

MISSOURI PUBLIC SERVICE COMMISSION

STAFF REPORT ON

KCP&L GREATER MISSOURI OPERATIONS COMPANY

**ELECTRIC UTILITY RESOURCE PLANNING
COMPLIANCE FILING**

FILE NO. EO-2012-0324

September 2012

JEFFERSON CITY, MISSOURI

**** Denotes Highly Confidential Information ****

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Table of Contents

Summary of Staff’s Review and Recommendations.....	1
List of Staff’s Deficiencies	6
List of Staff’s Concerns	7
GMO’s Chapter 22 Filing	9
Linkage between Chapter 22 Rules, the MEEIA and MEEIA Rules	15
Request for Acknowledgement of Joint Company Planning	17
GMO’s Capacity Balance Sheets Continue to Reflect an Overreliance on Additional Purchased Power Agreements (“PPAs”)	20
Failure to Comply With the Commission’s Special Contemporary Issue “h”	22
Failure to Design Alternative Resource Plans Which Are Consistent with State Energy Policy	23
Importance of April 1, 2013 Annual Update Filing	29
Staff’s Recommendations for GMO’s April 1, 2013 Annual Update Filing.....	32
4 CSR 240-22.030 Load Analysis and Load Forecasting	35
Summary.....	35
Concerns	35
4 CSR 240-22.040 Supply-Side Resource Analysis	36
Summary.....	36
Deficiencies	36
4 CSR 240-22.045 Transmission and Distribution Analysis	37
Summary.....	37
Deficiencies	38
Concerns	38
4 CSR 240-22.050 Demand-Side Resource Analysis.....	39
Summary.....	39
Deficiencies	47
Concerns	47
4 CSR 240-22.060 Integrated Resource Analysis	48
Summary.....	48
Deficiencies	49

Concerns	50
4 CSR 240-22.070 Risk Analysis and Strategy Selection.....	51
Summary.....	51
Deficiencies	51
4 CSR 240-22.080 Filing Schedule and Requirements	52
Summary.....	52
Deficiencies	53
Concerns	53

Summary of Staff's Review and Recommendations

On April 9, 2012,¹ KCP&L Greater Missouri Operations Company ("GMO" or "Company") made its Chapter 22 triennial compliance filing ("Filing") in Case No. EO-2012-0324 as required by the Commission's revised Chapter 22 Electric Utility Resource Planning Rules, which became effective on June 30, 2011.² Thus, GMO had only about nine (9) months following the effective date of the revised Chapter 22 Rules to prepare and to file its first triennial compliance filing under the revised Chapter 22 Rules. Staff recognizes and appreciates the Company's significant effort to make its first triennial compliance filing under the Commission's revised Chapter 22 Rules in such a short period of time.

GMO performed its electric utility resource planning for the Filing: a) for GMO as a stand-alone electric utility as it has in its past Chapter 22 triennial compliance filings, and b) for Kansas City Power & Light Company ("KCPL") and GMO operating as if it is a combined company. GMO's adopted preferred resource plan, Plan ACCG9, represents GMO's "allocated" portion of a "combined company" candidate resource plan, Plan AJDC2. Plan ACCG9 includes the demand-side management ("DSM") programs contained in the Company's Missouri Energy Efficiency Investment Act of 2009³ ("MEEIA") application⁴ starting in 2012 ("MEEIA DSM"),⁵ and includes the following supply-side capacity additions or retirements: addition of 19 MW of new solar, 350 MW of new wind, 450 MW of new combined cycle and the retirement of 99 MW of coal (Sibley Units 1 and 2). The 20-year risk adjusted present value of revenue requirements ("PVRR") of GMO's adopted preferred resource plan is \$12.485 billion. In the Filing, GMO requests that the Commission: 1)

¹ Under Rule 4 CSR 240-22.080(1)(A), GMO's first triennial compliance filing was due on April 1, 2012. On March 28, 2012 GMO filed its *Motion for Extension of Time* to extend the filing date to April 9, 2012; and on March 30, 2012, the Commission issued its order *Granting Extension to File Resource Plan*.

² The Commission's Chapter 22 Rules were first effective on May 6, 1993, and remained unchanged until they were revised on June 30, 2011.

³ Section 393.1075, RSMo Supp. 2010.

⁴ Volume 6, page 6 of the Filing states: "MEEIA DSM consists of a suite of twelve Energy Efficiency and two Demand Response programs that GMO considers the capacity and energy estimated from these programs comprise realistically achievable levels. MEEIA DSM is the level of DSM that proposed in Case EO-2012-0009 on December 22, 2011."

⁵ Plan ACCG9 also includes MEEIA DSM beginning in January 2012. However, on July 5, 2012 the Commission issued its *Order Granting Motion to Suspend Procedural Schedule and Granting Motion for Expedited Treatment* in Case No. EO-2012-0009, in which the evidentiary hearing scheduled for July 9-11, 2012, is continued indefinitely.

acknowledge⁶ that it is reasonable for KCPL and GMO to plan on a joint company basis, and 2) find that GMO's preferred resource plan is reasonable as of this filing.⁷

As a result of its limited review of the Filing, Staff finds that the methodologies and models used by the Company are generally well established and can produce technically correct calculation for the numerous analyses which are *described and documented*⁸ in the Filing. However, as discussed in more detail in this Staff Report, Staff finds that the Filing does not achieve the fundamental objective⁹ of the Commission's Chapter 22 Rules as a result of the following significant deficiencies and concerns:

1. The KCPL and GMO electric utility resource planning on a joint company basis complies with relatively few of the requirements of Rule 4 CSR 240-22.060 Integrated Resource Plan and Risk Analysis and Rule 4 CSR 240-22.070 Resource Acquisition Strategy Selection and, likewise *describes and documents* relatively few of the Chapter 22 filing requirements for each of the fourteen (14) combined/joint candidate resource plans.
2. The stand-alone GMO electric utility resource planning does not comply with many of the requirements of Rule 4 CSR 240-22.060 Integrated Resource Plan and Risk Analysis and Rule 4 CSR 240-22.070 Resource Acquisition Strategy Selection and, likewise fails to *describe and document* many of the Chapter 22

⁶ Rule 4 CSR 240-22.020(1): "Acknowledgment is an action the commission may take with respect to the officially adopted resource acquisition strategy or any element of the resource acquisition strategy including the preferred resource plan. Acknowledgement means that the *commission finds the preferred resource plan, resource acquisition strategy, or the specified element of the resource acquisition strategy to be reasonable at a specific date*, typically the date of the filing of the utility's Chapter 22 compliance filing or the date that acknowledgment is given. Acknowledgment may be given in whole, in part, or not at all. Acknowledgment shall not be construed to mean or constitute a finding as to the prudence, pre-approval, or prior commission authorization of any specific project or group of projects." (Emphasis added)

⁷ Volume 8, pages 25 and 26 of the Filing and cover letter of Roger W. Steiner dated April 9, 2012 for the Filing in File No. EO-2012-0324.

⁸ Rule 4 CSR 240-22.020(14): "Described and documented refers to the demonstration of compliance with each provision of this chapter. Describe means the provision of information in the technical volume(s) of the triennial compliance filing, *in sufficient detail to inform the stakeholders how the utility complied with each applicable requirement of Chapter 22, why that approach was chosen, and the results of its approach*. The description in the technical volume(s), including narrative text, graphs, tables, and other pertinent information shall be written in a manner that would allow a stakeholder to thoroughly assess the utility's resource acquisitions strategy and each of its components. Document means the provision of *all of the supporting information relating to the filed resource acquisition strategy pursuant to 4 CSR 240-22.080(11)*." (Emphasis added)

⁹ Rule 4 CSR 240-22.010(2): "The fundamental objective of the resource planning process at electric utilities shall be to provide the public with energy services that are safe, reliable, and efficient, at just and reasonable rates, in compliance with all legal mandates, and in a manner that *serves the public interest and is consistent with state energy and environmental policies*." (Emphasis added)

filing requirements for each of the twenty-one (21) GMO candidate resource plans.

3. None of the GMO candidate resource plans or the combined/joint company candidate resource plans satisfy at least the objectives and priorities identified in Rule 4 CSR 240-22.010(2),¹⁰ since these candidate resource plans do not include demand-side resources over the 20-year planning horizon¹¹ which are *consistent with the state energy policy* contained in the MEEIA goal of achieving all cost-effective demand-side savings.
4. The Company did not comply with the Commission's special contemporary issue "h"¹² which required GMO to analyze and document aggressive DSM portfolios without constraints and to analyze and document the investment mechanisms necessary to implement each DSM portfolio when analyzing any of its GMO candidate resource plans or its combined/joint company candidate resource plans.
5. KCPL and GMO are separate subsidiaries of Great Plains Energy, Inc. and do not have operating agreements and/or contracts in place to permit the joint operations assumed by the joint company planning.¹³ Also there is the matter of the separate rates / rate designs of KCPL and GMO, let alone the matter of the separate rates / rate designs of the Missouri Public Service and Light & Power Divisions of GMO. The appropriateness of joint KCPL / GMO electric resource planning minus a merger of those two entities is a question for the Commission.
6. GMO continues to rely unnecessarily upon additional short term purchased power agreements ("PPAs") in its 20-year electric utility resource planning instead of planning to put steel-in-the-ground. This overreliance on additional PPAs – with their

¹⁰ Staff contends that compliance with Rule 4 CSR 240-22.010(2) requires that electric utility resource planning analyze and describe and document: 1) demand-side resources that can achieve a goal of all cost-effective demand-side savings for the entire 20-year planning horizon, and 2) investment mechanisms necessary for the electric utility to implement demand-side resources that can achieve a goal of all cost-effective demand-side savings for the entire 20-year planning horizon.

¹¹ Rule 4 CSR 240-20.094(2)(A): "Planning horizon means a future time period of at least twenty (20) years duration over which the costs and benefits of alternative resource plans are evaluated."

¹² See Commission order date October 19, 2011 in File No. EO-2012-0041 which includes special contemporary issue "h": "Analyze and document aggressive DSM portfolios without constraints. Include analysis and documentation of demand-side investment mechanisms necessary to implement each DSM portfolio."

¹³ The Joint Operating Agreement made and entered into on October 10, 2008 by and between KCPL and GMO states at the top of its page 12: "KCP&L and KCP&L GMO will be operated and planned for as separate control areas with wholesale transactions governed by applicable FERC tariffs and rules, until and unless otherwise determined by the parties and approved by all applicable regulatory bodies."

inherently uncertain availability and prices - places an unnecessary risk on GMO's ratepayers, since GMO has a Commission-approved fuel and purchased power adjustment clause.

All of Staff's identified deficiencies and concerns are listed in the next two sections of this Staff Report, respectively.

However, GMO has a number of studies which are planned or ongoing related to its demand-side resources and supply-side resources which could significantly alter its future electric utility resource planning and change its adopted preferred resource plan. Most important among these studies are: 1) the DSM market potential study being performed by Navigant Consulting, Inc. and expected to be completed in January 2013, and 2) the Mega Study which will include evaluation of supply-side resources including engineering studies of GMO's coal generating plants (in particular, the Sibley and Lake Road generating plants) concerning upgrades necessary to comply with anticipated changes to environmental regulations. The final report for the Mega Study is expected in October 2012. The results of these studies – and potentially other studies¹⁴ - could change the Company's adopted preferred resource plan and, in particular, affect the Company's specific plans to retire some of its coal generating plants in the near future.

As a result of its limited review of the Filing, Staff recommends that the Commission:

1. Not acknowledge that it is reasonable for KCPL and GMO to plan on a joint company basis.
2. Not find that GMO's preferred resource plan is reasonable as of its filing.
3. Direct KCPL and GMO to file either a) a detailed proposal for allocating capacity and energy between KCPL and GMO, and if GMO's MPS and L&P rate districts are not eliminated, between GMO's MPS and L&P rate districts; or b) a plan for merging KCPL and GMO into one electrical corporation¹⁵ prior to or at the time of any future Chapter 22 electric utility resource

¹⁴ Volume 7, page 28 of the Filing discusses briefly several other studies which are being "explored" by KCPL and GMO in anticipation of joint planning in the future: 1) a joint KCPL and GMO Network Integrated Transmission Service Agreement ("NITSA") with SPP, 2) Request for Proposals for capacity and the associated energy on an annual basis to meet GMO's SPP reserve obligations, and 3) **

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¹⁵ The plan to merge should include a certain date by which the companies will file their merger case.

planning filing for which GMO requests Commission acknowledgement that it is reasonable for KCPL and GMO to plan on a joint company basis.¹⁶

4. Order GMO to complete the following projects and studies for consideration and inclusion in its April 1, 2013 annual update filing:

- Current/ongoing DSM market potential study by the scheduled completion date of January 2013;
- Mega Study by the scheduled completion date of October 2012;
- LED lighting pilot program scheduled completion date of summer 2012;
- A joint KCPL and GMO Network Integrated Transmission Service Agreement with SPP;
- Request for Proposals for capacity and the associated energy on an annual basis to meet GMO's SPP reserve obligations; and
- ** _____

_____ **

5. Order GMO to comply with the following special contemporary issues for its April 1, 2013 annual update filing.¹⁷

- Update on Smart Grid Demonstration Project;¹⁸ and
- Analyze and document aggressive DSM portfolios including demand-side programs and demand-side rates without constraints. Include analysis and documentation of demand-side investment mechanisms necessary to implement each aggressive DSM portfolio.

¹⁶ However, until there is a completed legal merger of KCPL and GMO, KCPL and GMO are required to perform and file separate Chapter 22 triennial compliance and annual update filings unless a waiver is received from the Commission for the requirements in 4 CSR 240-22.080(1)(A) and 4 CSR 240-22.080(3).

¹⁷ Staff will file a complete list of its suggested special contemporary issues for GMO by September 15, 2012 in accordance with 4 CSR 240-22.080(4)(A).

¹⁸ Volume 7, page 35 of the Filing describes the GMO SmartGrid demonstration project. However, what is described as GMO's SmartGrid demonstration project is actually KCPL's SmartGrid demonstration project described in Volume 7, page 30 of the KCPL Chapter 22 triennial compliance filing made on April 9, 2012 in File No. EO-2012-0323.

6. Order GMO to comply as a stand-alone utility with all of the requirements of Rule 4 CSR 240-22.060 Integrated Resource Plan and Risk Analysis and Rule 4 CSR 240-22.070 Resource Acquisition Strategy Selection for its April 1, 2013 annual update.

List of Staff's Deficiencies

A *deficiency* as defined in Rule 4 CSR 240-22.020(9) means deficiencies in the electric utility's compliance with the provisions of Chapter 22, any major deficiencies in the methodologies or analyses required to be performed by Chapter 22, and anything that would cause the electric utility's resource acquisition strategy to fail to meet the requirements identified in Chapter 22. As a result of its limited review, Staff finds the following deficiencies with the Company's Chapter 22 triennial compliance filing:

Deficiency 1 - GMO did not include the nuclear powered small modular reactor (SMR) as a potential supply-side resource option and did not provide its assessments of the SMR technology as required by Rule 4 CSR 240-22.040(1).

Deficiency 2 - GMO did not provide its assessments of the RTO expansion plans as required by Rule 4 CSR 240-22.045(3)(C).

Deficiency 3 – GMO did not identify and describe all affiliates as required by 4 CSR 240-22.045(5).

Deficiency 4 - The Company has no current market research study that identifies the MAP, technical potential and RAP of potential demand- side resource options as required by Rule 4 CSR 240-22.050(2).

Deficiency 5 - The Company has not provided all information required by Rule 4 CSR 240-22.050. Specifically, the Company has repeatedly referenced the future results of: a) the Navigant Demand-Side Management Potential study, not available until January 15, 2013, in response to satisfying specific requirements of Rule 4 CSR 240-22.050 (1)(A)3, 1(D), 1(E), (2), (3)(G)3, (3)(G)5, (3)(I) (4)(D),4(E), 4(G) and 6(C); b) the Smart Grid Residential TOU Pilot Tariff that will not be available until after the summer of 2012 in response to satisfying the specific requirements of Rule 4 CSR 240-22.050(4)(D)1 and (4)(D)4.

Deficiency 6 - GMO has failed to design alternative resource plans to satisfy at least the objectives and priorities identified in 4 CSR 240-22.060(1) over the entire 20-year planning horizon required by Chapter 22. In particular candidate resource plans with DSM A demand-side resources do not satisfy the objective and priorities identified in 4 CSR 240-22.060(1) over the entire 20-year planning

horizon and are not consistent with the state energy policy in MEEIA of achieving all cost-effective demand-side savings.

