VOLUME 1:

EXECUTIVE SUMMARY

KCP&L GREATER MISSOURI OPERATIONS COMPANY (GMO)

INTEGRATED RESOURCE PLAN

CASE NO. EE-2009-0237

4 CSR 240-22.010

** PUBLIC **

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TABLE OF CONTENTS

TABLE OF TABLES

VOLUME 1: EXECUTIVE SUMMARY

SECTION 1: ALTERNATIVE RESOURCE PLANS

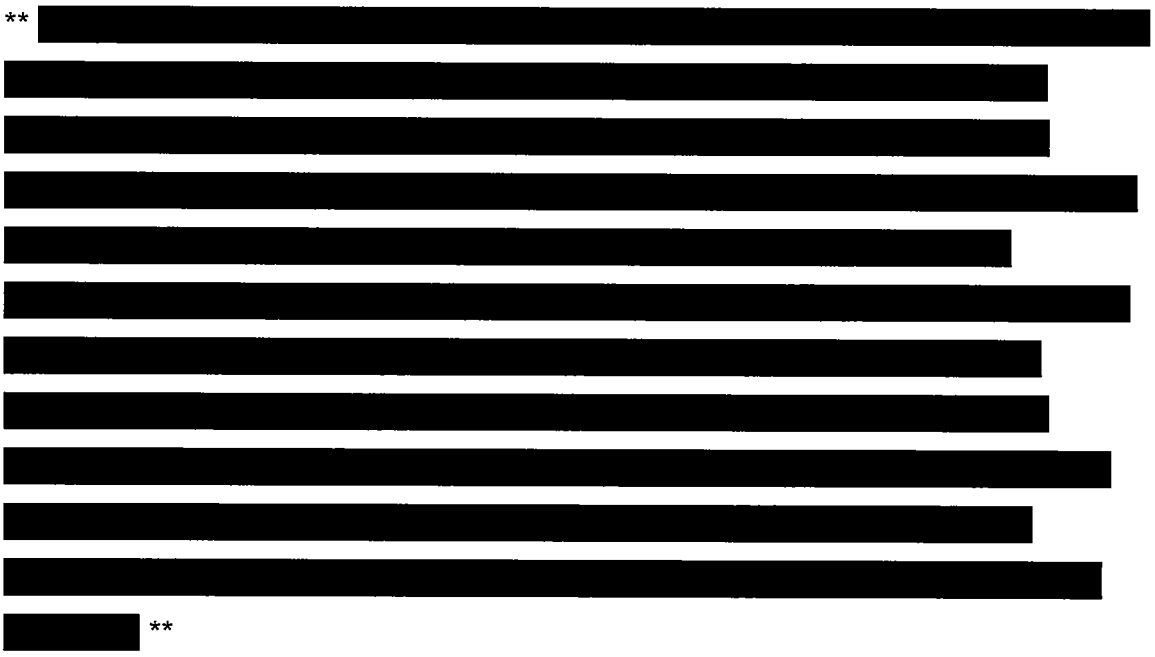
Alternative resource plans were developed using combinations of supply-side resources, demand-side resources and ** [redacted] **. Timing of supply additions ** [redacted] ** and quantity of resources are varied. In total, twelve (12) alternative resource plans were developed for integrated resource analysis. Table 1 represents an overview of each plan included in the revised integrated analysis over the 2012 through 2031 planning period. While not shown in the table below, each alternative resource plan included sufficient renewable resources to meet the Missouri Renewable Energy Standard.

Table 1: Overview of Alternative Resource Plans ** Highly Confidential **

		[redacted]					
CAA00	ENHANCED		X				
CAA01	ENHANCED			X			
CAB00	ENHANCED		X				
CAB01	ENHANCED			X			
CAB02	ENHANCED						X
CAB04	ENHANCED		X		X		
CAB05	ENHANCED		X		X		
CBB00	ENHANCED		X				
CCB00	ENHANCED		X				
CCB01	ENHANCED		X			X	
CXX00	ENHANCED		X				
XAB00	NONE		X				

SECTION 2: PREFERRED RESOURCE PLAN

Results from the twelve alternative resource plans ranked by NPVRR demonstrate that the Preferred Resource Plan includes an enhanced level of proposed DSM programs starting in 2012, subject to receiving acceptable approval under Missouri Energy Efficiency Investment Act (MEEIA), and renewable resources additions beginning in 2014. GMO plans to make a DSM plan filing under the MEEIA rule in August 2011. This filing will request DSM tariff and cost recovery approval via the Demand-Side Programs Investment Mechanism (DSIM) mechanisms authorized under the rule. The rule provides for Missouri Public Service Commission (MPSC) approval of any filing in 120 days. It is GMO's expectation that the filing will receive Commission approval prior to the end of 2011. Without such approval, consistent with the Company's requested filing, the Company cannot pursue the DSM plan included in this filing.



