BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Union Electric Company's
2011 Utility Resource Filing Pursuant to
4 CSR 240 – Chapter 22.

File No. EO-2011-0271

STAFF'S REPORT ON UNION ELECTRIC COMPANY'S
2011 ELECTRIC UTILITY RESOURCE PLANNING COMPLIANCE FILING

COMES NOW the Staff ("Staff") of the Missouri Public Service Commission ("Commission"), and submits its Report on Union Electric Company d/b/a Ameren Missouri's 2011 Chapter 22 Electric Utility Resource Planning Compliance Filing. In support thereof, Staff states:

1. Former rule 4 CSR 240-22.080(5)[1] provided that Staff shall review each compliance filing and, within 120 days after each utility's scheduled electric resource plan filing date, file a report that identifies, among other things, any deficiencies in the electric utility's compliance with the provisions of Chapter 22.

2. As part of its attached report Staff identifies both the deficiencies and the concerns Staff found during its limited review of Ameren Missouri's 2011 Chapter 22 Compliance Filing.

3. Staff found four deficiencies in Ameren Missouri's filing with respect to the following rules:

- 4 CSR 240-22.010 Policy Objectives
- 4 CSR 240-22.050 Demand-Side Resource Analysis
- 4 CSR 240-22.070 Risk Analysis and Strategy Selection

[1] New Chapter 22 rules became effective on May 31, 2011.

Staff Exhibit No. 11
Date 12/15/11 Reporter JMB
File No. EO-2011-0271

4. Staff did not identify any deficiencies with respect to Ameren Missouri's obligations arising from Missouri's statutory Renewable Energy Standards.

5. In its report Staff discusses the deficiencies and concerns it identified in Ameren Missouri's Compliance Filing. Staff also provides recommended resolutions to the deficiencies and concerns it identifed.

WHEREFORE, Staff submits its report on Ameren Missouri's 2011 Chapter 22 Electric Utility Resource Planning Compliance Filing.

Respectfully submitted,

/s/ Nathan Williams
Nathan Williams
Deputy Counsel
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Certificate of Service

I hereby certify that copies of the foregoing have been mailed, hand-delivered, transmitted by facsimile or electronically mailed to counsel of record this 23rd day of June, 2011.

/s/ Nathan Williams

MISSOURI PUBLIC SERVICE COMMISSION

STAFF REPORT ON

UNION ELECTRIC COMPANY
d/b/a AMEREN MISSOURI

ELECTRIC UTILITY RESOURCE PLANNING
COMPLIANCE FILING

FILE NO. EO-2011-0271

June 23, 2011

JEFFERSON CITY, MISSOURI

** Denotes Highly Confidential Information **

HC

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Summary of Staff's Findings and Recommendations

Description of Ameren Missouri's Resource Acquisition Strategy and Integrated Resource Plan

On February 23, 2011, Union Electric Company, d/b/a Ameren Missouri, filed its 2011 Integrated Resource Plan (IRP) compliance filing (Filing) in File No. EO-2011-0271, as required by rule 4 CSR 240-22 Electric Utility Resource Planning.

As a result of its review, Staff finds that Ameren Missouri's analysis gave its decision-makers[1] a comprehensive set of fourteen (14) candidate resource plans, and risk analyses for each candidate resource plan, for use during the decision-makers' strategy selection process. The risk adjusted present value of revenue requirements (PVRR) over 29 years for the fourteen (14) candidate resource plans[2] varies from a low of $59.7 billion (for a plan with only realistic achievable potential (RAP) demand-side management (DSM) resources (Plan R0)) to a high of $65.6 billion (for a plan with Low Risk DSM, combined cycle gas plant and 30% ownership of a nuclear plant (Plan H1)) for a range of $5.9 billion. Ameren Missouri's adopted resource acquisition strategy includes its preferred resource plan (Plan B1), which consists of Low Risk DSM and the addition of a combined cycle plant late in the 20-year planning horizon; five contingency resource plans, Low Risk DSM[3], two levels of RAP DSM[4], addition of combined cycle plants, 30% of a nuclear plant, and/or the retirement of Ameren Missouri's Meramec Plant; and two decision factors - plant financing solution and

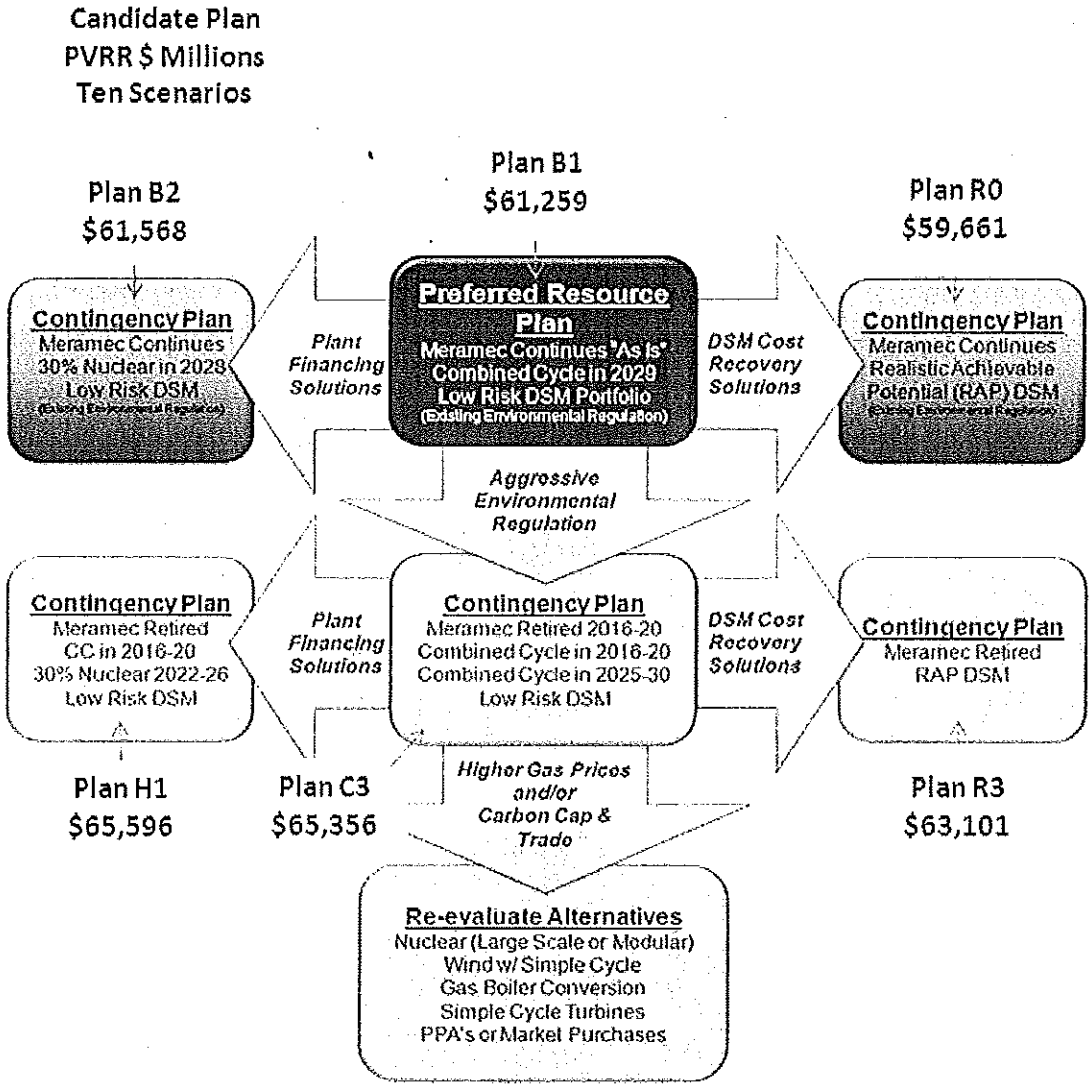
[1] Chapter 10, Appendix D, of Ameren Missouri's filing indicates that Ameren Missouri decision-makers present at the January 31, 2011, Ameren Missouri Board of Directors Meeting who adopted the 2011 IRP resource acquisition strategy included: Board Chairman Baxter, and Board Members Cole, Heflin, Lyons, and Sullivan.

[2] See Addendum C Page 1 of 8 for risk adjusted PVRR for the fourteen (14) candidate resource plans for the ten scenarios probability tree.

[3] See Addendum A, Plan B1, Plan B2, Plan B3, Plan B4, Plan C1,Plan C2, Plan C3, Plan H1, Plan H2 and Plan H3 which each contain a pre-determined amount of energy savings from Low Risk DSM energy efficiency programs and, beginning in 2016, an amount of demand savings from demand response programs determined by the MIDAS model for each year. By 2030 the demand savings from Low-Risk DSM equals 232 MW from energy efficiency programs and 244 MW from demand response programs.

[4] See Addendum A, Plan R0, Plan R1 and Plan R2 which each contain a pre-determined amount of energy and savings and demand savings from only energy efficiency programs. By 2030, the amount of demand savings from RAP energy efficiency programs is 1,007 MW. Also, see Addendum A, Plan R3 which contains a predetermined amount of energy and demand savings from energy efficiency programs and, beginning in 2016, an amount of demand savings from demand response program for each year determined by the MIDAS model. By 2030, the demand savings from RAP energy efficiency programs is 1,007 MW, and the demand savings from RAP demand response programs is an additional 826 MW for a total demand savings in Plan R3 of 1,833 MW in 2030.

DSM cost recovery solution. Ameren Missouri's resource acquisition strategy is shown in the following diagram:



Ameren Missouri selected Plan B1 as its preferred resource plan under current environmental regulations, even though its RAP DSM with only energy efficiency programs and no supply-side addition through the planning period plan (Plan R0) has a risk adjusted PVRR which is $1.6 billion less than its preferred plan (Plan B1). If an acceptable DSM cost recovery solution is achieved under current environmental regulations, Ameren Missouri's strategy is to move to Plan R0. If an acceptable plant financing solution is achieved under

current environmental regulations, then Ameren Missouri's strategy is to move to its Low Risk DSM, 30% Nuclear plan (Plan B2) which has a PVRR $0.31 billion higher than its preferred plan (Plan B1) and a PVRR $1.9 billion higher than its plan with the lowest PVRR (Plan R0). Staff notes that Ameren Missouri's IRP filing has no discussion of Ameren Missouri's strategy should an acceptable plant financing solution and an acceptable DSM cost recovery solution both be achieved under current environmental regulations.

If there are aggressive environmental regulations, the Company's strategy is to retire its Meramec plant, which was put into operations in 1953, and to replace Meramec with other supply-side resources and/or demand-side resources. Under these conditions, the PVRR of Ameren Missouri's preferred plan to do Low Risk DSM and add combined cycle plants (Plan C3) is $2.3 billion higher than the PVRR of its plan with RAP DSM with both energy efficiency programs and demand-response programs and no additional supply-side resources (Plan R3). If an acceptable DSM cost recovery solution is achieved under aggressive environmental regulations, then Ameren Missouri's strategy is to move to its Plan R3 which, again, has a PVRR $2.3 billion lower than its Plan C3. If an acceptable plant financing solution is achieved under aggressive environmental regulations, then Ameren Missouri's strategy is to move to Plan H1 with Low Risk DSM, combined cycle plants and 30% of a nuclear plant which has a PVRR $2.5 billion higher than Plan R3. Staff notes that Ameren Missouri's IRP filing has no discussion of Ameren Missouri's strategy should an acceptable plant financing solution and an acceptable DSM cost recovery solution both be achieved under aggressive environmental regulations.

Deficiencies

Although the load analysis and load forecast, analyses of alternative supply-side and demand-side resources, and the construction and operation of the Company's probability tree are complete, accurate overall and generally well documented, the Company's strategy selection process is incomplete and poorly documented, and its adopted resource acquisition strategy does not demonstrate compliance with the fundamental objective of the resource planning process for electric utilities in Missouri to minimize the present worth of long run utility costs—the primary selection criterion when choosing the preferred resource plan as required by rule 4 CSR 240-22.010(B). Staff finds the following additional deficiencies with the filing:

- The Company did not identify and screen all end-use measures as required by rule 4 CSR 240-22.050(3) when it failed to identify and screen for the cost effectiveness of two high-potential demand-side resources: 1) a voluntary curtailment program (such as the Company's current Rider L Peak Power Rebate program) and 2) a proven customer education program such as OPOWER which is designed to convert passive individual energy users into active participants in demand-side programs.
- The Company's filing is not in compliance with rule 4 CSR 240-22.010(2)(C), since it did not present an analysis of and a plan to request a demand-side programs investment mechanism (DSIM) it feels is necessary for the Company to implement its RAP DSM programs portfolio which is estimated to reduce the present worth of long run utility cost by $1.6 billion to $2.5 billion when compared to the Low Risk DSM programs portfolio now included in its adopted preferred resource plan.
- The Company is not in compliance with rule 4 CSR 240-22.070(8), since its IRP filing does not: 1) correctly quantify the expected value of better information by not including Plan R0 and Plan B3 in its analysis of the value of better information, and 2) quantitatively analyze and document the DSM cost recovery solution which is necessary for Ameren Missouri to select Plan R0 as its preferred resource plan under current environmental regulations with Meramec (initial operations in 1953) continuing to operate "as-is," and to select contingency Plan R3 as its preferred resource plan under aggressive environmental regulations with Meramec either retired, converted to natural gas fuel or having environmental controls installed.

To remedy these deficiencies the Company should:

- Evaluate the cost effectiveness of a revised Rider L program and the OPOWER program for its customers, and present the evaluation results to its DSM stakeholders for discussion. Should one or both programs be found to be cost-effective, Ameren Missouri must evaluate the impact of one or both of the programs on the present value revenue requirements (PVRR) by including

Rider L and/or the OPOWER program in the integrated resource analysis for Plan R0, and present the results to its DSM stakeholders for discussion;

- Prepare a filing under the Commission's MEEIA rules[5] or, if the MEEIA rules are stayed due to legal action, under Section 393.1075, RSMo Supp. 2010;
- Should a filing under the Commission's MEEIA rules or, if the MEEIA rules are stayed due to legal action, under Section 393.1075, RSMo Supp. 2010, not be made by April 1, 2012, the Company should quantitatively analyze and document the DSM cost recovery solution which is necessary for Ameren Missouri to select Plan R0 as its preferred resource plan under current environmental regulations and Meramec continuing to operate "as is," and to select contingency Plan R3 as its preferred resource plan under aggressive environmental regulations and Meramec not continuing to operate "as is."
- In its future Chapter 22 filings including its next annual update IRP filing on April 1, 2012[6], the Company should assign at least a majority of the weighting in the preferred resource plan selection process to present worth of long-run utility costs and correctly analyze the value of better information.

Concerns

Staff has five significant concerns. First, the documentation of Ameren Missouri's Board of Directors' meetings during which the resource acquisition strategy and preferred resource plan were discussed and "unanimously adopted" is significantly different from the IRP filing's documentation of the preferred resource plan selection scorecard and the adopted resource acquisition strategy (see Concern B). To resolve this concern, when presenting its analysis of candidate resource plans to Ameren Missouri decision-makers, Ameren Missouri should present the analysis for all candidate resource plans.

Second, Ameren Missouri's preferred resource plan does not meet the statutory goal of the Missouri Energy Efficiency Investment Act (MEEIA) to achieve all cost-effective demand-side savings. This concern could be resolved through a MEEIA filing. While the MEEIA filing in itself will not meet the statutory goal, it would be movement towards the

[5] Rules 4 CSR 240-3.163, 4 CSR 240-3.164, 4 CSR 240-20.093 and 4 CSR 240-20.094.
[6] Rule 4 CSR 240-22.080(3) effective June 30, 2011.

statutory goal and remove the uncertainty regarding a DSM cost recovery solution which would address this concern.

Third, should the plant financing regulations decision factor and/or the DSM cost recovery regulations decision factor change "to a degree to cause Ameren Missouri's management to select a different course of action," the Company may choose Plan B2 or Plan R0 as its preferred resource plan during the three-year implementation period. Ameren Missouri has spent significant resources in recent years to influence new plant financing regulations. Its efforts to determine a DSM cost recovery solution have been limited. This filing shows that RAP DSM will reduce the NPVRR by $1.6 billion to $2.5 billion. It is now time for the Company to work with its stakeholders and the Commission (through a MEEIA filing) to achieve the DSM cost recovery solution.[7]

Fourth, one of the factors in the selection scorecard method used by Ameren Missouri is economic development resulting from each candidate resource plan. Staff's concern is not that Ameren Missouri included economic development as a factor in its decision; the concern is how Ameren Missouri calculated the economic impact results in its favoring the addition of 30% of a nuclear plant. The Company's estimations of the economic impact of each candidate resource plan is for only the direct impacts of each plan and does not address in any way the indirect impact on the economy as a result of various levels of long-run utility costs, *i.e.*, lower revenue requirements for the utility. Put more simply, the Company's analysis of and scores for the economic development policy objective do not address the indirect economic impact of the $1.6 billion lower PVRR and lower annual revenue requirements[8] for Plan R0 vs. Plan B1 under current environmental regulations, and does not address the indirect economic impact of the $2.5 billion lower PVRR and the lower annual revenue requirements[9] for Plan R3 vs. Plan C3 under aggressive environmental regulations.

Finally, scores on Ameren Missouri's preferred resource plan selection scorecard are not logically consistent and may have serious flaws, because the comparison of one plan to another can only be done fairly when comparing plans designed for current environmental regulations with Meramec continuing to operate "as is" or when comparing plans designed for

[7] In addition, Ameren Missouri did not include in its strategy which plan it would move to if both the plant financing regulations and the DSM cost recovery regulations decision factors change.
[8] See Addendum C Page 6 of 8.
[9] See Addendum C Page 7 of 8 and Page 8 of 8.

aggressive environmental regulations with Meramec not continuing to operate "as is." To resolve this concern, Ameren Missouri should be take steps necessary to assure that scores are internally consistent when using scorecards to select its preferred resource plan for its next IRP filing.

Staff's remaining three concerns are minor in nature and can be addressed in the Company's IRP update filing on April 1, 2012.

Summary of the Process and Filing

Prior to its IRP filing, Ameren Missouri held ten stakeholder meetings over two years to provide status updates on various aspects of its electric utility resource planning and to solicit stakeholder input to its planning process. Two stakeholder meetings were held soon after Ameren Missouri filed this IRP.

These meetings were very informative, helped clarify issues, and provided an appropriate forum for stakeholder education and sharing. Such pre- and post-filing stakeholder meetings are appreciated and encouraged.

Unlike past Ameren Missouri IRP filings, which were organized into one or more separate documents for each Chapter 22 rule, this IRP filing is organized into one volume with chapters containing the information, discussion and filing requirements that flow smoothly in a narrative that tells a clear story. At the end of each chapter is a Compliance Reference guide which cross references each Chapter 22 filing requirement met in the chapter with the page in the chapter on which the filing requirement is contained. Staff finds this approach to be productive and useful, and encourages Ameren Missouri to continue this practice in future filings.

Staff found the Company's electronic workpapers to be helpful and well organized. However, Staff would prefer to receive all electronic workpapers with all formulas intact.[10] Ameren Missouri was very responsive to Staff's emails and phone calls concerning clarifying questions and data inquiries. Staff was able to use the Company's MIDAS model inputs in Staff's MIDAS model, and to verify that the outputs from its model match those of the Company's. Staff was also able to verify the correct construction and functioning of the Company's probability tree.

[10] Rule 4 CSR 240-22.080(11) effective June 30, 2011, requires formulas in a utility's resource plan compliance filing workpapers to be intact.

Ameren Missouri's 2011 IRP Filing and Adopted Resource Acquisition Strategy

On February 23, 2011, Ameren Missouri filed its 2011 IRP compliance filing in File No. EO-2011-0271, as required by rule 4 CSR 240-22 Electric Utility Resource Planning. The remainder of this report provides a summary of Ameren Missouri's IRP filing and its adopted resource acquisition strategy, including its adopted preferred resource plan. It also includes Staff's discussion of Staff's review of the filing and each deficiency and concern Staff has identified, along with Staff's recommended remedy for the deficiency or concern.

On February 19, 2009, the Missouri Public Service Commission (Commission) issued its *Final Order Regarding AmerenUE's 2008 Integrated Resource Plan* in Case No. EO-2007-0409. In its final order, the Commission approved a partial stipulation and agreement to remedy most of the alleged deficiencies in Ameren Missouri's 2008 IRP. The Commission directed the Company to include specific analyses and information in its 2011 IRP to address the remaining alleged deficiencies. In its final order, the Commission concluded:

> Because of the uncertainty in the 2008 IRP's treatment of the decision whether to build Callaway 2, the Commission finds that AmerenUE's 2008 IRP does not demonstrate compliance with the requirements of the Commission's IRP rule. Furthermore, for the same reason, the Commission finds that AmerenUE's resource acquisition strategy does not meet the requirements stated in 4 CSR 240-22.010(2)(A)-(C).
>
> Despite the deficiencies in AmerenUE's 2008 IRP filing, it would be a waste of resources to require AmerenUE to look backward to revise that filing. Instead, the Commission will direct AmerenUE and the other interested parties to look forward to AmerenUE's next IRP filing.

On February 24, 2010, Ameren Missouri filed, in File No. EE-2010-0243, its *Motion to Establish a Proceeding and Request for Waivers* in connection with Ameren Missouri's 2011 IRP filing due in February 2011. In this filing, Ameren Missouri did not seek complete relief from any portion of the Commission's IRP rules without offering replacement language intended to comply with the spirit of the rule, and stated that granting the requested relief from the rules would improve the Company's planning process for its February 2011 Filing. In its order dated June 30, 2010, the Commission granted Ameren Missouri relief from the rules as requested, with the exceptions that follow: 1) Commission-adopted language provided by the Office of Public Counsel (OPC) for 4 CSR 240-22.050(2), and 2) a resolution of issues reached between Ameren Missouri and the Missouri Department of Natural

Resources (MDNR) for various sections of rules 4 CSR 240-22.030, 4 CSR 240-22.040 and 4 CSR 240-22.050. The Commission denied the Company's waiver request concerning rule 4 CSR 240-22.040(1)(K).

During its analysis for and preparation of its 2011 IRP filing, Ameren Missouri conducted ten stakeholder meetings to provide status updates and an opportunity for stakeholder feedback concerning a wide range of electric utility resource planning issues. Staff and other key stakeholders actively participated in the stakeholder meetings: The date of each meeting and a brief description of the meeting topic follow:

- January 9, 2009 – Renewable energy study conducted by Black & Veatch
- April 2, 2009 – Waivers requested by Ameren Missouri
- August 26, 2009 – Renewable energy follow-up and coal and natural gas resource options study conducted by Black & Veatch
- November 20, 2009 – 2008 IRP implementation plan update and overview of 2011 IRP planning process
- January 26, 2010 – Conference call on financing analysis plan
- March 8, 2010 – Scenarios, uncertain factors, load analysis and forecasting, EPRI end-to-end efficiency study, and initial supply-side screening results
- April 16, 2010 – Conference call on financing analysis plan
- May 25, 2010 – Forecasting results, demand-side management (DSM) analysis, alternative resource plan development, scenario modeling results
- September 14, 2010 – Integration analysis, sensitivity analysis, critical independent uncertain factors and decision framework
- February 22, 2011 – Risk analysis, environmental scenarios and strategy selection

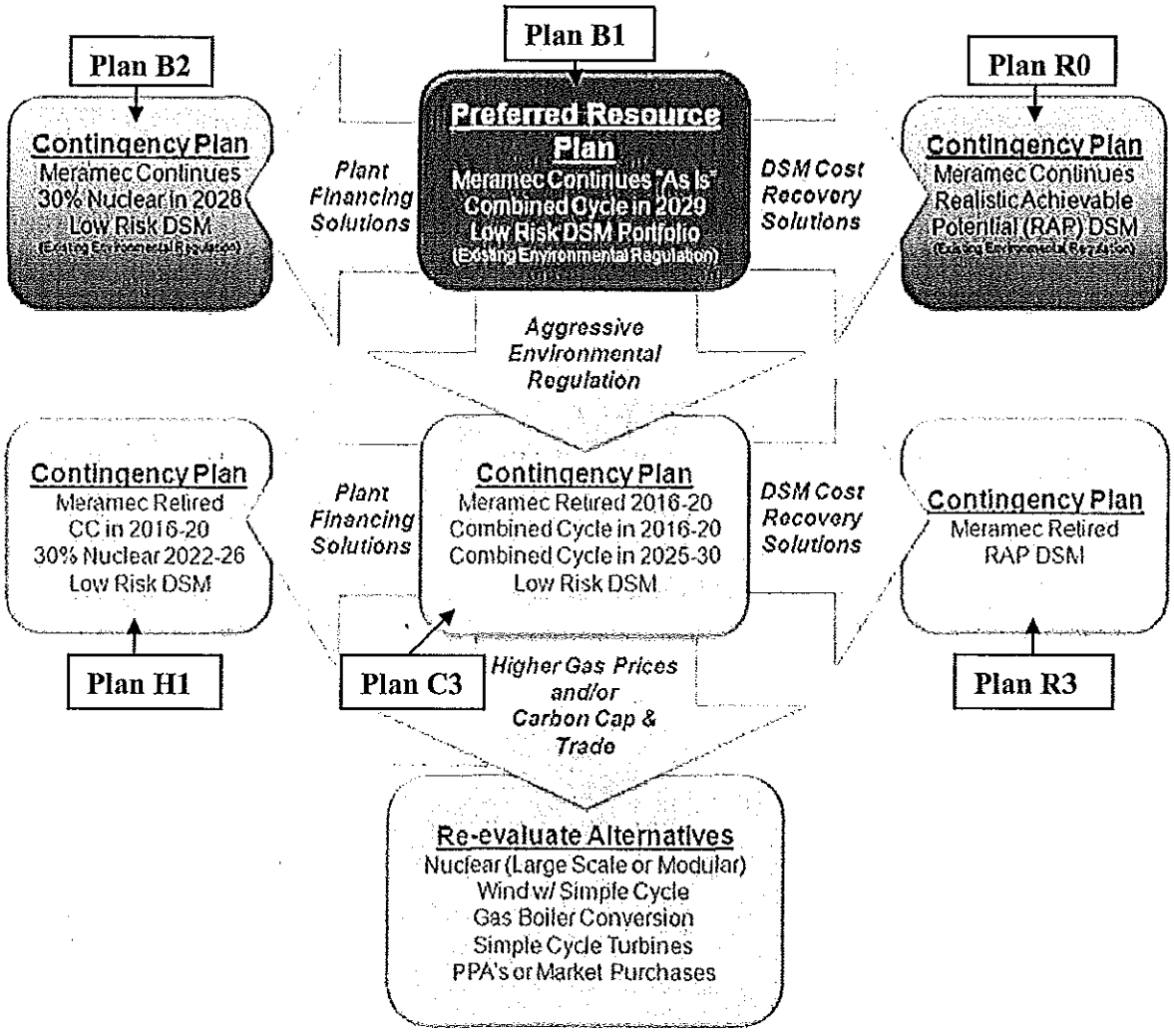
Staff has completed its limited review of the documents and workpapers Ameren Missouri provided, as well as the presentations and discussions that occurred during the following meetings Ameren Missouri held with its stakeholders to review its 2011 IRP filing:

- April 5, 2011 – Integrated resource analysis and strategy selection
- April 6, 2011 – Supply-side resource analysis and DSM cost recovery

Presented following are: 1) A flow chart of the Company's Decision Roadmap; 2) a summary table of capacity additions and retirements or reductions for the preferred resource plan (Plan B1) as well as contingency resource plans (Plan B2, Plan R0, Plan C3, Plan H1 and Plan R3); and 3) a highly confidential table with the capacity balance for the preferred resource plan (Plan B1) which illustrates that Ameren Missouri is expecting to be long on

capacity through 2027 under this plan. Addendum A contains more detailed information for all fourteen (14) candidate resource plans.