Deficiency 7 – The only requirements of Rule 4 CSR 240-22.060 Integrated Resource Plan and Risk Analysis that are satisfied and *described and documented*¹⁹ for each of the Filing’s fourteen (14) combined/joint candidate resource plans are for integrated resource analysis and the calculation of PVRR for each plan.²⁰

Deficiency 8 – The filing requirements of Rule 4 CSR 240-22.070(2) or Rule 4 CSR 240-22.070(3) were not *described and documented* for the any of the twenty-one (21) GMO candidate resource plan.

Deficiency 9 – The only requirements of Rule 4 CSR 240-22.070 Resource Acquisition Strategy Selection that were satisfied and *described and documented* for each of the fourteen (14) combined/joint candidate resource plans are: 1) analysis and specification of ranges for critical uncertain factors,²¹ and 2) the expected value of better information related to the critical uncertain factors (CO₂, load forecast and natural gas prices).²²

Deficiency 10 – The Filing failed to comply with the Commission’s special contemporary issue “h” by not analyzing and documenting aggressive DSM portfolios without constraints and by not including analysis and documentation of demand-side investment mechanisms to implement each DSM portfolio.

List of Staff’s Concerns

A *concern* as defined by Rule 4 CSR 240-22.020(6) means concerns with the electric utility’s compliance with the provisions of Chapter 22, any major concerns with the methodologies or analyses required to be performed by Chapter 22, and anything that, while not rising to the level of a deficiency, may prevent the electric utility’s resource acquisition strategy from effectively fulfilling the objectives of Chapter 22. As a result of its limited review, Staff finds the following concerns with the Company’s Chapter 22 triennial compliance filing:

¹⁹ Rule 4 CSR 240-22.020(14): “Described and documented refers to the demonstration of compliance with each provision of this chapter. Describe means the provision of information in the technical volume(s) of the triennial compliance filing, in sufficient detail to inform the stakeholders how the utility complied with each applicable requirement of Chapter 22, why that approach was chosen, and the results of its approach. The description in the technical volume(s), including narrative text, graphs, tables, and other pertinent information shall be written in a manner that would allow a stakeholder to thoroughly assess the utility’s resource acquisitions strategy and each of its components. Document means the provision of all of the supporting information relating to the filed resource acquisition strategy pursuant to Rule 4 CSR 240-22.080(11).”

²⁰ Volume 6, page 17 of the Filing.

²¹ Volume 6, pages 9 – 12 of the Filing.

²² Volume 7, pages 17 – 19 of the Filing.

Concern A - GMO submitted energy and peak growth rates that are arithmetic averages.

Concern B – The Filing does not describe and document the analysis performed by the utility to determine whether such affiliate-built transmission is in the interest of the utility’s Missouri customers.

Concern C - GMO is constraining both the Energy Optimizer and MPower programs.

Concern D - The Chapter 22 TRC value of 0.63 for the Energy Star New Homes program indicates that this program is not cost effective and differs significantly from the MEEIA TRC value of 1.32. In addition, several other TRC values in this Chapter 22 filing differ from those contained in the Company’s MEEIA filing.

Concern E – All capacity balance sheets filed to comply with Rule 4 CSR 240-22.060(4)(B)9 include solar resources at 100% of name plate capacity. However, Staff understands that SPP is proposing a 10% solar capacity credit for its transmission planning studies.

Concern F – GMO continues to rely unnecessarily upon additional short term purchased power agreements (“PPAs”) in its 20-year electric utility resource planning instead of planning to put steel-in-the-ground. This overreliance on additional PPAs – with their inherently uncertain availability and prices - places an unnecessary risk on GMO’s ratepayers, since GMO has a Commission-approved fuel and purchased power adjustment clause.

Concern E – All capacity balance sheets filed to comply with Rule 4 CSR 240-22.060(4)(B)9 include solar resources at 100% of name plate capacity. However, Staff understands that SPP is proposing a 10% solar capacity credit for its transmission planning studies.

Concern F – GMO continues to rely unnecessarily upon additional short term purchased power agreements (“PPAs”) in its 20-year electric utility resource planning instead of planning to put steel-in-the-ground. This overreliance on additional PPAs – with their inherently uncertain availability and prices - places an unnecessary risk on GMO’s ratepayers, since GMO has a Commission-approved fuel and purchased power adjustment clause.

Concern G – KCPL and GMO do not have the proper operating agreements and/or contracts in place to correctly analyze joint company planning. In the absence of proper operating agreements and/or contracts, joint company planning must be performed in the context of a plan to merge KCPL and GMO, and no such plan to merge the two companies exists at this time.

GMO's Chapter 22 Filing

On April 9, 2012, GMO filed its triennial compliance filing in File No. EO-2012-0324, as required by the Commission's Rules in 4 CSR 240-22 Electric Utility Resource Planning. GMO requested no variances or waivers from the Commission's Chapter 22 Rules for the Filing. This is GMO's first triennial compliance filing under the Commission's revised Chapter 22 Rules, which became effective on June 30, 2011.

On December 20, 2011, GMO file its *Application for Authority to Establish A Demand-Side Programs Investment Mechanism* in File No. EO-2012-0009. This application requested Commission approval of a three-year plan for demand-side programs and a demand-side programs investment mechanism ("DSIM") under the MEEIA and the Commission's MEEIA Rules.²³ Rebuttal and surrebuttal testimony were filed on March 20, 2012 and May 10, 2012, respectively. However, hearings, originally scheduled for May 29, 30 and 31 and June 1, 2012, were reset for July 9 – 11, 2012. Then, on July 5, 2012, the hearings were continued indefinitely to allow parties the opportunity to conduct confidential settlement discussions for this case. At this time, the confidential settlement discussions are ongoing. GMO's three-year demand-side programs' plan in File No. EO-2012-0009 is very similar to its plan for demand-side resources in years 2012 – 2014 of its adopted preferred resource plan.

As part of its electric utility resource planning process, GMO gave its decision-makers a set of twenty-one (21) GMO candidate resource plans, and risk analyses for each candidate resource plans, for use during the decision-makers' strategy selection process. KCPL also conducted resource planning for the combined operation of KCPL and GMO. GMO's allocated portion of the two (2) combined company candidate resource plans with the lowest PVRR over the 20-year planning horizon resulting from the integrated resource analysis for the fourteen (14) combined/joint resource plans were included among the twenty-one (21) GMO candidate resource plans. Plan ACCG8²⁴ is GMO's allocated portion of combined company Plan AGDC2,²⁵ and Plan ACCG9, GMO's adopted preferred resource plan, is GMO's allocated portion of combined company Plan AJDC2. All of the Company's

²³ Section 393.1075, RSMo Supp. 2010, and Commission Rules 4 CSR 240-3.163, 4 CSR 240-3.164, 4 CSR 240-20.093 and 4 CSR 240-20.094.

²⁴ See Volume 1, page 20 of the Filing for the naming convention for the GMO alternative resource plans.

²⁵ See Volume 6, page 13 of the Filing for the naming convention for the alternative resource plans on a combined company basis.

candidate resource plans include renewable energy resources which can supply energy to or purchase renewable energy credits (“RECs”) for use by GMO necessary to comply with the minimum requirements contained in the Commission’s Rule 4 CSR 240-20.100 Electric Utility Renewable Energy Standard Requirements in each year of the 20-year planning horizon.

The following table contains a summary of all twenty-one (21) GMO candidate resource plans and the risk adjusted 20-year PVRR of each plan. The risk adjusted PVRR is calculated using the MIDAS[®] model accounting for the high, base and low case impacts of three critical uncertain factors²⁶ (load forecast, natural gas prices and CO₂ prices). The Company chose to not include any uncertain factors in its decision tree in the MIDAS[®] model other than the three (3) critical uncertain factors. Thus, the Company’s decision tree has just 27 branches.

PLAN	NPVRR (\$ Millions)	DELTA	Rank (L-H)	Plan Description	Resource Addition	DSM Level
ECCG1	12,220	-	1	Retire S1, S2 by Jan 2017	CT	Very Aggressive
DCCG1	12,229	8	2	Retire S1, S2 by Jan 2017	CT	Aggressive
ACCG8	12,434	213	3	Retire S1, S2 by Jan 2017 Based on Combined Co., only if M1 retained by KCP&L	CC	MEEIA
FCCG1	12,467	247	4	Retire S1, S2 by Jan 2017	CT	Stip and Agreement*
ACCG9	12,485	265	5	Retire S1, S2 by Jan 2017, based on Combined Co. - Preferred Plan	CC	MEEIA
AICG9	12,597	376	6	Retire S1, S2 by Jan 2017, S3 Biomass Usage	CC	MEEIA
ACCG1	12,627	407	7	Retire S1, S2 by Jan 2017	CT	MEEIA
ACCG7	12,671	450	8	Retire S1, S2 by Jan 2017	Dogwood & CC	MEEIA
AAAG1	12,673	452	9	No Retirements	CT	MEEIA
ACCG4	12,678	457	10	Retire S1, S2 by Jan 2017	Coal	MEEIA
AFCG1	12,680	460	11	Ret S1, S2, LR4 to NG by Jan 2017	CT	MEEIA
AECG1	12,695	474	12	Ret LR4, S1, S2 by Jan 2017	CT	MEEIA
ACCG3	12,702	481	13	Retire S1, S2 by Jan 2017	CC	MEEIA
ACCG6	12,703	482	14	Retire S1, S2 by Jan 2017	Dbl Wind & CT	MEEIA
ABCG1	12,706	486	15	Retire LR4 by Jan 2017	CT	MEEIA
BCCG1	12,716	495	16	Retire S1, S2 by Jan 2017	CT	MEEIA EE only
AAAG3	12,790	570	17	No Retirements	CC	MEEIA
ACCG5	12,927	707	18	Retire S1, S2 by Jan 2017	Nuclear	MEEIA
ADCG1	12,979	758	19	Ret S1, S2, S3 by Jan 2017	CT	MEEIA
CCCG1	13,133	913	20	Retire S1, S2 by Jan 2017	CT	MEEIA DR Only
XCCG1	13,164	944	21	Retire S1, S2 by Jan 2017	CT	Persistence Only

* Non-Unanimous Stipulation and Agreement, Case EE-2009-0237, MDNR Deficiency #1

One GMO candidate resource plan, Plan DCCG1, is designed to comply with the Commission’s special contemporary issue “h”. Plan DCCG1 has a 20-year PVRR which is \$257 million less than that of the GMO adopted preferred resource plan, Plan ACCG9. However, GMO’s decision-makers decided that “These levels of DSM are not considered to

²⁶ Rule 4 CSR 240-22.020(8): “Critical uncertain factor is any uncertain factor that is likely to materially affect the outcome of the resource planning decision.”

be realistically achievable.”²⁷ Thus, Plan DCCG1 was eliminated by GMO’s decision-makers from the preferred resource plan selection process without further analysis or explanation in the Filing. The Filing goes on to state: “The plan producing the next lowest expected value of NPVRR was chosen as the Preferred Plan.”²⁸ It should be noted that this plan is based upon resource planning in tandem with Kansas City Power & Light Company (KCP&L) and provides benefits to Missouri retail customers by planning on a combined company basis.”²⁹

Plan ACCG9 includes the MEEIA DSM programs and the following supply-side capacity additions or retirements: additions of 19 MW of new solar, 350 MW of new wind, 450 MW of new combined cycle and the retirement of 99 MW of coal (Sibley Units 1 and 2). The PVRR of GMO’s adopted preferred resource plan is \$12.485 billion.

Following are the GMO adopted resource acquisition plan (with wind and solar additions based on installed capacity) and the capacity balance sheet³⁰ (with wind additions based on 8% capacity credit by the Southwest Power Pool) for GMO’s adopted preferred resource plan, Plan ACCG9.

²⁷ Volume 1, page 25 of the Filing.

²⁸ This is not a correct statement, since GMO’s adopted preferred resource plan, Plan ACCG9, has a 20-year PVRR of \$12,485 million, while Plan ACCG8 – GMO’s allocated portion of combined company Plan AGDC2 – has a 20-year PVRR of \$12,434 million; and Plan FCCG1 has a 20-year PVRR of \$12,467 million.

²⁹ Volume 1, page 25 of the Filing.

³⁰ Volume 6, Table 43 on page 120 of the Filing.

Year	CC (MW)	Solar (MW)	Wind (MW)	MEEIA DSM (MW)	Retire (MW)	Existing Capacity (MW)
2012	-			57		2,210
2013	-			76		2,218
2014	-			95		2,143
2015	-			112		2,143
2016	-			131		2,143
2017	-			149	99	2,078
2018	-	10		155		2,078
2019	-		150	172		2,078
2020	-			189		2,078
2021	300	6	100	206		2,078
2022	-			222		2,078
2023	-	3		239		2,078
2024	-		100	255		2,078
2025	-			274		2,078
2026	-			291		2,078
2027	-			309		2,078
2028	150			326		2,078
2029	-			344		2,078
2030	-			363		2,078
2031	-			381		2,078

This Capacity Balance Sheet Is Deemed Highly Confidential In Its Entirety

The following capacity balance sheet is for Plan AJDC2, which is the adopted preferred resource plan for the combined company electric utility resource planning. Plan ACCG9 is GMO's allocated portion of Plan AJDC2. Addendum A contains the fourteen (14) capacity balance sheets for each of the fourteen (14) combined company candidate resource plans.³¹

³¹ On August 28, 2012 Staff received from GMO an Excel file with fourteen (14) capacity balance sheets for each of the fourteen (14) combined company candidate resource plans. These capacity balance sheets were not included in the Filing for the combined company candidate resource plans as required by Rule 4 CSR 240-22.060(4)(B)9.

**This Capacity Balance Sheet
Is Deemed
Highly Confidential
In Its Entirety**

As part of its Filing, GMO requested that the “Commission acknowledge,³² under 4 CSR [240]-22.080(17), that it is reasonable for GMO to plan on a joint company basis (GMO and Kansas City Power & Light Company) as evidenced by the significant savings to retail customers from joint planning.”³³ The Filing indicates that the 20-year PVRR “savings” is \$142 million³⁴ for GMO’s customer as a result of the Company’s joint planning. Also as part of its Filing, GMO requested that the Commission find that GMO’s preferred resource plan is reasonable as of its filing.³⁵

Linkage between Chapter 22 Rules, the MEEIA and MEEIA Rules

Staff performed its review of the Filing in the context of the Commission’s revised Chapter 22 Rules, the MEEIA and the Commission’s MEEIA Rules. Staff performed its review of the Filing in this way, because the policy objectives of Chapter 22 and of MEEIA are inseparable for electric utilities, since 4 CSR 240-22.010(2) states:

The fundamental objective of the resource planning process at electric utilities *shall* be to provide the public with energy services that are safe, reliable, and efficient, at just and reasonable rates, in compliance with all legal mandates, and *in a manner that serves the public interest and is consistent with state energy and environmental policies.* ...
(Emphasis added)

And MEEIA establishes the following *state energy policy* for valuing demand-side resources and supply-side resources and for the cost recovery of these resources for Missouri’s electrical corporations³⁶ in Section 393.1075.3 and .4:

3. *It shall be the policy of the state to value demand-side investments equal to traditional investments in supply and delivery infrastructure and allow*

³² Rule 4 CSR 240-22.020(1): “Acknowledgment is an action the commission may take with respect to the officially adopted resource acquisition strategy or any element of the resource acquisition strategy including the preferred resource plan. Acknowledgement means that the *commission finds the preferred resource plan, resource acquisition strategy, or the specified element of the resource acquisition strategy to be reasonable at a specific date*, typically the date of the filing of the utility’s Chapter 22 compliance filing or the date that acknowledgment is given. Acknowledgment may be given in whole, in part, or not at all. Acknowledgment shall not be construed to mean or constitute a finding as to the prudence, pre-approval, or prior commission authorization of any specific project or group of projects.” (Emphasis added)

³³ Cover letter of Roger W. Steiner dated April 9, 2012 for the Filing in File No. EO-2012-0324.

³⁴ \$142 million is the 20-year PVRR difference between Plan ACCG1 (PVRR of \$12,627 million) and Plan ACCG9 (PVRR of \$12,485 million).

³⁵ Volume 8, page 26 of the Filing.