The Preferred Plan also includes solar resources that are based upon estimates of the installed solar capacity required to fulfill the requirements of Missouri's Renewable Energy Standard. It should be noted that these solar resources as

well as the wind additions could be obtained from a power purchase agreement, purchase of renewable energy credits (REC), or company ownership.

The Preferred Resource Plan is shown in Table 2 below:

Table 2: Preferred Resource Plan ** Highly Confidential **

PLAN CAB00						
YEAR	SOLAR	WIND	CT	CC	DSM	[redacted]
2012	-	-	-	-	54	
2013	-	-	-	-	73	
2014	3	100	-	-	93	
2015	-	-	-	-	112	
2016	-	-	-	-	131	
2017	-	-	-	-	149	
2018	7	100	154	-	168	
2019	-	100	154	-	186	
2020	-	-	-	-	194	
2021	7	150	-	-	207	
2022	-	-	-	-	218	
2023	-	-	-	-	235	
2024	1	-	-	-	253	
2025	-	-	-	-	270	
2026	-	-	-	-	288	
2027	1	-	-	-	306	
2028	-	-	154	-	324	
2029	-	-	-	-	342	
2030	-	-	-	-	361	
2031	-	-	-	-	361	

SECTION 3: CONTINGENCY PLANS

The most significant potential impact on the Preferred Plan after the Implementation Period comes from the possibility of deviation of critical uncertain factors from the mid level. Table 3 provides an overview of the relationship between critical uncertain factors with respect to potential alternative resource plans.

Table 3: Alternative Plans for Each Critical Uncertain Factor

Risk Factor	Alternative Plan	
	CAB01	CXX00
High Load Growth		X
High CO2	X	
High Natural Gas		X
Low Load Growth	X	
Low CO2		X
Low Natural Gas	X	

Under a scenario of high load growth, high natural gas prices, or low CO_2 prices, ** [redacted] **, Plan CXX00, would be a lower-cost option. Note that this plan contains identical wind, solar, and DSM resource additions as in the Preferred Plan. This alternative resource plan is shown in Table 4 below:

Table 4: Alternative Resource Plan CXX00 ** Highly Confidential **

PLAN CXX00						
YEAR	SOLAR	WIND	CT	CC	DSM	[redacted]
2012	-	-	-	-	54	
2013	-	-	-	-	73	
2014	3	100	-	-	93	
2015	-	-	-	-	112	
2016	-	-	-	-	131	
2017	-	-	-	-	149	
2018	7	100	-	-	168	
2019	-	100	-	-	186	
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2026	-	-	-	-	288	
2027	1	-	-	-	306	
2028	-	-	-	-	324	
2029	-	-	-	-	342	
2030	-	-	154	-	361	
2031	-	-	-	-	361	

Under a scenario of low load growth, low natural gas prices, or high CO_2 prices, ** [redacted] **, but instead of CT's additions, combined cycle additions would be the lower cost option. Plan CAB01 reflects this scenario and is shown in Table 5 below. Note that this plan contains identical wind, solar, and DSM resource additions as in the Preferred Plan.

Table 5: Alternative Resource Plan CAB01 ** Highly Confidential **

PLAN CAB01						
YEAR	SOLAR	WIND	CT	CC	DSM	[redacted]
2012	-	-	-	-	54	
2013	-	-	-	-	73	
2014	3	100	-	-	93	
2015	-	-	-	-	112	
2016	-	-	-	-	131	
2017	-	-	-	-	149	
2018	7	100	-	300	168	
2019	-	100	-	-	186	
2020	-	-	-	-	194	
2021	7	150	-	-	207	
2022	-	-	-	-	218	
2023	-	-	-	-	235	
2024	1	-	-	-	253	
2025	-	-	-	-	270	
2026	-	-	-	-	288	
2027	1	-	-	300	306	
2028	-	-	-	-	324	
2029	-	-	-	-	342	
2030	-	-	-	-	361	
2031	-	-	-	-	361	