Decision Roadmap



Plan B1: Combined Cycle - No Secondary - Prop C Renewables - Low Risk DSM - Mer continues - Nor continues

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Existing capacity position	-117	211	516	440	387	318	250	168	65	-22	-116	-212	-311	-412	-520	-626	-736	-852	-969	-1,089
+ Total plant upgrades	2	6	30	34	38	15	85	85	85	91	91	91	91	68	69	69	69	69	69	69
+ Meramec retirement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+ Renewables	0	0	8	8	8	12	12	17	17	20	21	23	26	28	31	33	36	39	41	44
+ Noranda termination	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Energy efficiency	-49	-69	-88	-111	-134	-154	-172	-189	-201	-206	-216	-223	-228	-232	-235	-235	-235	-236	-235	-232
- Demand response	0	0	0	0	0	-14	-49	-75	-93	-111	-121	-133	-145	-157	-167	-185	-202	-213	-229	-244
+ New primary supply side	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	600	600
+ New secondary supply side	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
= Capacity position after adjustment	-66	286	643	593	567	513	569	534	461	407	332	258	178	73	-17	-103	-194	-295	205	100
Purchases(+) or sales(-)	66	-286	-643	-593	-567	-513	-569	-534	-461	-407	-332	-258	-178	-73	17	103	194	295	-205	-100

Plan B2: Nuke 30% - No Secondary - Prop C Renewables - Low Risk DSM - Mer continues - Nor continues

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Existing capacity position	-117	211	516	440	387	318	250	168	65	-22	-116	-212	-311	-412	-520	-626	-736	-852	-969	-1,089
+ Total plant upgrades	2	6	30	34	38	15	85	85	85	91	91	91	91	68	69	69	69	69	69	69
+ Meramec retirement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+ Renewables	0	0	8	8	8	12	12	17	17	20	21	23	26	28	31	33	36	39	41	44
+ Noranda termination	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Energy efficiency	-49	-69	-88	-111	-134	-154	-172	-189	-201	-206	-216	-223	-228	-232	-235	-235	-235	-236	-235	-232
- Demand response	0	0	0	0	0	-14	-49	-75	-93	-111	-121	-133	-145	-157	-167	-185	-202	-213	-229	-244
+ New primary supply side	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	480	480
+ New secondary supply side	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
= Capacity position after adjustment	-66	286	643	593	567	513	569	534	461	407	332	258	178	73	-17	-103	-194	185	85	-20
Purchases(+) or sales(-)	66	-286	-643	-593	-567	-513	-569	-534	-461	-407	-332	-258	-178	-73	17	103	194	-185	-85	20

Plan C3: Combined Cycle - Combined Cycle - Prop C Renewables - Low Risk DSM - Mer retire 2016 - Nor continues

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Existing capacity position	-117	211	516	440	387	318	250	168	65	-22	-116	-212	-311	-412	-520	-626	-736	-852	-969	-1,089
+ Total plant upgrades	2	6	30	34	38	-59	11	11	11	41	41	41	41	41	41	41	41	41	41	41
+ Meramec retirement	0	0	0	0	0	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854
+ Renewables	0	0	8	8	8	12	12	17	17	20	21	23	26	28	31	33	36	39	41	44
+ Noranda termination	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Energy efficiency	-49	-69	-88	-111	-134	-154	-172	-189	-201	-206	-216	-223	-228	-232	-235	-235	-235	-236	-235	-232
- Demand response	0	0	0	0	0	-14	-49	-75	-93	-111	-121	-133	-145	-157	-167	-185	-202	-213	-229	-244
+ New primary supply side	0	0	0	0	0	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600
+ New secondary supply side	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	600	600	600	600	600
= Capacity position after adjustment	-66	286	643	593	567	185	241	206	133	103	28	-46	-126	-208	-299	215	124	23	-77	-182
Purchases(+) or sales(-)	66	-286	-643	-593	-567	-185	-241	-206	-133	-103	-28	46	126	208	299	-215	-124	-23	77	182

Plan H1: Combined Cycle - Nuke 30% - Prop C Renewables - Low Risk DSM - Mer retire 2016 - Nor continues

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Existing capacity position	-117	211	516	440	387	318	250	168	65	-22	-116	-212	-311	-412	-520	-626	-736	-852	-969	-1,089
+ Total plant upgrades	2	6	30	34	38	-59	11	11	11	41	41	41	41	41	41	41	41	41	41	41
+ Meramec retirement	0	0	0	0	0	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854
+ Renewables	0	0	8	8	8	12	12	17	17	20	21	23	26	28	31	33	36	39	41	44
+ Noranda termination	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Energy efficiency	-49	-69	-88	-111	-134	-154	-172	-189	-201	-206	-216	-223	-228	-232	-235	-235	-235	-236	-235	-232
- Demand response	0	0	0	0	0	-14	-49	-75	-93	-111	-121	-133	-145	-157	-167	-185	-202	-213	-229	-244
+ New primary supply side	0	0	0	0	0	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600
+ New secondary supply side	0	0	0	0	0	0	0	0	0	0	0	0	0	0	480	480	480	480	480	480
= Capacity position after adjustment	-66	286	643	593	567	185	241	206	133	103	28	-46	-126	-208	181	95	4	-97	-197	-302
Purchases(+) or sales(-)	66	-286	-643	-593	-567	-185	-241	-206	-133	-103	-28	46	126	208	-181	-95	-4	97	197	302

Plan R0: No Primary - No Secondary - Prop C Renewables - RAP DSM - Mer continues - Nor continues

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Existing capacity position	-117	211	516	440	387	318	250	168	65	-22	-116	-212	-311	-412	-520	-626	-736	-852	-969	-1,089
+ Total plant upgrades	2	6	30	34	38	15	85	85	85	91	91	91	91	68	69	69	69	69	69	69
+ Meramec retirement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+ Renewables	0	0	8	8	8	12	12	16	16	20	21	24	26	29	31	34	37	39	41	44
+ Noranda termination	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Energy efficiency	-48	-85	-134	-210	-306	-407	-507	-603	-688	-758	-825	-883	-927	-955	-977	-989	-1,000	-1,006	-1,009	-1,007
- Demand response	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+ New primary supply side	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+ New secondary supply side	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
= Capacity position after adjustment	-66	302	688	692	739	752	854	873	855	847	821	785	733	639	557	466	370	262	151	31
Purchases(+) or sales(-)	66	-302	-688	-692	-739	-752	-854	-873	-855	-847	-821	-785	-733	-639	-557	-466	-370	-262	-151	-31

Plan R3: No Primary - No Secondary - Prop C Renewables - RAP DSM - Mer retire 2016 - Nor continues

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Existing capacity position	-117	211	516	440	387	318	250	168	65	-22	-116	-212	-311	-412	-520	-626	-736	-852	-969	-1,089
+ Total plant upgrades	2	6	30	34	38	-59	11	11	11	41	41	41	41	41	41	41	41	41	41	41
+ Meramec retirement	0	0	0	0	0	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854
+ Renewables	0	0	8	8	8	12	12	16	16	20	21	24	26	29	31	34	37	39	41	44
+ Noranda termination	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Energy efficiency	-48	-85	-134	-210	-306	-407	-507	-603	-688	-758	-825	-883	-927	-955	-977	-989	-1,000	-1,006	-1,009	-1,007
- Demand response	0	0	0	0	0	-20	-83	-158	-236	-329	-399	-474	-549	-620	-679	-732	-765	-784	-805	-826
+ New primary supply side	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+ New secondary supply side	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
= Capacity position after adjustment	-66	302	688	692	739	156	10	103	163	272	316	355	378	378	354	316	252	164	74	-25
Purchases(+) or sales(-)	66	-302	-688	-692	-739	156	-10	-103	-163	-272	-316	-355	-378	-378	-354	-316	-252	-164	-74	25

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AmerenUE

updated 5/27/2011 per IRP EO-2011-0271

A. System Generation Capacity		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Existing Generation Capacity																					
Callaway	Nuclear	1190	1190	1190	1190	1190	1190	1260	1260	1260	1260	1260	1260	1260	1260	1260	1260	1260	1260	1260	1260
Keokuk	Hydro	138	142	142	146	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150
Labadie	Coal	2407	2407	2418	2418	2418	2418	2418	2418	2418	2418	2418	2418	2418	2418	2418	2418	2418	2418	2418	2418
Rush Island	Coal	1217	1217	1230	1230	1230	1230	1230	1230	1230	1230	1230	1230	1230	1230	1230	1230	1230	1230	1230	1230
Sioux	Coal	972	972	972	972	972	972	972	972	972	972	972	972	972	972	972	972	972	972	972	972
Meramec	Coal	854	854	854	854	854	854	854	854	854	854	854	854	854	854	854	854	854	854	854	854
Fred Weber	LFG	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Total Base Capacity		6793	6797	6821	6825	6829	6829	6899	6899	6899	6899	6899	6899	6899	6899	6899	6899	6899	6899	6899	6899
Osage	Hydro	234	234	234	234	234	234	234	234	234	234	234	234	234	234	234	234	234	234	234	234
Taum Sauk	Hydro	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440
Audrain	Gas	578	578	578	578	578	578	578	578	578	608	608	608	608	608	608	608	608	608	608	608
Fairgrounds	Oil	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
Goose Creek	Gas	438	438	438	438	438	438	438	438	438	438	438	438	438	438	438	438	438	438	438	438
Howard Bend	Oil	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43
Kirmundy	Gas	208	208	208	208	208	208	208	208	208	208	208	208	208	208	208	208	208	208	208	208
Kirksville	Gas	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
Meramec 1,2 CTGs	Oil/Gas	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112
Mexico	Oil	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
Moberly	Oil	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
Moreau	Oil	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
Peno Creek Energy Ctr	Gas/Oil	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188
Pinckneyville	Gas	316	316	316	316	316	316	316	316	316	316	316	316	316	316	316	316	316	316	316	316
Racoon Creek	Gas	304	304	304	304	304	304	304	304	304	304	304	304	304	304	304	304	304	304	304	304
Venice 1,2,3,4,5 CTs	Gas	491	491	524	524	524	524	524	524	524	524	524	524	524	524	524	524	524	524	524	524
Viaduct	Gas	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
New CC	Gas																			600	600
Total Intermediate/Peaking Capacity		3611	3611	3644	3644	3644	3644	3644	3644	3644	3674	3674	3674	3674	3674	3674	3674	3674	3674	4274	4274
Total Generation Capacity		10404	10408	10466	10469	10473	10473	10543	10543	10543	10573	10573	10573	10573	10573	10573	10573	10573	10573	11173	11173

B. Capacity Transactions	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Purchases																				
Pioneer Prairie Wind (See Note 3)	8	8	8	8	8	8	8	8	8	8	8	8	8	8	0	0	0	0	0	0
Total Purchases	8	8	8	8	8	8	8	8	8	8	8	8	8	8	0	0	0	0	0	0
Net Transactions	8	8	8	8	8	8	8	8	8	8	8	8	8	8	0	0	0	0	0	0
Total System Capacity (A+B)	10412	10416	10473	10477	10481	10481	10551	10551	10551	10581	10581	10581	10581	10581	10573	10573	10573	10573	11173	11173

C. System Peaks & Reserves	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Peak Demands																				
UE Forecasted Peak	8379	8531	8565	8610	8668	8728	8785	8855	8943	9018	9098	9181	9265	9352	9436	9527	9621	9720	9820	9923
Voltage Reduction	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)
Wholesale contracts	20	12	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Demand Response	0	0	0	0	0	(14)	(40)	(75)	(93)	(111)	(121)	(123)	(409)	(513)	(527)	(540)	(540)	(540)	(540)	(540)
Demand Side Management (DSM)	(42)	(60)	(78)	(95)	(115)	(131)	(147)	(162)	(172)	(178)	(184)	(190)	(195)	(198)	(201)	(201)	(201)	(201)	(198)	
Peak Forecast with adjustments	8256	8383	8392	8416	8453	8483	8489	8619	8678	8631	8693	8769	8471	8541	8608	8686	8780	8879	8979	9085
Capacity Reserves (A+B-C)	2148	2063	2081	2062	2028	1998	2062	2003	1973	1950	1888	1823	2110	2040	1965	1887	1793	1694	2194	2088

D. Capacity Needs	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Capacity Reserves																				
Capacity Margin	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
Reserve Margin	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%
Required Capacity	9671	9773	9818	9846	9890	9925	9932	9966	10036	10098	10171	10247	9911	9983	10071	10163	10273	10388	10506	10629
Capacity Balance (A+B-D)	741	643	654	631	591	556	619	586	515	483	410	334	670	598	502	410	300	186	668	544

NOTES:

1) Units in italics are not in rate base

2) Unit capacities in bold with border indicate a change from previous year

3) 102 MW Wind Purchase counted as 8 MW Capcity for MISO

4) Changes in supply-side or demand-side resources are indicated by shaded cells

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List of Staff's Deficiencies

1. Ameren Missouri did not perform cost-effectiveness screening for a modified Rider L program or for potential customer education programs provided by third party providers such as OPOWER. Rule 4CSR 240-22.050 (3).

2. Ameren Missouri did not use minimization of the present worth of long-run utility costs as the primary selection criterion in choosing its preferred resource plan as required by rules 4 CSR 240-22.070(6)(A) and 4 CSR 240-22.010(2)(B).

3. Ameren Missouri has not quantitatively analyzed and documented the DSM cost recovery solution which is necessary for Ameren Missouri to select Plan R0 as its preferred resource plan under current environmental regulations and Meramec continuing to operate "as is," and to select contingency Plan R3 as its preferred resource plan under aggressive environmental regulations and Meramec not continuing to operate "as is" as required by rules 4 CSR 240-22.070(6)(A) and 4 CSR 240-22.010(2)(C).

4. Ameren Missouri did not correctly quantify the expected value of better information concerning at least the critical uncertain factors that affect the performance of its preferred resource plan, as measured by the present value of utility revenue requirements. Rule 4 CSR 240-22.070(8).

List of Staff's Concerns

A. Ameren Missouri did not consistently use the value for avoided capacity costs in various calculations in its IRP. Rule 4 CSR 240-22 050(2).

B. Documentation of Ameren Missouri's Board of Directors' meetings[11] during which the preferred resource plan was discussed and "unanimously adopted" does not indicate that all candidate resource plans analyzed pursuant to the requirements of 4 CSR 240-22.060 and the requirements of 4 CSR 240-22.070(1) – (5) were considered by Ameren Missouri's decision-makers and does not indicate that the lowest cost candidate resource plans (Plan R0 and Plan R2) were considered at all by Ameren Missouri's decision-makers.

C. The two sets of independent critical uncertain factors which are included as "joint" independent critical uncertain factors in Ameren Missouri's probability tree do not correctly reflect the values and probabilities for these two sets of the individual independent critical uncertain factors. Rule 4 CSR 240-22.070(1) variance.

D. The high-case, base-case and low-case natural gas prices may be too high as a result of the recent development of shale gas plays in the United States. Rule 4 CSR 240-22.070(3)

[11] Documents include: 1) Chapter 10, Appendix D; 2) Ameren Missouri's response to The Office of Public Counsel's data request 2007; 3) Ameren Missouri's response to The Office of Public Counsel's data request 2008.

E. Ameren Missouri's preferred resource plan does not meet the statutory goal of the Missouri Energy Efficiency Investment Act to achieve all cost-effective demand-side savings.

F. Ameren Missouri has made very limited effort to achieve the DSM cost recovery solution necessary for it to choose Plan R0 as its preferred resource plan under current environmental regulations.

G. When analyzing the economic development policy objective for various candidate resource plans, Ameren Missouri did not analyze the indirect economic impacts of various candidate resource plans due to the lower risk adjusted PVRR for RAP DSM no supply-side resources Plan R0 under current environmental regulations (up to $1.9 billion vs. Plan B2), and for Low Risk DSM Combined Cycle plants in 2016 and 2026 Plan R3 under aggressive environmental regulations (up to $2.5 billion vs. Plan H1).

H. Scores on Ameren Missouri's preferred resource plan scorecard are not logically consistent and may have serious flaws, because the comparison of one plan to another can only be done fairly when comparing plans designed for current environmental regulations with Meramec continuing to operate "as is" or when comparing plans designed for aggressive environmental regulations with Meramec not continuing to operate "as is."

4 CSR 240-22.030 Load Analysis and Forecasting

Summary

The stated purpose of rule 4 CSR 240-22.030, Load Analysis and Forecasting, is the setting of the "minimum standards for the maintenance and updating of historical data, the level of detail required in analyzing and forecasting loads, and for the documentation of the inputs, components and methods used to derive the load forecasts."

In Staff's limited review of Ameren Missouri's load analysis and energy and demand forecasts, Staff found no deficiencies concerning compliance with this rule, and Staff has not identified any additional concerns. Staff believes this filing also meets the Load Analysis and Forecasting requirements of the Non-Unanimous Stipulation and Agreement in Case No. EO-2007-0409.

Ameren Missouri requested waivers from specific provisions of this rule. All were granted by the Commission. These waivers pertained to all or part of the following subsections of the rule:

4 CSR 240-22.030 (1)(D)1.	Start date of historical energy data base
4 CSR 240-22.030 (1)(D)2.	Start date of historical peak and hourly load data base
4 CSR 240-22.030 (3)	Analysis of use per unit
(4 CSR 240-22.030 (3)(B)1.	Measures of stock of energy-using capital goods
4 CSR 240-22.030 (4)(A)	Load Profiles for Class and for Net System Load
4 CSR 240-22.030 (4)(B)	Calibrate Class Load Profiles to Net System Load Profiles
4 CSR 240-22.030 (5)(B)2.B.	End Use Detail
4 CSR 240-22.030 (8)(B)2.	Plots of coincident demands showing end-use com
4 CSR 240-22.030 (8)(E)1.	Plots of hourly load profiles with end use components

Ameren Missouri's retail energy sales grew by 45 percent (45%) over the 14-year period from 1995 to 2009, a compound annual rate of 1.87%, and retail peak demand grew by 9.4% over the 7-year period from 2003 to 2009, a compound annual rate of 1.29%. For the planning forecast period of 2010 to 2030 Ameren Missouri projects retail sales will grow by 23% over 20 years, 1.09% annually, and retail peak demand will grow by 18% over 20 years, 0.91% annually.

Based on its limited review, Staff concludes Ameren Missouri's Load Analysis and Forecasting filing meets the requirements of rule 4 CSR 240-22.030, and Staff has identified no deficiencies or concerns.

4 CSR 240-22.040 Supply-Side Resource Analysis

Summary

Rule 4 CSR 240-22.040, Supply-Side Resource Analysis, requires Ameren Missouri to review existing resources for opportunities to upgrade or retire them, and also to review a wide variety of supply-side resource options to determine cost estimates for each. Resource options are to be ranked based upon their relative annualized utility costs, as well as based upon their probable environmental costs. Resources which do not have significant disadvantages pass this pre-screening process and are to be included in the integrated resource analysis process used to select the preferred resource plan.

Ameren Missouri reviewed fossil fuel, renewable energy, and nuclear resource options, as well as its transmission and distribution system options. Ameren Missouri evaluated technologies based on capital, fixed and variable cost estimates from Black and Veatch , Burns & McDonnell, Energy Information Administration (EIA), Electric Power Research Institute ("EPRI"), projects in the region under construction, manufacturers' data, consultants, various reports, and Ameren Missouri in-house experts. Ameren Missouri ranked these options to obtain a high, base and low range of costs based on a broad range of technology development, probable environmental regulations and cost uncertainties. Ameren Missouri excluded some technologies from its further review because the technologies are in the developmental stage, resource inadequacy, or absence of geological features required for their implementation or use by Ameren Missouri.

Ameren Missouri's supply-side resource screening analysis identified potential cost-effective options that it passed on to consider further in its integrated resource analysis. Ameren Missouri evaluated the efficiency, life extension, environmental enhancements and retirement scenarios of the existing facilities it relies upon for capacity and power. Ameren Missouri also analyzed its transmission and distributions systems as required by the Commission's Chapter 22 rules.

With respect to rule 4 CSR 240-22.040 Supply-Side Resource Analysis, Ameren Missouri requested, and the Commission granted, in Docket No. EE-2010-0243, waivers of the following specific provisions of that rule:

4 CSR 240-22.040(2)(B)2.	Specify at least two levels of mitigation of environmental pollutants
4 CSR 240-22.040(3)	Analysis of existing and planned interconnectedgeneration resources
4 CSR 240-22.040(6)	Future transmission facilities required over planning horizon

Ameren Missouri requested a waiver in this filing from rule 4 CSR 240-22.040(1)(K) and the Commission's Order in its last Chapter 22 compliance filing Case No. EO-2007-0409 concerning environmental impacts associated with the release of radioactive tritium and noble gases (krypton and xenon) from the Callaway I nuclear plant. The Commission denied this waiver request.

Based on its limited review, Staff concludes Ameren Missouri's Supply-Side Resource Analysis filing meets the requirements of rule 4 CSR 240-22.040, and Staff has identified no concerns or deficiencies.

4 CSR 240-22.050 Demand-Side Resource Analysis

Summary

Rule 4 CSR 240-22.050, Demand-Side Resource Analysis, specifies the methods by which end-use measures and demand-side programs shall be developed and screened for cost-effectiveness. It also requires the ongoing evaluation of end-use measures and programs, and the use of program evaluation information to improve program design and cost-effectiveness analysis.

The current Ameren Missouri 2011 IRP filing improves and expands Ameren Missouri's overall consideration and evaluation of demand-side resources from its previous 2008 IRP filing. A primary improvement is the knowledge gained from the actual program implementation and evaluation experience from its previous and current demand-side programs. Another primary improvement is the incorporation of a substantial DSM Market Potential Study prepared by Global Energy Partners that utilized primary market research data from Ameren Missouri's customers and input received as a result of multiple stakeholder workshops and meetings. The 2011 IRP filing also reflects: (1) the acquisition of the DSMore™ model – one of the leading cost effectiveness measurement tools for energy efficiency and demand response programs; (2) the acquisition of multiple measure level databases; (3) a robust economic screening process including approximately 500 electric energy efficiency measures; (4) a review of utility program design best practices; and (5) the incorporation of input from outside consultant reports such as Navigant for distributed generation and an evaluation of the peak power rebate programs by ADM associates.

Ameren Missouri applied for and received from the Commission variances from six (6) provisions of this rule related to the following:

4 CSR 240-22.050 (2)	Specifies the required methods for calculating and allocating avoided costs
4 CSR 240-22.050(3)(F)	End-use measures in at least one (1) potential demand-side program
4 CSR 240-22.050(6)(D)	Design a marketing plan and delivery process
4 CSR 240-22.050(9)	Evaluation of demand-side program
4 CSR 240-22.050(11)(D)	Document methods and assumptions used in avoided cost estimates
4 CSR 240-2.050(11)(J)	A description of the process and impact evaluation plans

Staff believes Ameren Missouri's Demand-Side Resource Analysis filing is deficient in meeting the requirements of rule 4 CSR 240-22.050(3), and Staff has also identified one (1) concern for this rule.

Deficiencies

1. Ameren Missouri did not perform cost-effectiveness screening for a modified Rider L program or for potential customer education programs provided by third party providers such as OPOWER. Rule 4CSR 240-22.050 (3).

Ameren Missouri's current Rider L for C&I (commercial and industrial) business customers is described on page 52, section 7.2.6.5 "NDDR Large Business." An evaluation report for the Rider L Peak Power Rebate Program, dated April 2010, prepared by ADM Associates recommended that Rider L be revised to provide increased customer compensation, with the implied intent of increasing the retention rate of existing customers and the program's appeal to new customers. Specifically, ADM recommended revising the customer specific baseline calculation formula and the formula by which credits are paid. Staff notes that File No. EO-2009-0437 was opened to investigate tariff language changes to Rider L, and that Rider L is set to expire on December 31, 2011.

A proven customer education program designed to convert passive individual energy users into active participants in demand-side programs (provided by third party providers such as OPOWER[12]) was neither described nor included in Ameren Missouri's cost-effectiveness screening. OPOWER provided a presentation during Staff's Smart Grid Workshop on June 28, 2010, that was submitted in File No. EW-2009-0292. In its presentation, OPOWER reported very impressive results for customer engagement with 1) over 85 percent (>85%) of customers receiving the OPOWER personalized monthly report taking significant action to save energy, 2) realized first year energy savings for individual utility clients ranging from 1.5 percent (1.5%) to 3.5 percent (3.5%), and 3) a 20 percent (20%) increase in overall effectiveness of energy efficiency programs for utility clients as a result of those clients implementing the customized OPOWER monthly report approach to customer engagement.

[12] http://www.opower.com/ .

To resolve this deficiency Ameren Missouri should: 1) perform cost-effectiveness screening for revised Rider L program based upon the incorporation of the ADM report recommendations and stakeholder input from File No. EO-2009-0437 as part of its next IRP filing, and 2) contact OPOWER to obtain its input as to a recommended program scope and implementation cost and perform a cost-effectiveness screening based upon this data as part of its next IRP filing. Further, Ameren Missouri should evaluate the cost effectiveness of a revised Rider L program and of the OPOWER program for its service territory and present the evaluation results to its DSM stakeholders for discussion.

Concerns

A. Ameren Missouri did not consistently use the value for avoided capacity costs in various calculations in its IRP. Rule 4 CSR 240-22 050(2).

Attachment 1 of the *Order Regarding Application of Waivers*, File No. EE-2010-0243, dated June 30, 2010, established the MISO Cost of New Entry (CONE) value as an acceptable avoided cost. Staff notes that in the MISO FERC compliance filing regarding the annual CONE recalculation dated August 2, 2010, MISO established a CONE value of $95,000/MW-month for the planning year commencing June 1, 2011. Section 7.2.4, "Avoided Costs," page 27, establishes this cost based upon a value of $90/kW-year. When adjusted by an inflation factor, as indicated in Figure 7.11. Section 7.2.6.2, "DDR Large Business", page 49, the resulting capacity cost is in the range of $67-$74/kW-year. The graph of "Utility Avoided Energy Costs" on page 29 of the Ameren Missouri DG Market Penetration Assessment Report prepared by Navigant Consulting dated September 30, 2009, does not agree with the values previously referenced on page 27 of Ameren Missouri's IRP.

To resolve this concern, Ameren Missouri should review its calculations to assure that it utilizes the correct MISO CONE value for avoided capacity costs. If Ameren Missouri did not use the MISO CONE value in the calculation, then the calculation should be revised and the new results submitted in the next IRP filing.

4 CSR 240-22.060 Integrated Resource Analysis

Summary

Rule 4 CSR 240-22.060, Integrated Resource Analysis, requires the utility to design alternative resource plans to meet the planning objectives identified in rule 4 CSR 240-22.010(2), to set minimum standards for the scope and level of detail required in resource plan analysis, and to perform a logically consistent and economically-equivalent analysis of alternative resource plans.