³⁶ Rule 4 CSR 240-22.020(16): “Electric utility or utility mean any electrical corporation as defined in section 386.020, RSMo, which is subject to the jurisdiction of the commission.”

recovery of all reasonable and prudent costs of delivering cost-effective demand-side programs. In support of this policy, the commission shall:

- (1) Provide timely cost recovery for utilities;
 - (2) Ensure that utility financial incentives are aligned with helping customers use energy more efficiently and in a manner that sustains or enhances utility customers' incentives to use energy more efficiently; and
 - (3) Provide timely earnings opportunities associated with cost-effective measurable and verifiable efficiency savings.
4. The commission shall permit electric corporations to implement commission-approved demand-side programs proposed pursuant to this section with a goal of achieving all cost-effective demand-side savings.
(Emphasis added)

Although electric utilities are not required to request Commission approval of demand-side programs and a DSIM under MEEIA and the Commission's MEEIA rules, electric utilities are required to comply with the Commission's Chapter 22 Rules which establish that the fundamental objective of the electric utility resource planning process at each electric utility *shall* be to provide the public with energy services that are safe, reliable, and efficient, at just and reasonable rates, in compliance with all legal mandates, and *in a manner that serves the public interest and is consistent with state energy and environmental policies*. Because MEEIA establishes state energy policy, each electric utility is required – as part of its electric utility resource planning - to develop candidate resource plans and to analyze and document DSIM's which can allow the electric utility to make reasonable progress toward an expectation that the electric utility can achieve a goal of all cost-effective demand-side savings.³⁷

It is important to also note the linkages between MEEIA Rules and Chapter 22 Rules included in Rule 4 CSR 240-20.094(3)(A):

(A) For demand-side programs and program plan that have a total resource cost test ratio greater than one (1), the commission shall approve demand-side programs or program plans, and annual demand and energy savings targets for each demand-side program it approves, provided it finds that the utility has met the filing and submission requirements of 4 CSR 240-3.164(2) and the demand-side programs and program plans-

1. Are consistent with a goal of achieving all cost-effective demand-side savings;
2. Have reliable evaluation, measurement, and verification plans; and

³⁷ See Rule 4 CSR 240-20.094(2) "Guideline to Review Progress Toward an Expectation that the Electric Utility's Demand-Side Programs Can Achieve a Goal of All Cost-Effective Demand-Side Savings."

3. Are included in the electric utility's preferred plan or have been analyzed through the integration process required by 4 CSR 240-22.060 to determine the impact of the demand-side programs and program plans on the net present value of revenue requirements of the electric utility.
(Emphasis added)

Of less significance - but still important - is the linkage between Chapter 22 Rules and MEEIA Rules in 4 CSR 240-22.070(8):

Evaluation of Demand-Side Programs and Demand-Side Rates. The utility shall describe and document its evaluation plans for all demand-side programs and demand-side rates that are included in the preferred resource plan selected pursuant to 4 CSR 240-22.070(1). Evaluation plans required by this section are for planning purposes and are separate and distinct from the evaluation, measurement, and verification reports required by 4 CSR 240-3.163(7) and 4 CSR 240-20.093(7); nonetheless, the evaluation plan should, in addition to the requirements of this section, include the proposed evaluation schedule and the proposed approach to achieving the evaluation goals pursuant to 4 CSR 240-3.163(7) and 4 CSR 240-20.093(7). The evaluation plans for each program and rate shall be developed before the program or rate is implemented and shall be filed when the utility files for approval of demand-side programs or demand-side program plans with the tariff application for the program or rate as described in 4 CSR 240-20.094(3).
(Emphasis added)

In addition, on October 19, 2011, the Commission ordered KCPL and GMO³⁸ to comply with the following “special contemporary issue” in each electric utility’s April 1, 2012 triennial compliance filing or annual update filing:

Analyze and document aggressive DSM portfolios without constraints.
Include analysis and documentation of demand-side investment mechanisms necessary to implement each DSM portfolio.

Request for Acknowledgement of Joint Company Planning

Staff recommends that the Commission not acknowledge that it is reasonable for GMO and KCPL to plan on a joint company basis as requested by GMO in this case for the following three reasons.

First, while the 20-year NPVRR was calculated for each of the fourteen (14) combined/joint candidate resource plans does indicate that some savings may be possible

³⁸ Commission October 19, 2011 order *In The Matter of a Determination of Special Contemporary Resource Planning Issues to be Addressed by KCP&L Greater Missouri Operations Company in its Next Triennial Compliance Filing or Next Annual Update Report* in File No. EO-2012-0042.

through joint planning, Staff finds the only requirements of Rule 4 CSR 240-22.060 Integrated Resource Plan and Risk Analysis and Rule 4 CSR 240-22.070 Resource Acquisition Strategy Selection that were satisfied and *described and documented* for each of the fourteen (14) combined/joint candidate resource plans are: 1) integrated resource analysis and the calculation of PVRR for each plan,³⁹ 2) analysis and specification of ranges for critical uncertain factors,⁴⁰ and 3) the expected value of better information related to the critical uncertain factors (CO₂, load forecast and natural gas prices).⁴¹ Staff notes that although the Company performed the analysis and specification of ranges of critical uncertain factors required by Rule 4 CSR 240-22.070(2) and the analysis required by Rule 4 CSR 240-22.070(3) related to the expected value of better information for the fourteen (14) combined/joint candidate resource plans, it did not comply with the requirements of Rule 4 CSR 240-22.070(2) regarding the identification and documentation of ranges of critical uncertain factors and Rule 4 CSR 240-22.070(3) regarding the documentation and quantification of expected value of better information for any of the twenty-one (21) GMO candidate resource plans.

Secondly – and very importantly - Staff finds that none of the fourteen (14) combined/joint candidate resource plans comply with the Commission-ordered special contemporary issue “h”:

Analyze and document aggressive DSM portfolios without constraints.
Include analysis and documentation of demand-side investment mechanisms necessary to implement each DSM portfolio.

The Commission ordered GMO to comply with special contemporary issue “h” so that the Filing would contain information and analyses to inform the Commission on GMO’s DSM programs *and investment mechanisms which could be consistent with the state energy policy of MEEIA*. Staff finds no evidence in the Filing that GMO included any “aggressive DSM portfolios without constraints” among the fourteen (14) combined/joint candidate resource plans and no evidence of any “analysis and documentation of demand-side investment mechanisms necessary to implement each DSM portfolio.”

³⁹ Volume 6, page 17 of the Filing.

⁴⁰ Volume 6, pages 9 – 12 of the Filing.

⁴¹ Volume 7, pages 17 – 19 of the Filing.

The Company asserts that it has performed joint electric utility resource planning, but it clearly has not.

Lastly, because GMO is a separate company from KCPL, GMO is required by Commission rules to perform its own electric utility resource planning.⁴² Performing combined/joint company electric utility resource planning can have significant value for GMO and KCPL, if it is performed correctly.

Staff recently filed testimony in GMO's current general rate proceeding (File No. ER-2012-0175) presenting its concerns regarding the capacity planning for KCPL and GMO. First, Staff witness Lena M. Mantle discusses her concerns with the joint (KCPL and GMO) resource planning of capacity and resources in Staff's Revenue Requirement Cost of Service Report in File No. ER-2012-0175 and makes the following recommendation to the Commission:⁴³

Staff recommends that the Commission not allow GMO and KCPL to conduct joint resource planning of capacity and resources. If the Commission considers allowing joint resource planning, before the Commission allows KCPL and GMO to share capacity resources or engage in capacity resource planning together, it should require: 1) GMO and KCPL to file a detailed proposal for allocating capacity and energy between KCPL and GMO, and if GMO's MOS and L&P rate districts are not eliminated, between GMO's MPS and L&P rate districts; and 2) KCPL and GMO to file a definitive plan for merging KCPL and GMO into one electrical corporation.

When concluding her testimony, Ms. Mantle offers:⁴⁴

"An alternative available to KCPL and GMO may involve KCPL and GMO entering into a long-term contract for KCPL to supply capacity and energy to GMO after GMO issues a Request for Proposal ("RFP") for a long term PPA and evaluates the responses it receives. If KCPL's bid would be the low cost solution, a contract between KCPL and GMO would have to meet the requirements of 4 CSR 240-20.015 Affiliate Transaction rule."

The need for specific processes and procedures for "combined utility planning" is pointed out in Staff's concerns discussed by Staff witness Matthew J. Barnes regarding the joint operation of the KCPL and GMO systems by KCPL with respect to ** _____

⁴² See Rule 4 CSR 240-22.080(1) and (1)(A).

⁴³ See page 246, lines 14 – 21 of Staff's Revenue Requirement Cost of Service Report filed on August 9, 2012 in file No. ER-2012-0175.

⁴⁴ See page 248, lines 4 – 8 of Staff's Revenue Requirement Cost of Service Report filed on August 9, 2012 in file No. ER-2012-0175.

____ ** due to the Missouri River flood. ** _____

____ ** Staff's analysis of information in GMO's monthly reports as required by Rule 4 CSR 240-3.190(1)(E) concluded that much of the energy KCPL purchased through the ** _____ ** contracts was sold to GMO at SPP market prices. Staff's analysis concludes that if GMO had entered into the ** _____ ** contracts itself instead of KCPL, then GMO would have saved \$3.9 million⁴⁵ in energy costs. Similarly, had KCPL and GMO entered into a long-term contract for KCPL to supply capacity and energy to GMO as a result of a competitive bidding process, then GMO may have saved in energy costs.

Thus, Staff has many reasons to recommend that the Commission not acknowledge that it is reasonable for KCPL and GMO to plan on a joint company basis as requested by GMO.

GMO's Capacity Balance Sheets Continue to Reflect an Overreliance on Additional Purchased Power Agreements ("PPAs")

Staff continues to be concerned about GMO's overreliance – during its 20-year electric utility resource planning – upon short term PPAs.

GMO's capacity balance sheets in the Filing continue to reflect an overreliance on PPAs in order to meet the 12% capacity margin requirements of the Southwest Power Pool ("SPP"). Graph 1 below contains the additional PPAs in the capacity balance sheets of GMO's candidate resource plans expressed in megawatts ("MW"). Graph 2 below contains the additional PPA in the capacity balance sheets of GMO's candidate resource plans expressed in percent (%) of required capacity. GMO's required capacity in 2012 is ** _____ ** and increases year-by-year to ** _____ ** in 2031. Required capacity includes the 12% capacity margin requirement of SPP. The dotted line in Graph 1 and Graph 2 is for the adopted preferred resource plan, Plan ACCG9, and the dashed line in Graph 1 and Graph 2 is for Plan ACCG8. Plan ACCG9 is GMO's allocated portion of combined company Plan AJDC2, and Plan ACCG8 is GMO's allocated portion of combined company Plan AGDC2.

⁴⁵ See page 275, line 23 of Staff's Rate Design Cost of Service Report filed on August 9, 2012 in File No. ER-2012-0175.

Graph 1
And
Graph 2

Are Deemed

Highly Confidential

In Their Entirety

Graph 1 illustrates that GMO's adopted preferred resource plan, Plan ACCG9, includes additional PPAs that range from ** _____ ** for years 2014 through 2020.

Graph 2 illustrates that GMO's adopted preferred resource plan, Plan ACCG9, includes additional PPAs as a percent of required capacity that range from ** _____ **for years 2014 through 2020.

Addendum B is a "History of Staff's Position Regarding GMO's Capacity Additions Since 2000" and Addendum C is the Company's capacity balance sheet for its adopted preferred resource plan in GMO's 2009 Chapter 22 triennial compliance filing (File No. EE-2009-0237). Staff has contended since 2004 that GMO's reliance on short-term PPAs is short-sighted. This long term plan shows a continued overreliance on short-term additional PPAs for an extended period of time. This reliance on short-term PPAs is unnecessarily risky for ratepayers when compared to a plan to putting steel-in-the-ground. This is especially true for GMO's customers, since GMO has a Commission-approved fuel and purchased power adjustment clause ("FAC") in which customers are responsible for 95% of the difference between GMO's actual total fuel and purchased power costs plus emissions allowance costs less off-system sales revenue and GMO's base energy costs (which are billed to customers as a result of rates set by the Commission in the Company's last general rate proceeding).

Failure to Comply With the Commission's Special Contemporary Issue "h"

Two GMO candidate resource plans included DSM resources which are more aggressive than the MEEIA DSM resources in the Company's adopted preferred resource plan, Plan ACCG9. Among the twenty-one (21) GMO candidate resource plans, Plan DCCG1 included "aggressive DSM" portfolio" and Plan ECCG1 included "very aggressive DSM" portfolio. Plan DCCG1 and Plan ECCG1 were both developed to satisfy the requirements of the Commission-ordered special contemporary issue "h". However, the Filing contains no "analysis or documentation of demand-side investment mechanisms necessary to implement the "aggressive DSM" portfolio or the "very aggressive DSM" portfolio as required by special contemporary issue "h" other than GMO's statement of "The necessary demand-side investment mechanism is described in case number EO-2012-0009 for Kansas City Power &

Light's Greater Missouri Operations.”⁴⁶ GMO has not complied with the Commission's special contemporary issue “h” for its GMO stand-alone company electric utility resource planning or for its combined company electric utility resource planning.

Compliance with the Commission's special contemporary issue “h” would have provided valuable insight to the Commission, parties to this case and the Company regarding demand-side programs and demand-side investment mechanisms which may be included in a future GMO MEEIA application.

The Company's failure to analyze and document demand-side investment mechanisms necessary to implement the “aggressive DSM” portfolio and the “very aggressive DSM” portfolio is a significant deficiency in the Filing.

Failure to Design Alternative Resource Plans Which Are Consistent with State Energy Policy

Rule 4 CSR 240-22.060(1) states the resource planning objective as:

“The utility shall design alternative resource plans to satisfy at least the objectives and priorities identified in 4 CSR 240-22.010(2). The fundamental objective of the resource planning process at electric utilities shall be to provide the public with energy services that are safe, reliable, and efficient, at just and reasonable rates, in compliance with all legal mandates, and in a manner that serves the public interest and is *consistent with state energy and environmental policies*.”⁴⁷

(Emphasis added)

Because MEEIA established *state energy policy* of the State of Missouri, each electric utility is required – as part of its electric utility resource planning - to develop candidate resource plans and to analyze and document DSM's which are *consistent with state energy policy* and, therefore, can allow the electric utility to make reasonable progress toward an expectation that the electric utility can achieve MEEIA's goal of all cost-effective demand-side savings.⁴⁸

Chapter 22 requires that electric utility resource planning be performed for a planning horizon of at least twenty (20) years.⁴⁹ GMO's “MEEIA DSM” portfolio in the Filing

⁴⁶ Volume 8, page 12 of the Filing.

⁴⁷ Rule 4 CSR 240-22.010(2)

⁴⁸ See Rule 4 CSR 240-20.094(2) “Guideline to Review Progress Toward an Expectation that the Electric Utility's Demand-Side Programs Can Achieve a Goal of All Cost-Effective Demand-Side Savings.”

⁴⁹ Rule 4 CSR 240-22.020(43) “Planning horizon means a future time period of at least twenty (20) years duration over which the cost and benefits of alternative resource plans are evaluated.”

