its pending electric rate increase case, Case No. ER-2008-0318.

43. All actions agreed upon by AmerenUE shall be completed for its next IRP filing, unless otherwise stated.

II. Effect of this Partial Stipulation and Agreement

44. None of the Signatories shall be deemed to have approved or acquiesced in any question of Commission authority, accounting authority or principle, cost of capital methodology, capital structure, decommissioning methodology, ratemaking or procedural principle, valuation methodology, cost of service methodology or determination, depreciation principle or method, rate design methodology, jurisdictional allocation methodology, cost allocation, cost recovery, or question of prudence, that may underlie this Partial Stipulation and Agreement, or for which provision is made in this Partial Stipulation and Agreement.

45. This Partial Stipulation and Agreement represents a negotiated settlement. Except as specified herein, the Signatories to this Partial Stipulation and Agreement shall not be

prejudiced, bound by, or in any way affected by the terms of this Partial Stipulation and Agreement: (i) in any future proceeding; (ii) in any proceeding currently pending under a separate docket; and/or (iii) in this proceeding should the Commission decide not to approve this Partial Stipulation and Agreement, or in any way condition its approval of same.

46. The provisions of this Partial Stipulation and Agreement have resulted from extensive negotiations among the Signatories and the provisions are interdependent. In the event that the Commission does not approve and adopt the terms of this Partial Stipulation and Agreement in total, or approves this Partial Stipulation and Agreement with modifications or conditions that a Signatory objects to, it shall be void and no Signatory shall be bound, prejudiced, or in any way affected by any of the agreements or provisions hereof.

47. When approved and adopted by the Commission, this Partial Stipulation and Agreement shall constitute a binding agreement between the Signatories hereto. The Signatories shall cooperate in defending the validity and enforceability of this Partial Stipulation and Agreement and the operation of this Partial Stipulation and Agreement according to its terms. Nothing in this Partial Stipulation and Agreement is intended to impinge, restrict or limit in any way any party's discovery powers, including the right to access information and investigate matters related to AmerenUE.

48. This Partial Stipulation and Agreement does not constitute a contract with the Commission. Acceptance of this Partial Stipulation and Agreement by the Commission shall not be deemed as constituting an agreement on the part of the Commission to forego, during the term of this Partial Stipulation and Agreement, the use of any discovery, investigative or other power of the Commission. Thus, nothing in this Partial Stipulation and Agreement is intended to impinge or restrict in any manner the exercise by the Commission, or of any Signatory, of any statutory right, including the right to access information, or any statutory obligation.

Commission Approval of this Partial Stipulation and Agreement

49. If requested by the Commission, the Staff shall submit to the Commission a memorandum addressing any matter requested by the Commission. AmerenUE and the other Signatories and Parties shall be served with a copy of any such memorandum and shall be entitled to submit to the Commission, within five (5) business days of receipt of the same, a responsive memorandum, which shall also be served on all parties of record. The contents of any memorandum provided by any Signatory or Party are its own and are not acquiesced in or otherwise adopted by the other Signatories to this Partial Stipulation and Agreement, whether or not the Commission approves and adopts this Partial Stipulation and Agreement.

50. If the Commission has questions for the Signatories, the Signatories will make available, at any on-the-record session, their experts/witnesses and attorneys so long as all Parties have had adequate notice of that session. The Signatories agree to cooperate in presenting this Partial Stipulation and Agreement to the Commission for approval, and will take no action, direct or indirect, in opposition to the request for approval of this Partial Stipulation and Agreement.

51. If the Commission does not unconditionally approve this Partial Stipulation and Agreement without modification, and notwithstanding its provision that it shall become void thereon, neither this Partial Stipulation and Agreement, nor any matters associated with its consideration by the Commission, shall be considered or argued to be a waiver of the rights that any Signatory has to a hearing on the issues presented by the Partial Stipulation and Agreement, for cross-examination, or for a decision in accordance with Section 536.080 RSMo 2000 or Article V, Section 18 of the Missouri Constitution, and the Signatories shall retain all procedural and due process rights as fully as though this Partial Stipulation and Agreement had not been presented for approval, and any suggestions or memoranda, testimony or exhibits that have been

offered or received in support of this Partial Stipulation and Agreement shall thereupon become privileged as reflecting the substantive content of settlement discussions and shall be stricken from and not be considered as part of the administrative or evidentiary record before the Commission for any further purpose whatsoever.

52. In the event the Commission accepts the specific terms of this Partial Stipulation and Agreement, the Signatories waive their respective rights to call, examine and cross-examine witnesses, pursuant to Section 536.070(2) RSMo 2000; their respective rights to present oral argument and written briefs pursuant to Section 536.080.1 RSMo 2000; their respective rights to the reading of the transcript by the Commission pursuant to Section 536.080.2 RSMo 2000; their respective rights to seek rehearing, pursuant to Section 386.500 RSMo 2000; and their respective rights to judicial review pursuant to Section 386.510 RSMo 2000. This waiver applies only to a Commission Report and Order respecting this Partial Stipulation and Agreement issued in this proceeding, and does not apply to any matters raised in any subsequent Commission proceeding, or any matters not explicitly addressed by this Partial Stipulation and Agreement.