Ameren Missouri applied for and received approval from the Commission for five (5) waivers from this rule related to:

4 CSR 240-22.060(4)	Process to select candidate resource plans
4 CSR 240-22.060(4)(C)	Impact of changes in electric rates on electric future loads
4 CSR 240-22.060(6)(A)	Description of alternative resource plans and candidate resource plans
4 CSR 240-22.060(6)(B)	Summary of performance of each alternative resource plan and candidate resource plan
4 CSR 240-22.060(6)(C)	Plots of performance measures for each alternative resource plan and candidate resource plan

Ameren Missouri developed five attributes or dimensions for use in its creation of alternative resource plans:

1. Nine (9) Supply-Side Types Attributes
    - Coal with carbon capture
    - Combined cycle (greenfield)
    - Combined cycle (Meramec)
    - Combined cycle (Venice)
    - Simple cycle (greenfield)
    - Pumped storage
    - Nuclear 30% (partial ownership)
    - Nuclear 50% (partial ownership)
    - Wind with simple cycle

2. Four (4) Demand-Side Portfolio Attributes
    - Maximum achievable potential (MAP)
    - Realistic achievable potential (RAP)
    - Low risk
    - None

3. Three (3) Meramec Status Attributes
    - Meramec retired 2015
    - Meramec retired 2022
    - Meramec continues as-is

4. Two (2) Renewable Portfolios
    - Federal
    - Missouri

5. Two (2) Noranda Status Attributes
    - Noranda continues
    - Noranda contract expires 2020

The various combinations of these five attributes result in 432 different alternative resource plans. However, some combinations result in duplicate alternative resource plans or infeasible alternative resource plans, e.g., the Meramec combined cycle option is contingent on Meramec's retirement so the interaction of Meramec continuing and the Meramec combined cycle option would produce an infeasible plan. Ultimately, Ameren Missouri analyze 216 alternative resource plans in an initial screening process based on a scorecard approach that embodied several measures linked to the following Ameren Missouri policy objectives and relative weightings:

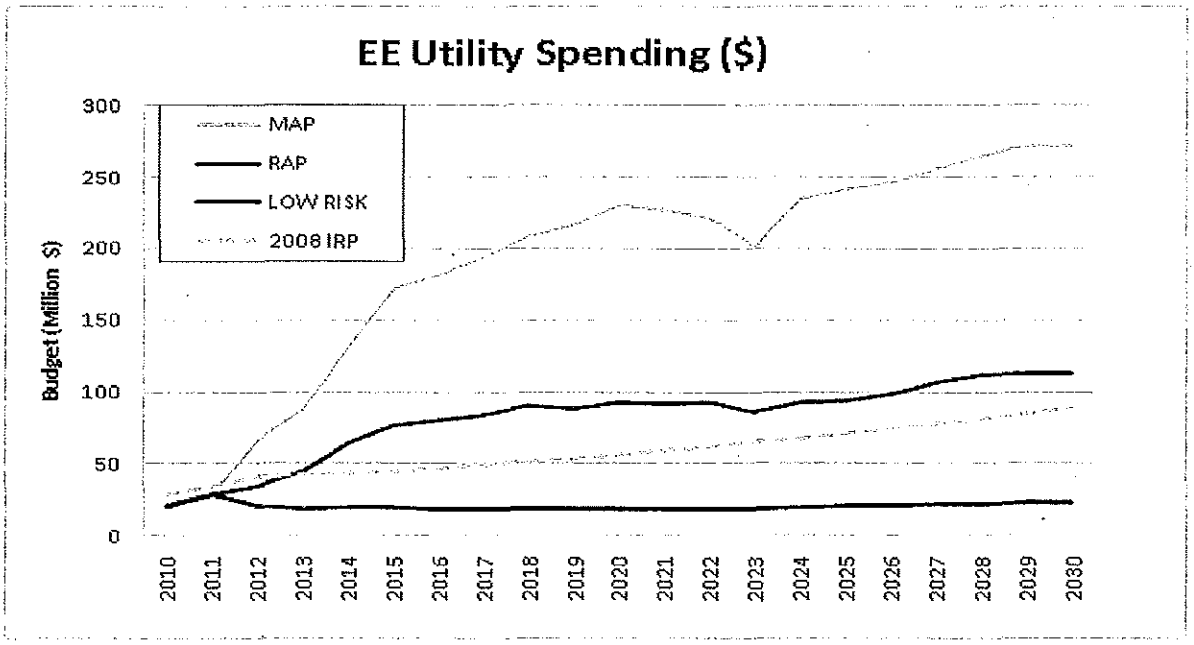
1. Environmental and resource diversity (20%) measured by resource diversity, carbon emissions, SO_2 emissions and NO_x emissions;
2. Energy efficiency (10%) measured by energy savings;
3. Financial and regulatory (20%) measured by return on equity (ROE), return on invested capital (ROIC), earnings per share (EPS), free cash flow, stranded cost risk, transaction risk and [cost] recovery;
4. Customer satisfaction (15%) measured by average rates and single year rate increase;
5. Economic development (10%) measured by primary job growth (FTE-years); and
6. Cost (25%) measured by net present value of revenue requirements (NPVRR).

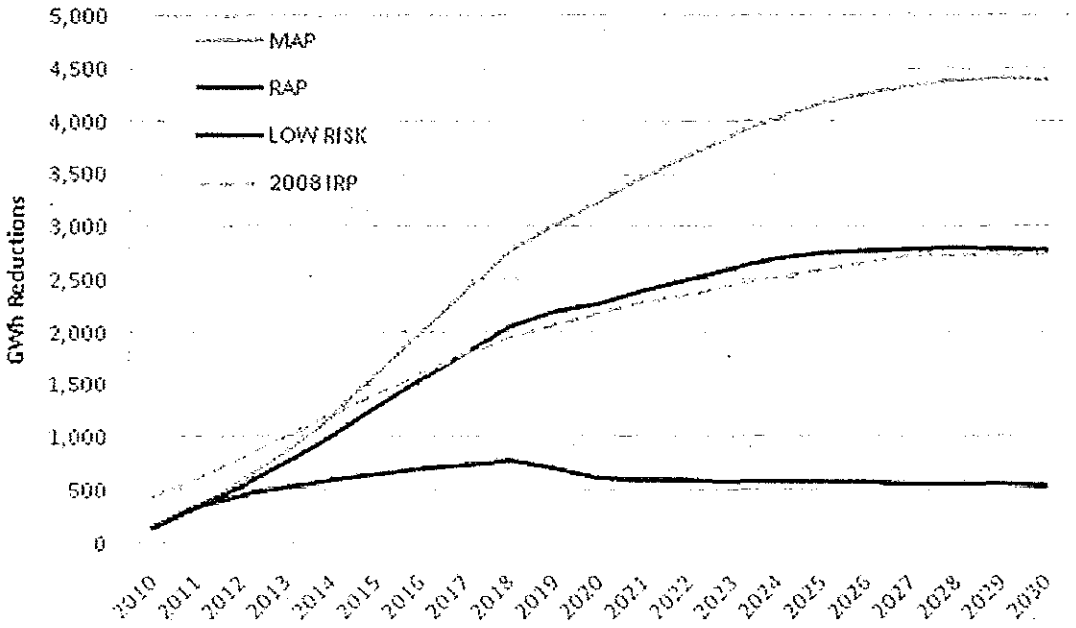
Ameren Missouri identified fourteen (14) candidate resource plans for further consideration in its risk analysis and strategy selection. Each of the fourteen (14) candidate resource plans includes the following plant upgrades which total 139 MW by the year 2020:

1. Meramec Units 3 and 4 – 15 MW in 2011

2. Rush Island Unit 1 – 13 MW in 2013
3. Labadie Unit 2 – 11 MW in 2013
4. Callaway Unit 1 – 70 MW in 2017
5. Audrain Combustion Turbines – 30 MW in 2020

Each of the fourteen (14) candidate resource plans includes the "pre-determined" low risk energy efficiency programs based on continuation of the existing regulatory framework or the "pre-determined "RAP energy efficiency programs and RAP demand response programs which are added "on an as-needed basis to meet capacity needs." The maximum achievable potential (MAP) DSM portfolio was determined to not be cost effective. Low Risk DSM, RAP DSM and MAP DSM spending and energy savings are summarized in following figures:





The fourteen (14) candidate resource plans are shown in Table 9.11 of the Ameren Missouri filing which is reproduced following:

Envir. Scenario	Meramec Status	First Supply-Side	Second Supply-Side	Renewable Portfolio	DSM Portfolio	Noranda Status
Moderate	Continues As-Is	--	--	Missouri RES	RAP	Continues
Moderate	Continues As-Is	Combined Cycle	--	Missouri RES	Low Risk	Continues
Moderate	Continues As-Is	Simple Cycle	--	Missouri RES	Low Risk	Continues
Moderate	Continues As-Is	Nuclear 30%	--	Missouri RES	Low Risk	Continues
Moderate	Continues As-Is	Wind/SC	--	Missouri RES	Low Risk	Continues
Aggressive	Retired 2016	--	--	Missouri RES	RAP	Continues
Aggressive	Retired 2016	Combined Cycle	Combined Cycle	Missouri RES	Low Risk	Continues
Aggressive	Retired 2016	Combined Cycle	Simple Cycle	Missouri RES	Low Risk	Continues
Aggressive	Retired 2016	Combined Cycle	Nuclear 30%	Missouri RES	Low Risk	Continues
Aggressive	Retired 2016	Combined Cycle	Wind/SC	Missouri RES	Low Risk	Continues
Aggressive	Controlled	--	--	Missouri RES	RAP	Continues
Aggressive	Controlled	Combined Cycle	--	Missouri RES	Low Risk	Continues
Aggressive	Gas Conversion	--	--	Missouri RES	RAP	Continues
Aggressive	Gas Conversion	Combined Cycle	--	Missouri RES	Low Risk	Continues

Based on its limited review, Staff has identified no deficiencies or concerns for Ameren Missouri's Integrated Resource Analysis filing.

4 CSR 240-22.070 Risk Analysis and Strategy Selection

Summary

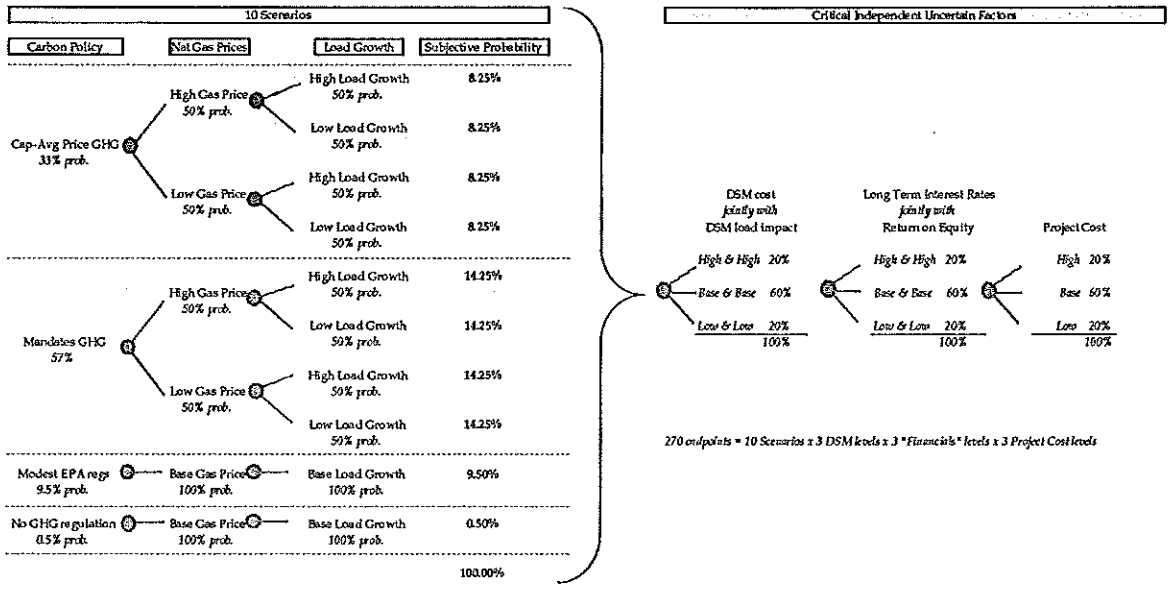
Rule 4 CSR 240-22.070, Risk Analysis and Strategy Selection, requires the utility to identify the critical uncertain factors that affect the performance of resource plans, establishes minimum standards for the methods used to assess the risks associated with these uncertainties, and requires the utility to specify and officially adopt a resource acquisition strategy.

Ameren Missouri applied for and received approval from the Commission for relief from ten requirements of this rule. They relate to the following:

4 CSR 240-22.070(1)	Method of formal decision analysis
4 CSR 240-22.070(2)	Detailed decision-tree
4 CSR 240-22.070(2)(E)	Siting and permitting costs and scheduling for new generation and generation-related transmission
4 CSR 240-22.070(2)(F)	Construction costs and scheduling for new generation and transmission
4 CSR 240-22.070(3)	Construction of decision-tree
4 CSR 240-22.070(4)	Chance node for load growth uncertainty
4 CSR 240-22.070(5)	Cumulative probability distribution of the values of each performance measure of each of the alternative resource plans
4 CSR 240-22.070(6)(B)	Trend of expected unserved hours for the preferred resource plan
4 CSR 240-22.070(7)	Impact of the preferred resource plan on future requirements for emergency imported power
4 CSR 240-22.070(11)(A)	Decision-tree diagram for each of the alternative resource plans

Ameren Missouri's probability tree (Figure 0.12 on page 20 of Chapter 9 of its filing) consists of the following dependent and independent critical uncertain factors, and is represented in the chart which follows:

1. Dependent critical uncertain factors (which together define ten (10) planning scenarios and subjective probabilities for each planning scenario)
    - CO_2 policy
    - Natural gas prices
    - Load growth
2. Independent critical uncertain factors
    - DSM costs jointly with DSM load impacts
    - Long term interest rates jointly with return on equity
    - Project cost



The various combinations of dependent critical uncertain factors and subjective probabilities of each combination of dependent critical uncertain factors result in ten (10) distinct planning scenarios. Ameren Missouri's probability tree includes four (4) scenarios for the carbon policy critical uncertain factor:

- No greenhouse gas (GHG) regulations with a probability of 0.5%
- Modest EPA regulations with a probability of 9.5%
- Mandates for GHG regulations with a probability of 57%
- Cap-average price GHG regulations with a probability of 33%

Addendum A to this Staff Report includes a summary of the annual capacity additions and capacity reductions for each of the fourteen (14) candidate resource plans. Following is a summary of the fourteen (14) candidate resource plans and the expected risk adjusted PVRR of each, ordered from lowest PVRR to highest PVRR, for the entire ten (10) scenarios probability tree[13]:

[13] The candidate resource plans that are included in Ameren Missouri's resource acquisition strategy are highlighted in colors that correspond to the adopted resource acquisition strategy (Decision Roadmap) that follow in this report.

Ameren Missouri 2011 Chapter 22 Compliance Filing (File No. EO-2011-0271)
Candidate Resource Plans and Expected Risk Adjusted NPVRR Through 2039

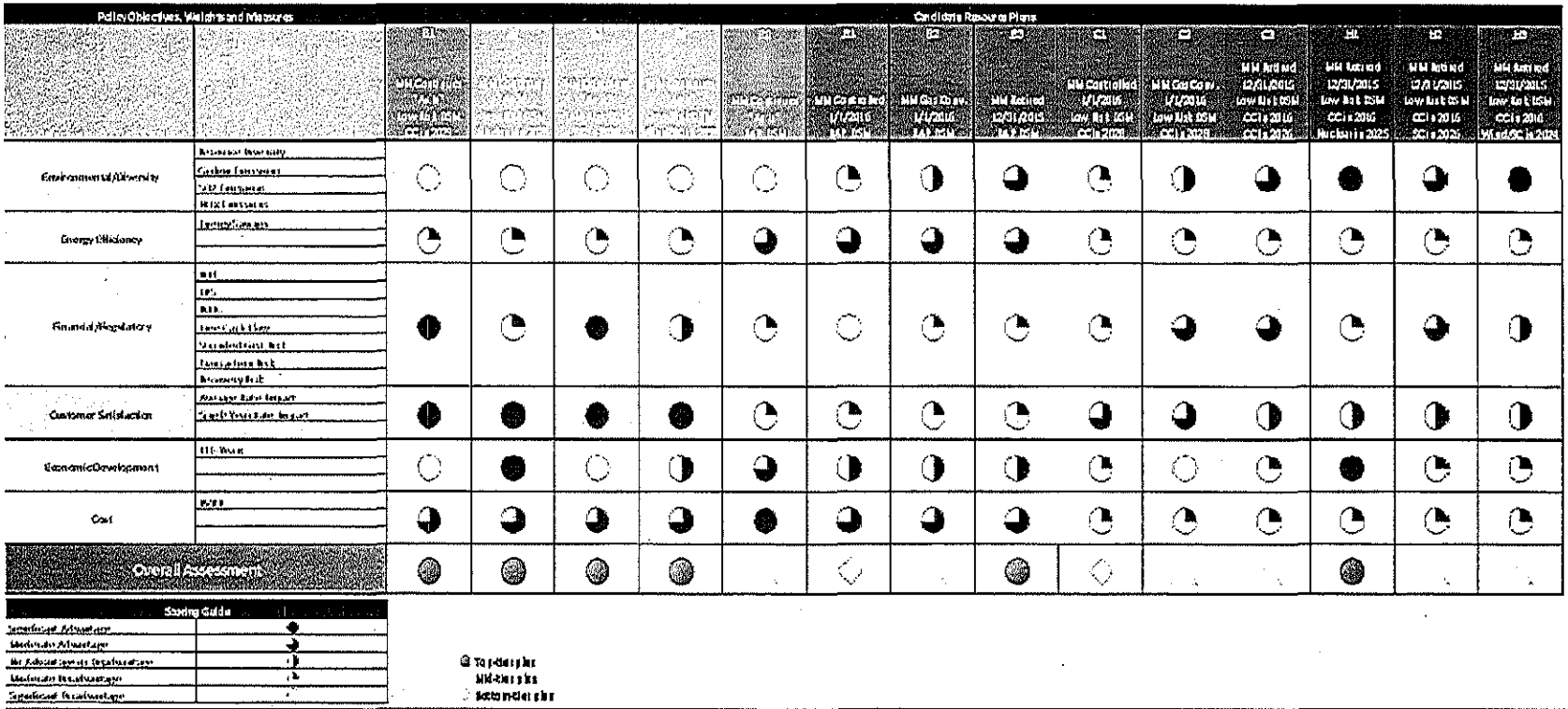
Candidate	NPVRR	vs. R0	vs. R3	Supply-Side Resources					
Plan	$ Millions	$ Millions	$ Millions	Primary	Secondary	Renewables	DSM	Meramec	Noranda
R0	$ 59,661	$ -	$ (3,440)	None	None	Prop C	RAP	Cont.	Cont.
B3	$ 61,161	$ 1,500	$ (1,940)	SC	None	Prop C	Low Risk	Cont.	Cont.
B1	$ 61,253	$ 1,592	$ (1,848)	CC	None	Prop C	Low Risk	As is	Cont.
B4	$ 61,403	$ 1,742	$ (1,698)	Wind/SC	None	Prop C	Low Risk	Cont.	Cont.
B2	$ 61,568	$ 1,907	$ (1,533)	Nuke 30%	None	Prop C	Low Risk	Cont.	Cont.
R1	$ 62,867	$ 3,206	$ (234)	None	None	Prop C	RAP	Controlled	Cont.
R3	$ 63,101	$ 3,440	$ -	None	None	Prop C	RAP	Retired 2016	Cont.
R2	$ 63,358	$ 3,697	$ 257	none	None	Prop C	RAP	Convert Gas	Cont.
C1	$ 64,403	$ 4,742	$ 1,302	CC	None	Prop C	Low Risk	Controlled	Cont.
C2	$ 64,875	$ 5,214	$ 1,774	CC	None	Prop C	Low Risk	Convert Gas	Cont.
H2	$ 65,198	$ 5,537	$ 2,097	CC	SC	Prop C	Low Risk	Retired 2016	Cont.
C3	$ 65,356	$ 5,695	$ 2,255	CC	CC	Prop C	Low Risk	Retired 2016	Cont.
H3	$ 65,420	$ 5,759	$ 2,319	CC	Wind/SC	Prop C	Low Risk	Retired 2016	Cont.
H1	$ 65,596	$ 5,935	$ 2,495	CC	Nuke 30%	Prop C	Low Risk	Retired 2016	Cont.

Ameren Missouri's decision-makers chose to use a scorecard approach[14] to evaluate its fourteen (14) candidate resource plans during their strategy selection process to adopt a resource acquisition strategy and a preferred resource plan for Ameren Missouri. The preferred resource plan selection scorecard and the adopted resource acquisition strategy (Decision Roadmap) follow:

[14] See Chapter 10, Pages 12 – 14 of Ameren Missouri's 2011 IRP Filing.

Ameren Missouri 2011 IRP

Preferred Plan Selection Scorecard

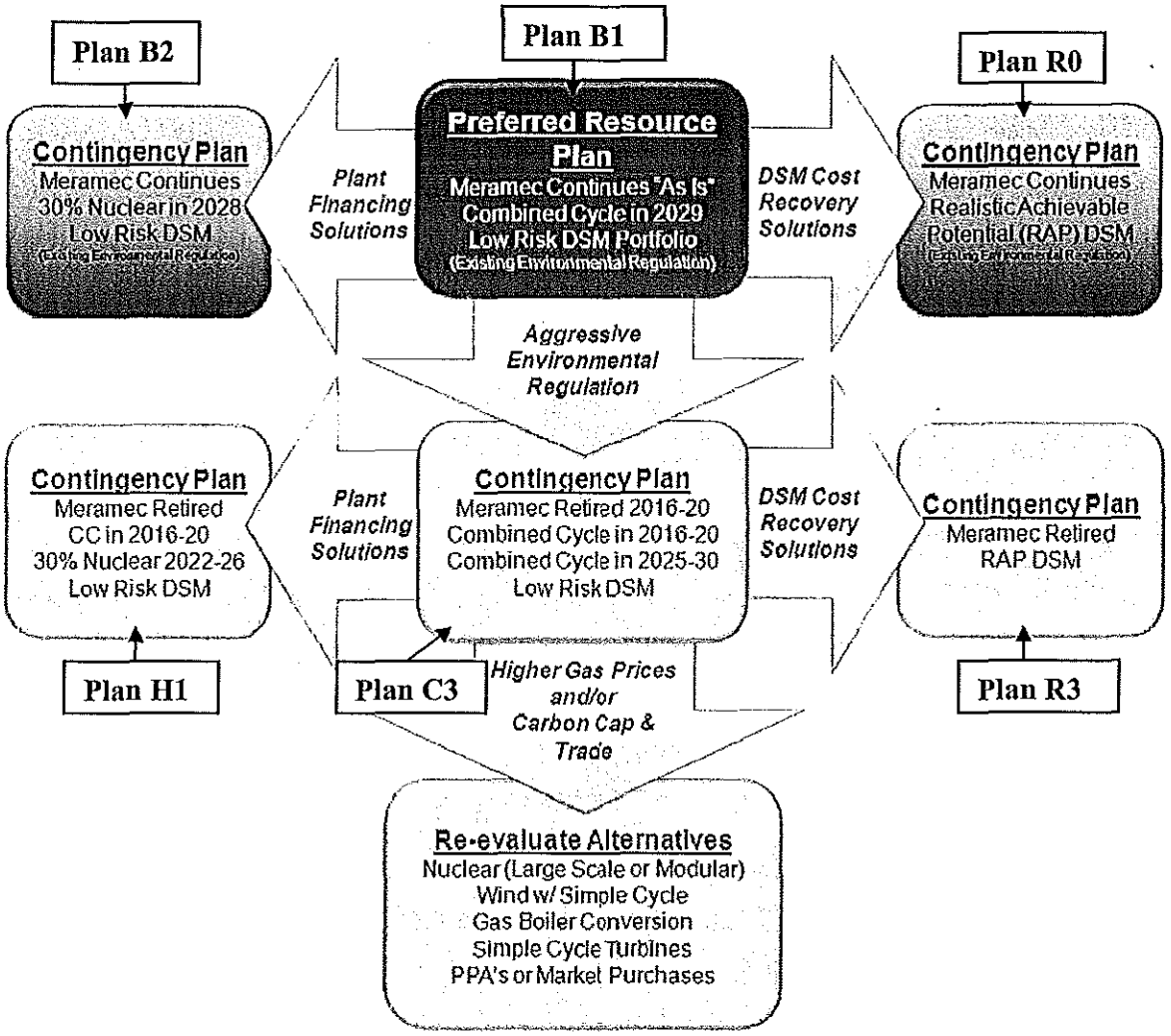


Notes on Scores by Policy Objective

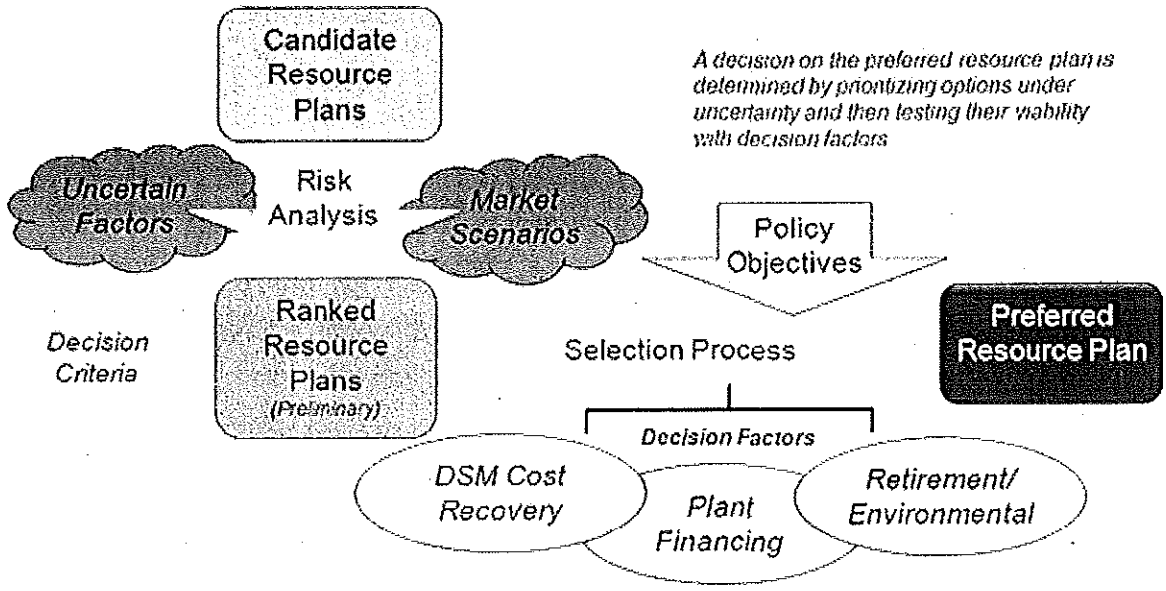
Environmental/Diversity	
Energy Efficiency	
Financial/Regulatory	
Customer Satisfaction	
Economic Development	
Cost (PVRR)	

Key to Abbreviations

Decision Roadmap



At the September 14, 2010, stakeholder meeting, Ameren Missouri presented an overview of the decision process it intended to use for selection of its preferred resource plan. The overview included one slide which is essentially the same as the Figure 10.1 of its 2011 IRP filing. There was no discussion of the use of a scorecard to select the preferred resource plan at the September 14, 2010, stakeholder meeting.



Ameren Missouri's preferred resource plan selection process is described on pages 12-15 of Chapter 10 of the Company's filing.

Staff's review of the Company's workpapers used to develop Table 10.5 Preferred Resource Plan Selection Scorecard (see Addendum B Page 1 of 4) resulted in the following observations:

- The Company incorrectly claims that it used the same policy objectives for Figure 10.5 as those in Table 9.2[15], in that Energy Efficiency is not a policy objective included in Figure 10.5 while it is included as a policy objective in Table 9.2;
- Although there are no weights for the policy objectives on Figure 10.5, there are weights for each of the policy objectives in the Company's workpapers used to develop Figure 10.5;
- The weights for the policy objectives in Figure 10.5 and in Table 9.2 are as follows:

[15] Chapter 10, bottom of page 12: "To select Preferred Plan Ameren Missouri relied on a scorecard approach similar to that used to perform an initial screen of the 216 alternative resource plans, as discussed in Chapter 9. However, that process was limited to purely quantitative measures since the screening included a large number of plans. With only 14 plans there is greater opportunity to use both quantitative and qualitative reasoning to rank plans according to the same policy objectives. Figure 10.5 shows the comparison."

	Table 9.2	Figure 10.5
Environmental/Diversity	20%	20%
Energy Efficiency	10%	0%
Financial/Regulatory	20%	20%
Customer Satisfaction	15%	20%
Economic Development	10%	10%
Cost	25%	30%
Total	100%	100%

- The weighted average scores for each candidate resource plan on Addendum B Page 1 of 4 were used by the Company to determine which candidate resource plans are considered to be "top tier plans" in Figure 10.5;

Addendum B Page 2 of 4 attached to this report is Staff's analysis which uses the same policy objectives and same weights from Table 9.2 of the IRP filing to rank Ameren Missouri's candidate resource plans based on weighted average scores. However, Staff's analysis also includes changes to the scores for Ameren Missouri's RAP candidate resource plans (Plan R0, Plan R1, Plan R2 and Plan R3) for the Energy Efficiency policy objective and for the Customer Satisfaction policy objective as follows:

- Change scores for Energy Efficiency policy objective for Ameren Missouri's RAP plans (Plan R0, Plan R1, Plan R2 and Plan R3) from "4" to "5" to be consistent with the comment in the discussion of the Energy Efficiency objective at the bottom of the score card where Ameren Missouri states: "RAP DSM plans score 'significant advantage' due to high energy savings."[16]
- Change scores for Customer Satisfaction policy objective for RAP plans from "2" to "4", as a result of Staff's Concern H.