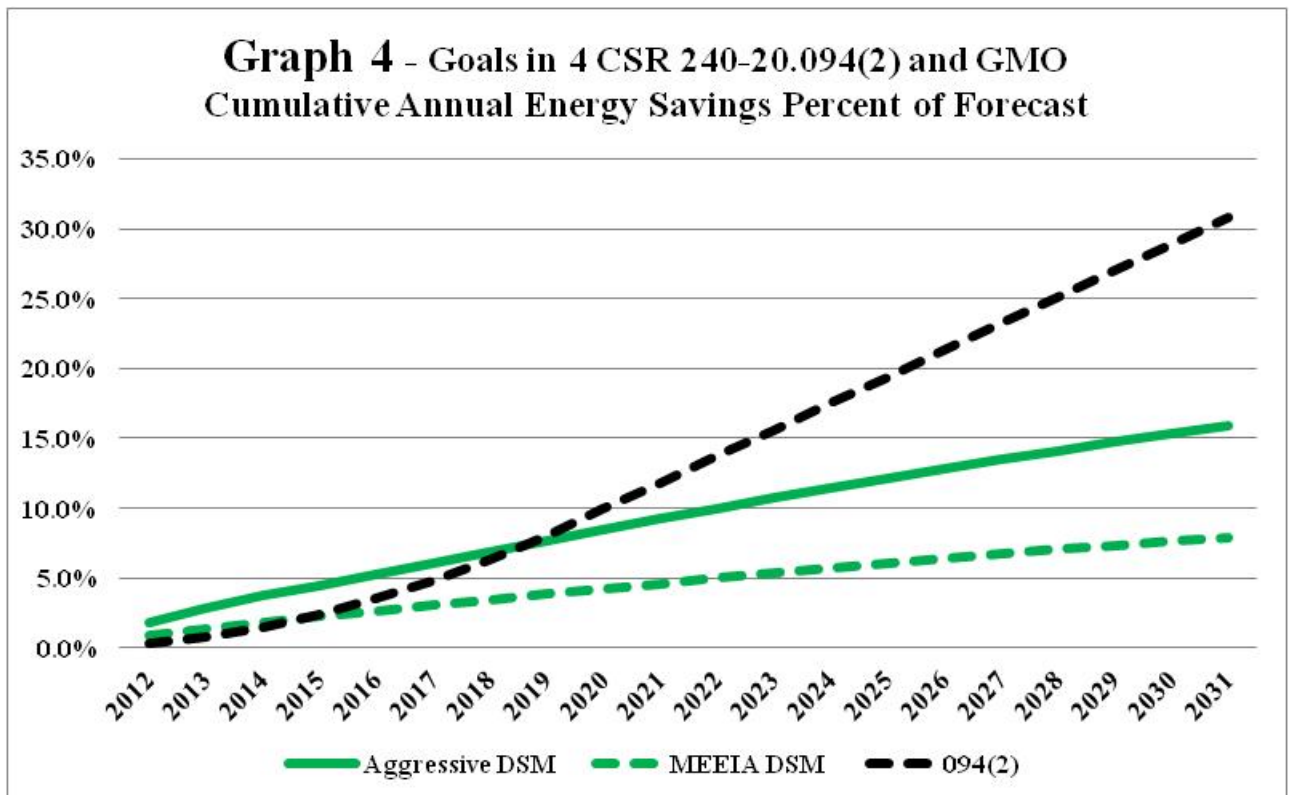
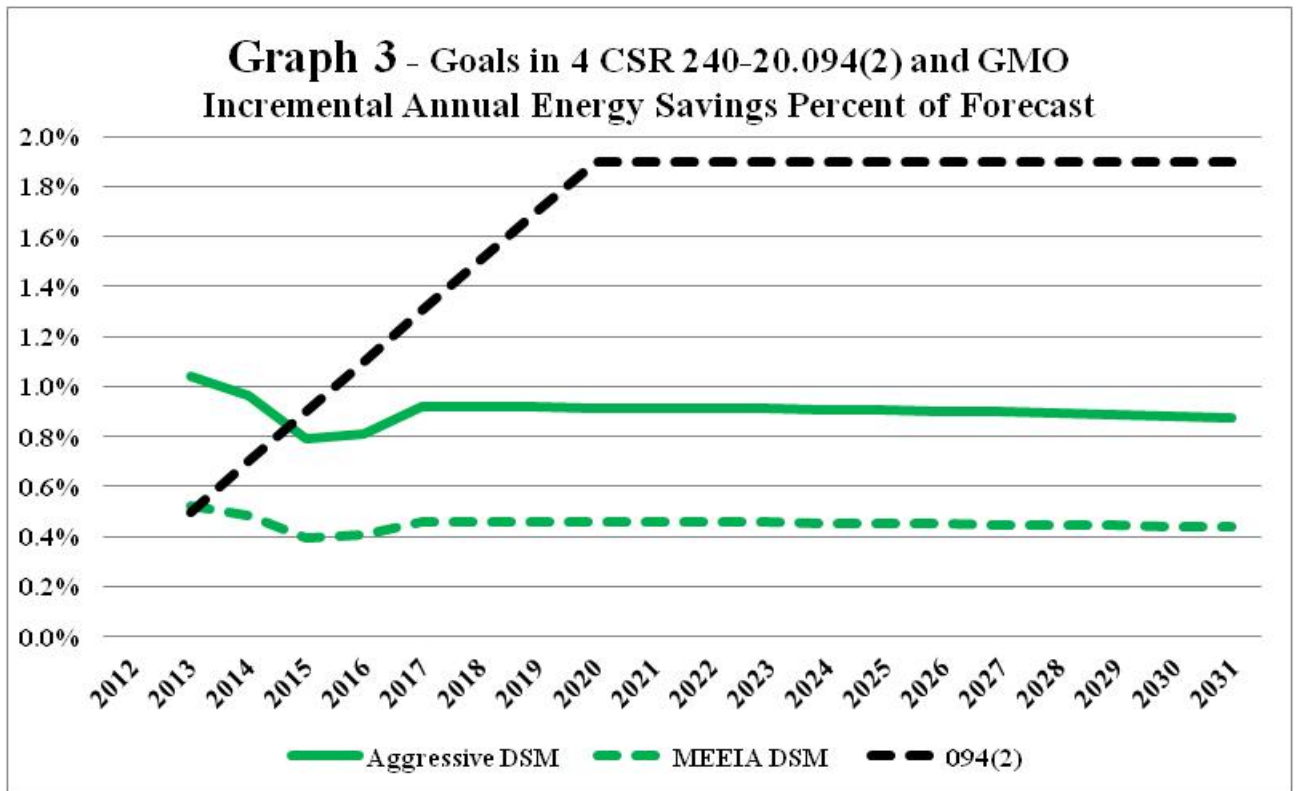
consists of GMO's three-year MEEIA DSM portfolio in the Company's MEEIA filing, and does not "ramp up" the incremental annual energy savings after the first three years for the MEEIA program plan.

Staff contends that compliance with Chapter 22 requires that electric utility resource planning analyze, and describe and document: 1) demand-side resources that can achieve a goal of all cost-effective demand-side savings for the entire 20-year planning horizon, and 2) investment mechanisms necessary for the electric utility to implement cost-effective demand-side resources that can achieve a goal of all cost-effective demand-side savings.

Graph 3 and Graph 4 below illustrate that for GMO's MEEIA DSM and "aggressive DSM" portfolios, the incremental annual energy savings as a percent of its energy load forecast and cumulative annual energy savings as a percent of its energy load forecast are significantly less than the corresponding "soft goals"⁵⁰ in Rule 4 CSR 240-20.094(2). The "soft goals" in Rule 4 CSR 240-20.094(2) are representative of the incremental annual energy savings and the cumulative annual energy savings contained in the energy efficiency resource standards that electric utilities of many other states are required to meet. The soft goals for annual energy and demand savings in Rule 4 CSR 240-20.094(2) and the annual realistic achievable potential energy and demand savings as determined through the utility's DSM market potential study are used by the Commission "as a guideline to review progress toward an expectation that the electric utility's demand-side programs can achieve a goal of all cost-effective demand-side saving."⁵¹

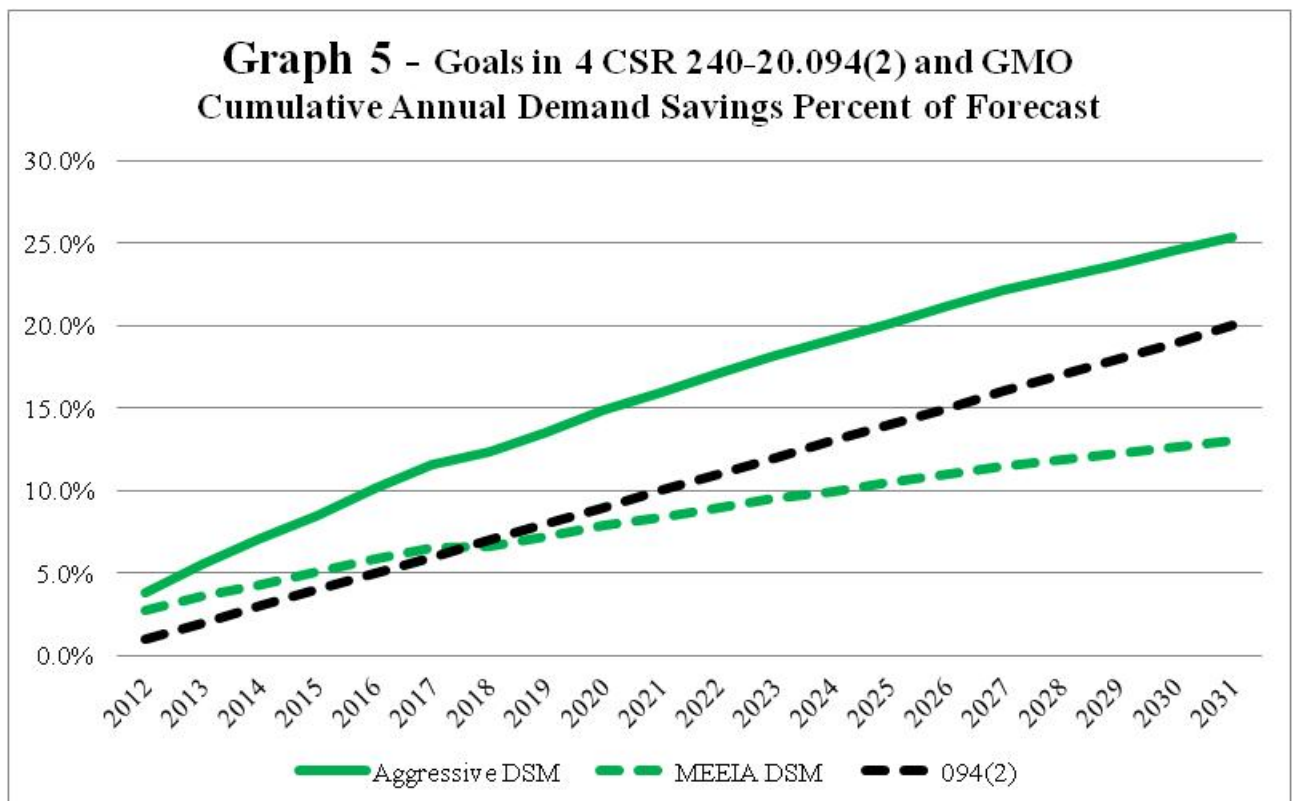
⁵⁰ In its response to Comment # 7 in its February 9, 2011 *Order of Rulemaking* in which the Commission adopted Rule 4 CSR 240-20.094, the Commission provided: "Rulemaking is an exercise of the Commission's quasi-legislative power. Interim goals are well within the rulemaking authority granted to the commission in §393.1075.11. An administrative agency has reasonable latitude regarding what methods and procedures to adopt in carrying out its statutory duties. The legislative delegation of powers and duties includes by implication everything necessary to carry out the power or duty and make it effectual or complete. "Where the grant of power is clear, the detail for its exercise need be given only within practical limits. The rest may be left to the administrative agency delegated the duty to accomplish the legislative purpose." *AT&T v. Wallemann*, 827 S.W.2d 217, 224-225 (Mo. App. WD 1992). Moreover, the "soft-goals" at issue are guidelines to review progress and not mandatory."

⁵¹ Rule 4 CSR 240-20.094(2)(A).



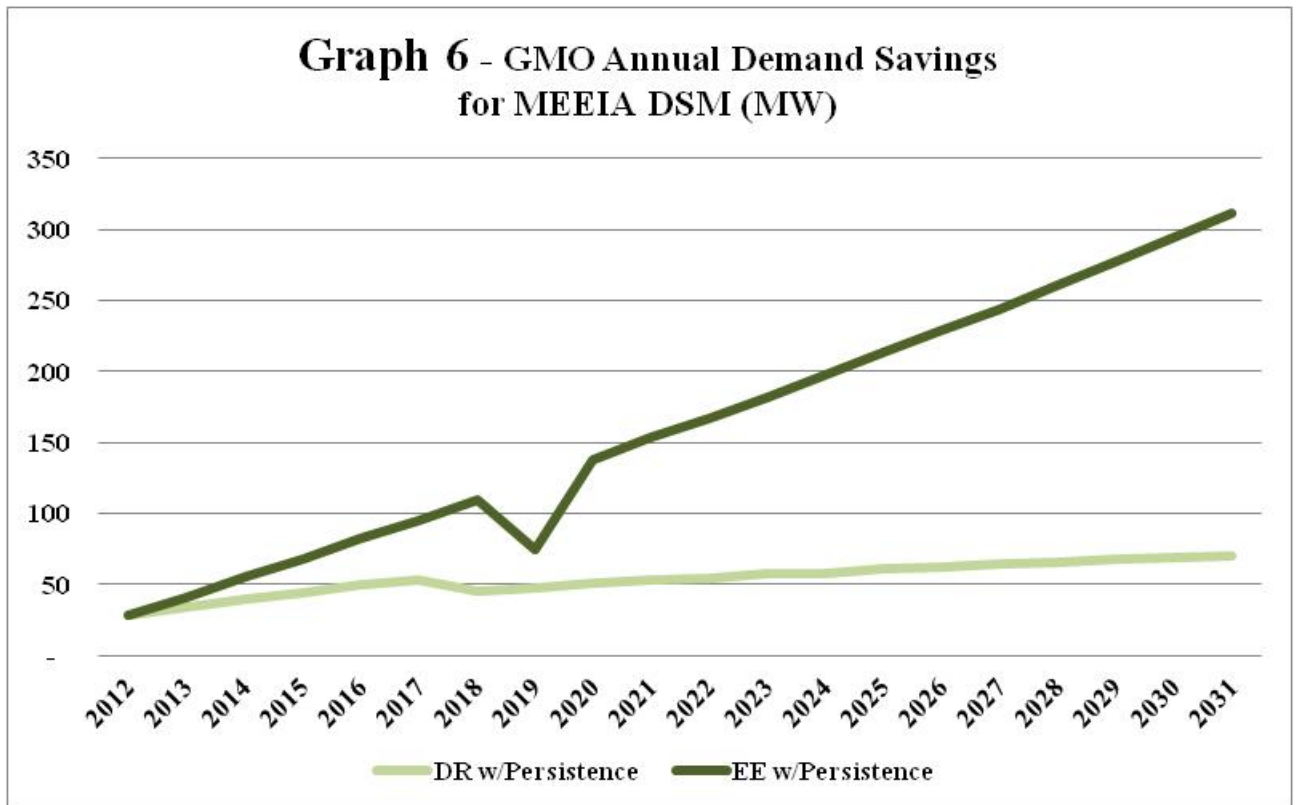
The above graphs illustrate that: 1) incremental annual energy savings for the MEEIA DSM portfolio (0.5%) and the “aggressive DSM” portfolio (0.9%) do not increase from year-to-year throughout the 20-year planning horizon while the incremental annual energy savings for the soft goals in Rule 4 CSR 240-20.094(2) increase from 0.5% in 2013 to 1.9% in 2020 and are constant at 1.9% for the period 2021 to 2031, 2) cumulative annual energy savings in 2020 is only 4.2% and 8.4% for MEEIA DSM and “aggressive DSM”, respectively; while the 2020 cumulative annual energy savings in the soft goal in Rule 4 CSR 240-22.094(2) is 9.9%.