Miscellaneous

53. Counterparts. This Partial Stipulation and Agreement may be executed in one or more counterparts, each of which shall be deemed an original, and all of which shall constitute one and the same instrument. The agreements of the Signatories shall be binding on and inure to the benefit of their respective successors and assigns. The paragraph and subparagraph headings and captions are for the convenience of the reader only and are not intended to be a part of this Partial Stipulation and Agreement.

54. Notices. Any notice required or permitted under this Partial Stipulation and Agreement shall be valid only if in writing, delivered personally, by commercial carrier, sent by

U.S. Mail, sent by confirmed telefacsimile transmission, or sent by e-mail, to counsel for each Signatory at the addresses, telefacsimile numbers, or e-mail addresses set forth with their signatures below, or to such other addresses, telefacsimile numbers, or e-mail addresses as a Signatory may designate by notice to the other Signatories. A validly given notice will be effective when delivered personally, by telefacsimile, or by a commercial courier, when sent by certified mail with return receipt requested, postage prepaid, or when sent by e-mail.

III. Issues Unresolved by this Partial Stipulation and Agreement

55. There are six Office of the Public Council alleged deficiencies which remain unresolved:

A. 4 CSR-240-22.010(2). OPC states that AmerenUE was unable to analyze demand-side resources on an equivalent basis with supply-side resources because of its lack of experience in implementing large-scale DSM programs. *OPC Report*, p. 3.

B. 4 CSR 240-22.050(6). OPC states that AmerenUE's program design and estimated impacts from its Industrial Demand Response program is flawed and unrealistic. *OPC Report*, p. 4.

C. 4 CSR 240-22.050(7)(A)(1). OPC states that AmerenUE did not use the best available information in its estimation of demand-side program impacts. The load impacts of DSM programs that AmerenUE modeled in its integrated analysis should have been time-differentiated based on the specific load altering characteristics of each program instead of just modifying customer segment load shapes by taking the estimated demand and energy impacts of each program and applying them to the base load shape through an algorithm contained in the MIDAS software. *OPC Report*, p. 4.

D. 4 CSR 240-22.060(2) and 4 CSR 240-22.010(2)(A) and (2)(C) – Failure to specify plan selection considerations/criteria and related performance measures necessary to be

reasonably certain that the preferred plan that is ultimately chosen will result in the least cost plan subject to risk and other considerations. *OPC Report*, p. 5.

E. 4 CSR 240-22.060(3) and 4 CSR 240-22.010(2)(A) – Failure to construct a wide range of alternative resource plans to be reasonably certain that the preferred plan that is ultimately chosen will result in the least cost plan subject to risk and other considerations. *OPC Report*, p. 7.

F. 4 CSR 240-22.070(2) – Failure to identify all of the uncertain factors that are critical to the performance of the resource plan by performing the analysis required by this section of the rule for the independent uncertain factors and documentation of the analysis as required by 4 CSR 240-22.070(11). *OPC Report*, p. 8.

56. There is one DNR alleged deficiency which remains unresolved:

4 CSR 240-22.050(4). DNR states that AmerenUE failed to include a portfolio that represents a very aggressive approach for the achievable potential of the demand-side portfolio by leveling penetration after the first years, constraining incentive costs and other issues, which did not allow the Company to fully evaluate the impact that reductions under an aggressive portfolio could have on the magnitude of the Company's next capacity addition prior to making major commitments to that capacity addition. *DNR Report, Synapse Attachment*, p. 8.

57. There are five Sierra Club alleged deficiencies which remain unresolved:

A. 4 CSR 240-22.050(4). This deficiency is the same as the DNR deficiency listed above in paragraph 56. *Sierra Club Report*, p. 8.

B. 4 CSR 240-22.030(7). Rather than bracketing its base case forecast with high and low forecasts, AmerenUE only developed a base case forecast and a low case forecast. Nevertheless, AmerenUE adopts BAU as its high case with the rationale that this assures

reliability. This artificially maximizes load growth and contradicts the purported assumption of lower growth rates. *Sierra Club Report*, p. 1.

C. 4 CSR 240-22.040(1)(K). Failure to address the environmental impact of tritium and noble gases. *Sierra Club Report* pp. 2–3.

D. 4 CSR 240-22.040(8)(B). The overnight costs and O&M costs given for US-EPR are unrealistically low and not consistent with the rule. *Sierra Club Report* p. 6.

E. 4 CSR 240-22.060(2). The IRP does not give cumulative probability distributions for performance measures required by 22.060(2). *Sierra Club Report*, p. 9.

WHEREFORE the Signatories ask the Commission to accept this Joint Filing and approve the Partial Stipulation and Agreement.

Respectfully submitted,

**UNION ELECTRIC COMPANY,
d/b/a AmerenUE**

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Dated: August 12, 2008.

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing have been mailed, hand-delivered, transmitted by facsimile or electronically mailed to all counsel of record this 12th day of August, 2008.

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