Addendum B Page 3 of 4 attached to this report is Staff's analysis which: a) assigns a 50% weight for the Cost policy objective to comply with rule 4 CSR 40-22.010(2)(B)[17], and b) adjusts the remaining weights in Addendum B Page 2 of 4 from a total of 75% to a total of 50%.

[16] According to the scorecard, a score of "4" indicates moderate advantage whereas a score of "5" indicates a significant advantage.

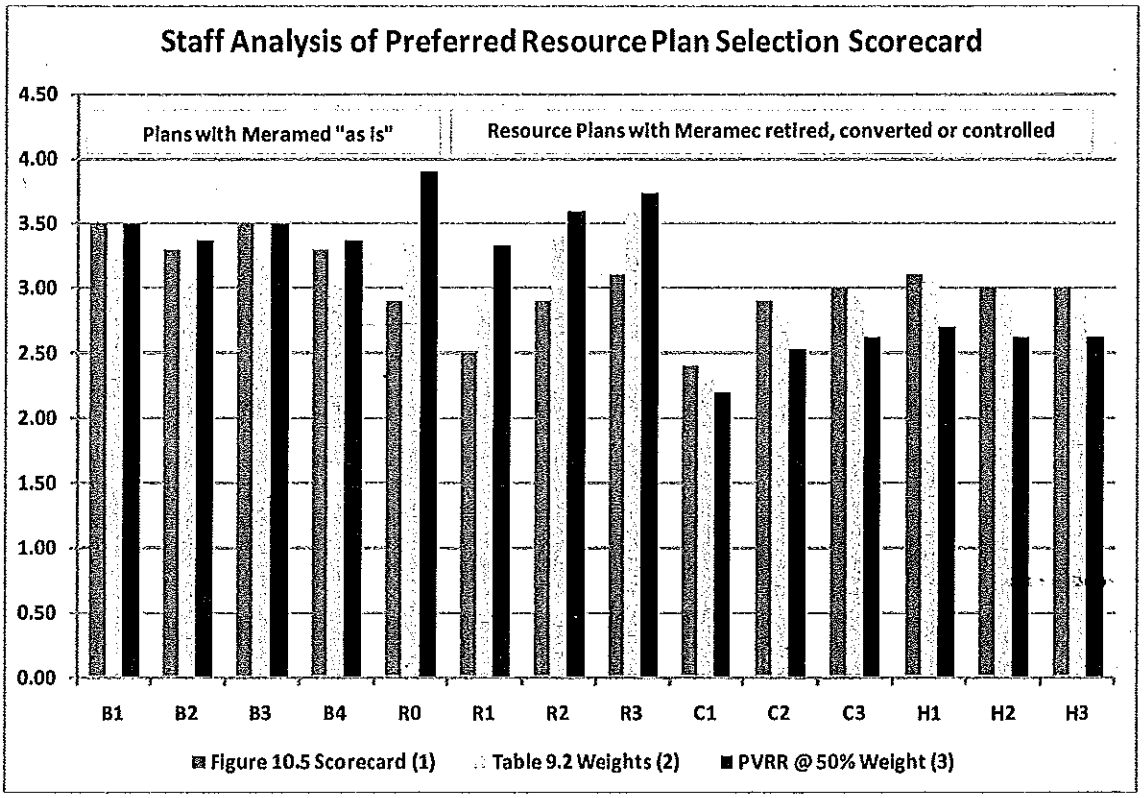
[17] Rule 4 CSR 240-22.010(2)(B): "Use minimization of the present worth of long-run utility costs as the primary selection criterion in choosing the preferred resource plan;"

A comparison of Staff's analysis with Ameren Missouri's analysis is shown in the following table and chart and is further illustrated in Addendum B Page 4 of 4 attached to this report.

Staff Analysis of Preferred Resource Plan Selection Scorecard

	B1	B2	B3	B4	R0	R1	R2	R3	C1	C2	C3	H1	H2	H3
Figure 10.5 Scorecard (1)	3.50	3.30	3.50	3.30	2.90	2.50	2.90	3.10	2.40	2.90	3.00	3.10	3.00	3.00
Table 9.2 Weights (2)	3.25	3.05	3.25	3.05	3.35	3.00	3.40	3.60	2.30	2.80	2.95	3.05	2.95	2.95
PVRR @ 50% Weight (3)	3.50	3.37	3.50	3.37	3.90	3.33	3.60	3.73	2.20	2.53	2.63	2.70	2.63	2.63

= Top Tier Plans



Notes:

(1) Weighted scores from Addendum B Page 1 - Ameren Missouri analysis to generate Figure 10.5 of its 2011 IRP Filing

(2) Weighted scores from Addendum B Page 2 - Staff analysis to include the following changes to Addendum B Page 1: a) change weights to those in Table 9.2, b) change scores for Energy Efficiency of RAP plans from 4's to 5's to be consistent with comment "RAP DSM plans score "significant advantage" due to high eneryg savings.", and c) change scores for Customer Satisfaction for RAP plans from 2's to 4's.

(3) Weighted scores from Addendum B Page 3 - Staff analysis to include the following changes to Addendum B Page 2: a) 50% weight for Cost (PVRR) to comply with Rule 4 CSR 240-22.010(2)(B), b) adjust the remaining weights in Addendum B Page 2 from total of 75% to total of 50%.

This table shows that both of Staff's analyses clearly favor RAP when Meramec continues to operate "as is" and clearly favor RAP when Meramec does not continue to operate "as is".

Another noticeable difference between Staff's scorecard analysis and the Company's is that Staff's analysis does not result in either of the two plans that include the addition of nuclear power (Plans B2 and H1) being "top-tier" plans.

Based on its limited review of Ameren Missouri's IRP filing, Staff has identified three (3) deficiencies and seven (7) concerns with Ameren Missouri's Risk Analysis and Strategy Selection filing.

Deficiencies

2. Ameren Missouri did not use minimization of the present worth of long-run utility costs as the primary selection criterion in choosing its preferred resource plan as required by rules 4 CSR 240-22.070(6)(A) and 4 CSR 240-22.010(2)(B).

See discussion above. The word "primary" or the words "primary selection criterion" are not defined in Chapter 4 CSR 240-22. "Primary" means: of first rank, importance or value; basic; forming the base or essence; fundamental; constituting or serving as the basis or starting point; of central importance; principal [18]. When weighting selection criterion for the selection of a utility's adopted preferred resource plan the utility must assign at least a majority of the weighting in the preferred resource plan selection process to the present worth of long-run utility costs as measured through PVRR.

To resolve this deficiency Ameren Missouri should assign at least a majority of the weighting in the preferred resource plan selection process to present worth of long-run utility costs policy objective (as measured by risk adjusted PVRR) in its future Chapter 22 filings including its April 1, 2012 annual update filing[19].

3. Ameren Missouri has not quantitatively analyzed and documented the DSM cost recovery solution which is necessary for Ameren Missouri to select Plan R0 as its preferred resource plan under current environmental regulations and Meramec continuing to operate "as is," and to select contingency Plan R3 as its preferred resource plan under aggressive environmental regulations and Meramec not continuing to operate "as is" as required by rules 4 CSR 240-22.070(6)(A) and 4 CSR 240-22.010(2)(C).

[18] Webster's New Collegiate Dictionary, copyright 1979, definition of primary and its synonyms principal, basic and fundamental.
[19] Rule 4 CSR 240-22.080(3) effective June 30, 2011.

In its review and analysis of Ameren Missouri's IRP filing Staff found the following:

- Ameren Missouri did not identify or screen two significant potential demand-side resources characterized as (1) a modified Rider L program; and (2) potential customer education programs provided by third party providers such as OPOWER (see Deficiency 1);
- For the five (5) candidate resource plans which include continued operation of Meramec "as is," there are distinctly different risk adjusted PVRR savings for Plan R0 (RAP DSM, no supply-side resources) compared to other plans under current environmental regulations. Plan R0 has a risk adjusted PVRR $1.9 billion less than that of Plan B2 (Low Risk DSM, 30% Nuclear in 2029) and $1.6 billion less than the preferred resource plan Ameren Missouri adopted, Plan B1 (Low Risk DSM, Combined Cycle in 2029):

Expected Risk Adjusted PVRR Through 2039 for Ten Scenarios Probability Tree for Candidate Resource Plans Which Include Meramec Continuing to Operate "As Is"

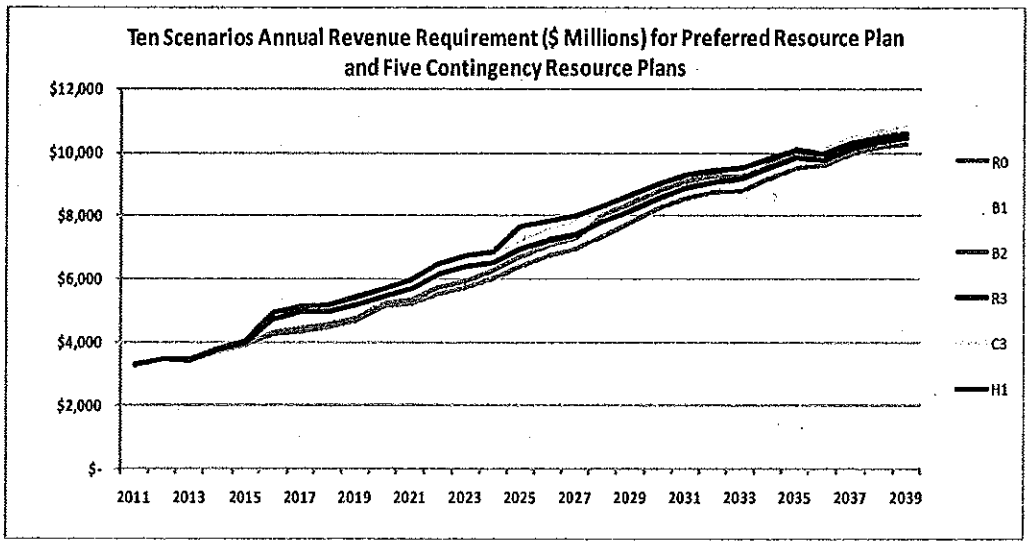
Candidate	PVRR	vs. R0	Supply-Side Resources					
Plan	$ Millions	$ Millions	Primary	Secondary	Renewables	DSM	Meramec	Noranda
R0	$ 59,661	$	None	None	Prop C	RAP	"As Is"	Cont.
B3	$ 61,161	$ 1,500	SC	None	Prop C	Low Risk	"As Is"	Cont.
B1	$ 61,259	$ 1,598	CC	None	Prop C	Low Risk	"As Is"	Cont.
B4	$ 61,403	$ 1,742	Wind/SC	None	Prop C	Low Risk	"As Is"	Cont.
B2	$ 61,568	$ 1,907	Nuke 30%	None	Prop C	Low Risk	"As Is"	Cont.

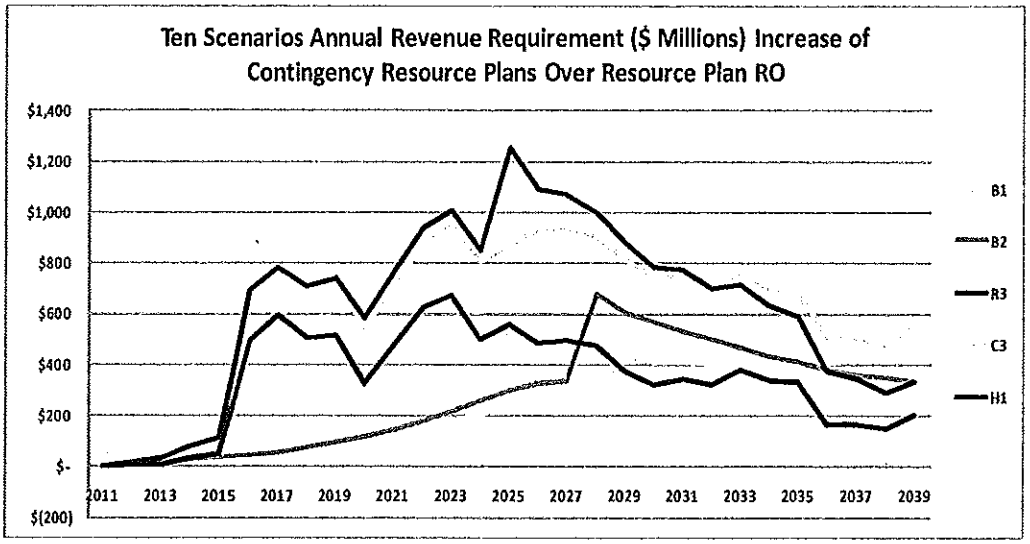
- For the nine (9) candidate resource plans which do not include continued operation of Meramec "as is" there are distinct risk adjusted PVRR savings for Plan R3 (RAP DSM, no supply-side resources) compared to other plans under aggressive environmental regulations. Plan R3 has a risk adjusted PVRR $2.5 billion less than that of Plan H1 (Low Risk DSM, Combined Cycle in 2016 and 30% Nuclear in 2025):

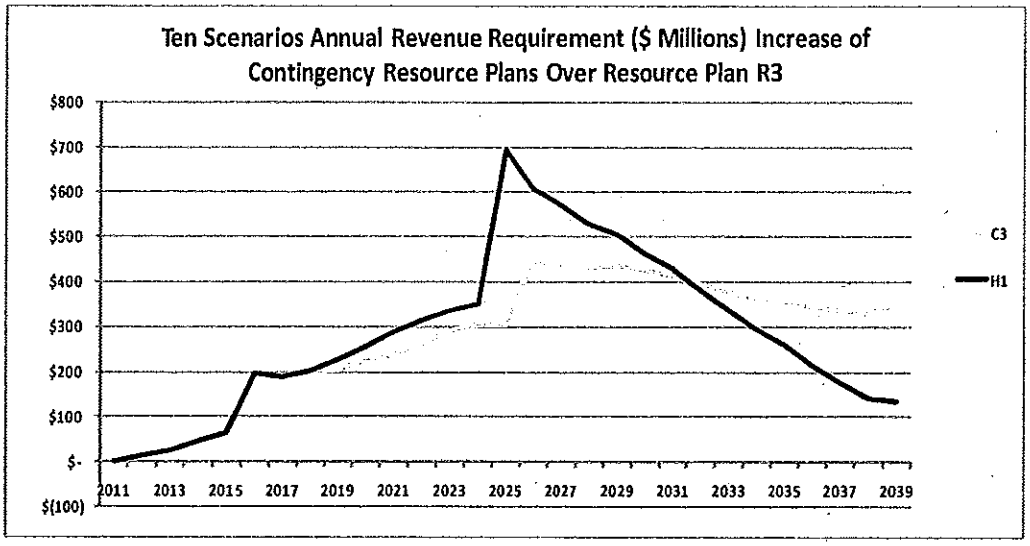
Expected Risk Adjusted PVRR Through 2039 for Ten Scenarios Probability Tree for Candidate Resource Plans Which Include Meramec Not Continuing to Operate "As Is"

Candidate Plan	PVRR $ Millions	vs. R3 $ Millions	Supply-Side Resources			DSM	Meramec	Noranda
			Primary	Secondary	Renewables			
R1	$ 62,867	$ (234)	None	None	Prop C	RAP	Controlled	Cont.
R3	$ 63,101	$	None	None	Prop C	RAP	Retired 2016	Cont.
R2	$ 63,358	$ 257	none	None	Prop C	RAP	Convert Gas	Cont.
C1	$ 64,403	$ 1,302	CC	None	Prop C	Low Risk	Controlled	Cont.
C2	$ 64,875	$ 1,774	CC	None	Prop C	Low Risk	Convert Gas	Cont.
H2	$ 65,198	$ 2,097	CC	SC	Prop C	Low Risk	Retired 2016	Cont.
C3	$ 65,356	$ 2,255	CC	CC	Prop C	Low Risk	Retired 2016	Cont.
H3	$ 65,420	$ 2,319	CC	Wind/SC	Prop C	Low Risk	Retired 2016	Cont.
H1	$ 65,596	$ 2,495	CC	Nuke 30%	Prop C	Low Risk	Retired 2016	Cont.

- Summarized below are the risk adjusted annual revenue requirements for the candidate resource plans included in the Company's Decision Roadmap resulting from the ten scenarios probability tree analysis. The following graphs and tables illustrate the significantly higher annual revenue requirements for Low Risk DSM Plan B1 and Low Risk DSM, 30% Nuclear in 2029 Plan B2 when compared to RAP DSM, no supply-side resources Plan R0 under current environmental regulations (Meramec continues "as is"), and the significantly higher annual revenue requirements for Low Risk DSM, Combined Cycle plants in 2016 and 2026 Plan C3 and for Low Risk DSM, Combined Cycle in 2016 and Nuclear in 2025 Plan H1 when compared to RAP DSM no supply-side Plan R3 under aggressive environmental regulations:


Ten Scenarios Annual Revenue Requirement ($ Millions) for Preferred Resource Plan and Five Contingency Resource Plans
$12,000
$10,000
$8,000
$6,000
$4,000
$2,000
$-
2011 2013 2015 2017 2019 2021 2023 2025 2027 2029 2031 2033 2035 2037 2039
R0
B1
B2
R3
C3
H1


Ten Scenarios Annual Revenue Requirement ($ Millions) Increase of Contingency Resource Plans Over Resource Plan RO
$1,400
$1,200
$1,000
$800
$600
$400
$200
$-
$(200)
2011 2013 2015 2017 2019 2021 2023 2025 2027 2029 2031 2033 2035 2037 2039
B1
B2
R3
C3
H1


Ten Scenarios Annual Revenue Requirement ($ Millions) Increase of Contingency Resource Plans Over Resource Plan R3
$800
$700
$600
$500
$400
$300
$200
$100
$-
$(100)
2011 2013 2015 2017 2019 2021 2023 2025 2027 2029 2031 2033 2035 2037 2039
C3
H1

Ten Scenarios Probability Tree Risk Adjusted
Average Annual Revenue Requirement ($ Millions)
Increase of Plan B1 and Plan B2 Over Plan RO

	2011 - 2020	2021 - 2030	2031 - 2039
B1	$ 48	$ 256	$ 414
B2	$ 48	$ 361	$ 417

Ten Scenarios Probability Tree Risk Adjusted
Average Annual Revenue Requirement ($ Millions)
Increase of Plan C3 and Plan H1 Over Plan R3

	2011 - 2020	2021 - 2030	2031 - 2039
C3	$ 115	$ 358	$ 362
H1	$ 121	$ 465	$ 262

- The relative ranking of candidate resource plans, the relative risk adjusted PVRR savings, and the levels of annual revenue requirements savings do not change appreciably among the all ten scenarios probability tree, the mandates for GHG scenarios probability tree, the cap-average price GHG scenarios probability tree, the EPA scenarios probability tree or the business-as-usual (BAU) scenarios probability tree (see Addendum C to this report for Staff's analysis);
- If selection of Ameren Missouri's preferred resource plan is based only on minimization of long-term utility cost (risk adjusted PVRR), RAP DSM, no supply-side resources Plan R0 is the selection if Meramec continues to operate "as is" in an environment of current carbon regulations, and Low Risk DSM Combined Cycle plants in 2016 and 2026 Plan C3 is the selection if Meramec does not continue to operate "as is" in an environment of aggressive carbon regulations.[20]
- Ameren Missouri did not comply with rules 4 CSR 240-22.070(6)(A) and 4 CSR 240-22.020(2)(B) when selecting its preferred resource plan (see Deficiency 2);

[20] Top of page 25 of Chapter 9 of Ameren Missouri's filing: "If decision making were solely based on PVRR then the analysis would be complete at this point. Since decision making is multi-dimensional, Ameren Missouri created a scorecard that embodied its policy objective."

- Compliance with rules 4 CSR 240-22.070(6)(A) and 4 CSR 240-22.020(2)(B) would likely result in Ameren Missouri selecting Plan R0 as its preferred resource plan and not Plan B1;
- Ameren Missouri did not comply with rule 4 CSR 240-22.070(8) when analyzing the value of better information (see Deficiency 4);
- Staff's analysis shows that had Ameren Missouri complied with rule 4 CSR 240-22.070(8) spending up to $234 million to obtain better information concerning DSM costs and DSM load impacts would be prudent to better manage risk associated with the implementation of its RAP DSM portfolio.

From its analysis, Staff concludes:

- The risk adjusted PVRR savings and annual revenue requirements savings from RAP DSM no supply-side resources Plan R0 under current environmental regulations, and from RAP DSM no supply-side resources Plan R3 under aggressive environmental regulations, are significant and are relatively consistent in all five planning scenarios Staff analyzed;
- Rules 4 CSR 240-22.070(6)(A) and 4 CSR 240-22.010(2)(C) require that Ameren Missouri "explicitly identify and, where possible, quantitatively analyze any other considerations which are critical to meeting the fundamental objective of the resource planning process, but which may constrain or limit the minimization of the present worth of long run expected utility costs." Ameren Missouri has not complied with these requirements and has not adequately analyzed and documented a DSM cost recovery solution which is necessary for Ameren Missouri to select Plan R0 as its preferred resource plan under present environmental regulations and continued operation of Meramec "as is," or to select Plan R3 as its preferred resource plan under aggressive environmental regulations and Meramec not continuing to operate "as is."

To resolve this deficiency, Ameren Missouri should work with its stakeholder group to:

- Resolve Deficiency 1 by evaluating the cost effectiveness of a revised Rider L program and the OPOWER program for its customers, and present the evaluation results to its DSM stakeholders for discussion. Should one or both programs be

found to be cost-effective, Ameren Missouri must evaluate the impact of one or both of the programs on the present value revenue requirements (PVRR) by including Rider L and/or the OPOWER program in the integrated resource analysis for Plan R0, and present the results to its DSM stakeholders for discussion;

- Prepare a filing under the Commission's MEEIA rules[21] or, if the MEEIA rules are stayed due to legal action, under Section 393.1075, RSMo Supp. 2010;
- Should a filing under the Commission's MEEIA rules or, if the MEEIA rules are stayed due to legal action, under Section 393.1075, RSMo Supp. 2010, not be made by April 1, 2012, the Company should quantitatively analyze and document the DSM cost recovery solution which is necessary for Ameren Missouri to select Plan R0 as its preferred resource plan under current environmental regulations and Meramec continuing to operate "as is," and to select contingency Plan R3 as its preferred resource plan under aggressive environmental regulations and Meramec not continuing to operate "as is."

4. Ameren Missouri did not correctly quantify the expected value of better information concerning at least the critical uncertain factors that affect the performance of its preferred resource plan, as measured by the present value of utility revenue requirements. Rule 4 CSR 240-22.070(8).

Appendix C of Chapter 10 of Ameren Missouri's IRP filing is Ameren Missouri's analysis and quantification of the expected value of better information for the six (6) critical uncertain factors Ameren Missouri identified. Ameren Missouri excluded the RAP DSM, no supply-side resources Plans R0 and B3 from its analysis of the expected value of better information with the following explanation: "The two low cost plans were excluded because of the use of decision factors and a scorecard designed to reflect multiple planning objectives other than merely PVRR." Plans R0 and B2 should not be excluded from this analysis and quantification of the expected value of better information.

Addendum D to this Staff Report is Staff's quantification of the expected value of better information concerning at least the critical uncertain factors for all fourteen (14) candidate resource plans and for the nine (9) candidate resource plans which include the control of

[21] Rules 4 CSR 240-3.163, 4 CSR 240-3.164, 4 CSR 240-20.093 and 4 CSR 240-20.094.

Meramec, the conversion of Meramec to burning natural gas or the retirement of Meramec. Addendum D illustrates:

- For all fourteen (14) candidate resource plans, with **B1** as the preferred resource plan, the expected value of better information under conditions of risk neutrality is $1,598 million for load, for gas prices, for carbon policy, for DSM cost and DSM load impact, and for project cost; and $1,299 million for interest rates and return on equity;
- For all fourteen (14) candidate resource plans, with **R0** as the preferred resource plan, the expected value of better information under conditions of risk neutrality is $0;
- For nine (9) candidate resource plans which include the control of Meramec, the conversion of Meramec to burn natural gas or the retirement of Meramec, and with **C3** as the preferred resource plan, the expected value of better information under conditions of risk neutrality is: $2,489 million for load growth, $ 2,539 million for gas prices, $2,556 million for carbon policy, $2,489 million for DSM cost and DSM load impact, for project cost, for interest rates, and return on equity; and
- For nine (9) candidate resource plans which include the control of Meramec, the conversion of Meramec to burn natural gas or the retirement of Meramec, and with **R3** as the preferred resource plan, the expected value of better information under conditions of risk neutrality is: $234 million for load growth, $284 million for gas prices, $301 million for carbon policy, and $234 million for DSM cost, DSM load impact, project cost, interest rates, and return on equity.

Staff's analysis of the value of better information is contained in Addendum D.

Further, rule 4 CSR 240-22.070(8) does not limit the quantification of expected value of better information to only the critical uncertain factors, but rather to "*at least* the critical uncertain factors." Staff believes that Ameren Missouri should have quantitatively analyzed and documented the regulatory framework which is necessary for Ameren Missouri to select Plan R0 as its preferred resource plan under present carbon regulations and to select contingency Plan R3 as its preferred resource plan under aggressive carbon regulations (see Deficiency 3).

Ameren Missouri did not correctly complete an analysis of the value of better information, and did not meet the requirements of rule 4 CSR 240-22.070(8). Staff concludes that had Ameren Missouri correctly completed its analysis of the value of better information that the result would show Ameren Missouri spending up to $234 million to obtain better information concerning DSM costs and DSM load impacts to better manage risk associated with the implementation of the RAP DSM portfolio is prudent.

To resolve this deficiency, Ameren Missouri should correctly analyze the value of better information in its future Chapter 22 filings including its April 1 2012 annual update.

Concerns

B. Documentation of Ameren Missouri's Board of Directors' meetings[22] during which the preferred resource plan was discussed and "unanimously adopted" does not indicate that all candidate resource plans analyzed pursuant to the requirements of 4 CSR 240-22.060 and the requirements of 4 CSR 240-22.070(1) – (5) were considered by Ameren Missouri's decision-makers and does not indicate that the lowest cost candidate resource plans (Plan R0 and Plan R2) were considered at all by Ameren Missouri's decision-makers.

Staff's concern has two dimensions. First, Staff's review of documentation of Ameren Missouri Board of Directors' meetings during which the preferred resource plan was discussed and "unanimously adopted" suggest that only four (4) of the fourteen (14) candidate resource plans analyzed pursuant to requirements of rule 4 CSR 240-22.060 and the requirements of rule 4 CSR 240-22.070(1) – (5) were presented to the Ameren Missouri decision-makers[23]. Second, what is characterized in this documentation to the Board of Directors as the "Lowest Cost Resource Plan" (Meramec continues "as is" through 2030, new combined cycle in 2029 – 2030 and modest energy efficiency (EE) portfolio, which is Plan B1) is not the lowest cost plan, since Plan R0 and Plan B3 have risk adjusted PVRR which are $1.6 billion lower than Plan B1 and $1.5 billion lower that Plan B1, respectively.

[22] Documents include: 1) Chapter 10, Appendix D; 2) Ameren Missouri's response to The Office of Public Counsel's data request 2007; 3) Ameren Missouri's response to The Office of Public Counsel's data request 2008.

[23] Chapter 10, Appendix D, of Ameren Missouri's filing indicates that Ameren Missouri decision-makers present at the January 31, 2011, Ameren Missouri Board of Directors Meeting who adopted the 2011 IRP resource acquisition strategy included: Board Chairman Baxter, and Board Members Cole, Heflin, Lyons, and Sullivan.

To resolve this concern, when presenting candidate resource plans to Ameren Missouri decision-makers, Ameren Missouri should comply with rules 4 CSR 240-22.070(6) and 4 CSR 240-22.080(11)(F)[24] in future IRP filings, including the annual update filings.