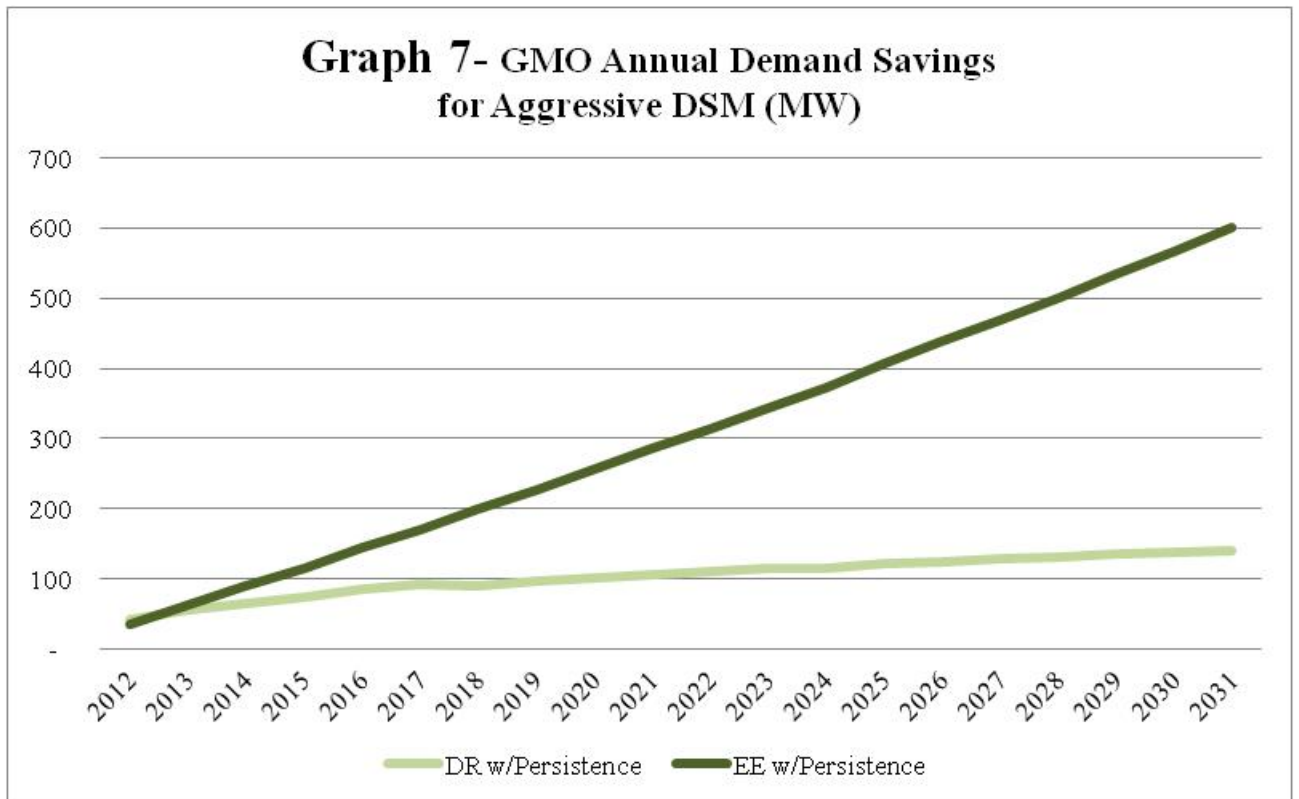
Graph 5 below illustrates that for GMO’s MEEIA DSM portfolio the cumulative annual demand savings as a percent of GMO’s peak demand forecast are greater than the corresponding “soft goals” in Rule 4 CSR 240-20.094(2) from 2013 to 2017 and then lag below the “soft goals” in Rule 4 CSR 240-20.094(2) for the rest of the 20-year planning horizon. The “aggressive DSM” portfolio has cumulative annual demand savings as a percent of peak demand forecast which are greater than the “soft goals” in 4 CSR 240-20.094(2) for the entire 20-year planning horizon.



A more in depth analysis of the cumulative annual demand savings from energy efficiency programs and from demand response programs was performed by Staff and

illustrates that GMO's energy efficiency programs continue to contribute much more of the incremental and cumulative annual demand savings year-by-year over the 20-year planning horizon than do the demand response programs as shown below in Graphs 6 and 7.





These graphs show that GMO has failed to design alternative resource plans to satisfy at least the objectives and priorities identified in Rule 4 CSR 240-22.060(1) over the entire 20-year planning horizon required by Chapter 22. In particular candidate resource plans with MEEIA DSM demand-side resources do not satisfy the objective and priorities identified in Rule 4 CSR 240-22.060(1) over the entire 20-year planning horizon and are not consistent with the state energy policy in MEEIA to achieve all cost-effective demand-side savings.

This deficiency alone makes it impossible for GMO to achieve the fundamental objective of Chapter 22 and is a significant deficiency in the Filing.

The Company is in the process of performing a DSM market potential study for its service territory.⁵² Staff and other parties are providing advice to GMO and its consultant, Navigant Consulting, Inc., on various aspects of the DSM market potential study which is scheduled to be final in January 2013. The GMO DSM market potential study will provide valuable information about demand-side programs which can achieve the maximum achievable potential (“MAP”) and realistic achievable potential (“RAP”) for demand-side

⁵² See Appendix 5A of the Filing for the Statement of Work for the Navigant contract.

resources in the GMO service territory. The MAP and RAP portfolios should then be used to update the Company's integrated resource analysis for the annual update filing in April 2013.

Importance of April 1, 2013 Annual Update Filing

The discussion in this section of the Staff Report is intended to illustrate the importance of including the currently ongoing DSM market potential study and the Mega Study in the integrated resource analyses for the Company's April 1, 2013 annual update filing.

Information in File Nos. EO-2012-0323 and EO-2012-0324 indicates that reductions in the 20-year PVRR of \$108 million and \$256 million can be realized for KCPL and GMO, respectively, should the DSM D and "aggressive DSM" - and not DSM A and MEEIA DSM – be included in the adopted preferred resource plans of the respective companies. Should KCPL and GMO develop a comprehensive plan to merge the two companies, the total benefits from DSM D and "aggressive DSM" demand-side resources and from planning on a combined/joint company basis is estimated to be \$515 million – *assuming* the benefits from combined planning included in the Filing of \$9 million for KCPL and \$142 million for GMO.

Estimate of PVRR Reduction With Aggressive DSM or Similar RAP Portfolio

Preferred Resource Plans With DSM A - Allocated From Combined Planning

Table 26: Alternative Resource Plan AGEK9

Year	CC's (MW)	Solar (MW)	Wind (MW)	DSM A (MW)	Retire (MW)	Existing Capacity (MW)
2012	-	-	-	89	-	4,492
2013	-	-	-	89	-	4,553
2014	-	-	-	169	-	4,609
2015	-	-	-	185	-	4,602
2016	-	-	100	195	170	4,355
2017	-	-	-	213	-	4,397
2018	-	11	-	201	-	4,397
2019	-	-	-	223	-	4,397
2020	-	-	200	242	-	4,397
2021	-	6	-	215	-	4,397
2022	-	-	-	279	-	4,397
2023	-	3	100	295	-	4,397
2024	-	-	-	312	-	4,341
2025	-	-	-	328	-	4,341
2026	-	-	-	346	-	4,341
2027	-	-	-	363	-	4,341
2028	150	-	-	380	-	4,341
2029	-	-	-	397	-	4,341
2030	-	-	-	415	-	4,341
2031	-	-	-	433	-	4,341

Lowest Cost Plans With Aggressive DSM Portfolios -NOT Combined Planning

Table 31: Alternative Resource Plan DCEK1

Year	CC's (MW)	Solar (MW)	Wind (MW)	Aggressive DSM (MW)	Retire (MW)	Existing Capacity (MW)
2012	-	-	-	89	-	4,492
2013	-	-	-	89	-	4,553
2014	-	-	-	248	-	4,609
2015	-	-	-	280	-	4,602
2016	-	-	100	303	510	4,057
2017	-	-	-	335	-	4,057
2018	-	11	-	341	-	4,057
2019	-	-	-	385	-	4,057
2020	-	-	200	423	-	4,057
2021	-	6	-	464	-	4,057
2022	-	-	-	497	-	4,057
2023	-	3	100	529	-	4,057
2024	-	-	-	562	-	4,001
2025	-	-	-	596	-	4,001
2026	-	-	-	631	-	4,001
2027	-	-	-	665	-	4,001
2028	-	-	-	698	-	4,001
2029	-	-	-	734	-	4,001
2030	-	-	-	769	-	4,001
2031	154	-	-	805	-	4,001

Table 21: Alternative Resource Plan ACCG9

Year	CC's (MW)	Solar (MW)	Wind (MW)	MEEIA DSM (MW)	Retire (MW)	Existing Capacity (MW)
2012	-	-	-	57	-	2,210
2013	-	-	-	76	-	2,218
2014	-	-	-	95	-	2,143
2015	-	-	-	112	-	2,143
2016	-	-	-	131	-	2,143
2017	-	-	-	149	99	2,078
2018	-	10	-	165	-	2,078
2019	-	-	150	172	-	2,078
2020	-	-	-	189	-	2,078
2021	300	6	100	206	-	2,078
2022	-	-	-	222	-	2,078
2023	-	3	-	239	-	2,078
2024	-	-	100	255	-	2,078
2025	-	-	-	274	-	2,078
2026	-	-	-	291	-	2,078
2027	-	-	-	309	-	2,078
2028	150	-	-	326	-	2,078
2029	-	-	-	344	-	2,078
2030	-	-	-	363	-	2,078
2031	-	-	-	381	-	2,078

Table 28: Alternative Resource Plan DCCG1

Year	CC's (MW)	Solar (MW)	Wind (MW)	Aggressive DSM (MW)	Retire (MW)	Existing Capacity (MW)
2012	-	-	-	79	-	2,210
2013	-	-	-	117	-	2,218
2014	-	-	-	156	-	2,143
2015	-	-	-	190	-	2,143
2016	-	-	-	229	-	2,143
2017	-	-	-	263	99	2,078
2018	-	10	-	290	-	2,078
2019	-	-	150	322	-	2,078
2020	-	-	-	358	-	2,078
2021	-	6	100	392	-	2,078
2022	-	-	-	424	-	2,078
2023	-	3	-	459	-	2,078
2024	-	-	100	490	-	2,078
2025	-	-	-	527	-	2,078
2026	-	-	-	563	-	2,078
2027	-	-	-	598	-	2,078
2028	-	-	-	631	-	2,078
2029	-	-	-	669	-	2,078
2030	154	-	-	706	-	2,078
2031	-	-	-	742	-	2,078

	(A)
NPVRR	
(\$ Millions)	
AGEK9	\$ 20,830
ACCG9	\$ 12,485
Total	\$ 33,315

Benefits from Combined Planning
Including \$9 million for KCPL
and \$142 million for GMO } \$ 151

	Benefits of Aggressive DSM	
	(B)	(A) minus (B)
NPVRR		
(\$ Millions)		
DCEK1	\$ 20,722	\$ 108
DCCG1	\$ 12,229	\$ 256
Total	\$ 32,951	\$ 364

Assumed Benefits from Combined Planning \$ 151

Potential Benefits of Aggressive DSM \$ 515

1.5%

The potential benefits of “aggressive DSM” and DSM D of \$515 million in the above analysis is also equal to the PVRR for the KCPL Plan AGEK1 with DSM A (\$20,839 million) minus the PVRR for KCPL Plan DCEK1 with DSM D (\$20,722 million) plus the PVRR for GMO Plan ACCG1 with MEEIA DSM (\$12,627 million) minus the PVRR for GMO Plan DCCG1 with “aggressive DSM” (\$12,229 million) – where all of these candidate resource plans are company specific only and not combined company plans.

It is also very important to recognize the following changes in the supply-side resources of KCPL and GMO should the utilities implement their DSM D and “aggressive DSM” demand-side resources, respectively. Specifically, should GMO select its Plan DCCG1 (with “aggressive DSM”) as its preferred resource plan, the 300 MW natural gas combined cycle plant in 2021 and the 150 MW natural gas combined cycle plant in 2028 in Plan ACCG9 would not be needed, and, instead, would be replaced by a 154 MW natural gas combined cycle plant in 2030. Similarly, the KCPL adopted preferred resource plan (with DSM A) includes the retirement of the 170 MW Montrose Unit 1 in 2016 to avoid retrofitting the plant to comply with anticipated environmental regulations.⁵³ However, should Plan DCEK1 (with DSM D) be the preferred resource plan of KCPL, then the 510 MW Montrose Units 1, 2, and 3 could be retired in 2016. Also the 150 MW natural gas combined cycle plant could be postponed from 2028 to 2031 through implementation of Plan DCEK1.

The Mega Study - scheduled to be completed in October 2012 – is expected to provide additional important information concerning supply-side resources – especially the existing coal plants - for consideration in the integrated resource analyses for the Company’s April 1, 2013 annual update filing.

The impact on coal plants’ retirements in future years may be more pronounced should KCPL and GMO file either a) a detailed proposal for allocating capacity and energy between KCPL and GMO, and if GMO’s MPS and L&P rate districts are not eliminated, between GMO’s MPS and L&P rate districts; or b) a plan for merging KCPL and GMO into one electrical corporation prior to or at the time of any future Chapter 22 electric utility resource

⁵³ Volume 1, pages 19 – 20: “The environmental drivers that contributed to the Montrose Unit 1 retirement included Mercury and Air Toxics Standards Rule, Ozone National Ambient Air Quality Standards (NAAQS), PM NAAQS, Clean Water Act Section 316(a) and (b), Effluent Guidelines, and Coal Combustion Residuals Rule. These rules are currently not in effect and will be monitored by KCP&L prior to the projected retirement year 2016 to determine if the current decision to retire Montrose Unit 1 continues to be prudent.”

planning filing for which GMO requests Commission acknowledgement that it is reasonable for KCPL and GMO to plan on a joint company basis.

Staff's Recommendations for GMO's April 1, 2013 Annual Update Filing

Staff looks forward to working with GMO and its stakeholder group⁵⁴ to improve upon the GMO planning process, so the Company can soon achieve the fundamental objective of Chapter 22 and comply with the state energy policy of MEEIA.

Because MEEIA contains state energy policy, each electric utility is required – as part of its electric utility resource planning process - to develop candidate resource plans and to analyze and document DSIM's which can allow the electric utility to make reasonable progress toward an expectation that the electric utility can achieve a goal of all cost-effective demand-side savings. This section of the Staff Report describes the linkage between Chapter 22 and MEEIA and describes its recommendation regarding the timing of GMO's MEEIA filing and the resource planning update that is to be filed by GMO on or around April 1, 2013. The following chart provides the flow of activities and filings for GMO related to Chapter 22 and to MEEIA prior to this triennial filing and Staff's recommended flow of activities and filings that can result in an effective and efficient planning process to meet the policy objectives of both Chapter 22 and the state energy policy of MEEIA.

⁵⁴ Rule 4 CSR 240-22.020(56) "Stakeholder group means— (A) Staff, public counsel, and any person or entity granted intervention in a prior Chapter 22 proceeding of the electric utility. Such persons or entities shall be a party to any subsequent related Chapter 22 proceeding of the electric utility without the necessity of applying to the commission for intervention; and (B) Any person or entity granted intervention in a current Chapter 22 proceeding of the electric utility."

Overview of Electric Utility Resource Planning and Missouri Energy Efficiency Investment Act Filings and Activities for GMO

	2011												2012												2013												2014												
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
General Rate Case																																																	
MEEIA Rules Effective					5/31																																												
Revised Chapter 22 Rules Effective						6/30																																											
DSM Potential Study (1)																																																	
Chapter 22 Triennial Compliance Filing																																																	
Chapter 22 Special Contemporary Issues																																																	
Chapter 22 Annual Update Filings																																																	
4 CSR 240-20.093 Case																																																	
4 CSR 240-20.094 Case																																																	
4 CSR 2340-31.63(5)																																																	
4 CSR 240-20.094 Case																																																	
DSM Programs																																																	

Notes:
(1) Final project report date is January 15, 2013 in the *Statement of Work Pursuant to Master Service Agreement By and Between Great Plains Energy Services Incorporated and Navigant Consulting, Inc.* contained in Appendix 5A of KCPL's Chapter 22 triennial compliance filing in Case No. EO-2012-0324

150 days for Staff and intervenors analyses and reports under 22.080(8)

Reports

HG Hearing

OR Order

SC Special contemporary issues required by 22.080(4) (effective 6/30/2011)

File Filing case

CM Comments by Staff and parties regarding the annual update reports as allowed by 22.080(3)(D)

AR Annual report required by 20.093(8) to include information required by 3.163(5)

AU Annual update workshop and report required by 22.080(3)

Assumed period of twelve (12) months for analysis and preparation prior to Chapter 22 filings

Regarding the Company's April 1, 2013 annual update filing, Staff recommends that the Commission:

1. Direct KCPL and GMO to file either a) a detailed proposal for allocating capacity and energy between KCPL and GMO, and if GMO's MPS and L&P rate districts are not eliminated, between GMO's MPS and L&P rate districts; or b) a plan for merging KCPL and GMO into one electrical corporation⁵⁵ prior to or at the time of any future Chapter 22 electric utility resource planning filing for which GMO requests Commission acknowledgement that it is reasonable for KCPL and GMO to plan on a joint company basis.⁵⁶
2. Order GMO to complete the following projects and studies for consideration and inclusion in its April 1, 2013 annual update filing:
 - Current/ongoing DSM market potential study by the scheduled completion date of January 2013;
 - Mega Study by the scheduled completion date of October 2012;
 - LED lighting pilot program scheduled completion date of summer 2012;
 - A joint KCPL and GMO Network Integrated Transmission Service Agreement with SPP;
 - Request for Proposals for capacity and the associated energy on an annual basis to meet GMO's SPP reserve obligations; and
 - ** _____

**
3. Order GMO to comply with the following special contemporary issues for its April 1, 2013 annual update filing.⁵⁷
 - Update on Smart Grid Demonstration Project;⁵⁸ and

⁵⁵ The plan to merge should include a certain date by which the companies will file their merger case.