C. The two sets of independent critical uncertain factors which are included as "joint" independent critical uncertain factors in Ameren Missouri's probability tree do not correctly reflect the values and probabilities for these two sets of the individual independent critical uncertain factors. Rule 4 CSR 240-22.070(1) variance.

Through its analysis of uncertain factors, Ameren Missouri determined that long-term interest rates, authorized return on equity, DSM program costs, and DSM energy and demand savings (DSM load impacts) are each independent critical uncertain factors, having the assigned values and probabilities in Table 0.10 on page 18 of Chapter 9 of Ameren Missouri's filing. Ameren Missouri, with the assistance of Charles River Associates, did a good job of determining the probabilities and values for each of these four independent critical uncertain factors. However, Ameren Missouri's probability tree includes values and probabilities for DSM cost *jointly with* DSM load impact, and includes values and probabilities for long-term interest rates *jointly with* return on equity. Ameren Missouri chose to treat DSM cost *jointly with* DSM load impact, and to treat long-term interest rates *jointly with* return on equity, in order to reduce the number of branches on the probability tree and to reduce the run time for integrated resource analysis with the MIDAS model. The following example illustrates; 1) how joint probabilities are calculated correctly, 2) how Ameren Missouri chose (incorrectly) to include the joint probabilities and values in its probability tree, and 3) what Staff believes are more correct joint probabilities and values to use given the analysis of the long-term interest rates and of the return on equity critical uncertain factors:

[24] For revised Chapter 22 rules to be effective June 30, 2011, the corresponding subsections are: 4 CSR 240-22.070(7) and 4 CSR 240-22.080(2)(A).

Independent Critical Uncertain Factors				Correct Probabilities and Values for Nine Branches				Joint Probabilities for Three Branches		
LT Interest Rates		ROE		Correct Joint Probabilities	LT Interest Rates		ROE	Incorrect Joint Probabilities	More Correct Option	More Correct Option
Probability	Value	Probability	Value		Value		Value			
		20%	10.16%	4%	5.7%	and	10.16%	20%	4%	0%
20%	5.7%	60%	11.35%	12%	5.7%	and	11.35%	0%	0%	20%
		20%	13.27%	4%	5.7%	and	13.27%	0%	0%	0%
		20%	10.16%	12%	7.2%	and	10.16%	0%	0%	0%
60%	7.2%	60%	11.35%	36%	7.2%	and	11.35%	60%	92%	60%
		20%	13.27%	12%	7.2%	and	13.27%	0%	0%	0%
		20%	10.16%	4%	8.4%	and	10.16%	0%	0%	0%
20%	8.4%	60%	11.35%	12%	8.4%	and	11.35%	0%	0%	20%
		20%	13.27%	4%	8.4%	and	13.27%	20%	4%	0%

To resolve this concern Ameren Missouri should investigate and utilize ways to more correctly represent two independent critical uncertain factors as joint critical uncertain factors in its annual update to be filed April 1, 2012.

D. The high-case, base-case and low-case natural gas prices may be too high as a result of the recent development of shale gas plays in the United States. Rule 4 CSR 240-22.070(3)

Staff is concerned that Ameren Missouri's natural gas prices used in its MIDAS model may be too high, and that the operations costs of the natural gas-fueled generation resources may be overstated throughout its IRP filing. Staff analyzed natural gas prices from the Energy Information Administration (EIA) and compared them to Ameren Missouri's natural gas inputs in MIDAS. Staff finds that the EIA base-case natural gas prices are lower than Ameren Missouri's low-case natural gas prices over a 20-year time frame. The EIA base-case natural gas price for 2011 is $5.13 per MMBtu and Ameren Missouri's base case average natural gas price for 2011 is $6.34 per MMBtu. However, Ameren Missouri's analysis of the natural gas critical uncertain factor was reasonable with the data available at the time of its analysis.

Staff recommendations a discussion on the impact of lower gas prices than what was modeled be included in Ameren Missouri's annual update to be filed on April 1, 2012.

E. Ameren Missouri's preferred resource plan does not meet the statutory goal of the Missouri Energy Efficiency Investment Act to achieve all cost-effective demand-side savings.

Because of the relatively low levels of energy and demand savings reflected in Ameren Missouri's adopted preferred resource plan (Plan B1), Ameren Missouri has not satisfied the statutory requirement of a goal of achieving all cost-effective demand-side savings contained in Section 393,1075.4, RSMo Supp. 2010.

To resolve this concern, Ameren Missouri should work with its stakeholder group to:

- Resolve Deficiency 1 by evaluating the cost effectiveness of a revised Rider L program and of the OPOWER program for its service territory and presenting the evaluation results to its DSM stakeholders for discussion prior to its annual update to be filed on April 1, 2012;
- If revised Rider L and/or the OPOWER program are found to be cost effective, run revised Rider L and/or the OPOWER program through the integrated resource analysis for Plan R0 to determine the impact on PVRR; and
- Prepare a filing under the MEEIA rules, or if the MEEIA rules are not effective, under MEEIA prior to its annual update to be filed on April 1, 2012.
- Should a filing under the Commission's MEEIA rules or, if the MEEIA rules are stayed due to legal action, under the Section 393.1075, RSMo Supp. 2010, not be made by April 1, 2012, the Company should quantitatively analyze and document the DSM cost recovery solution which is necessary for Ameren Missouri to select Plan R0 as its preferred resource plan under current environmental regulations and Meramec continuing to operate "as is," and to select contingency Plan R3 as its preferred resource plan under aggressive environmental regulations and Meramec not continuing to operate "as is".

F. Ameren Missouri has made very limited effort to achieve the DSM cost recovery solution necessary for it to choose Plan R0 as its preferred resource plan under current environmental regulations.

Should the plant financing regulations decision solution and/or the DSM cost recovery regulations decision solution be achieved "to cause[s] Ameren Missouri's management to select a different course of action," the Company may choose Plan B2 or R0 as its preferred resource plan during the 3-year implementation period. Ameren Missouri has spent significant resources in recent years related to new plant financing regulations and legislation. Its efforts to determine a DSM cost recovery solution have been limited. Ameren Missouri's filing shows RAP DSM will reduce risk adjusted NPVRR by up to $1.6 billion under current environmental regulations and by up to $2.5 billion under aggressive environmental regulations. It is now time for the Company to work with its stakeholders and the Commission (through a MEEIA filing) to achieve the DSM cost recovery solution. To resolve this concern the Company should:

- Prepare a filing under the Commissions MEEIA rules[25] or, if the MEEIA rules are stayed due to legal action, under the Section 393.1075, RSMo Supp. 2010;
- Should the Company receive approval of a DSIM which provide sufficient cost recovery and financial incentives to implement the RAP DSM portfolio, provide notification to the Commission as required by rule 4 CSR 240-22.080(10) that the Company's preferred resource plan is no longer appropriate and advise the Commission of the selected contingency option for its adapted preferred resource plan.
- Should the Company receive Commission approval of a DSIM which provides sufficient cost recovery and financial incentives to implement the RAP DSM portfolio, provide notification to the Commission as required by rule 4 CSR 240-22.080(10) that the Company's preferred resource plan is no longer appropriate and advise the Commission of the selected contingency option for its adapted preferred resource plan.

G. When analyzing the economic development policy objective for various candidate resource plans, Ameren Missouri did not analyze the indirect economic impacts of various candidate resource plans due to the lower risk adjusted PVRR for RAP DSM no supply-side resources Plan R0 under current environmental regulations (up to $1.9 billion vs. Plan B2), and for Low Risk DSM Combined Cycle plants in 2016 and 2026 Plan R3 under aggressive environmental regulations (up to $2.5 billion vs. Plan H1).

Staff's concern is not that Ameren Missouri included economic development as a factor in its decision; Staff's concern is how Ameren Missouri calculated the economic impact results in its favoring the addition of 30% of a nuclear plant. The Company's estimations of the economic impact of each plan is for only the direct impacts of each plan (i.e., construction jobs, jobs operating generating plants, jobs installing end-use measures for DSM programs) and does not address in any way the indirect impact on the economy as a result of various levels of long-run utility costs, i.e., lower revenue requirements for the utility. Put more simply, the Company's analysis of and scores for the economic development policy objective do not address the indirect economic impact of the $1.6 billion lower risk adjusted PVRR and lower annual revenue requirements[26] for the RAP DSM no supply-side resources Plan R0 vs. Low Risk DSM Combined Cycle plant in 2026 Plan B1 under current environmental regulations, and do not

[25] 4 CSR 240-3.163, 4 CSR 240-3.164, 4 CSR 240-20.093 and 4 CSR 240-20.094.
[26] See Addendum C Page 6 of 8.

address the indirect economic impact of the $2.5 billion lower risk adjusted PVRR and the lower annual revenue requirements[27] for RAP DSM no supply-side resources Plan R3 vs. Low Risk DSM Combined Cycle plants in 2016 and 2026 Plan C3 under aggressive environmental regulations.

To resolve this concern the Company should analyze and document the indirect economic impacts of its candidate resource plans, if the Company chooses to use the economic development policy objective in risk analysis and strategy selection for future IRP filings.

H. Scores on Ameren Missouri's preferred resource plan scorecard are not logically consistent and may have serious flaws, because the comparison of one plan to another can only be done fairly when comparing plans designed for current environmental regulations with Meramec continuing to operate "as is" or when comparing plans designed for aggressive environmental regulations with Meramec not continuing to operate "as is."

In its review of scores in Figure 10.5, Staff has developed considerable concern about the apparent inconsistency of the scores Ameren Missouri has assigned. Staff is concerned that scoring all fourteen (14) plans against each other is very difficult, if not impossible, to do because five resource plans (Plan B1, Plan B2, Plan B3, Plan B4 and Plan R0) are resource plans designed for Meramec continuing to operate "as is," while the remaining nine (9) resource plans are designed for Meramec not continuing to operate "as is." Staff has studied the scores assigned to the Customer Satisfaction policy objective and determined that when considering the average rate impact and the single year rate impact for the five (5) resource plans with Meramec continuing to operate "as is," there is less than 0.8% variation between the average rate impacts of the five plans and less that 1.4% variation between the single year rate impact. Staff believes the appropriate score for this result is for all five plans to have the same "no advantage or disadvantage" score of 3. However Ameren Missouri's scorecard shows a "significant advantage" score of 5 for Plan B1, Plan B2, Plan B3 and Plan B4 and a "moderate disadvantage" score of 2 for Plan R0.

To resolve this concern, Ameren Missouri should take steps necessary to assure that when using scorecards to select its preferred resource plan for its next IRP filing the resulting scores are internally consistent.

[27] See Addendum C Page 7 of 8 and Page 8 of 8.

4 CSR 240-22.080 Filing Schedule and Requirements

Summary

Chapter 4 CSR 240-22 Electric Utility Resource Planning sets minimum standards to govern the scope and objectives of the integrated resource planning process of the electric utilities regulated by the Commission. The focus of Chapter 4 CSR 240-22 is on the planning process used to determine the utility's preferred resource plan, not the outcome of that process, i.e., the adopted preferred resource plan. Rule 4 CSR 240-22.080 identifies minimum reporting requirements concerning who is to file, when to file, what to file, the review process and the Commission's authority with respect to compliance filings.

Ameren Missouri has taken the initiative to organize and present the information in this IRP filing differently from the way it has in its past IRP filings. Past IRP filings have been organized into chapters for each rule of Chapter 22. Ameren Missouri has organized this IRP in one volume with chapters of information and discussion which flows smoothly in a narrative form to tell a clear story. At the end of each chapter is a Compliance Reference guide which cross references each Chapter 22 filing requirement met in the chapter tied to the page in the chapter on which the filing requirement is contained. Staff finds this approach to be productive and useful and encourages Ameren Missouri to continue this practice in future filings.

The Commission has filed with the Missouri Secretary of State final revisions to all rules contained in Chapter 4 CSR 240-22 Electric Utility Resource Planning. The revised Chapter 4 CSR 240-22 rules have an effective date of June 30, 2011. The Commission's formal rulemaking process for revisions to Chapter 4 CSR 240-22 is recorded in File No. EX-2010-0254.

The final revised rule 4 CSR 240-22.080(1) provide as follows concerning filing dates of compliance filing for all electric utilities:

> (1) Each electric utility which sold more than one (1) million megawatt-hours to Missouri retail electric customers for calendar year 2009 shall make a filing with the commission every three (3) years on April 1. Companies submitting their triennial compliance filings on the same schedule may file them jointly. The electric utilities shall submit their triennial compliance filings on the following schedule:
>
> (A) Kansas City Power & Light Company and KCP&L Greater Missouri Operations Company, or their successors, on April 1, 2012, and every third year thereafter;

(B) The Empire District Electric Company, or its successor, on April 1, 2013, and every third year thereafter; and
(C) Union Electric Company d/b/a Ameren Missouri, or its successor, on April 1, 2014, and every third year thereafter.

Therefore, Staff expects Ameren Missouri's next triennial compliance filing will be made on April 1, 2014. Rule 4 CSR 240-22.080(3), which goes into effect on June 30, 2011, requires that electric utilities file updates to their resource plans on April 1 of the years where they do not make a triennial compliance filing. Therefore, Ameren Missouri is to file annual updates to this compliance filing on April 1, 2012 and April 1, 2013. Ameren Missouri is to report any significant changes in compliance with 4 CSR 240-22.080(10), which will become effective on June 30, 2011.

Based on its limited review, Staff has identified no deficiencies or concerns related to Ameren Missouri's rule 4 CSR 240-22.080 filing.

Plan B1: Combined Cycle - No Secondary - Prop C Renewables - Low Risk DSM - Mer continues - Nor continues

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Existing capacity position	-117	211	516	440	387	318	250	168	65	-22	-116	-212	-311	-412	-520	-626	-736	-852	-969	-1,089
+ Total plant upgrades	2	6	30	34	38	15	85	85	85	91	91	91	91	68	69	69	69	69	69	69
+ Meramec retirement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+ Renewables	0	0	8	8	8	12	12	17	17	20	21	23	26	28	31	33	36	39	41	44
+ Noranda termination	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Energy efficiency	-49	-69	-88	-111	-134	-154	-172	-189	-201	-206	-216	-223	-228	-232	-235	-235	-235	-236	-235	-232
- Demand response	0	0	0	0	0	-14	-49	-75	-93	-111	-121	-133	-145	-157	-167	-185	-202	-213	-229	-244
+ New primary supply side	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	600	600
+ New secondary supply side	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
= Capacity position after adjustments	-66	286	643	593	567	513	569	534	461	407	332	258	178	73	-17	-103	-194	-295	205	100
Purchases(+) or sales(-)	66	-286	-643	-593	-567	-513	-569	-534	-461	-407	-332	-258	-178	-73	17	103	194	295	-305	-100

Plan B2: Nuke 30% - No Secondary - Prop C Renewables - Low Risk DSM - Mer continues - Nor continues

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Existing capacity position	-117	211	516	440	387	318	250	168	65	-22	-116	-212	-311	-412	-520	-626	-736	-852	-969	-1,089
+ Total plant upgrades	2	6	30	34	38	15	85	85	85	91	91	91	91	68	69	69	69	69	69	69
+ Meramec retirement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+ Renewables	0	0	8	8	8	12	12	17	17	20	21	23	26	28	31	33	36	39	41	44
+ Noranda termination	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Energy efficiency	-49	-69	-88	-111	-134	-154	-172	-189	-201	-206	-216	-223	-228	-232	-235	-235	-235	-236	-235	-232
- Demand response	0	0	0	0	0	-14	-49	-75	-93	-111	-121	-133	-145	-157	-167	-185	-202	-213	-229	-244
+ New primary supply side	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	480	480	480
+ New secondary supply side	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
= Capacity position after adjustments	-66	286	643	593	567	513	569	534	461	407	332	258	178	73	-17	-103	-194	185	85	-20
Purchases(+) or sales(-)	66	-286	-643	-593	-567	-513	-569	-534	-461	-407	-332	-258	-178	-73	17	103	194	-185	-85	20

Plan B3: Simple Cycle - No Secondary - Prop C Renewables - Low Risk DSM - Mer continues - Nor continues

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Existing capacity position	-117	211	516	440	387	318	250	168	65	-22	-116	-212	-311	-412	-520	-626	-736	-852	-969	-1,089
+ Total plant upgrades	2	6	30	34	38	15	85	85	85	91	91	91	91	68	69	69	69	69	69	69
+ Meramec retirement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+ Renewables	0	0	8	8	8	12	12	17	17	20	21	23	26	28	31	33	36	39	41	44
+ Noranda termination	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Energy efficiency	-49	-69	-88	-111	-134	-154	-172	-189	-201	-206	-216	-223	-228	-232	-235	-235	-235	-236	-235	-232
- Demand response	0	0	0	0	0	-14	-49	-75	-93	-111	-121	-133	-145	-157	-167	-185	-202	-213	-229	-244
+ New primary supply side	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	692	692
+ New secondary supply side	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
= Capacity position after adjustments	-66	286	643	593	567	513	569	534	461	407	332	258	178	73	-17	-103	-194	-295	297	192
Purchases(+) or sales(-)	66	-286	-643	-593	-567	-513	-569	-534	-461	-407	-332	-258	-178	-73	17	103	194	295	-297	-192

Plan B4: Wind/Simple Cyc - No Secondary - Prop C Renewables - Low Risk DSM - Mer continues - Nor continues

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Existing capacity position	-117	211	516	440	387	318	250	168	65	-22	-116	-212	-311	-412	-520	-626	-736	-852	-969	-1,089
+ Total plant upgrades	2	6	30	34	38	15	85	85	85	91	91	91	91	68	69	69	69	69	69	69
+ Meramec retirement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+ Renewables	0	0	8	8	8	12	12	17	17	20	21	23	26	28	31	33	36	39	41	44
+ Noranda termination	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Energy efficiency	-49	-69	-88	-111	-134	-154	-172	-189	-201	-206	-216	-223	-228	-232	-235	-235	-235	-236	-235	-232
- Demand response	0	0	0	0	0	-14	-49	-75	-93	-111	-121	-133	-145	-157	-167	-185	-202	-213	-229	-244
+ New primary supply side	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	410	410	410
+ New secondary supply side	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
= Capacity position after adjustments	-66	286	643	593	567	513	569	534	461	407	332	258	178	73	-17	-103	-194	115	15	-90
Purchases(+) or sales(-)	66	-286	-643	-593	-567	-513	-569	-534	-461	-407	-332	-258	-178	-73	17	103	194	-115	-15	90

Plan C1: Combined Cycle - No Secondary - Prop C Renewables - Low Risk DSM - Mer controlled - Nor continues

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Existing capacity position	-117	211	516	440	387	318	250	168	65	-22	-116	-212	-311	-412	-520	-626	-736	-852	-969	-1,089
+ Total plant upgrades	2	6	30	34	38	-59	11	11	11	41	41	41	41	41	41	41	41	41	41	41
+ Meramec retirement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+ Renewables	0	0	8	8	8	12	12	17	17	20	21	23	26	28	31	33	36	39	41	44
+ Noranda termination	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Energy efficiency	-49	-69	-88	-111	-134	-154	-172	-189	-201	-206	-216	-223	-228	-232	-235	-235	-235	-236	-235	-232
- Demand response	0	0	0	0	0	-14	-49	-75	-93	-111	-121	-133	-145	-157	-167	-185	-202	-213	-229	-244
+ New primary supply side	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	600	600	600
+ New secondary supply side	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
= Capacity position after adjustments	-66	286	643	593	567	459	495	460	387	357	282	208	128	46	-45	-131	-222	277	177	72
Purchases(+) or sales(-)	66	-286	-643	-593	-567	-459	-495	-460	-387	-357	-282	-208	-128	-46	45	131	222	-277	-177	-72

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Plan C2: Combined Cycle - No Secondary - Prop C Renewables - Low Risk DSM - Mer nat gas convert - Nor continues

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Existing capacity position	-117	211	516	440	387	277	209	127	24	-63	-157	-253	-352	-453	-561	-667	-777	-893	-1,010	-1,130
+ Total plant upgrades	2	6	30	34	38	-31	39	39	39	69	69	69	69	69	69	69	69	69	69	69
+ Meramec retirement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+ Renewables	0	0	8	8	8	12	12	17	17	20	21	23	26	28	31	33	36	39	41	44
+ Noranda termination	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Energy efficiency	-49	-69	-88	-111	-134	-154	-172	-189	-201	-206	-216	-223	-228	-232	-235	-235	-235	-236	-235	-232
- Demand response	0	0	0	0	0	-14	-49	-75	-93	-111	-121	-133	-145	-157	-167	-185	-202	-213	-229	-244
+ New primary supply side	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	600	600	600
+ New secondary supply side	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
= Capacity position after adjustments	-66	286	643	593	567	426	482	447	374	344	269	195	115	33	-58	-144	-235	264	164	59
Purchases(+) or sales(-)	66	-286	-643	-593	-567	-426	-482	-447	-374	-344	-269	-195	-115	-33	58	144	235	-264	-164	-59

Plan C3: Combined Cycle - Combined Cycle - Prop C Renewables - Low Risk DSM - Mer retire 2016 - Nor continues

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Existing capacity position	-117	211	516	440	387	318	250	168	65	-22	-116	-212	-311	-412	-520	-626	-736	-852	-969	-1,089
+ Total plant upgrades	2	6	30	34	38	-59	11	11	11	41	41	41	41	41	41	41	41	41	41	41
+ Meramec retirement	0	0	0	0	0	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854
+ Renewables	0	0	8	8	8	12	12	17	17	20	21	23	26	28	31	33	36	39	41	44
+ Noranda termination	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Energy efficiency	-49	-69	-88	-111	-134	-154	-172	-189	-201	-206	-216	-223	-228	-232	-235	-235	-235	-236	-235	-232
- Demand response	0	0	0	0	0	-14	-49	-75	-93	-111	-121	-133	-145	-157	-167	-185	-202	-213	-229	-244
+ New primary supply side	0	0	0	0	0	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600
+ New secondary supply side	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	600	600	600	600	600
= Capacity position after adjustments	-66	286	643	593	567	185	241	206	133	103	28	-46	-126	-208	-299	215	124	23	-77	-182
Purchases(+) or sales(-)	66	-286	-643	-593	-567	-185	-241	-206	-133	-103	-28	46	126	208	299	-215	-124	-23	77	182

Plan H1: Combined Cycle - Nuke 30% - Prop C Renewables - Low Risk DSM - Mer retire 2016 - Nor continues

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Existing capacity position	-117	211	516	440	387	318	250	168	65	-22	-116	-212	-311	-412	-520	-626	-736	-852	-969	-1,089
+ Total plant upgrades	2	6	30	34	38	-59	11	11	11	41	41	41	41	41	41	41	41	41	41	41
+ Meramec retirement	0	0	0	0	0	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854
+ Renewables	0	0	8	8	8	12	12	17	17	20	21	23	26	28	31	33	36	39	41	44
+ Noranda termination	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Energy efficiency	-49	-69	-88	-111	-134	-154	-172	-189	-201	-206	-216	-223	-228	-232	-235	-235	-235	-236	-235	-232
- Demand response	0	0	0	0	0	-14	-49	-75	-93	-111	-121	-133	-145	-157	-167	-185	-202	-213	-229	-244
+ New primary supply side	0	0	0	0	0	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600
+ New secondary supply side	0	0	0	0	0	0	0	0	0	0	0	0	0	0	480	480	480	480	480	480
= Capacity position after adjustments	-66	286	643	593	567	185	241	206	133	103	28	-46	-126	-208	181	93	4	-97	-197	-302
Purchases(+) or sales(-)	66	-286	-643	-593	-567	-185	-241	-206	-133	-103	-28	46	126	208	-181	-93	-4	97	197	302

Plan H2: Combined Cycle - Simple Cycle - Prop C Renewables - Low Risk DSM - Mer retire 2016 - Nor continues

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Existing capacity position	-117	211	516	440	387	318	250	168	65	-22	-116	-212	-311	-412	-520	-626	-736	-852	-969	-1,089
+ Total plant upgrades	2	6	30	34	38	-59	11	11	11	41	41	41	41	41	41	41	41	41	41	41
+ Meramec retirement	0	0	0	0	0	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854
+ Renewables	0	0	8	8	8	12	12	17	17	20	21	23	26	28	31	33	36	39	41	44
+ Noranda termination	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Energy efficiency	-49	-69	-88	-111	-134	-154	-172	-189	-201	-206	-216	-223	-228	-232	-235	-235	-235	-236	-235	-232
- Demand response	0	0	0	0	0	-14	-49	-75	-93	-111	-121	-133	-145	-157	-167	-185	-202	-213	-229	-244
+ New primary supply side	0	0	0	0	0	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600
+ New secondary supply side	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	692	692	692	692	692
= Capacity position after adjustments	-66	286	643	593	567	185	241	206	133	103	28	-46	-126	-208	-299	307	216	115	15	-90
Purchases(+) or sales(-)	66	-286	-643	-593	-567	-185	-241	-206	-133	-103	-28	46	126	208	299	-307	-216	-115	-15	90

Plan H3: Combined Cycle - Wind/Simple Cyc - Prop C Renewables - Low Risk DSM - Mer retire 2016 - Nor continues

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Existing capacity position	-117	211	516	440	387	318	250	168	65	-22	-116	-212	-311	-412	-520	-626	-736	-852	-969	-1,089
+ Total plant upgrades	2	6	30	34	38	-59	11	11	11	41	41	41	41	41	41	41	41	41	41	41
+ Meramec retirement	0	0	0	0	0	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854
+ Renewables	0	0	8	8	8	12	12	17	17	20	21	23	26	28	31	33	36	39	41	44
+ Noranda termination	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Energy efficiency	-49	-69	-88	-111	-134	-154	-172	-189	-201	-206	-216	-223	-228	-232	-235	-235	-235	-236	-235	-232
- Demand response	0	0	0	0	0	-14	-49	-75	-93	-111	-121	-133	-145	-157	-167	-185	-202	-213	-229	-244
+ New primary supply side	0	0	0	0	0	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600
+ New secondary supply side	0	0	0	0	0	0	0	0	0	0	0	0	0	0	410	410	410	410	410	410
= Capacity position after adjustments	-66	286	643	593	567	185	241	206	133	103	28	-46	-126	-202	111	25	-66	-167	-267	-372
Purchases(+) or sales(-)	66	-286	-643	-593	-567	-185	-241	-206	-133	-103	-28	46	126	-202	-111	-25	66	167	267	372

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Plan R0: No Primary - No Secondary - Prop C Renewables - RAP DSM - Mer continues - Nor continues

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Existing capacity position	-117	211	516	440	387	318	250	168	63	-22	-116	-212	-311	-412	-520	-626	-736	-852	-969	-1,089
+ Total plant upgrades	2	6	30	34	38	15	85	85	85	91	91	91	91	68	69	69	69	69	69	69
+ Meramec retirement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+ Renewables	0	0	8	8	8	12	12	16	16	20	21	24	26	29	31	34	37	39	41	44
+ Noranda termination	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Energy efficiency	-48	-85	-134	-210	-306	-407	-507	-603	-688	-758	-825	-883	-927	-955	-977	-989	-1,000	-1,006	-1,009	-1,007
- Demand response	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+ New primary supply side	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+ New secondary supply side	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
= Capacity position after adjustments	-66	302	688	692	739	752	854	873	855	847	821	785	733	639	557	466	370	262	151	31
Purchases(+) or sales(-)	66	-302	-688	-692	-739	-752	-854	-873	-855	-847	-821	-785	-733	-639	-557	-466	-370	-262	-151	-31

Plan R1: No Primary - No Secondary - Prop C Renewables - RAP DSM - Mer controlled - Nor continues

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Existing capacity position	-117	211	516	440	387	318	250	168	63	-22	-116	-212	-311	-412	-520	-626	-736	-852	-969	-1,089
+ Total plant upgrades	2	6	30	34	38	-59	11	11	11	-41	-41	-41	-41	-41	-41	-41	-41	-41	-41	-41
+ Meramec retirement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+ Renewables	0	0	8	8	8	12	12	16	16	20	21	24	26	29	31	34	37	39	41	44
+ Noranda termination	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Energy efficiency	-48	-85	-134	-210	-306	-407	-507	-603	-688	-758	-825	-883	-927	-955	-977	-989	-1,000	-1,006	-1,009	-1,007
- Demand response	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+ New primary supply side	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+ New secondary supply side	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
= Capacity position after adjustments	-66	302	688	692	739	678	780	799	781	797	771	735	683	612	529	438	342	234	123	3
Purchases(+) or sales(-)	66	-302	-688	-692	-739	-678	-780	-799	-781	-797	-771	-735	-683	-612	-529	-438	-342	-234	-123	-3

Plan R2: No Primary - No Secondary - Prop C Renewables - RAP DSM - Mer nat gas convert - Nor continues

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Existing capacity position	-117	211	516	440	387	277	209	127	24	-63	-157	-253	-352	-453	-561	-667	-777	-893	-1,010	-1,130
+ Total plant upgrades	2	6	30	34	38	-31	39	39	39	69	69	69	69	69	69	69	69	69	69	69
+ Meramec retirement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+ Renewables	0	0	8	8	8	12	12	16	16	20	21	24	26	29	31	34	37	39	41	44
+ Noranda termination	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Energy efficiency	-48	-85	-134	-210	-306	-407	-507	-603	-688	-758	-825	-883	-927	-955	-977	-989	-1,000	-1,006	-1,009	-1,007
- Demand response	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-20
+ New primary supply side	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+ New secondary supply side	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
= Capacity position after adjustments	-66	302	688	692	739	665	767	786	768	784	758	722	670	599	516	425	329	221	110	10
Purchases(+) or sales(-)	66	-302	-688	-692	-739	-665	-767	-786	-768	-784	-758	-722	-670	-599	-516	-425	-329	-221	-110	-10

Plan R3: No Primary - No Secondary - Prop C Renewables - RAP DSM - Mer retire 2016 - Nor continues

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Existing capacity position	-117	211	516	440	387	318	250	168	63	-22	-116	-212	-311	-412	-520	-626	-736	-852	-969	-1,089
+ Total plant upgrades	2	6	30	34	38	-59	11	11	11	-41	-41	-41	-41	-41	-41	-41	-41	-41	-41	-41
+ Meramec retirement	0	0	0	0	0	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854	-854
+ Renewables	0	0	8	8	8	12	12	16	16	20	21	24	26	29	31	34	37	39	41	44
+ Noranda termination	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Energy efficiency	-48	-85	-134	-210	-306	-407	-507	-603	-688	-758	-825	-883	-927	-955	-977	-989	-1,000	-1,006	-1,009	-1,007
- Demand response	0	0	0	0	0	-20	-83	-158	-236	-329	-399	-474	-549	-620	-679	-732	-765	-784	-805	-826
+ New primary supply side	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+ New secondary supply side	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
= Capacity position after adjustments	-66	302	688	692	739	-156	10	103	163	272	316	355	378	378	354	316	252	164	74	-25
Purchases(+) or sales(-)	66	-302	-688	-692	-739	356	-10	-103	-163	-272	-316	-355	-378	-378	-354	-316	-252	-164	-74	25

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Ameren Missouri 2011 IRP

Preferred Plan Selection Scorecard

Policy Objectives, Weights and Measures			Candidate Resource Plans														
Policy Objective	Weight	Measure	1 MM Continued Low Risk DSM CC in 2016					2 MM Controlled 1/1/2016 RAP DSM	3 DMM Gas Conv. 1/1/2016 RAP DSM	4 MM Retired 12/31/2015 RAP DSM	2 MM Controlled 1/1/2016 Low Risk DSM CC in 2026	3 MM Gas Conv. 1/1/2016 Low Risk DSM CC in 2026	4 MM Retired 12/31/2015 Low Risk DSM CC in 2026	H1 MM Retired 12/31/2015 Low Risk DSM CC in 2026 Nuclear in 2025	H2 MM Retired 12/31/2015 Low Risk DSM CC in 2026 SC in 2026	H3 MM Retired 12/31/2015 Low Risk DSM CC in 2026 Wind/SC in 2024
Environmental/Diversity	20%	Resource Diversity Carbon Emissions SO2 Emissions NOx Emissions	1	1	1	1	1	2	3	4	2	3	4	5	4	5
Energy Efficiency	10%	Energy Savings	2	2	2	2	4	4	4	4	2	2	2	2	2	2
Financial/Regulatory	20%	ROE EPS ROIC Free Cash Flow Stranded Cost Risk Transaction Risk Recovery Risk	5	2	5	3	2	1	2	2	2	4	4		4	3
Customer Satisfaction	20%	Average Rate Impact Single Year Rate Impact	5	5	5	5	2	2	2	2	4	4	3	3	3	3
Economic Development	10%	FTE-Years	1	5	1	3	4		3	3	2	1	2	5	2	2
Cost	20%	PVRR		4	4	4	5						2	2	2	2
Weighted Average Score			3.10	3.00	3.10	3.40	3.50	2.30	3.00	3.20	2.60	3.00	3.00	3.60	3.00	3.00

Scoring Guide	
Significant Advantage	5
Moderate Advantage	4
No Advantage or Disadvantage	3
Moderate Disadvantage	2
Significant Disadvantage	1

Notes on Scores by Policy Objective	
Environmental/Diversity	
Energy Efficiency	
Financial/Regulatory	
Customer Satisfaction	
Economic Development	
Cost (PVRR)	

Key to Abbreviations
CC = Combined Cycle Gas Turbine Generator; MM = Maramec; RAP = Realistic Achievable Potential DSM Portfolio; CC = Combined Cycle Gas Turbine Generator; SC = Simple Cycle Gas Turbine Generator

Note: Ameren Missouri analysis to generate Figure 10.5 of its 2011 IRP Filing

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Addendum B Page 1 of 4

Ameren Missouri 2011 IRP

Preferred Plan Selection Scorecard

Policy Objectives, Weights and Measures			Candidate Resource Plans													
Policy Objective	Weight	Measures	MM Continues As-Is Low Risk DSM CC in 2020	[illegible]	[illegible]	[illegible]	MM Continues As-Is RAP DSM	MM Controlled 1/1/2016 RAP DSM	MM Gas Conv. 1/1/2016 RAP DSM	MM Retired 12/31/2015 RAP DSM	MM Controlled 1/1/2016 Low Risk DSM CC in 2020	MM Gas Conv. 1/1/2016 Low Risk DSM CC in 2028	MM Retired 12/31/2015 Low Risk DSM CC in 2016 CC in 2026	H1 MM Retired 12/31/2015 Low Risk DSM CC in 2016 Nuclear in 2025	H2 MM Retired 12/31/2015 Low Risk DSM CC in 2016 SC in 2026	H3 MM Retired 12/31/2015 Low Risk DSM CC in 2016 Wind/SC in 2024
Environmental/Diversity	20%	Resource Diversity Carbon Emissions SO2 Emissions NOx Emissions	1	1	1	1	1	2	3	4	2	3	4	5	4	5
Energy Efficiency	[illegible]	Energy Savings	2	2	2	2	5	5	5	5	2	2	2	2	2	2
Financial/Regulatory	20%	ROE EPS ROIC Free Cash Flow Stranded Cost Risk Transaction Risk Recovery Risk	5	2	5	3	2	1	2	2	2	4	4		4	3
Customer Satisfaction	[illegible]	Average Rate Impact Single Year Rate Impact [illegible]	5	5	5	5	4	4	4	4	4	4	3	5	3	3
Economic Development	10%	FTE-Years	1	5	1	3	4		3	3	2	1	2	5	2	2
Cost		PVRR		4	4	4	5						2	2	2	2
Weighted Average Score			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Scoring Guide	
Significant Advantage	5
Moderate Advantage	4
No Advantage or Disadvantage	3
Moderate Disadvantage	2
Significant Disadvantage	1

Notes on Scores by Policy Objective	
Environmental/Diversity	[illegible]
Energy Efficiency	[illegible]
Financial/Regulatory	[illegible]
Customer Satisfaction	[illegible]
Economic Development	[illegible]
Cost (PVRR)	[illegible]

Key to Abbreviations
CC = Combined Cycle Gas Turbine Generator MM = Meramec RAP = Realistic Achievable Potential DSM Portfolio CC = Combined Cycle Gas Turbine Generator SC = Simple Cycle Gas Turbine Generator

Note: Staff analysis to include the following changes to Addendum B Page 1: a) change weights to those in Table 9.2, b) change scores for Energy Efficiency of RAP plans from 4's to 5's to be consistent with comment "RAP DSM plans score "significant advantage" due to high energy savings.", and c) change scores for Customer Satisfaction for RAP plans from 2's to 4's.

HC

Addendum B Page 2 of 4

Ameren Missouri 2011 IRP

Preferred Plan Selection Scorecard

Policy Objectives, Weights and Measures			Candidate Resource Plans													
			A1 MM Continues Low Risk DSM CC in 2016	B1	C1	D1	E1 MM Continues Low Risk DSM SC in 2016	F1 MM Controlled 1/1/2016 RAP DSM	G1 MM Gas Conv. 1/1/2016 RAP DSM	H1 MM Retired 12/31/2015 RAP DSM	I1 MM Controlled 1/1/2016 Low Risk DSM CC in 2028	J1 MM Gas Conv. 1/1/2016 Low Risk DSM CC in 2028	K1 MM Retired 12/31/2015 Low Risk DSM CC in 2016 CC in 2026	L1 MM Retired 12/31/2015 Low Risk DSM CC in 2016 Nuclear in 2045	M1 MM Retired 12/31/2015 Low Risk DSM CC in 2016 SC in 2045	N1 MM Retired 12/31/2015 Low Risk DSM CC in 2016 Wind/SC in 2024
Environmental/Diversity	13%	Resource Diversity Carbon Emissions SO2 Emissions NOx Emissions	1	1	1	1	1	2	3	4	2	3	4	5	4	5
Energy Efficiency	7%	Energy Savings	2	2	2	2	5	5	5	5	2	2	2	2	2	2
Financial/Regulatory	13%	ROE EPS ROIC Free Cash Flow Stranded Cost Risk Transaction Risk Recovery Risk	5	2	5	3	2	1	2	2	2	4	4		4	3
Customer Satisfaction	7%	Average Rate Impact Single Year Rate Impact	5	5	5	5	4	4	4	4	4	4	3	3	3	3
Economic Development	7%	FTE-Years	1	5	1	3	4		3	3	2	1	2	5	2	2
Cost		PVRR		4	4	4	5						2	2	2	2
WEIGHTED SCORE																

Scoring Guide	
Significant Advantage	5
Moderate Advantage	4
No Advantage or Disadvantage	3
Moderate Disadvantage	2
Significant Disadvantage	1

Notes on Scores by Policy Objective	
Environmental/Diversity	
Energy Efficiency	
Financial/Regulatory	
Customer Satisfaction	
Economic Development	
Cost (PVRR)	

Key to Abbreviations:
CC = Combined Cycle Gas Turbine Generator; MM = Meramec; RAP = Realistic Achievable Potential DSM Portfolio; CC = Combined Cycle Gas Turbine Generator; SC = Simple Cycle Gas Turbine Generator

Note: Weighted scores from Addendum B Page 3 - Staff analysis to include the following changes to Addendum B Page 2: a) 50% weight for Cost (PVRR) to comply with Rule 4 CSR 240-22.010(2)(B), b) adust the remaining weights in Addendum B Page 2 from total of 75% to total of 50%.

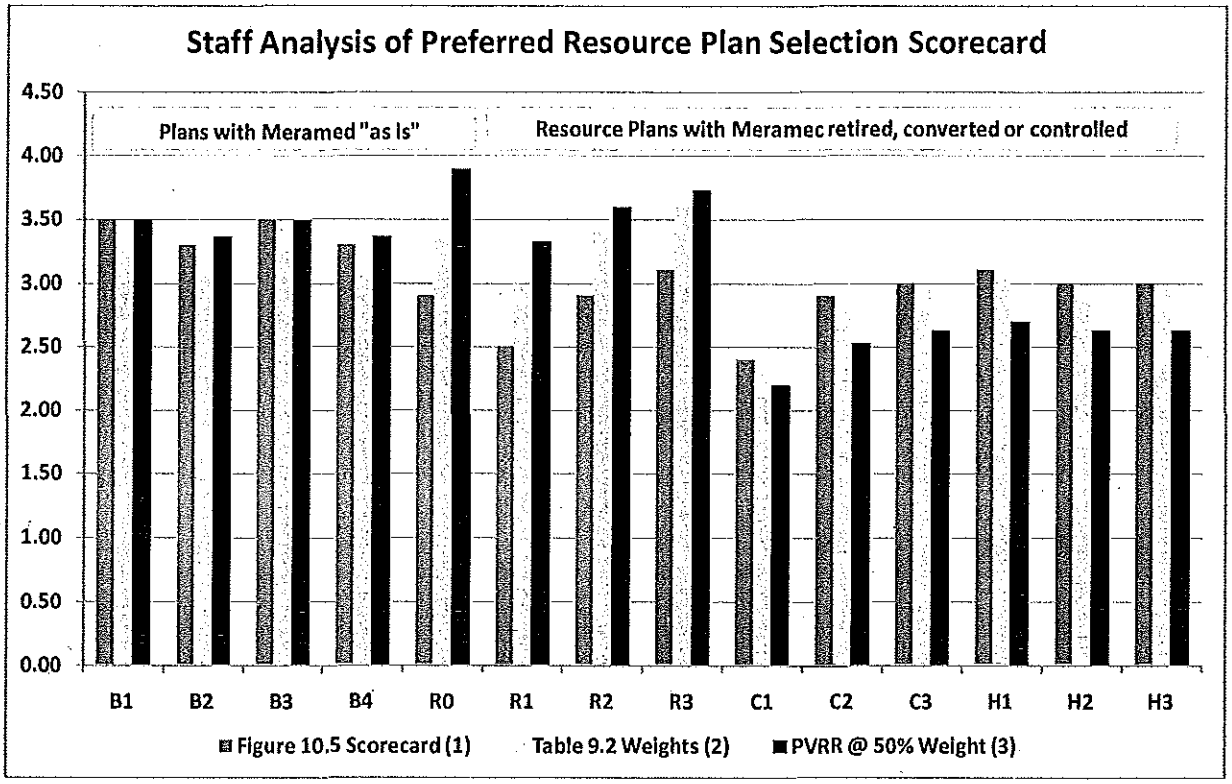
HC

Addendum B Page 3 of 4

Staff Analysis of Preferred Resource Plan Selection Scorecard

	B1	B2	B3	B4	R0	R1	R2	R3	C1	C2	C3	H1	H2	H3
Figure 10.5 Scorecard (1)	3.50	3.30	3.50	3.30	2.90	2.50	2.90	3.10	2.40	2.90	3.00	3.10	3.00	3.00
Table 9.2 Weights (2)	3.25	3.05	3.25	3.05	3.35	3.00	3.40	3.60	2.30	2.80	2.95	3.05	2.95	2.95
PVRR @ 50% Weight (3)	3.50	3.37	3.50	3.37	3.90	3.33	3.60	3.73	2.20	2.53	2.63	2.70	2.63	2.63

= Top Tier Plans



Notes:

(1) Weighted scores from Addendum B Page 1 - Ameren Missouri analysis to generate Figure 10.5 of its 2011 IRP Filing

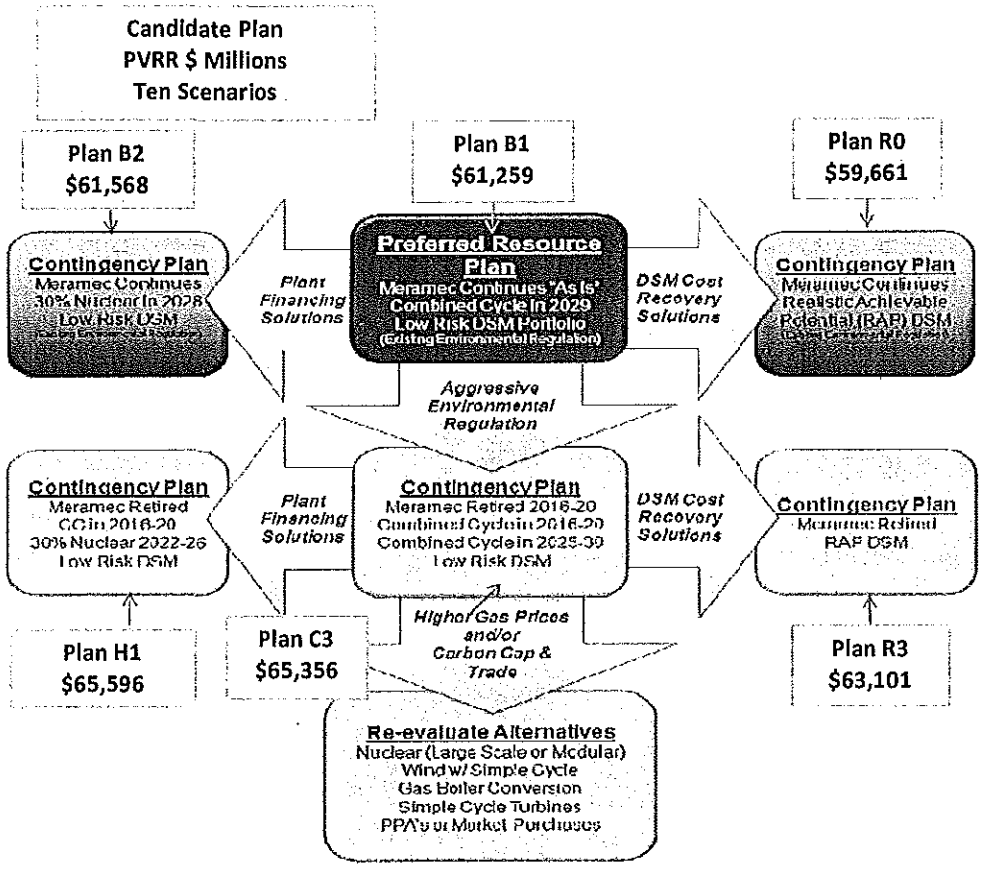
(2) Weighted scores from Addendum B Page 2 - Staff analysis to include the following changes to Addendum B Page 1: a) change weights to those in Table 9.2, b) change scores for Energy Efficiency of RAP plans from 4's to 5's to be consistent with comment "RAP DSM plans score "significant advantage" due to high eneryg savings.", and c) change scores for Customer Satisfaction for RAP plans from 2's to 4's.

(3) Weighted scores from Addendum B Page 3 - Staff analysis to include the following changes to Addendum B Page 2: a) 50% weight for Cost (PVRR) to comply with Rule 4 CSR 240-22.010(2)(B), b) adjust the remaining weights in Addendum B Page 2 from total of 75% to total of 50%.

HC

Candidate Resource Plans and Expected Risk Adjusted NPVRR Through 2039
Ten Scenarios

Candidate Plan	PVRR $ Millions	vs. R0 $ Millions	vs. R3 $ Millions	Supply-Side Resources Primary	Secondary	Renewables	DSM	Meramec	Noranda
R0	$ 59,661	$	$ (3,440)	None	None	Prop C	RAP	"As Is"	Cont.
B3	$ 61,161	$ 1,500	$ (1,940)	SC	None	Prop C	Low Risk	"As Is"	Cont.
B1	$ 61,259	$ 1,598	$ (1,842)	CC	None	Prop C	Low Risk	"As Is"	Cont.
B4	$ 61,403	$ 1,742	$ (1,698)	Wind/SC	None	Prop C	Low Risk	"As Is"	Cont.
B2	$ 61,568	$ 1,907	$ (1,533)	Nuke 30%	None	Prop C	Low Risk	"As Is"	Cont.
R1	$ 62,867	$ 3,206	$ (234)	None	None	Prop C	RAP	Controlled	Cont.
R3	$ 63,101	$ 3,440	$	None	None	Prop C	RAP	Retired 2016	Cont.
R2	$ 63,358	$ 3,697	$ 257	none	None	Prop C	RAP	Convert Gas	Cont.
C1	$ 64,403	$ 4,742	$ 1,302	CC	None	Prop C	Low Risk	Controlled	Cont.
C2	$ 64,875	$ 5,214	$ 1,774	CC	None	Prop C	Low Risk	Convert Gas	Cont.
H2	$ 65,198	$ 5,537	$ 2,097	CC	SC	Prop C	Low Risk	Retired 2016	Cont.
C3	$ 65,356	$ 5,695	$ 2,255	CC	CC	Prop C	Low Risk	Retired 2016	Cont.
H3	$ 65,420	$ 5,759	$ 2,319	CC	Wind/SC	Prop C	Low Risk	Retired 2016	Cont.
H1	$ 65,596	$ 5,935	$ 2,495	CC	Nuke 30%	Prop C	Low Risk	Retired 2016	Cont.



Ten Scenarios Average Annual Revenue Requirement ($ Millions) Increase of Contingency Resource Plans Over Resource Plan RO

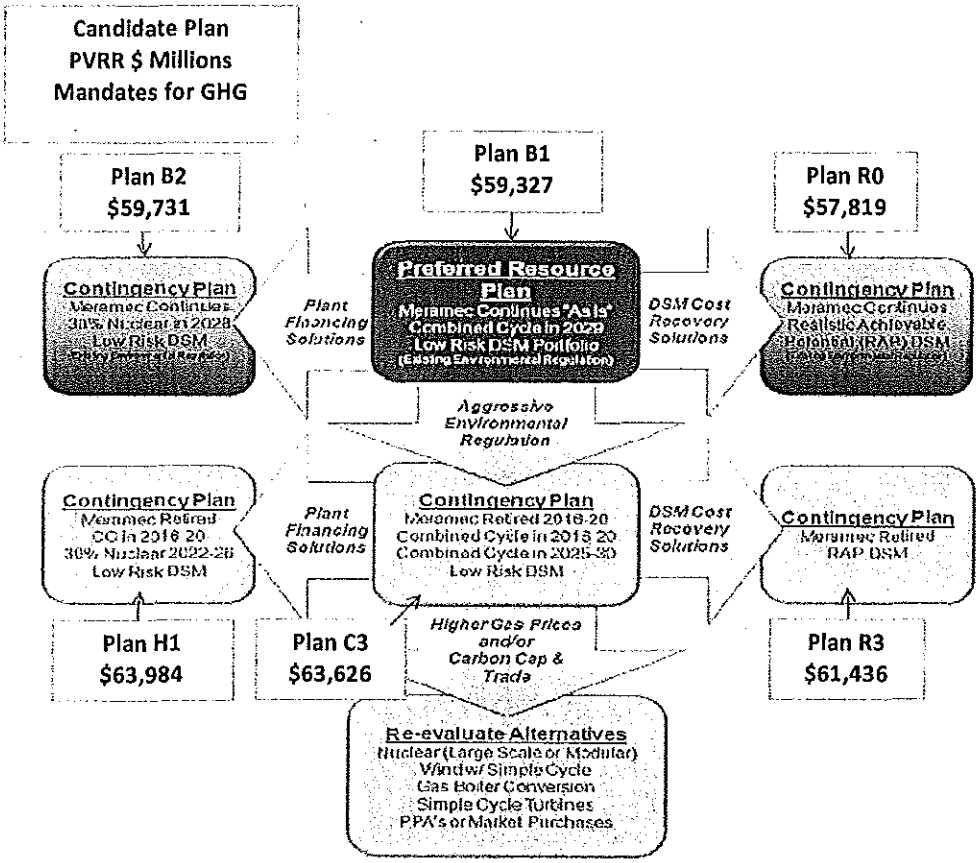
	2011 - 2020	2021 - 2030	2031 - 2039
B1	$ 48	$ 256	$ 414
B2	$ 48	$ 361	$ 417
R3	$ 253	$ 497	$ 265
C3	$ 369	$ 855	$ 627
H1	$ 374	$ 962	$ 526

Ten Scenarios Average Annual Revenue Requirement ($ Millions) Increase of Contingency Resource Plans Over Resource Plan R3

	2011 - 2020	2021 - 2030	2031 - 2039
C3	$ 115	$ 358	$ 362
H1	$ 121	$ 465	$ 262

Candidate Resource Plans and Expected Risk Adjusted NPVRR Through 2039
Mandates for GHG Scenarios

Candidate Plan	PVRR $ Millions	vs. R0 $ Millions	vs. R3 $ Millions	Supply-Side Resources			DSM	Meramec	Noranda
				Primary	Secondary	Renewables			
R0	$ 57,819	$	$ (3,617)	None	None	Prop C	RAP	As Is	Cont.
B3				SC	None	Prop C	Low Risk	"As Is"	Cont.
B1	$ 59,327	$ 1,507	$ (2,110)	CC	None	Prop C	Low Risk	As Is	Cont.
B4				Wind/SC	None	Prop C	Low Risk	"As Is"	Cont.
B2	$ 59,731	$ 1,911	$ (1,705)	Nuke 30%	None	Prop C	Low Risk	As Is	Cont.
R1				None	None	Prop C	RAP	Controlled	Cont.
R3	$ 61,436	$ 3,617	$	None	None	Prop C	RAP	Retired 2016	Cont.
R2				none	None	Prop C	RAP	Convert Gas	Cont.
C1				CC	None	Prop C	Low Risk	Controlled	Cont.
C2				CC	None	Prop C	Low Risk	Convert Gas	Cont.
H2				CC	SC	Prop C	Low Risk	Retired 2016	Cont.
C3	$ 63,626	$ 5,807	$ 2,190	CC	CC	Prop C	Low Risk	Retired 2016	Cont.
H3				CC	Wind/SC	Prop C	Low Risk	Retired 2016	Cont.
H1	$ 63,984	$ 6,165	$ 2,548	CC	Nuke 30%	Prop C	Low Risk	Retired 2016	Cont.