⁵⁶ However, until there is a completed legal merger of KCPL and GMO, KCPL and GMO are required to perform and file separate Chapter 22 triennial compliance and annual update filings unless a waiver is received from the Commission for the requirements in 4 CSR 240-22.080(1)(A) and 4 CSR 240-22.080(3).

⁵⁷ Staff will file a complete list of its suggested special contemporary issues for GMO by September 15, 2012 in accordance with 4 CSR 240-22.080(4)(A).

- Analyze and document aggressive DSM portfolios including demand-side programs and demand-side rates without constraints. Include analysis and documentation of demand-side investment mechanisms necessary to implement each aggressive DSM portfolio.

4 CSR 240-22.030 Load Analysis and Load Forecasting

Summary

The stated purpose of Rule 4 CSR 240-22.030, Load Analysis and Load 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.”

The revised *Load Analysis and Load Forecasting Rule* is less prescriptive than the original rule regarding the analytical methods the utility shall use, allowing multiple methods and leaving more discretion to the utility to choose the methods by which it achieves the stated purpose of the rule.

KCP&L did not request any waivers from specific provisions of this rule.

In Staff’s limited review of KCP&L’s load analysis and energy and demand forecasts, Staff found no deficiencies concerning compliance with this rule, and Staff believes this filing also meets the Load Analysis and Load Forecasting requirements of the Non-Unanimous Stipulation and Agreement in Case No. EE-2008-0034.

However Staff does have the following concern.

Concerns

Concern A - GMO submitted energy and peak growth rates that are arithmetic averages.

GMO submitted energy and peak growth rates that are arithmetic averages when compound annual growth rates (CAGR) are the appropriate measure of growth, Compound annual growth rates should be used, because arithmetic averaging of growth rates gives

⁵⁸ Volume 7, page 35 of the Filing describes the GMO SmartGrid demonstration project. However, what is described as GMO’s SmartGrid demonstration project is actually KCPL’s SmartGrid demonstration project described in Volume 7, page 30 of the KCPL Chapter 22 triennial compliance filing made on April 9, 2012 in File No. EO-2012-0323.

incorrect results. In this filing, GMO is reporting a higher growth rate than its analysis actually shows. A CAGR is the geometric average growth rate over a period of several years. For a time series beginning with year 0, the formula for the CAGR is:

$$CAGR = (ending\ value \div starting\ value)^{1/(number\ of\ years)} - 1$$

The following table summarizes Staff calculated 20-year CAGR and growth rates as provided in GMO's IRP⁵⁹:

The following table summarizes Staff calculated 20-year CAGR and growth rates as provided in GMO's Chapter 22⁶⁰:

2012 Chapter 22: GMO Growth Rates					
MPS			SJLP		
	Energy	Demand		Energy	Demand
GMO-MPS	** _____ **	** _____ **	GMO-SJLP	** _____ **	** _____ **
Staff	** _____ **	** _____ **	Staff	* _____ **	** _____ **

To remedy this concern, GMO should use compound annual growth rates in all future Chapter 22 filings when expressing the rate of growth in its annual energy and demand levels in its load forecasts.

Staff Expert Witness: David Roos

4 CSR 240-22.040 Supply-Side Resource Analysis

Summary

Rule 4 CSR 240-22.040 – the revised *Supply-Side Analysis Rule* clarifies the consideration of transmission and distribution requirements for each supply-side resource to ensure that the full cost of each resource type is factored into the analysis. The revised rule explicitly requires the consideration of transmission constraints in the supply-side resource screening process.

Deficiencies

Deficiency 1 - GMO did not include the nuclear powered small modular reactor (SMR) as a potential supply-side resource option and did not provide its assessments of the SMR technology as required by Rule 4 CSR 240-22.040(1).

⁵⁹ KCPL work papers for the Filing: PeakNSI Historical Forecast

⁶⁰ GMO work papers: PeakNSI Historical Forecast

Although GMO evaluated three nuclear technologies, GMO did not include SMR as a potential supply-side resource in its April 9, 2012 filing. However, ten (10) days later, on April 19, 2012, GMO committed to supporting the application of Ameren Missouri and Westinghouse for the Department of Energy's Small Modular Reactor Design Program. GMO carried one nuclear technology forward to its integrated resource plan and risk analysis, U.S. Evolutionary Power Reactor (U.S. EPR)⁶¹, and analyzed this in 200 MW increments so this analysis may provide some insight into the SMR technology's cost performance, since the Westinghouse SMR's are 225 MW.

Although the rule citation is for the first section of the Supply-Side Resource Analysis Rule, the effect of this deficiency follows through to the remainder of the Supply-Side Resource Analysis Rule as well as the Integrated Resource Plan and Risk Analysis Rule and the Resource Acquisition Strategy Selection Rule including contingency resource plans in 4 CSR 240-22.070(4). Since the three nuclear technologies that were evaluated by GMO were all highly ranked in the nominal utility cost supply-side rankings performed by GMO and since nuclear technologies excel in the high cost carbon tax scenarios, the importance of all nuclear technologies, including SMR, cannot be overlooked.

To resolve this deficiency, GMO should provide its assessment of the SMR technology in its April 1, 2013 annual update filing.

Staff Expert Witness: Dan Beck

4 CSR 240-22.045 Transmission and Distribution Analysis

Summary

Rule 4 CSR 240-22.045 *Transmission and Distribution Analysis* is a new rule which specifies the minimum standards for the scope and level of detail required for transmission and distribution network analysis and reporting. Rule 4 CSR 240-22.045 is prompted, in part, by the changes in federal law that can affect electric utility resource planning and resource viability (e.g., policies of Regional Transmission Organizations (RTOs), development of regional power markets, and implementation of Smart Grid technologies). The rule does not prescribe how analyses are to be done, but allows a utility to conduct its own analyses or adopt the RTO or Independent Transmission System Operator (ISO) transmission plan. It

⁶¹ U.S. ERP technology is for large scale nuclear generating stations, e. g., 1600 MW. This is the technology on which Ameren Missouri's 2008 combined Construction and Operating License Application (COLA) was based.

does require documentation of the RTO/ISO transmission projects and requires the electric utility to review transmission and distribution for the reduction of power losses, interconnection of new generation facilities, facilitation of sales and purchases and incorporation of advance technologies for the optimization of investment in transmission and distribution resources.

The Company did not request any waivers from Rule 4 CSR 240-22.045 as a part of this Chapter 22 filing.

Deficiencies

Deficiency 2 - GMO did not provide its assessments of the RTO expansion plans as required by Rule 4 CSR 240-22.045(3)(C).

These documents are necessary to determine if GMO satisfied the conditions required in Rule 4 CSR 240-22.045(3)(B) which permits the company to use the RTO transmission expansion plans for its resource planning.

To resolve this deficiency, GMO should provide its assessments of the RTO expansion plans in its annual update.

Deficiency 3 – GMO did not identify and describe all affiliates as required by 4 CSR 240-22.045(5).

GMO is affiliated with KCPL and Transource Energy, LLC (“Transource”). Some of the analysis in Rule 4 CSR 240-22.045 is based on a combination of KCPL and GMO rather than GMO as an individual company. In particular, the 2009 Balanced Portfolio is a combined analysis of KCPL and GMO with no distinction between KCPL and GMO.

To resolve this deficiency, GMO should – in future Chapter 22 filings - identify and describe the relationship between itself, KCPL and Transource. GMO and KCPL should conduct separate analysis of the RTO expansion plans for each company.

Concerns

Concern B – The Filing does not describe and document the analysis performed by the utility to determine whether such affiliate-built transmission is in the interest of the utility’s Missouri customers.

The report indicates that Great Plains Energy, the holding company for both KCPL and GMO, intends for Transource “to pursue, develop, construct, and own” any future

regional and inter-regional transmission projects subject to regional cost allocation. The Filing does not “describe and document the analysis performed by the utility to determine whether such affiliate-built transmission is in the interest of the utility’s Missouri customers” (4 CSR 240-22.045(3)(B)5), but indicates that separate filings with the Commission are planned later this year. On August 31, 2012, Transource filed an application and testimony for a certificate of convenience and necessity and request for waiver in File No. EA-2013-0098, and KCPL and GMO filed an application and testimony in File No. EO-2012-0367.

To remedy this concern, GMO should provide its analysis of affiliate-built transmission in its April 1, 2013 annual update filing.

Staff Expert Witness: Michael Stahlman

4 CSR 240-22.050 Demand-Side Resource Analysis

Summary

The revised Rule 4 CSR 240-22.050, *Demand-Side Resource Analysis*, “specifies the principles by which potential demand-side resource options shall be developed and analyzed for cost-effectiveness, with the *goal of achieving all cost-effective demand-side savings.*” (Emphasis added). The revised Demand-Side Analysis Rule identifies the objectives to be achieved by the demand-side programs and portfolios, and gives each utility the option of developing demand-side programs or portfolios from the top down (starting with a program designs and filling in the cost-effective measures) or from the bottom up (starting with screening a comprehensive menu of measures and ending with program designs). The rule clarifies the distinction between demand-side programs and demand-side rates and places more emphasis on demand-side rates than the previous rule did. It is less prescriptive than the original rule in that it does not specify how the screening analysis is to be conducted or how the avoided costs are to be calculated. It does include the use of the calculation of the Total Resource Cost (“TRC”) test which meets the requirement of the MEEIA (Section 393.1075.4 RSMo Supp. 2010). The rule requires documentation regarding how the potential demand-side resources were analyzed and screened to identify demand-side candidate resource options to advance to the integrated resource analysis. The requirements for the evaluation of demand-side programs are removed from this rule but are included in the revised resource acquisition strategy selection rule.

Finally, Rule 4 CSR 240-22.050 requires the selection of demand-side candidate resource options that are passed on to integrated resource analysis in Rule 4 CSR 240-22.060 and assessment of their technical potentials, maximum achievable potentials (“MAP”), and realistic achievable potentials (“RAP”).

The current GMO 2012 Chapter 22 filing improves and expands GMO’s overall consideration and evaluation of demand-side resources from their previous 2008 Chapter 22 filing.

Primary improvements include the knowledge gained from the actual program implementation and evaluation, measurement and verification (“EM&V”) experience for the previous and the current demand-side programs, research of previously implemented demand-side programs from other utilities⁶² and the Company’s MEEIA filing on December 22, 2011 on which Settlement discussions have been ongoing among the stakeholders.⁶³ The Company is communicating with stakeholders and meeting on a regular basis with significant decision makers⁶⁴ and quarterly with its DSM advisory group.

The Company did not request any waivers from Rule 4 CSR 240-22.050 as a part of this Chapter 22 filing.⁶⁵

Demand-Side Management Programs

The Company has included in its demand-side management portfolio “MEEIA DSM” nine (9) energy efficiency (“EE”) programs, three (3) educational programs, one (1) affordable program for low-income residential customers, and two (2) demand response (“DR”) programs that the Company considers realistically achievable capacity and energy levels⁶⁶ and which are included in GMO’s adopted preferred resource plan, Plan ACCG9⁶⁷. The “MEEIA DSM” portfolio was developed based upon the DSM proposed in the MEEIA filing, Case EO-2012-0009 on December 22, 2011.⁶⁸

The Company did evaluate Alternative Resource Plans that have a more aggressive Demand Side Management portfolio that were developed to satisfy the requirement of Special

⁶² Volume 5, Demand –Side Resource Analysis”, page 47, Section 3.1, “Previously Implemented Demand-Side Programs From Other Utilities”

⁶³ File No. EO-2012-0009 filed December 22, 2011.

⁶⁴ Volume 5, , “Demand –Side Resource Analysis”, page 1, Section 1.1.2, “Decision-Maker Coverage”

⁶⁵ Volume 1, “Executive Summary”, page 2, Section 1.2 “Waivers”

⁶⁶ Volume 1, “Executive Summary”, page 24, Section 4.2, “Selection of Preferred Resource Plans”

⁶⁷ Volume 1, “Executive Summary”, page 27, Section 5, “Critical Uncertain Factors”

⁶⁸ Volume 6: “Integrated Resource Plan and Risk Analysis, page 6, Section 3, “Alternative Resource Plans”

Contemporary Issues “c” and “h” as stated in the Commission’s order dated October 19, 2011 in File No. EO-2012-0042, “Analyze and document aggressive DSM portfolios without constraints”, respectively, but the Company believes that these level of DSM are not realistically achievable.⁶⁹

The Company has engaged Navigant Consulting, Inc. (Navigant) to conduct a DSM market potential study for its service territory.

The results of this study are not expected until January 2013⁷⁰. Without a current market research study that identifies the MAP, technical potential and realistic achievable potential RAP of potential demand- side resource options as required by 4 CSR 240-22.050(2), the Company cannot utilize the MAP and RAP to design cost-effective demand-side programs. This is a significant deficiency.

Staff reviewed the Company’s demand-side management portfolio “MEEIA DSM”, consisting of nine (9) EE programs three (3) educational programs, one (1) affordable program for low-income residential customers, and two (2) DR programs. A brief description of each follows.

1. EE Programs

a. Home Performance with Energy Star[®]

The Home Performance with Energy Star[®] (“HPwES”) program is intended to encourage residential customers to identify deficiencies and implement energy efficiency measures in their homes. This is achieved by conducting a comprehensive home audit and implementing at least one of the recommended energy efficiency improvements.

This program is available to any customer receiving service under any generally available residential rate schedule offered by the Company. All audits must be requested by the owner of the home, multiplex, or apartment. A tenant agreement is required for rental residences. Program rebates are limited to one rebate per audit. Customer participation is limited to fund availability.

b. Cool Homes

The Cool Homes program is designed to encourage residential customers to have their working, central cooling systems evaluated and, if feasible, brought back to

⁶⁹ Volume 1, “Executive Summary”, page 25, Section 4.2, “Selection of Preferred Resource Plans”

⁷⁰ Volume 1, “Executive Summary”, page 34, Table 19, “DSM Potential Study Schedule”

factory specifications (re-commissioned), or to replace less efficient, working central cooling systems with high efficiency central cooling systems.

This program is available to any current customer with a working, central home cooling system receiving service under any generally available residential rate schedule. Customer participation is limited to fund availability.

c. Energy Star® New Homes

The Energy Star® New Homes program is designed to improve the energy efficiency of homes applying efficient construction techniques and high-performance products (windows, doors, appliances, lighting, and heating and cooling systems) in accordance with guidelines set by the Energy Star® program. Homes built under the Energy Star® guidelines are typically 20–30% more energy efficient than standard homes.

This program is offered in accordance with the training, rating and incentive elements of the program available to builders constructing new homes within the Company’s service territory area.

d. Appliance Turn-In (New Program)

The Appliance Turn-In program is designed to incent residential customers to remove old, operating, inefficient, secondary appliances (room air conditioners, refrigerators, freezers, and dehumidifiers) by taking the appliances out of the home and recycling them in an environmentally safe manner at no cost to the participating customer. Refrigerators or freezers must be clean, empty, defrosted, and at least 10 cubic feet and no more than 32 cubic feet in size.

The program will also raise awareness of the energy benefits of Energy Star® appliances.

e. Residential Lighting and Appliance (New Program)

The Residential Lighting and Appliance (“L&A”) program will promote ENERGY STAR® appliances, lighting, and home electronics. The program uses a two-pronged approach: 1) increasing the supply of qualifying products through partnerships with retailers, manufacturers and distributors, and 2) creating demand through consumer awareness and understanding of the ENERGY STAR® label and the benefits of energy efficiency.

Residential customers may participate in this program by purchasing any of the ENERGY STAR® qualified products listed in this tariff from participating program partners. Eligible measures installed and paid incentives under this program are not eligible for an incentive through any of the Company's other demand-side management programs. Customer participation will be limited to fund availability.

f. Residential Energy Report (New Program)

This program is a pilot program that will provide residential customers with an energy report that shows a comparison of the customer's household energy usage information with similar type customers or neighbors. The intention of the energy report is to provide information that will influence customers' behaviors in such a way that they reduce their energy usage. This is a behavioral modification program.

The Company will conduct a three year pilot of the program, selecting 50,000 customers per year for participation. The program will operate as an opt-out only program, meaning the Company will select customers for participation in the program and will allow customers to opt-out if desired. Residential energy reports will be automatically delivered to each target customer five or six times per year.

g. Multi-Family Rebate (New Program)

The Multi-family Rebate program advances comprehensive energy efficiency measures, including: whole house solutions, plug load efficiency, visual monitoring and displays, performance standards, local government opportunities and DSM integration in qualified multi-family residences.