Mandates GHG Scenarios Average Annual Revenue Requirement ($ Millions) Increase of Contingency Resource Plans Over Resource Plan R0

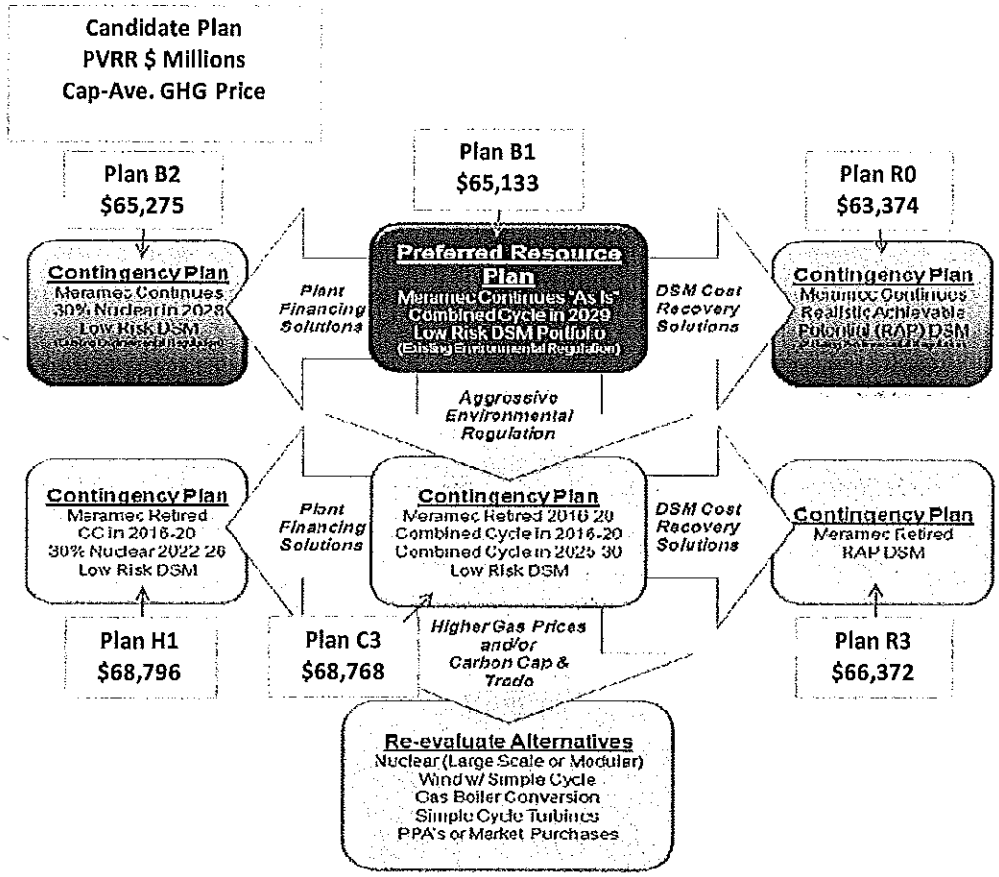
	2011 - 2020	2021 - 2030	2031 - 2039
B1	$ 45	$ 241	$ 392
B2	$ 45	$ 358	$ 445
R3	$ 260	$ 528	$ 299
C3	$ 373	$ 873	$ 651
H1	$ 378	$ 1,000	$ 599

Mandates GHG Scenarios Average Annual Revenue Requirement ($ Millions) Increase of Contingency Resource Plans Over Resource Plan R3

	2011 - 2020	2021 - 2030	2031 - 2039
C3	$ 113	$ 345	$ 352
H1	$ 118	$ 472	$ 301

Candidate Resource Plans and Expected Risk Adjusted NPVRR Through 2039
Cap-Ave. Price GHG Scenarios

Candidate Plan	PVRR $ Millions	vs. R0 $ Millions	vs. R3 $ Millions	Supply-Side Resources			DSM	Meramec	Noranda
				Primary	Secondary	Renewables			
R0	$ 63,374	$ -	$ (2,998)	None	None	Prop C	RAP	"As Is"	Cont.
B3				SC	None	Prop C	Low Risk	"As Is"	Cont.
B1	$ 65,133	$ 1,759	$ (1,239)	CC	None	Prop C	Low Risk	"As Is"	Cont.
B4				Wind/SC	None	Prop C	Low Risk	"As Is"	Cont.
B2	$ 65,275	$ 1,901	$ (1,097)	Nuke 30%	None	Prop C	Low Risk	"As Is"	Cont.
R1				None	None	Prop C	RAP	Controlled	Cont.
R3	$ 66,372	$ 2,998	$ -	None	None	Prop C	RAP	Retired 2016	Cont.
R2				none	None	Prop C	RAP	Convert Gas	Cont.
C1				CC	None	Prop C	Low Risk	Controlled	Cont.
C2				CC	None	Prop C	Low Risk	Convert Gas	Cont.
H2				CC	SC	Prop C	Low Risk	Retired 2016	Cont.
C3	$ 68,768	$ 5,395	$ 2,396	CC	CC	Prop C	Low Risk	Retired 2016	Cont.
H3				CC	Wind/SC	Prop C	Low Risk	Retired 2016	Cont.
H1	$ 68,796	$ 5,422	$ 2,424	CC	Nuke 30%	Prop C	Low Risk	Retired 2016	Cont.



Cap-Ave Price Scenarios Average Annual Revenue Requirement ($ Millions) Increase of Contingency Resource Plans Over Resource Plan RO

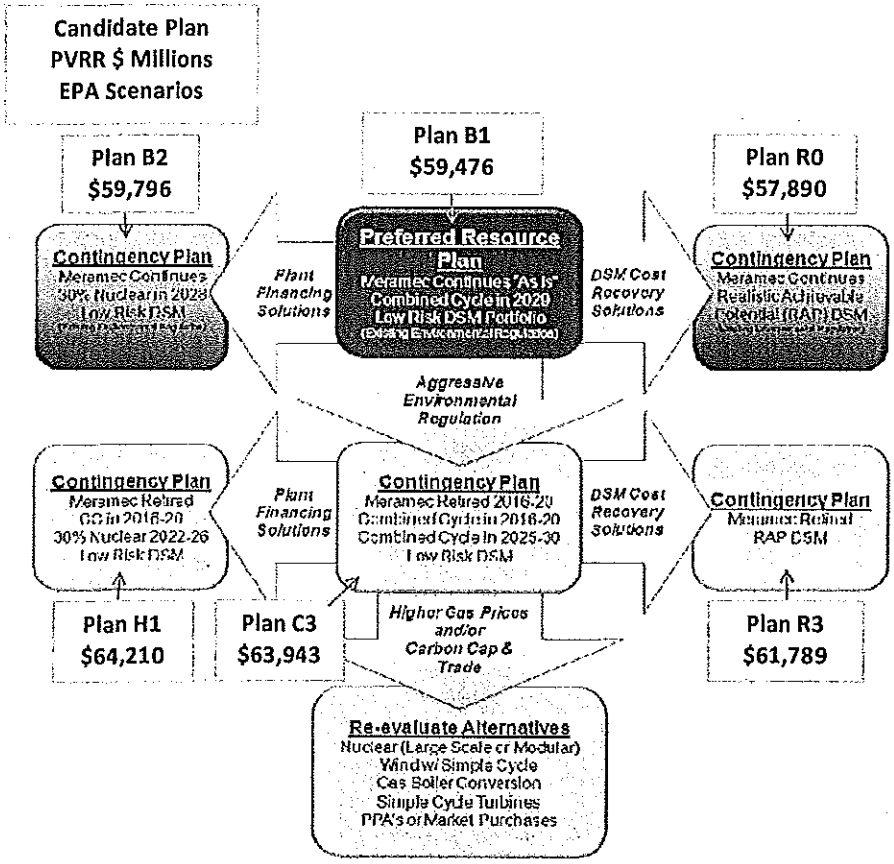
	2011 - 2020	2021 - 2030	2031 - 2039
B1	$ 52	$ 282	$ 455
B2	$ 52	$ 368	$ 369
R3	$ 238	$ 420	$ 168
C3	$ 358	$ 804	$ 558
H1	$ 364	$ 877	$ 368

Cap-Ave Price Scenarios Average Annual Revenue Requirement ($ Millions) Increase of Contingency Resource Plans Over Resource Plan R3

	2011 - 2020	2021 - 2030	2031 - 2039
C3	$ 120	$ 384	$ 390
H1	$ 125	$ 456	$ 200

Candidate Resource Plans and Expected Risk Adjusted NPVRR Through 2039
EPA Scenarios

Candidate Plan	PVRR $ Millions	vs. R0 $ Millions	vs. R3 $ Millions	Supply-Side Resources			DSM	Meramec	Noranda
				Primary	Secondary	Renewables			
R0	$ 57,890	$	$ (3,899)	None	None	Prop C	RAP	As Is	Cont.
B3				SC	None	Prop C	Low Risk	"As Is"	Cont.
B1	$ 59,476	$ 1,586	$ (2,313)	CC	None	Prop C	Low Risk	As Is	Cont.
B4				Wind/SC	None	Prop C	Low Risk	"As Is"	Cont.
B2	$ 59,796	$ 1,907	$ (1,993)	Nuke 30%	None	Prop C	Low Risk	As Is	Cont.
R1				None	None	Prop C	RAP	Controlled	Cont.
R3	$ 61,789	$ 3,899	$	None	None	Prop C	RAP	Retired 2016	Cont.
R2				none	None	Prop C	RAP	Convert Gas	Cont.
C1				CC	None	Prop C	Low Risk	Controlled	Cont.
C2				CC	None	Prop C	Low Risk	Convert Gas	Cont.
H2				CC	SC	Prop C	Low Risk	Retired 2016	Cont.
C3	$ 63,943	$ 6,054	$ 2,154	CC	CC	Prop C	Low Risk	Retired 2016	Cont.
H3				CC	Wind/SC	Prop C	Low Risk	Retired 2016	Cont.
H1	$ 64,210	$ 6,320	$ 2,421	CC	Nuke 30%	Prop C	Low Risk	Retired 2016	Cont.



EPA Scenarios Average Annual Revenue Requirement ($ Millions) Increase of Contingency Resource Plans Over Resource Plan RO

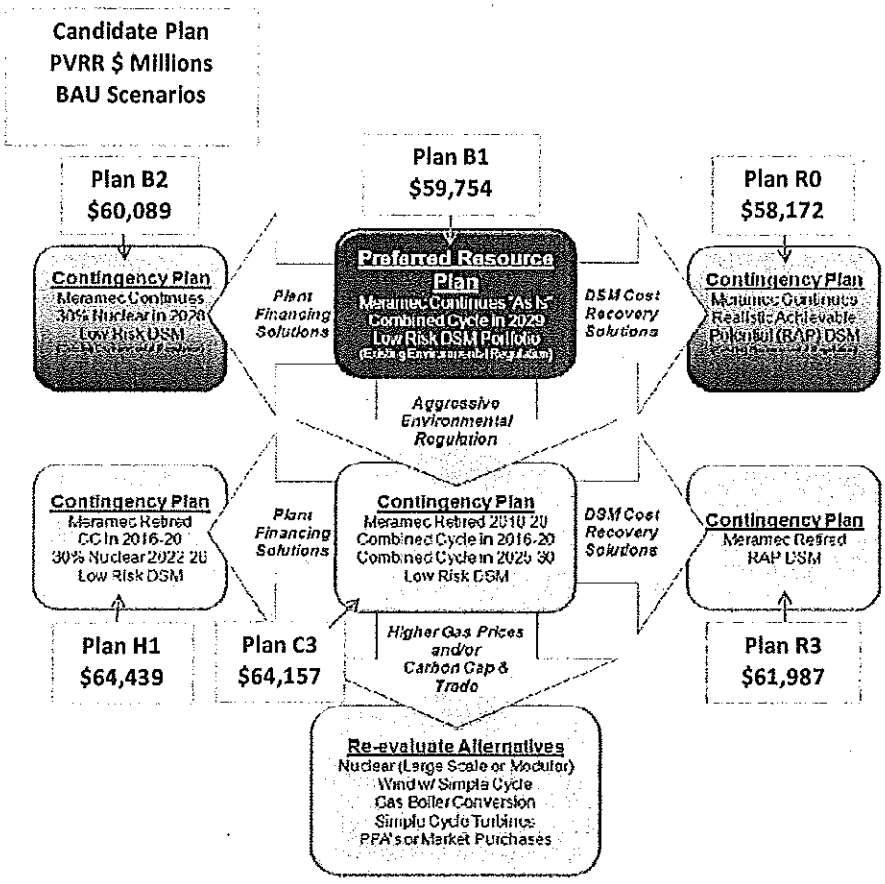
	2011 - 2020	2021 - 2030	2031 - 2039
B1	$ 48	$ 257	$ 400
B2	$ 47	$ 363	$ 413
R3	$ 265	$ 574	$ 388
C3	$ 378	$ 915	$ 718
H1	$ 384	$ 1,026	$ 630

EPA Scenarios Average Annual Revenue Requirement ($ Millions) Increase of Contingency Resource Plans Over Resource Plan R3

	2011 - 2020	2021 - 2030	2031 - 2039
C3	$ 114	$ 341	$ 331
H1	$ 69	$ 452	$ 243

Candidate Resource Plans and Expected Risk Adjusted NPVRR Through 2039
BAU Scenarios

Candidate Plan	PVRR $ Millions	vs. R0 $ Millions	vs. R3 $ Millions	Supply-Side Resources			DSM	Meramec	Noranda
				Primary	Secondary	Renewables			
R0	$ 58,172	$ -	$ (3,816)	None	None	Prop C	RAP	As Is	Cont.
B3				SC	None	Prop C	Low Risk	"As Is"	Cont.
B1	$ 59,754	$ 1,582	$ (2,234)	CC	None	Prop C	Low Risk	As Is	Cont.
B4				Wind/SC	None	Prop C	Low Risk	"As Is"	Cont.
B2	$ 60,089	$ 1,917	$ (1,899)	Nuke 30%	None	Prop C	Low Risk	As Is	Cont.
R1				None	None	Prop C	RAP	Controlled	Cont.
R3	$ 61,987	$ 3,816	$ -	None	None	Prop C	RAP	Retired 2016	Cont.
R2				none	None	Prop C	RAP	Convert Gas	Cont.
C1				CC	None	Prop C	Low Risk	Controlled	Cont.
C2				CC	None	Prop C	Low Risk	Convert Gas	Cont.
H2				CC	SC	Prop C	Low Risk	Retired 2016	Cont.
C3	$ 64,157	$ 5,986	$ 2,170	CC	CC	Prop C	Low Risk	Retired 2016	Cont.
H3				CC	Wind/SC	Prop C	Low Risk	Retired 2016	Cont.
H1	$ 64,439	$ 6,267	$ 2,451	CC	Nuke 30%	Prop C	Low Risk	Retired 2016	Cont.

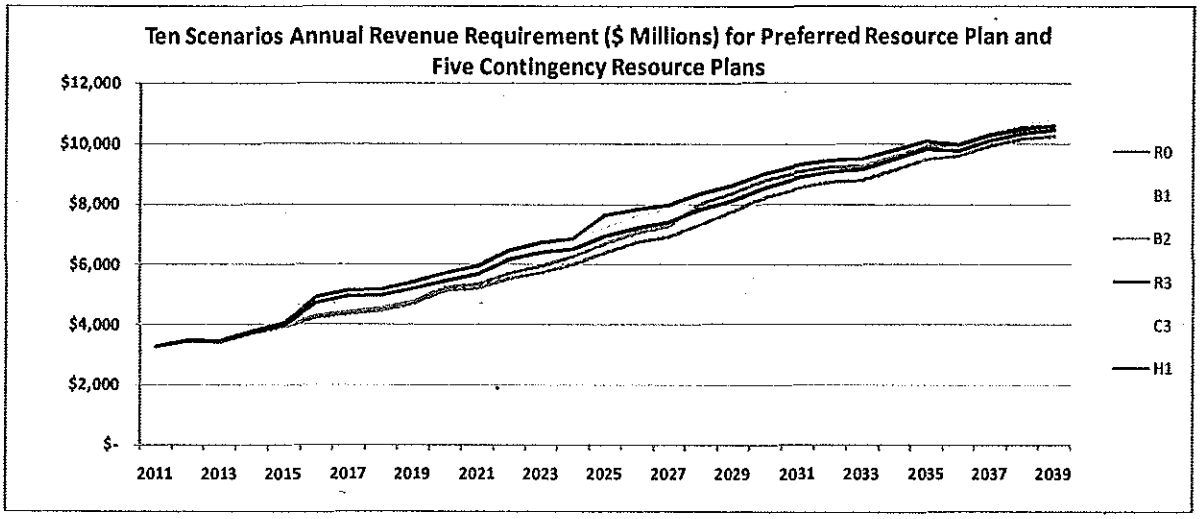


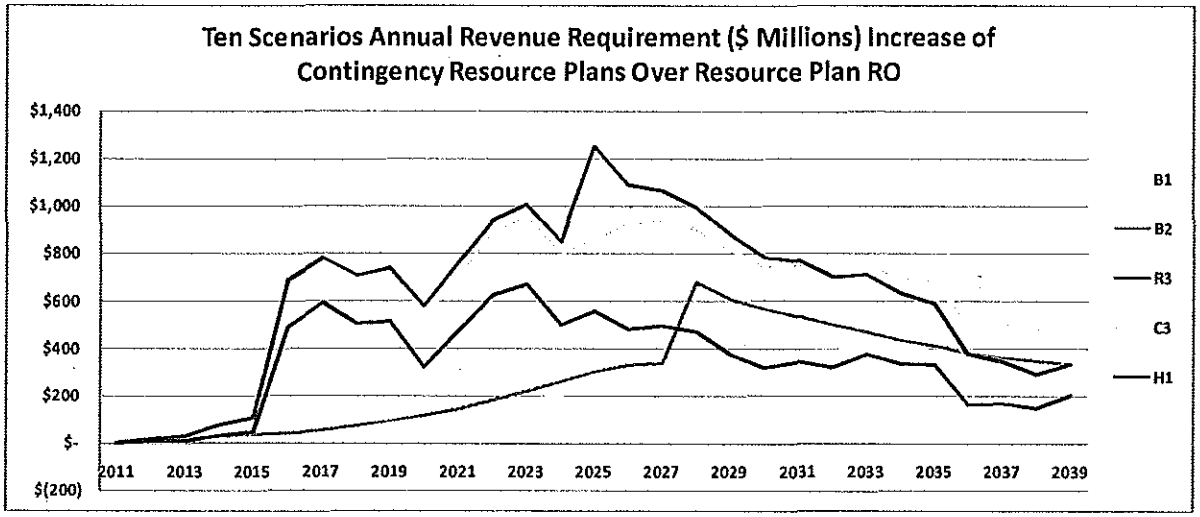
BAU Scenarios Average Annual Revenue Requirement ($ Millions) Increase of Contingency Resource Plans Over Resource Plan RO

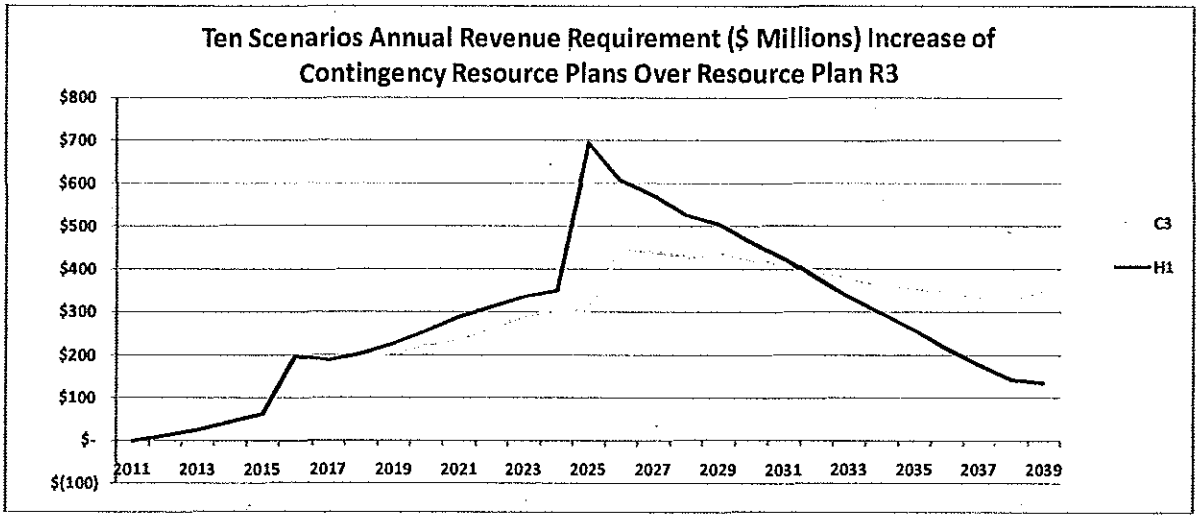
	2011 - 2020	2021 - 2030	2031 - 2039
B1	$ 47	$ 256	$ 401
B2	$ 47	$ 363	$ 421
R3	$ 263	$ 563	$ 353
C3	$ 377	$ 906	$ 694
H1	$ 382	$ 1,019	$ 613

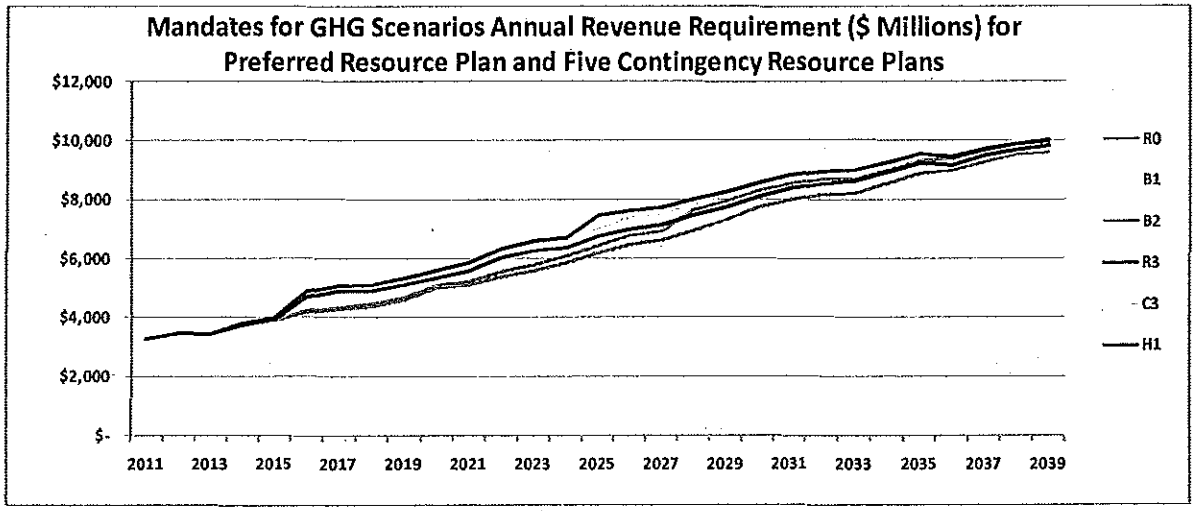
BAU Scenarios Average Annual Revenue Requirement ($ Millions) Increase of Contingency Resource Plans Over Resource Plan R3

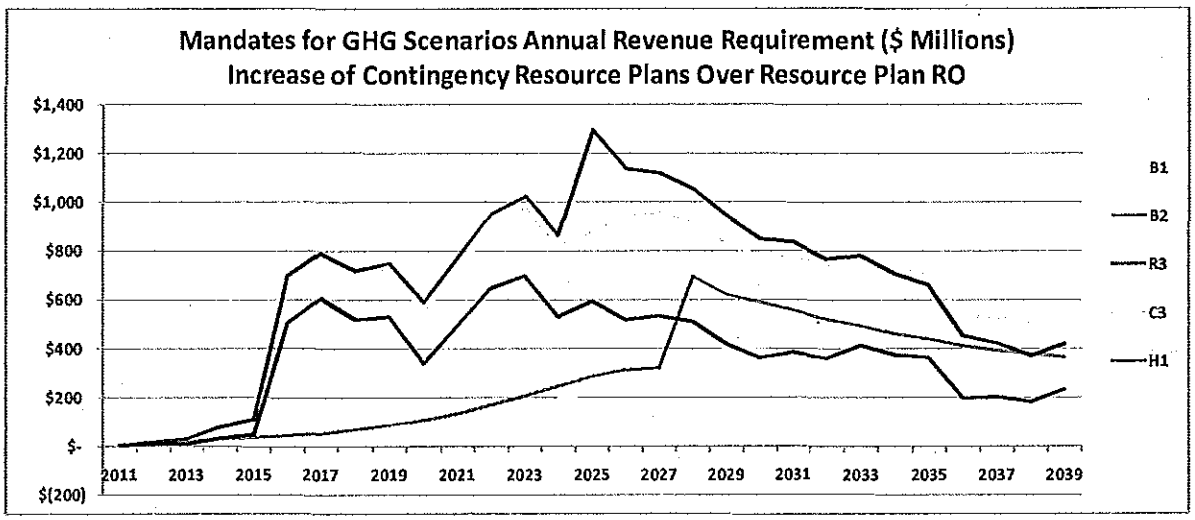
	2011 - 2020	2021 - 2030	2031 - 2039
C3	$ 113	$ 342	$ 341
H1	$ 119	$ 455	$ 261


Ten Scenarios Annual Revenue Requirement ($ Millions) for Preferred Resource Plan and Five Contingency Resource Plans
$12,000
$10,000
$8,000
$6,000
$4,000
$2,000
$-
2011 2013 2015 2017 2019 2021 2023 2025 2027 2029 2031 2033 2035 2037 2039
R0
B1
B2
R3
C3
H1


Ten Scenarios Annual Revenue Requirement ($ Millions) Increase of Contingency Resource Plans Over Resource Plan RO
$1,400
$1,200
$1,000
$800
$600
$400
$200
$-
$(200)
2011 2013 2015 2017 2019 2021 2023 2025 2027 2029 2031 2033 2035 2037 2039
B1
B2
R3
C3
H1


Ten Scenarios Annual Revenue Requirement ($ Millions) Increase of Contingency Resource Plans Over Resource Plan R3
$800
$700
$600
$500
$400
$300
$200
$100
$-
$(100)
2011 2013 2015 2017 2019 2021 2023 2025 2027 2029 2031 2033 2035 2037 2039
C3
H1


Mandates for GHG Scenarios Annual Revenue Requirement ($ Millions) for Preferred Resource Plan and Five Contingency Resource Plans
$12,000
$10,000
$8,000
$6,000
$4,000
$2,000
$-
2011 2013 2015 2017 2019 2021 2023 2025 2027 2029 2031 2033 2035 2037 2039
R0
B1
B2
R3
C3
H1


Mandates for GHG Scenarios Annual Revenue Requirement ($ Millions) Increase of Contingency Resource Plans Over Resource Plan RO
$1,400
$1,200
$1,000
$800
$600
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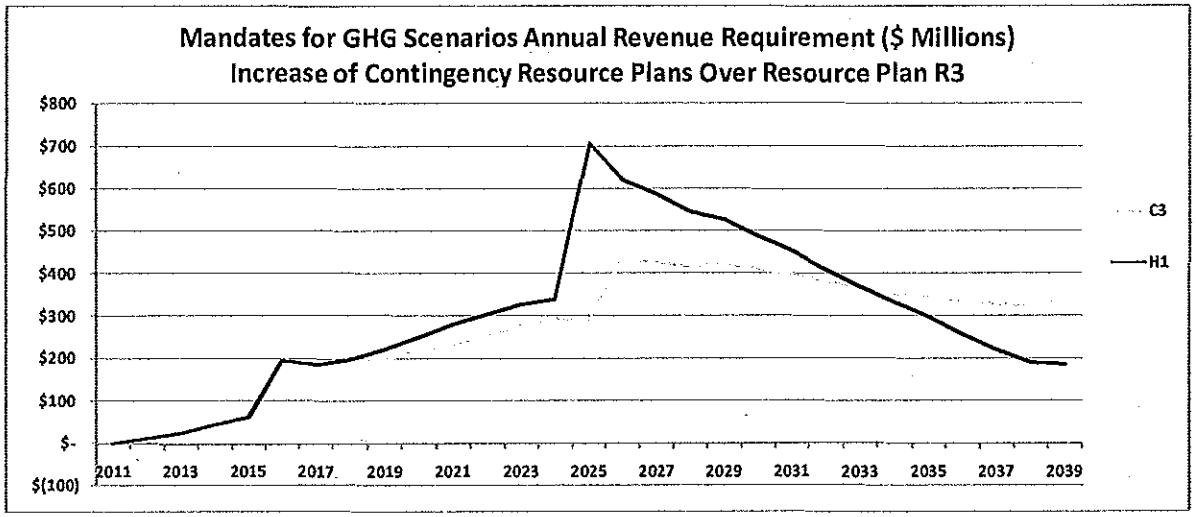
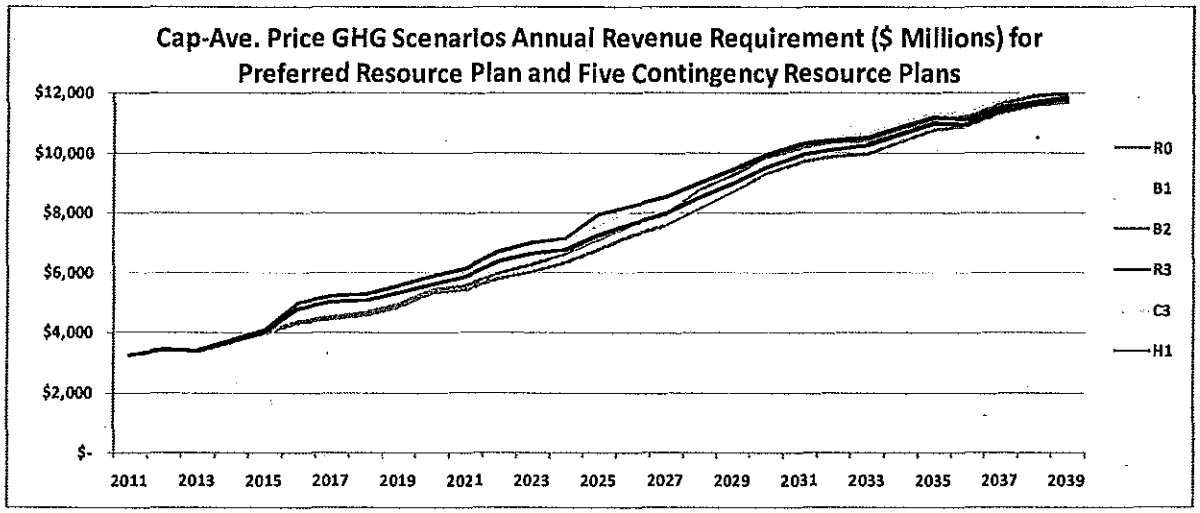
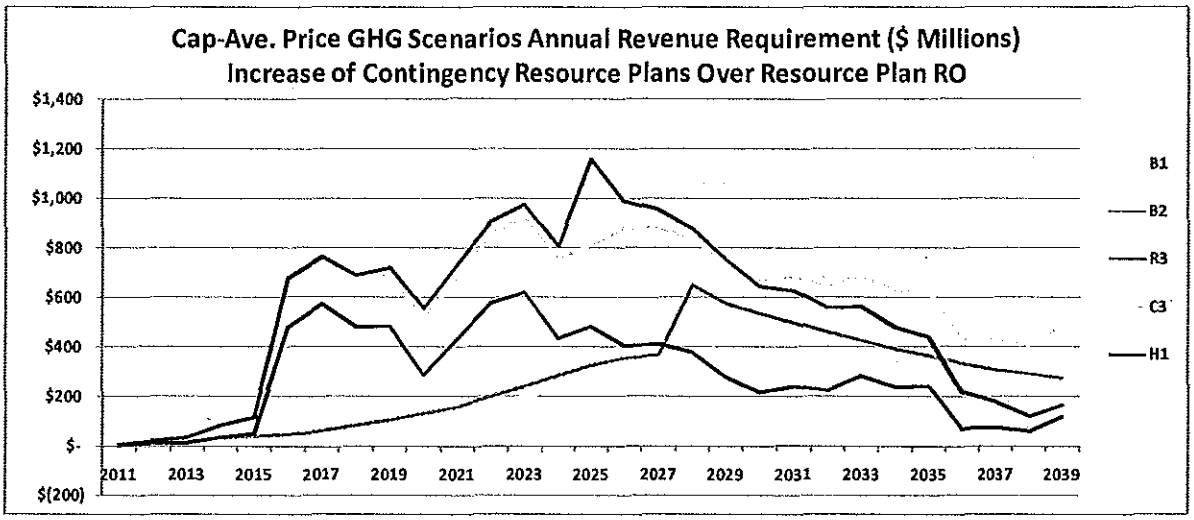
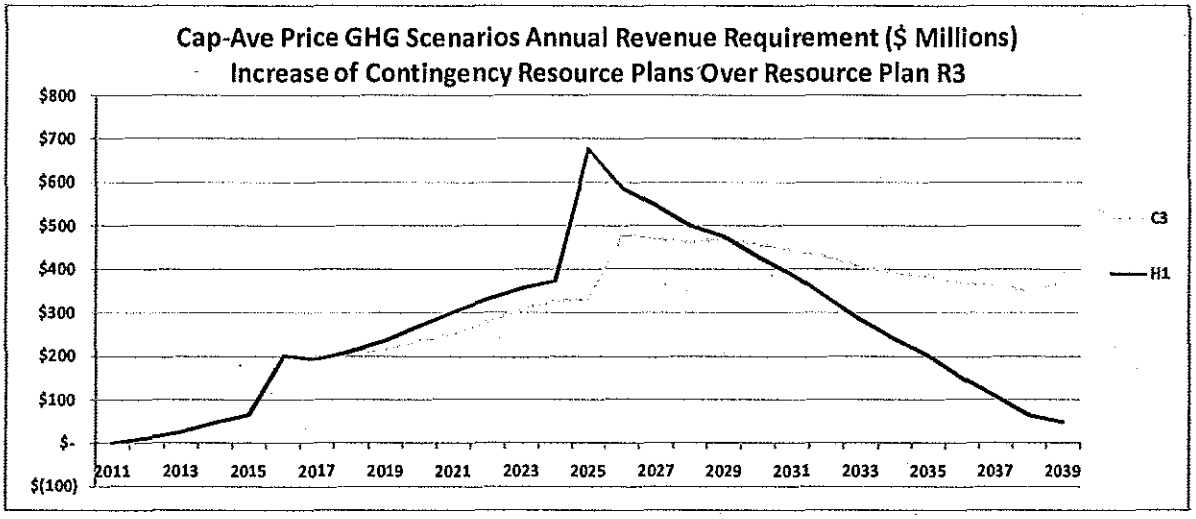
$200
$-
$(200)
2011 2013 2015 2017 2019 2021 2023 2025 2027 2029 2031 2033 2035 2037 2039
B1
B2
R3
C3
H1


Mandates for GHG Scenarios Annual Revenue Requirement ($ Millions) Increase of Contingency Resource Plans Over Resource Plan R3
$800
$700
$600
$500
$400
$300
$200
$100
$-
$(100)
2011 2013 2015 2017 2019 2021 2023 2025 2027 2029 2031 2033 2035 2037 2039
C3
H1


Cap-Ave. Price GHG Scenarios Annual Revenue Requirement ($ Millions) for Preferred Resource Plan and Five Contingency Resource Plans
$12,000
$10,000
$8,000
$6,000
$4,000
$2,000
$-
2011 2013 2015 2017 2019 2021 2023 2025 2027 2029 2031 2033 2035 2037 2039
R0
B1
B2
R3
C3
H1


Cap-Ave. Price GHG Scenarios Annual Revenue Requirement ($ Millions) Increase of Contingency Resource Plans Over Resource Plan RO
$1,400
$1,200
$1,000
$800
$600
$400
$200
$-
$(200)
2011 2013 2015 2017 2019 2021 2023 2025 2027 2029 2031 2033 2035 2037 2039
B1
B2
R3
C3
H1


Cap-Ave Price GHG Scenarios Annual Revenue Requirement ($ Millions) Increase of Contingency Resource Plans Over Resource Plan R3
$800
$700
$600
$500
$400
$300
$200
$100
$-
$(100)
2011 2013 2015 2017 2019 2021 2023 2025 2027 2029 2031 2033 2035 2037 2039
C3
H1

Value of Better Information Analysis for Resource Plan B1 ($ Millions)

14 Final Candidate Resource Plans	PVRR Without	Load			Gas Prices			Carbon				DSM			Project Cost			Interest Rate & ROE		
		Low	Base	High	Low	Base	High	BAU	EPA	Mandates	Cap&Trade	Low	Base	High	Low	Base	High	Low	Base	High
B1 - Meramec Continues As Is, Combined Cycle	[redacted]	58,025	59,489	64,886	62,406	59,489	60,505	59,754	59,476	59,327	65,133	61,411	61,240	61,164	60,862	61,239	61,715	58,381	61,124	64,540
B2 - Meramec Continues As Is, Nuclear 30%	61,568	58,347	59,811	65,180	62,805	59,811	60,722	60,089	59,796	59,731	65,275	61,726	61,545	61,480	61,045	61,539	62,180	58,554	61,429	64,999
B3 - Meramec Continues As Is, Simple Cycle	61,161	57,922	59,415	64,788	62,322	59,415	60,388	59,668	59,401	59,208	65,065	61,311	61,140	61,074	60,796	61,137	61,600	58,289	61,031	64,424
B4 - Meramec Continues As Is, Wind w/Simple Cycle	61,403	58,178	59,648	65,018	62,611	59,648	60,585	59,918	59,634	59,526	65,178	61,561	61,380	61,313	60,948	61,371	61,955	58,498	61,268	64,713
C1 - Combined Cycle, Meramec Controlled	64,403	61,180	62,588	68,030	65,557	62,588	63,652	62,854	62,574	62,482	68,272	64,571	64,371	64,330	63,590	64,349	65,380	61,215	64,257	68,031
C2 - Combined Cycle, Meramec Gas Conversion	64,875	61,535	63,511	68,518	65,660	63,511	64,392	63,705	63,501	63,119	68,321	65,022	64,849	64,807	64,206	64,829	65,682	61,787	64,732	68,392
C3 - Combined Cycle, Meramec Retired	65,356	62,035	63,954	68,988	66,119	63,954	64,905	64,157	63,943	63,626	68,768	65,505	65,335	65,270	64,546	65,296	66,346	62,214	65,209	68,939
H1 - Meramec Retired, CC, Nuclear 30%	65,596	62,284	64,221	69,213	66,487	64,221	65,010	64,439	64,210	63,984	68,796	65,744	65,569	65,527	64,615	65,534	66,762	62,302	65,438	69,362
H2 - Meramec Retired, CC, Simple Cycle	65,198	61,867	63,821	68,834	65,975	63,821	64,726	64,014	63,810	63,447	68,639	65,337	65,171	65,138	64,426	65,141	66,139	62,084	65,050	68,752
H3 - Meramec Retired, CC, Wind w/Simple Cycle	65,420	62,104	64,043	69,042	66,269	64,043	64,877	64,252	64,032	63,760	68,703	65,576	65,397	65,332	64,523	65,354	66,515	62,258	65,270	69,031
R0 - Meramec Continues As Is, RAP DSM	59,661	56,448	57,904	63,264	60,935	57,904	58,777	58,172	57,890	57,819	63,374	60,204	59,625	59,226	59,338	59,638	60,053	59,338	59,527	62,929
R1 - RAP DSM, Meramec Controlled	62,367	59,663	61,068	66,472	64,150	61,068	61,984	61,338	61,054	61,036	66,575	63,390	62,836	62,439	62,163	62,819	63,718	59,695	62,722	66,475
R2 - RAP DSM, Meramec Gas Conversion	63,358	60,030	62,018	66,984	64,277	62,018	62,738	62,214	62,008	61,689	66,647	63,917	63,317	62,926	62,700	63,333	64,092	60,229	63,219	66,905
R3 - RAP DSM, Meramec Retired	63,101	59,746	61,799	66,746	64,038	61,799	62,454	61,987	61,789	61,436	66,372	63,604	63,030	62,812	62,481	63,083	63,777	60,061	62,960	66,565
Minimum PVRR among plans		56,448	57,904	63,264	60,935	57,904	58,777	58,172	57,890	57,819	63,374	60,204	59,625	59,226	59,338	59,638	60,053	58,289	59,527	62,929
Plan with Minimum PVRR		R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0
Subjective Probability		45%	10%	45%	45%	10%	45%	1%	10%	57%	33%	20%	60%	20%	20%	60%	20%	20%	60%	20%
PVRR with Better Info		$		59,661	$		59,661	$			59,661	$		59,661	$		59,661	$		59,960
Expected Value of Better Info		$		1,598	$		1,598	$			1,598	$		1,598	$		1,598	$		1,299

HC

Value of Better Information Analysis for Resource Plan RO ($ Millions)

14 Final Candidate Resource Plans	PVRR Without	Load			Gas Prices			Carbon				DSM			Project Cost			Interest Rate & ROE		
		Low	Base	High	Low	Base	High	BAU	EPA	Mandate	Cap&Trad	Low	Base	High	Low	Base	High	Low	Base	High
B1 - Meramec Continues As Is, Combined Cycle	61,259	58,025	59,489	64,886	62,406	59,489	60,505	59,754	59,476	59,327	65,133	61,411	61,240	61,164	60,862	61,239	61,715	58,381	61,124	64,540
B2 - Meramec Continues As Is, Nuclear 30%	61,568	58,347	59,811	65,180	62,805	59,811	60,722	60,089	59,796	59,731	65,275	61,726	61,545	61,480	61,045	61,539	62,180	58,554	61,429	64,999
B3 - Meramec Continues As Is, Simple Cycle	61,161	57,922	59,415	64,788	62,322	59,415	60,388	59,668	59,401	59,208	65,065	61,311	61,140	61,074	60,796	61,137	61,600	58,289	61,031	64,424
B4 - Meramec Continues As Is, Wind w/Simple Cycle	61,403	58,178	59,648	65,018	62,611	59,648	60,585	59,918	59,634	59,526	65,178	61,561	61,380	61,313	60,948	61,371	61,955	58,498	61,268	64,713
C1 - Combined Cycle, Meramec Controlled	64,403	61,180	62,588	68,030	65,557	62,588	63,652	62,854	62,574	62,482	68,272	64,571	64,371	64,330	63,590	64,349	65,380	61,215	64,257	68,031
C2 - Combined Cycle, Meramec Gas Conversion	64,875	61,535	63,511	68,518	65,660	63,511	64,392	63,705	63,501	63,119	68,321	65,022	64,849	64,807	64,206	64,829	65,682	61,787	64,732	68,392
C3 - Combined Cycle, Meramec Retired	65,356	62,035	63,954	68,988	66,119	63,954	64,905	64,157	63,943	63,626	68,768	65,505	65,335	65,270	64,546	65,296	66,346	62,214	65,209	68,939
H1 - Meramec Retired, CC, Nuclear 30%	65,596	62,284	64,221	69,213	66,487	64,221	65,010	64,439	64,210	63,984	68,796	65,744	65,569	65,527	64,615	65,534	66,762	62,302	65,438	69,362
H2 - Meramec Retired, CC, Simple Cycle	65,198	61,867	63,821	68,834	65,975	63,821	64,726	64,014	63,810	63,447	68,639	65,337	65,171	65,138	64,426	65,141	66,139	62,084	65,050	68,752
H3 - Meramec Retired, CC, Wind w/Simple Cycle	65,420	62,104	64,043	69,042	66,269	64,043	64,877	64,252	64,032	63,760	68,703	65,576	65,397	65,332	64,523	65,354	66,515	62,258	65,270	69,031
R0 - Meramec Continues As Is, RAP DSM	[illegible]	56,448	57,904	63,264	60,935	57,904	58,777	58,172	57,890	57,819	63,374	60,204	59,625	59,226	59,338	59,638	60,053	59,338	59,527	62,929
R1 - RAP DSM, Meramec Controlled	62,867	59,663	61,068	66,472	64,150	61,068	61,984	61,338	61,054	61,036	66,575	63,390	62,836	62,439	62,163	62,819	63,718	59,695	62,722	66,475
R2 - RAP DSM, Meramec Gas Conversion	63,358	60,030	62,018	66,984	64,277	62,018	62,738	62,214	62,008	61,689	66,647	63,917	63,317	62,926	62,700	63,333	64,092	60,229	63,219	66,905
R3 - RAP DSM, Meramec Retired	63,101	59,746	61,799	66,746	64,038	61,799	62,454	61,987	61,789	61,436	66,372	63,604	63,030	62,812	62,481	63,083	63,777	60,061	62,960	66,565
Minimum PVRR among plans		56,448	57,904	63,264	60,935	57,904	58,777	58,172	57,890	57,819	63,374	60,204	59,625	59,226	59,338	59,638	60,053	58,289	59,527	62,929
Plan with Minimum PVRR		R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0
Subjective Probability		45%	10%	45%	45%	10%	45%	1%	10%	57%	33%	20%	60%	20%	20%	60%	20%	20%	60%	20%
PVRR with Better Info		$		59,661	$		59,661	$			59,661	$		59,661	$		59,661	$		59,960
Expected Value of Better Info		$		0	$		0	$			0	$		0	$		0	$		-

HC

Value of Better Information Analysis for Resource Plan C3 ($ Millions)

14 Final Candidate Resource Plans	PVRR Without	Load			Gas Prices			Carbon				DSM			Project Cost			Interest Rate & ROE		
		Low	Base	High	Low	Base	High	BAU	EPA	Mandate	Cap&Trad	Low	Base	High	Low	Base	High	Low	Base	High
B1 - Meramec Continues As Is, Combined Cycle																				
B2 - Meramec Continues As Is, Nuclear 30%																				
B3 - Meramec Continues As Is, Simple Cycle																				
B4 - Meramec Continues As Is, Wind w/Simple Cycle																				
C1 - Combined Cycle, Meramec Controlled	64,403	61,180	62,588	68,030	65,557	62,588	63,652	62,854	62,574	62,482	68,272	64,571	64,371	64,330	63,590	64,349	65,380	61,215	64,257	68,031
C2 - Combined Cycle, Meramec Gas Conversion	64,875	61,535	63,511	68,518	65,660	63,511	64,392	63,705	63,501	63,119	68,321	65,022	64,849	64,807	64,206	64,829	65,682	61,787	64,732	68,392
C3 - Combined Cycle, Meramec Retired		62,035	63,954	68,988	66,119	63,954	64,905	64,157	63,943	63,626	68,768	65,505	65,335	65,270	64,546	65,296	66,346	62,214	65,209	68,939
H1 - Meramec Retired, CC, Nuclear 30%	65,596	62,284	64,221	69,213	66,487	64,221	65,010	64,439	64,210	63,984	68,796	65,744	65,569	65,527	64,615	65,534	66,762	62,302	65,438	69,362
H2 - Meramec Retired, CC, Simple Cycle	65,198	61,867	63,821	68,834	65,975	63,821	64,726	64,014	63,810	63,447	68,639	65,337	65,171	65,138	64,426	65,141	66,139	62,084	65,050	68,752
H3 - Meramec Retired, CC, Wind w/Simple Cycle	65,420	62,104	64,043	69,042	66,269	64,043	64,877	64,252	64,032	63,760	68,703	65,576	65,397	65,332	64,523	65,354	66,515	62,258	65,270	69,031
R0 - Meramec Continues As Is, RAP DSM																				
R1 - RAP DSM, Meramec Controlled	62,867	59,663	61,068	66,472	64,150	61,068	61,984	61,338	61,054	61,036	66,575	63,390	62,836	62,439	62,163	62,819	63,718	59,695	62,722	66,475
R2 - RAP DSM, Meramec Gas Conversion	63,358	60,030	62,018	66,984	64,277	62,018	62,738	62,214	62,008	61,689	66,647	63,917	63,317	62,926	62,700	63,333	64,092	60,229	63,219	66,905
R3 - RAP DSM, Meramec Retired	63,101	59,746	61,799	66,746	64,038	61,799	62,454	61,987	61,789	61,436	66,372	63,604	63,030	62,812	62,481	63,083	63,777	60,061	62,960	66,565
Minimum PVRR among plans		59,663	61,068	66,472	64,038	61,068	61,984	61,338	61,054	61,036	66,372	63,390	62,836	62,439	62,163	62,819	63,718	59,695	62,722	66,475
Plan with Minimum PVRR		R1	R1	R1	R3	R1	R1	R1	R1	R1	R3	R1	R1	R1	R1	R1	R1	R1	R1	R1
Subjective Probability		45%	10%	45%	45%	10%	45%	1%	10%	57%	33%	20%	60%	20%	20%	60%	20%	20%	60%	20%
PVRR with Better Info		$		62,867	$		62,817	$			62,800	$		62,867	$		62,867	$		62,867
Expected Value of Better Info		$		2,489	$		2,539	$			2,556	$		2,489	$		2,489	$		2,489

HC

Value of Better Information Analysis for Resource Plan R3 ($ Millions)

14 Final Candidate Resource Plans	PVRR Without	Load			Gas Prices			Carbon				DSM			Project Cost			Interest Rate & ROE		
		Low	Base	High	Low	Base	High	BAU	EPA	Mandate	Cap&Trad	Low	Base	High	Low	Base	High	Low	Base	High
B1 - Meramec Continues As Is, Combined Cycle																				
B2 - Meramec Continues As Is, Nuclear 30%																				
B3 - Meramec Continues As Is, Simple Cycle																				
B4 - Meramec Continues As Is, Wind w/Simple Cycle																				
C1 - Combined Cycle, Meramec Controlled	64,403	61,180	62,588	68,030	65,557	62,588	63,652	62,854	62,574	62,482	68,272	64,571	64,371	64,330	63,590	64,349	65,380	61,215	64,257	68,031
C2 - Combined Cycle, Meramec Gas Conversion	64,875	61,535	63,511	68,518	65,660	63,511	64,392	63,705	63,501	63,119	68,321	65,022	64,849	64,807	64,206	64,829	65,682	61,787	64,732	68,392
C3 - Combined Cycle, Meramec Retired	65,356	62,035	63,954	68,988	66,119	63,954	64,905	64,157	63,943	63,626	68,768	65,505	65,335	65,270	64,546	65,296	66,346	62,214	65,209	68,939
H1 - Meramec Retired, CC, Nuclear 30%	65,596	62,284	64,221	69,213	66,487	64,221	65,010	64,439	64,210	63,984	68,796	65,744	65,569	65,527	64,615	65,534	66,762	62,302	65,438	69,362
H2 - Meramec Retired, CC, Simple Cycle	65,198	61,867	63,821	68,834	65,975	63,821	64,726	64,014	63,810	63,447	68,639	65,337	65,171	65,138	64,426	65,141	66,139	62,084	65,050	68,752
H3 - Meramec Retired, CC, Wind w/Simple Cycle	65,420	62,104	64,043	69,042	66,269	64,043	64,877	64,252	64,032	63,760	68,703	65,576	65,397	65,332	64,523	65,354	66,515	62,258	65,270	69,031
R0 - Meramec Continues As Is, RAP DSM																				
R1 - RAP DSM, Meramec Controlled	62,867	59,663	61,068	66,472	64,150	61,068	61,984	61,338	61,054	61,036	66,575	63,390	62,836	62,439	62,163	62,819	63,718	59,695	62,722	66,475
R2 - RAP DSM, Meramec Gas Conversion	63,358	60,030	62,018	66,984	64,277	62,018	62,738	62,214	62,008	61,689	66,647	63,917	63,317	62,926	62,700	63,333	64,092	60,229	63,219	66,905
R3 - RAP DSM, Meramec Retired	[illegible]	59,746	61,799	66,746	64,038	61,799	62,454	61,987	61,789	61,436	66,372	63,604	63,030	62,812	62,481	63,083	63,777	60,061	62,960	66,565
Minimum PVRR among plans		59,663	61,068	66,472	64,038	61,068	61,984	61,338	61,054	61,036	66,372	63,390	62,836	62,439	62,163	62,819	63,718	59,695	62,722	66,475
Plan with Minimum PVRR		R1	R1	R1	R3	R1	R1	R1	R1	R1	R3	R1	R1	R1	R1	R1	R1	R1	R1	R1
Subjective Probability		45%	10%	45%	45%	10%	45%	1%	10%	57%	33%	20%	60%	20%	20%	60%	20%	20%	60%	20%
PVRR with Better Info		$		62,867	$		62,817	$			62,800	$		62,867	$		62,867	$		62,867
Expected Value of Better Info		$		234	$		284	$			301	$		234	$		234	$		234

HC

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Union Electric Company's 2011 Utility Resource Filing Pursuant to 4 CSR 240 – Chapter 22.	)))	Case No. EO-2011-0271

AFFIDAVIT OF JOHN A. ROGERS

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

John A. Rogers, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Staff Report in pages 1 - 17 ; that he has knowledge of the matters set forth in such Report; and that such matters are true to the best of his knowledge and belief.

John A Rogers
John A. Rogers

Subscribed and sworn to before me this 23rd day of June, 2011.

SUSAN L. SUNDERMEYER
Notary Public - Notary Seal
State of Missouri
Commissioned for Callaway County
My Commission Expires: October 03, 2014
Commission Number: 10942086

Susan L. Sundermeyer
Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Union Electric Company's 2011 Utility Resource Filing Pursuant to 4 CSR 240 – Chapter 22.	)))	Case No. EO-2011-0271

AFFIDAVIT OF DAVID C. ROOS

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

David C. Roos, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Staff Report in pages 1-5; that he has knowledge of the matters set forth in such Report; and that such matters are true to the best of his knowledge and belief.

David C. Roos

Subscribed and sworn to before me this 23rd day of June, 2011.

SUSAN L. SUNDERMEYER
Notary Public - Notary Seal
State of Missouri
Commissioned for Callaway County
My Commission Expires: October 03, 2014
Commission Number: 10942086

Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Union Electric Company's 2011 Utility Resource Filing Pursuant to 4 CSR 240 – Chapter 22.	)))	Case No. EO-2011-0271

AFFIDAVIT OF LEON C. BENDER

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Leon C. Bender, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Staff Report in pages 1 to 11; that he has knowledge of the matters set forth in such Report; and that such matters are true to the best of his knowledge and belief.

Leon C. Bender

Subscribed and sworn to before me this 23rd day of June, 2011.

SUSAN L. SUNDERMEYER
Notary Public - Notary Seal
State of Missouri
Commissioned for Callaway County
My Commission Expires: October 03, 2014
Commission Number: 10942086

Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Union Electric Company's 2011 Utility Resource Filing Pursuant to 4 CSR 240 – Chapter 22.	)))	Case No. EO-2011-0271

AFFIDAVIT OF HOJONG KANG

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Hojong Kang, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Staff Report in pages 1 & 20; that he has knowledge of the matters set forth in such Report; and that such matters are true to the best of his knowledge and belief.

Hojong Kang

Hojong Kang

Subscribed and sworn to before me this 23rd day of June, 2011.

SUSAN L. SUNDERMEYER
Notary Public - Notary Seal
State of Missouri
Commissioned for Callaway County
My Commission Expires: October 03, 2014
Commission Number: 10942086

Susan L. Sundermeyer

Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Union Electric Company's 2011 Utility Resource Filing Pursuant to 4 CSR 240 – Chapter 22.	)))	Case No. EO-2011-0271

AFFIDAVIT OF RANDY S. GROSS

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Randy S. Gross, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Staff Report in pages _____; that he has knowledge of the matters set forth in such Report; and that such matters are true to the best of his knowledge and belief.

Randy S. Gross

Subscribed and sworn to before me this 23rd day of June, 2011.

SUSAN L. SUNDERMEYER
Notary Public - Notary Seal
State of Missouri
Commissioned for Callaway County
My Commission Expires: October 03, 2014
Commission Number: 10942086

Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Union Electric Company's 2011 Utility Resource Filing Pursuant to 4 CSR 240 -- Chapter 22.	)))	Case No. EO-2011-0271

AFFIDAVIT OF MATTHEW J. BARNES

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Matthew J. Barnes, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Staff Report in pages _____; that he has knowledge of the matters set forth in such Report; and that such matters are true to the best of his knowledge and belief.

Matthew J. Barnes

Subscribed and sworn to before me this 23rd day of June, 2011.

SUSAN L. SUNDERMEYER
Notary Public - Notary Seal
State of Missouri
Commissioned for Callaway County
My Commission Expires: October 03, 2014
Commission Number: 10942086

Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Union Electric Company's
2011 Utility Resource Filing Pursuant to
4 CSR 240 – Chapter 22.

File No. EO-2011-0271

CORRECTIONS TO STAFF'S REPORT ON UNION ELECTRIC COMPANY'S
2011 ELECTRIC UTILITY RESOURCE PLANNING COMPLIANCE FILING

COMES NOW the Staff ("Staff") of the Missouri Public Service Commission ("Commission"), and submits the following corrections to its Report on Union Electric Company d/b/a Ameren Missouri's 2011 Chapter 22 Electric Utility Resource Planning Compliance Filing:

1. Page 7, second line, delete the word "be."

2. Page 14, fifth line of Concern G., delete "Low Risk DSM Combined Cycle plants in 2016 and 2026" and substitute "RAP DSM and no new supply-side resources."

3. Page 37, beginning on fourth line of the second to last bullet, delete "Low Risk DSM Combined Cycle plants in 2016 and 2026 Plan C3" and substitute "RAP DSM and no new supply-side resources Plan R3."

4. Page 38, top line, change "4 CSR 240-22.020(2)(B)" to "4 CSR 240-22.010(2)(B).

5. Page 41, first line of Concern B., change word "meetings22" to "meetings[22]."

6. Page 43, last paragraph in Concern D., change word "recommendations" to "recommends."

7. Page 45, delete the second bullet in its entirety.

8. Page 45, fifth line of Concern G., delete "Low Risk DSM Combined Cycle plants in 2016 and 2026" and substitute "RAP DSM and no new supply-side resources."

9. Page 48, sixth line of first paragraph, change "4 CSR 240-22.080(10)" to "4 CSR 240-22.080(12)."

WHEREFORE, Staff corrects its report on Ameren Missouri's 2011 Chapter 22 Electric Utility Resource Planning Compliance Filing as set forth above.

Respectfully submitted,

/s/ Nathan Williams
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Certificate of Service

I hereby certify that copies of the foregoing have been mailed, hand-delivered, transmitted by facsimile or electronically mailed to counsel of record this 27th day of June, 2011.

/s/ Nathan Williams