The Multi-family Rebate program will offer prescribed rebates for energy efficient products to motivate multi-family property owners/managers to install energy efficient products in both common and dwelling areas of multi-family complexes and common areas of mobile home parks and condominiums.

h. Commercial and Industrial ("C&I") Rebate Program: Custom Retrofit and New Construction

The Company's C&I Rebate program is designed to encourage more effective utilization of electric energy through energy efficiency improvements in the building shell, installation of efficient electrical equipment in new construction, or the replacement of inefficient electrical equipment with efficient electrical equipment.

The program provides rebates for an energy audit and subsequent improvements in the energy efficiency of the building space and/or equipment.

Customer applications are evaluated and the rebates will be distributed on a first-come basis according to the date of the customer's application. Customer participation is limited to fund availability.

i. C&I Prescriptive Rebate Program (New Program)

The program is designed to 1) provide incentives to facility owners and operators for the installation of high efficiency equipment and controls; and 2) provide incentives to facility owners and operators for the installation of high efficiency equipment and controls; and 3) provide a marketing mechanism for electrical contractors, mechanical contractors, and their distributors to promote energy efficient equipment to end users.

Customer applications will be evaluated and the rebates will be distributed on a first-come basis according to the date of the customer's application.

2. Educational Programs

a. Building Operator Certification

This voluntary program is designed to establish and encourage Building Operator Certification through the Northwest Energy Efficiency Council's Building Operator Certification Level 1 and Level 2 curriculums. This effort will include certification update and refresh as appropriate. In support of partnerships with the Missouri Department of Natural Resources Energy Center (MDNR) and the Midwest Energy Efficiency Alliance (MEEA), the Company will:

- 1) Reimburse the annual cost to license the Level 1 and Level 2 curriculums for the Company's Missouri service territory, and
- 2) Reimburse portions of the tuition costs for building operators of properties in the Company's service area who successfully complete or refresh the certifications.

b. Home Energy Analyzer

This program allows all residential customers with access to the internet to retrieve their billing information, make comparisons of electric usage on a monthly or yearly basis, analyze electric usage on an end use basis, and research energy savings by end use through a searchable resource center. Customers can also compare their bills to analyze changes from one month to another. Residential customers can also compare

their home to a similar home in terms of average energy usage using the EnergyGuide label⁷¹ concept.

c. Business Energy Analyzer

This program is similar to the Home Energy Analyzer program. It is available to any non-residential and non-lighting customers.

3. Affordable Program – Low-Income Weatherization

The Weatherization Assistance Program enables low-income families to reduce their energy bills by making their homes more energy efficient.

4. DR Programs

a. MPower

MPower is a voluntary load curtailment program for large commercial and industrial customers and provides a payment to customers for reducing load when requested to do so by GMO.

This program is available to customers who can provide a minimum of 25 kw energy reduction and customers can customize the program for their particular situation. Customers specify the months they are available to participate, a maximum curtailment duration of 2, 4 or 8 hours and the maximum amount of curtailments per year that range from 3 to 250.⁷²

b. Energy Optimizer Program

Energy Optimizer is an air conditioning cycling program for residential and small commercial customers that allows the Company to cycle program participants' air conditioners off and on for up to 60 hours a year when the Company provided thermostats receive a paging signal from GMO to achieve a load reduction.

The avoided demand cost calculation is provided in Table 51 "Avoided Demand Cost **Highly Confidential**" of Volume 5.⁷³

For each program, the number of participants, program costs, avoided costs, cost effectiveness tests, and demand reduction savings are included in the Work Paper "GMO_Program Cost-Effectiveness_HC 240-22.050.xlsx."

⁷¹ The distinctive yellow and black **EnergyGuide** labels appear on most of the energy-using products that are subject to minimum efficiency standards set by the US Department of Energy. Consumers will find them on refrigerator-freezers and freezers, dishwashers, clothes washers, microwaves, water heaters, pool heaters, room air conditioners, central air-conditioners and heat pumps, furnaces and boilers, and fluorescent lamp ballasts.

⁷² Volume 5, Appendix 5d-"mpower2.pdf", slide 4.

⁷³ Volume 5, "Demand –Side Resource Analysis", page 189, "Demand-Side Programs Cost Effectiveness"

Table 1 summarizes the results of each cost-effectiveness test for GMO's proposed Programs, except the Home Energy Analyzer and Business Energy Analyzer, which are education programs for which the benefits are very difficult to quantify.

**<Table 1>
Cost-Effectiveness Test Summary**

Programs	IRP		MEEIA
	TRC	UCT	TRC
HPwES	0.76	0.83	0.58
Cool Homes	2.07	2.49	1.58
Energy Star [®] New Homes	0.63	0.70	1.32
Residential L&A	3.57	4.47	1.76
Multi-Family Rebate	3.57	4.46	2.88
Appliance Turn-In	2.83	2.83	3.65
C&I Prescriptive	3.51	5.27	2.78
C&I Rebate: Custom	2.33	3.26	N/A
C&I Rebate: New Construction	2.03	2.84	N/A
Low-Income Weatherization	0.35	0.35	0.20
MPower	1.45	1.45	1.53
Optimizer	2.30	2.30	3.16

Staff has reviewed the Company provided EM&V reports for Energy Star[®] New Homes, Cool Homes, HPwES, Low-income Weatherization, C&I Rebate, Build Operator Certification, Energy Optimizer and MPower DR programs in the Company's MEEIA filing on December 22, 2011 and finds these programs are successful and cost effective.⁷⁴ Staff's review and discussion of the EE programs and DR programs can be found in the testimony of Staff witnesses Hojong Kang and Randy Gross, respectively, in File No. EO-2012-0009.

As shown in Table 1, Staff notes that the TRC values in this IRP filing are different than the TRC values in the Company's MEEIA filing.⁷⁵ Most notably, the Chapter 22 TRC value for the Energy Star New Homes program, 0.63, now indicates that this program is not cost effective⁷⁶ and differs significantly from the MEEIA TRC value of 1.32.

Staff believes GMO's Demand-Side Resource Analysis filing is deficient in meeting the requirements of Rule 4 CSR 240-22.050. Staff has also identified two (2) concerns for this rule.

⁷⁴ File No. EO-2012-0009 filed December 22, 2011, Schedules ADD-5 and ADD-10.

⁷⁵ Rebuttal testimony of Randy S. Gross, page 5 and of Hojong Kang, page 22, File No. EO-2012-0009, March, 2012

⁷⁶ A demand-side program is considered to be cost-effective if its TRC value is greater than 1.0.

Deficiencies

Deficiency 4 - The Company has no current market research study that identifies the MAP, technical potential and RAP of potential demand- side resource options as required by Rule 4 CSR 240-22.050(2).

This is a significant deficiency that the Company indicates will be remedied by having the results of the Navigant Demand-Side Management Potential study on January 15, 2013. Without the results of this study, the Company cannot utilize the MAP and RAP from a DSM market potential study to design cost-effective demand-side programs.

To resolve this deficiency, the Company should utilize the results of the Navigant Demand-Side Management Potential as input in the preparation of its April 1, 2013 annual update filing.

Deficiency 5 - The Company has not provided all information required by Rule 4 CSR 240-22.050. Specifically, the Company has repeatedly referenced the future results of: a) the Navigant Demand-Side Management Potential study, not available until January 15, 2013, in response to satisfying specific requirements of Rule 4 CSR 240-22.050 (1)(A)3, 1(D), 1(E), (2), (3)(G)3, (3)(G)5, (3)(I) (4)(D),4(E), 4(G) and 6(C); b) the Smart Grid Residential TOU Pilot Tariff that will not be available until after the summer of 2012 in response to satisfying the specific requirements of Rule 4 CSR 240-22.050(4)(D)1 and (4)(D)4.

To resolve this deficiency, the Company should utilize the results of the Navigant Demand-Side Management Potential study and the Smart Grid Residential TOU Pilot Tariff when performing analyses for its April 1, 2013 annual update filing.

Concerns

Concern C - GMO is constraining both the Energy Optimizer and MPower programs.

GMO has indicated that it is not promoting either the Energy Optimizer or MPower program, and for the MPower program, the Company is not currently accepting and/or processing new program applications.⁷⁷ Staff is concerned that these programs cannot perform optimally to help GMO achieve all cost-effective demand-side savings.

To resolve this concern, the Company should utilize the results of the Navigant Demand-Side Management Potential study meeting the requirements of Rule

⁷⁷ GMO MEEIA Filing, EO-2012-0009, Company response to Data Requests No. 0001 and 0025.

4 CSR 240-22.050(2) and Rule 4 CSR 240-3.164(2) (A), and should use the same as input in the preparation of its April 1, 2013 annual update filing.

Concern D - The Chapter 22 TRC value of 0.63 for the Energy Star New Homes program indicates that this program is not cost effective and differs significantly from the MEEIA TRC value of 1.32. In addition, several other TRC values in this Chapter 22 filing differ from those contained in the Company's MEEIA filing.

To resolve this concern, the Company should carefully review all of the Chapter 22 calculated TRC values, compare them to the TRC values in the MEEIA filing and resolve all significant discrepancies. The Chapter 22 and MEEIA calculated TRC values for all programs should be reasonably consistent and any new TRC values should be included as input in the preparation of its April 1, 2013 annual update filing. If the results of this review indicate some programs are indeed not cost effective and do not meet the requirements of Rule 4 CSR 240-20.094 (3)(B) and (C), they should not be included in the Company's April 1, 2013 Chapter 22 annual update filing.

Staff Expert Witnesses: Randy Gross for demand response programs and Hojong Kang for energy efficiency programs

4 CSR 240-22.060 Integrated Resource Analysis

Summary

This rule requires the utility to design alternative resource plans to meet the planning objectives identifies in Rule 4 CSR 240-22.010(2) and sets minimum standards for the scope and level of detail required in resource plan analysis and for the logically consistent and economically equivalent analysis of alternative resource plans. This rule also requires the utility to identify the critical uncertain factors that affect the performance of alternative resource plans and establishes minimum standards for the methods used to assess the risks associated with these uncertainties.

One major change to the revised *Integrated Resource Analysis and Risk Analysis Rule* is that it contains all of the risk analysis which was previously spread between Rule 4 CSR 240-22.060 Integrated Resource Analysis and Rule 4 CSR 240-22.070 Risk Analysis and Strategy Selection. This rule now requires the utility to develop cases for analysis that maximize reliance on energy efficiency and renewable energy resources and then develop optimal cases. The rule requires the development of alternative resource plans based on

normal conditions and also to assess the robustness of each plan under more extreme conditions (high and low cases). The revised rule is less prescriptive and does not specify the analytical methods and does not require the utility to perform a specific decision tree analysis to evaluate risk. However, it does add the requirement to include performances measures of present worth of utility revenue requirements, with and without any financial performance incentives the utility is planning to request. The proposed rule requires analysis of financial parameters and, if required, description of any changes in legal mandates and cost recovery mechanisms necessary for the utility to maintain an investment grade credit rating and documentation of the methods, analyses, judgments and data the utility chooses.

See above sections titled Failure to Design Alternative Resource Plans Which Are Consistent with State Energy Policy, Requested Acknowledgement of Joint Company Planning and GMO Capacity Balance Sheets Continue to Reflect an Overreliance on Additional Purchased Power Agreements for Staff's discussion related to this rule.

Deficiencies

Deficiency 6 - GMO has failed to design alternative resource plans to satisfy at least the objectives and priorities identified in 4 CSR 240-22.060(1) over the entire 20-year planning horizon required by Chapter 22. In particular candidate resource plans with DSM A demand-side resources do not satisfy the objective and priorities identified in 4 CSR 240-22.060(1) over the entire 20-year planning horizon and are not consistent with the state energy policy in MEEIA of achieving all cost-effective demand-side savings.

To resolve this deficiency, the Company should complete its DSM market potential study by January 2013 and include in its April 1, 2013 annual update filing the RAP portfolio and the MAP portfolio of DSM programs from its DSM market potential study in the design of alternative resource plans that satisfy the objective and priorities identified in 4 CSR 240-22.060(1) over the entire 20-year planning horizon and are consistent with the state energy policy in MEEIA of achieving all cost-effective demand-side savings.

Deficiency 7 – The only requirements of Rule 4 CSR 240-22.060 Integrated Resource Plan and Risk Analysis that are satisfied and *described and documented*⁷⁸ for each of the Filing's fourteen (14) combined/joint candidate

⁷⁸ Rule 4 CSR 240-22.020(14): "Described and documented refers to the demonstration of compliance with each provision of this chapter. Describe means the provision of information in the technical volume(s) of the triennial compliance filing, in sufficient detail to inform the stakeholders how the utility complied with each applicable requirement of Chapter 22, why that approach was chosen, and the results of its approach. The description in the technical volume(s), including narrative text, graphs, tables, and other pertinent information shall be written in a

resource plans are for integrated resource analysis and the calculation of PVRR for each plan.⁷⁹

To resolve this deficiency, the Company should comply with all requirements of Rule 4 CSR 240-22.060 Integrated Resource Plan and Risk Analysis for its April 1, 2013 annual update filing.

Concerns

Concern E – All capacity balance sheets filed to comply with Rule 4 CSR 240-22.060(4)(B) include solar resources at 100% of name plate capacity. However, Staff understands that SPP is proposing a 10% solar capacity credit for its transmission planning studies.

To resolve Staff's concern, GMO should document the SPP policy for solar capacity credits in its April 1, 2013 annual update. GMO should follow the then-current SPP policy for solar capacity credits when developing capacity balance sheets when required for all future Chapter 22 filings.

Concern F – GMO continues to rely unnecessarily upon additional short term purchased power agreements ("PPAs") in its 20-year electric utility resource planning instead of planning to put steel-in-the-ground. This overreliance on additional PPAs – with their inherently uncertain availability and prices - places an unnecessary risk on GMO's ratepayers, since GMO has a Commission-approved fuel and purchased power adjustment clause.

To resolve Staff's concern, GMO should only include short term PPAs in its 20-year candidate resource plans' capacity balance sheets at a maximum amount of four percent (4%) of its required capacity annually. The longest that time period over which GMO should plan on relying on short term PPAs to meet its capacity requirements should be three (3) years. During this time period the Company should be constructing new generation or entering into contracts for long-term firm base, intermediate or peaking capacity in excess of four percent (4%) of its required capacity annually.

Staff Expert Witness: John Rogers

manner that would allow a stakeholder to thoroughly assess the utility's resource acquisitions strategy and each of its components. Document means the provision of all of the supporting information relating to the filed resource acquisition strategy pursuant to Rule 4 CSR 240-22.080(11)."

⁷⁹ Volume 6, page 17 of the Filing.

4 CSR 240-22.070 Risk Analysis and Strategy Selection

Summary

This rule requires the utility to select a preferred resource plan, develop an implementation plan, and officially adopt a resource acquisition strategy. The rule also requires the utility to prepare contingency plans and evaluate the demand-side resources that are included in the resource acquisition strategy.

The revised *Resource Acquisition Strategy Selection Rule* requires an evaluation of demand-side programs, demand-side rates and load building programs in the strategy selection process. It also clarifies the requirement to identify and develop implementation plans and contingency resource plans. The rule provides additional flexibility to exercise judgment when satisfying policy objectives of Chapter 22, but requires the selection of a preferred resource plan that invests in advanced transmission and distribution technologies, includes demand-side programs that meet legal mandates and includes sufficient resources to serve load forecasted under extreme weather conditions. The rule now requires the utility to officially adopt a preferred resource plan, contingency resource plans and resource acquisition strategy, including specific information to describe the implementation plan.

See above sections titled Requested Acknowledgement of Joint Company Planning and Failure to Comply With the Commission's Special Contemporary Issue "h" for Staff's discussion related to this rule.

Deficiencies

Deficiency 8 – The filing requirements of Rule 4 CSR 240-22.070(2) or Rule 4 CSR 240-22.070(3) were not *described and documented* for the any of the twenty-one (21) GMO candidate resource plan.

To resolve this deficiency, the Company should comply with all requirements of 4 CSR 240-22.070(2) and 4 CSR 240-22.070(3) for its April 1, 2013 annual update filing.

Deficiency 9 – The only requirements of Rule 4 CSR 240-22.070 Resource Acquisition Strategy Selection that were satisfied and *described and documented* for each of the fourteen (14) combined/joint candidate resource plans are: 1) analysis and specification of ranges for critical uncertain factors,⁸⁰ and 2) the

⁸⁰ Volume 6, pages 9 – 12 of the Filing.

expected value of better information related to the critical uncertain factors (CO₂, load forecast and natural gas prices).⁸¹

To resolve this deficiency, the Company should comply with all requirements of Rule 4 CSR 240-22.070 Resource Acquisition Strategy Selection for its April 1, 2013 annual update filing.

Staff Expert Witness: John Rogers

4 CSR 240-22.080 Filing Schedule and Requirements

Summary

This rule specifies the requirements for electric utility filings to demonstrate compliance with the provisions of Chapter 22. The purpose of the compliance review required by Chapter 22 is not Commission approval of the substantive findings, determinations, or analyses contained in the filing. The purpose of the compliance review required by Chapter 22 is to determine whether the utility's resource acquisition strategy meets the requirements of Chapter 22. However, if the Commission determines that the filing substantially meets these requirements, the Commission may further acknowledge that the preferred resource plan or resource acquisition strategy is reasonable in whole or in part at the time of the finding. This rule also establishes a mechanism for the utility to solicit and receive stakeholder input to its resource planning process.

The revised *Filing Schedule, Filing Requirements and Stakeholder Process Rule* establishes a filing by all electric utilities each April 1 with a triennial compliance filing every third year⁸² with more informal annual updates filings during the years between the full triennial compliance filings. The annual updates are coupled with a stakeholder workshop to communicate changing conditions and utility plans and to seek advice from stakeholders during the planning process. Preliminary plans are reviewed with stakeholders to receive input regarding potential concerns and deficiencies. However, once plans are filed, stakeholders again have the opportunity to identify potential concerns and deficiencies. The Commission, with input from stakeholders, will identify special contemporary issues each

⁸¹ Volume 7, pages 17 – 19 of the Filing.

⁸² Rule 4 CSR 240-22.080(1) establishes the following schedule: (A) Kansas City Power & Light Company and KCP&L Greater Missouri Operations Company, or their successors, on April 1 of 2012 and every third year thereafter; (B) The Empire District Electric Company, or its successor, on April 1 of 2013 and every third year thereafter; and (C) Union Electric Company d/b/a AmerenUE, or its successor, on April 1 of 2014 and every third year thereafter.

year for each utility to analyze during its planning process. To make the resource planning process more meaningful, the revised rule requires action from the utility if its business plan or acquisition strategy becomes inconsistent with the latest adopted preferred resource plan filed by the utility. The revised rule also requires certification that any request of action from the Commission is consistent with the utility's adopted preferred resource plan.

See above sections titled Requested Acknowledgement of Joint Company Planning and Failure to comply with the Commission's special contemporary issue "h" for Staff's discussion related to this rule.

Deficiencies

Deficiency 10 – The Filing failed to comply with the Commission's special contemporary issue "h" by not analyzing and documenting aggressive DSM portfolios without constraints and by not including analysis and documentation of demand-side investment mechanisms to implement each DSM portfolio.

To resolve this deficiency, the Company should comply with all of the special contemporary issues ordered by the Commission for inclusion in its April 1, 2013 annual update filing.

Concerns

Concern G – KCPL and GMO do not have the proper operating agreements and/or contracts in place to correctly analyze joint company planning. In the absence of proper operating agreements and/or contracts, joint company planning must be performed in the context of a plan to merge KCPL and GMO, and no such plan to merge the two companies exists at this time.

To resolve this concern, KCPL and GMO should file either 1) detailed proposal for allocating capacity and energy between KCPL and GMO, and if GMO's MPS and L&P rate districts are not eliminated, between GMO's MPS and L&P rate districts; or 2) a plan for merging KCPL and GMO into one electrical corporation prior to or at the time of any future Chapter 22 electric utility resource planning filing for which GMO requests Commission acknowledgement that it is reasonable for KCPL and GMO to plan on a joint company basis.

An alternative available to KCPL and GMO may involve KCPL and GMO entering into a long-term contract for KCPL to supply capacity and energy to GMO after GMO issues a RFP for a long term PPA and evaluates the responses it receives. If KCPL's bid would be

the low cost solution, a contract between KCPL and GMO would have to meet the requirements of 4 CSR 240-20.015 Affiliate Transactions rule.

Staff Expert Witness: John Rogers

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

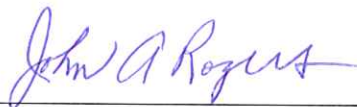
In the Matter of the Resource Plan of)
KCP&L Greater Missouri Operations)
Company)

Case No. EO-2012-0324

AFFIDAVIT OF JOHN A. ROGERS

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

John A. Rogers, employee of the Staff of the Missouri Public Service Commission, being of lawful age and after being duly sworn, states that he has participated in the preparation of the accompanying Staff Report on pages 1- 35 and 48-54, and the facts therein are true and correct to the best of his knowledge and belief.



John A. Rogers

Subscribed and sworn to before me this 6th day of September, 2012.

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

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

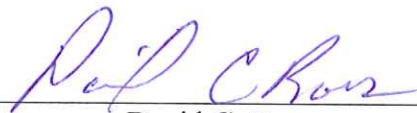
In the Matter of the Resource Plan of)
KCP&L Greater Missouri Operations)
Company)

Case No. EO-2012-0324

AFFIDAVIT OF DAVID C. ROOS

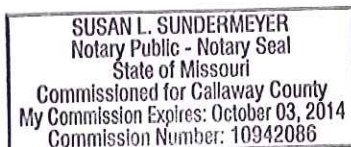
STATE OF MISSOURI)
) ss
COUNTY OF COLE)

David C. Roos, employee of the Staff of the Missouri Public Service Commission, being of lawful age and after being duly sworn, states that he has participated in the preparation of the accompanying Staff Report on pages 35-36, and the facts therein are true and correct to the best of his knowledge and belief.



David C. Roos

Subscribed and sworn to before me this 6th day of September, 2012.





Notary Public

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

In the Matter of the Resource Plan of)
KCP&L Greater Missouri Operations)
Company)

Case No. EO-2012-0324

AFFIDAVIT OF DANIEL I. BECK

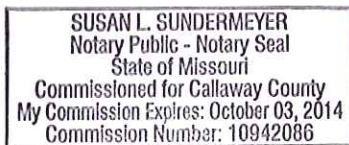
STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Daniel I. Beck, employee of the Staff of the Missouri Public Service Commission, being of lawful age and after being duly sworn, states that he has participated in the preparation of the accompanying Staff Report on pages 36-37, and the facts therein are true and correct to the best of his knowledge and belief.



Daniel I. Beck

Subscribed and sworn to before me this 6th day of September, 2012.




Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Resource Plan of)
KCP&L Greater Missouri Operations)
Company)

Case No. EO-2012-0324

AFFIDAVIT OF MICHAEL L. STAHLMAN

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Michael L. Stahlman, employee of the Staff of the Missouri Public Service Commission, being of lawful age and after being duly sworn, states that he has participated in the preparation of the accompanying Staff Report on pages 37-39, and the facts therein are true and correct to the best of his knowledge and belief.



Michael L. Stahlman

Subscribed and sworn to before me this 6th day of September, 2012.

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 the Resource Plan of)
KCP&L Greater Missouri Operations)
Company)

Case No. EO-2012-0324

AFFIDAVIT OF HOJONG KANG

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Hojong Kang, employee of the Staff of the Missouri Public Service Commission, being of lawful age and after being duly sworn, states that he has participated in the preparation of the accompanying Staff Report on pages 39 - 48, and the facts therein are true and correct to the best of his knowledge and belief.



Hojong Kang

Subscribed and sworn to before me this 6th day of September, 2012.





Notary Public

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

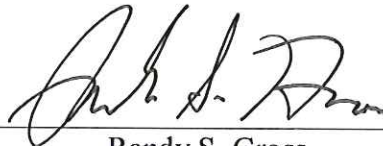
In the Matter of the Resource Plan of)
KCP&L Greater Missouri Operations)
Company)

Case No. EO-2012-0324

AFFIDAVIT OF RANDY S. GROSS

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Randy S. Gross, employee of the Staff of the Missouri Public Service Commission, being of lawful age and after being duly sworn, states that he has participated in the preparation of the accompanying Staff Report on pages 39-48, and the facts therein are true and correct to the best of his knowledge and belief.



Randy S. Gross

Subscribed and sworn to before me this 6th day of September, 2012.





Notary Public

Addendum A

Is Deemed

Highly Confidential

In Its Entirety

Filed
August 17, 2011
Data Center
Missouri Public
Service Commission

History of Staff's Position Regarding
GMO's Capacity Additions Since 2000

Staff Exhibit No. 4
Date 8/17/11 Reporter IL
File No. EE-2009-0237

In 2000, Aquila, Inc. ("Aquila") entered into a five-year purchased power agreement ("PPA") to obtain capacity and energy from the exempt wholesale generator Aries Plant owned by Aquila Merchant and Calpine. At the time when Aquila was planning to replace the power and energy provided through this agreement, Aquila met with Staff and the Office of the Public Counsel twice a year to update them on Aquila's resource needs and plans to meet those needs. The only information given to Staff at those meetings was Aquila's presentation material. Staff provided feedback based on the presentation materials and statements made during the presentations. Staff did not do a formal or informal review of the resource plan updates presented at the meetings. Sometimes, if Staff felt that it was warranted, Staff would respond to Aquila after a meeting by a letter expressing its concerns.

Aquila issued a Request For Proposals ("RFP") in the spring of 2001 for capacity for the delivery of energy in June 2005. The proposals Aquila received included purchased power offers respecting merchant coal, combustion turbine ("CT") and combined cycle ("CC") plants. However, the electric industry changed considerably when Aquila was reviewing the proposals in 2002, so at the urging of Staff, Aquila reissued the RFP in early 2003. At the June 26, 2003 resource planning update meeting with Staff and Office of Public Counsel, Aquila presented the results of its analysis of the bids it received from this second RFP. Included in the responses were proposals for wind, coal, CTs, and CCs. All of the proposals except one were purchased power agreements. Aquila reviewed the bids and then contacted neighboring utilities to see

what other supply options might be available. All of the proposals, including available capacity that Aquila learned of from talking with neighboring utilities, were evaluated against the option of Aquila building a CT/CC plant.

At this June 26, 2003 meeting, Aquila told Staff that an "undisclosed" bidder had offered it an excellent bid for 600 MW, but Aquila could not tell Staff much about the bid at that time. Because this would be more than enough to cover its needs, Aquila felt that no other capacity was needed. Staff filed rebuttal testimony on September 10, 2003 in EF-2003-0465 stating its concerns regarding Aquila's need to replace the Aries contract. Staff learned in a data request response from Aquila in this case that this bid withdrawn and a substitute proposal was not offered to Aquila.

On January 27, 2004, Aquila again met with Staff, this time not in a resource planning meeting, but in a meeting to let Staff know about Aquila's power supply acquisition process for the next five years. In this meeting, Aquila's preferred/proposed resource plan over the short term was to build three combustion turbines and to enter into three-to-five year PPAs based off of the bids to the 2003 RFP. Staff was concerned regarding the short-term nature of Aquila's preferred/proposed plan, so three days later on January 30, 2004, Staff responded with a letter to Mr. Dennis Williams of Aquila in which Staff, expressed its concern regarding Aquila's short-sightedness. Staff also explained in the letter that it was Staff's belief that Aquila needed to be looking at base-load generation because Aquila should not become overly dependent upon short-term PPAs.

Aquila met with Staff on February 9, 2004 to provide its semi-annual resource update. This update, which took into consideration events over a twenty-year time

horizon, showed that Aquila's least cost plan was to build five 105 MW CTs in 2005 and to purchase a small amount of capacity on the market in 2005. Then, between 2005 and 2009, Aquila would meet its growth through purchases on the market; build a CT in 2009 and another in 2010. It also called for Aquila to pursue base load capacity for 2010. Aquila's preferred plan differed from the least cost plan only in that instead of building five 105 MW CTs in 2005, Aquila would build three 105 MW CTs in 2005 and enter into a 200 MW PPA in 2005.

At the next semi-annual update on July 9, 2004, Aquila still showed that the five 105 MW CTs plan was least cost; however the three 105 MW CTs with PPAs was still its preferred plan. Aquila had found a very good 75 MW PPA with Nebraska Public Power District ("NPPD"), but it was still pursuing the other PPAs upon which it had received bids. At subsequent resource planning update meetings Aquila provided updates on the three 105 MW CTs and Aquila's pursuit of PPAs. Other than the 75 MW PPA with NPPD, Aquila was unable to enter into a PPA of more than a few months duration.

Aquila followed its preferred plan by building three 105 MW CTs at its South Harper site near the City of Peculiar and entering into a short-term purchased-power contract for power {capacity and/or energy} from another plant owned by Aquila Merchant - the 300 MW Crossroads plant in Mississippi - to meet its capacity needs for 2005.

In Aquila's first general electric rate increase case after the expiration of the Aries PPA, Case No. ER-2005-0436, Staff asserted that, given the information available to Aquila from its resource planning process when Aquila decided how it would replace the power it was obtaining through the Aries capacity contract, Aquila should have built five

105 MW CTs. In that case, it was Staff's position that utilities should carefully do risk and contingency analysis of their resource plans and chose a resource plan that is robust across many scenarios of possible future events. That is still Staff's position. Prudently building and owning generation, whether it is base load, intermediate or peaking, provides price stability for Missouri consumers. PPAs are useful tools and are typically less expensive than building generation in the short-term, but they should not be relied upon as long-term solutions to capacity needs in the planning process without a firm long-term contract in hand. It was Staff position that, instead of relying on short-term PPAs, Aquila should have had five 105 MW CTs built by 2005 and that it then would have had that capacity available to serve its customers for the next thirty years.

This was the first case, Case No. ER-2005-0436, where, in lieu of costs based on Aquila's three 105 MW CTs South Harper power plant and a purchased power agreement, Staff included the costs of a new site with five installed 105 MW CTs in its case to approximate a self-build option for MPS. At that time there was ongoing litigation involving the South Harper power plant, so Aquila was again using short-term purchased power contracts to meet its capacity needs. The parties in Case No. ER-2005-0436 entered into a Stipulation and Agreement regarding fuel and purchased power expenses. The Stipulation and Agreement was silent regarding how Aquila should meet its capacity requirements.

In Aquila's next rate increase case, Case No. ER-2007-0004, Aquila was still relying on the three 105 MW CTs at South Harper and short-term PPA. Due to Aquila's continued litigation regarding the South Harper power plant, in this case Staff took the position that Aquila should have built five 105 MW CTs in 2005 to meet its capacity and

energy needs, which was consistent with Staff's position in Aquila's preceding rate case. In this case Staff and other parties entered into another Stipulation and Agreement regarding fuel and purchased power expenses that was silent on how Aquila should meet its capacity requirements.

Staff's position remained that Aquila should have built five 105 MW CTs early enough to meet its capacity needs in 2005. In 2008, Section 393.171 RSMo. was passed which allowed the Commission to grant Aquila a certificate of convenience and necessity ("CCN") for South Harper and the substation associated with it. The Commission granted Aquila a CCN for South Harper and the substation effective March 28, 2009 in Case No. EA-2009-0118.

Aquila obtained this CCN during the pendency its next rate increase case (Case No. ER-2009-0090). By that time Great Plains Energy had acquired Aquila and had renamed it KCP&L – Greater Missouri Operations Company ("GMO"). Once the legal issues surrounding South Harper were resolved and the Commission had granted Aquila a CCN for South Harper, Staff's position changed and Staff included the capacity and running costs of the three 105 MW CTs at South Harper in its cost of service determination for GMO, but Staff maintained its position that Aquila should have built five 105 CTs in 2005, not three. Again, in Case No. ER-2009-0090, Staff and other parties entered into another Non-Unanimous Stipulation and Agreement regarding fuel and purchased power expense which was silent on how GMO should meet its capacity requirements.

As a part of this Non-Unanimous Stipulation and Agreement filed on May 22, 2009 in Case No. ER-2009-0090, GMO did agree to provide an analysis to be conducted

by GMO regarding the Crossroads units and capacity additions for the Company. GMO provided this analysis to Staff and parties on May 31, 2010. This study was based on adding capacity at 2009 costs and included the generic CTs at 2009 costs. However, the time GMO needed capacity was the summer peak season of 2005, at the same time as when the Aries PPA expired. Aquila's least cost plan was to build five CTs instead of the three Aquila built at South Harper to be in service during summer of 2005. So GMO's analysis provided to Staff on May 31, 2010, was not useful for determining the prudence of Aquila's actions in 2005.

Staff Expert: Lena M. Mantle

Addendum C

Is Deemed

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In Its Entirety