APPENDIX 7A:

IMPLEMENTATION PLAN AND RESOURCE ACQUISITION STRATEGY

KCP&L GREATER MISSOURI OPERATIONS COMPANY (GMO)

INTEGRATED RESOURCE PLAN

CASE NO. EE-2009-0237

4 CSR 240-22.070

** PUBLIC **

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SECTION 1: IMPLEMENTATION PLAN

(9) The utility shall develop an implementation plan that specifies the major tasks and schedules necessary to implement the preferred resource plan over the implementation period. The implementation plan shall contain:

1.1 SCHEDULE OF RESEARCH

(A) A schedule and description of ongoing and planned research activities to update and improve the quality of data used in load analysis and forecasting;

GMO plans to conduct its next residential appliance saturation survey in 2012. GMO will continue to obtain and use updated end-use data from the US Department of Energy (DOE) for its statistically adjusted end-use models. Also, GMO is in the process of hiring a consultant to develop a DSM potential study that will provide data for meeting load analysis and forecasting rules. See Section 1.2 for a detailed DSM potential study schedule.

1.2 SCHEDULE OF DSM PROGRAMS

(B) A schedule and description of ongoing and planned demand-side management programs, program evaluations and research activities;
Schedules and descriptions of the demand-side management programs are shown in Figure 1 below:

Figure 1: Energy Efficiency and Demand Response Programs

DSM Programs				
SEGMENT	DSM Program	Tariffs filed	Program Launch	EM&V Report Due
RESIDENTIAL				
	RESIDENTIAL LIGHTING AND APPLIANCES	August, 2011	January, 2012	June, 2013
	MULTI-FAMILY	August, 2011	January, 2012	January, 2013
	ENERGY STAR NEW HOMES	August, 2011	January, 2012	January, 2013
	RESIDENTIAL COOL HOMES	August, 2011	January, 2012	January, 2013
	HOME PERFORMANCE WITH ENERGY STAR	August, 2011	January, 2012	January, 2013
	LOW INCOME WEATHERIZATION	August, 2011	January, 2012	January, 2013
	APPLIANCE RECYCLING	August, 2011	January, 2012	June, 2013
	ENERGY OPTIMIZER	August, 2011	January, 2012	January, 2013
	HOME ENERGY ANALYZER, ON-LINE	August, 2011	January, 2012	January, 2013
COMMERCIAL				
	PRESCRIPTIVE REBATES	August, 2011	January, 2012	June, 2013
	CUSTOM REBATES, RETROFIT	August, 2011	January, 2012	January, 2013
	CUSTOM REBATES, NEW CONSTRUCTION	August, 2011	January, 2012	January, 2013
	MPOWER LOAD CURTAILMENT	August, 2011	January, 2012	January, 2013
	BUILDING OPERATOR CERTIFICATION	August, 2011	January, 2012	January, 2013
	BUSINESS ENERGY ANALYZER, ON-LINE	August, 2011	January, 2012	January, 2013

A DSM Potential Study initiative is currently being undertaken by GMO. The current schedule for this study is shown in below:

Figure 2: DSM Potential Study Schedule ** Highly Confidential **

DSM Potential Study Schedule Estimate		
Milestone	Estimated Completion Date	Status as of June 20, 2011
RFP Available	May 9, 2011	Complete
Intent to Respond & Signed Non-Disclosure Agreement Due	May 12, 2011	Complete
Mandatory Pre-bid Meeting (via Conference Call)	May 16, 2011	Complete
Bidder Questions Due – 12:00 Noon CDT	May 20, 2011	Complete
Final Answers to Questions Provided by KCP&L – Close of Business	May 27, 2011	Complete
Proposal Responses Due – 12:00 Noon CST	June 10, 2011	Complete
[redacted]		

GMO plans to make a DSM plan filing under the Missouri Energy Efficiency Investment Act ("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.

As a result, GMO expects a MPSC ruling on the filing by December 2011. Successful MPSC approval of the filing is needed to proceed with the pursuit of the DSM program launch depicted in Figure 1 above.

1.3 SCHEDULE OF RESOURCE ACQUISITION

(C) A schedule and description of all supply-side resource acquisition and construction activities; and

In addition to the Preferred Plan, GMO is in the process of constructing a landfill gas operation at St Joseph, Missouri. The current schedule is shown in Figure 3 below:

Figure 3: St. Joseph Landfill Gas Construction Schedule

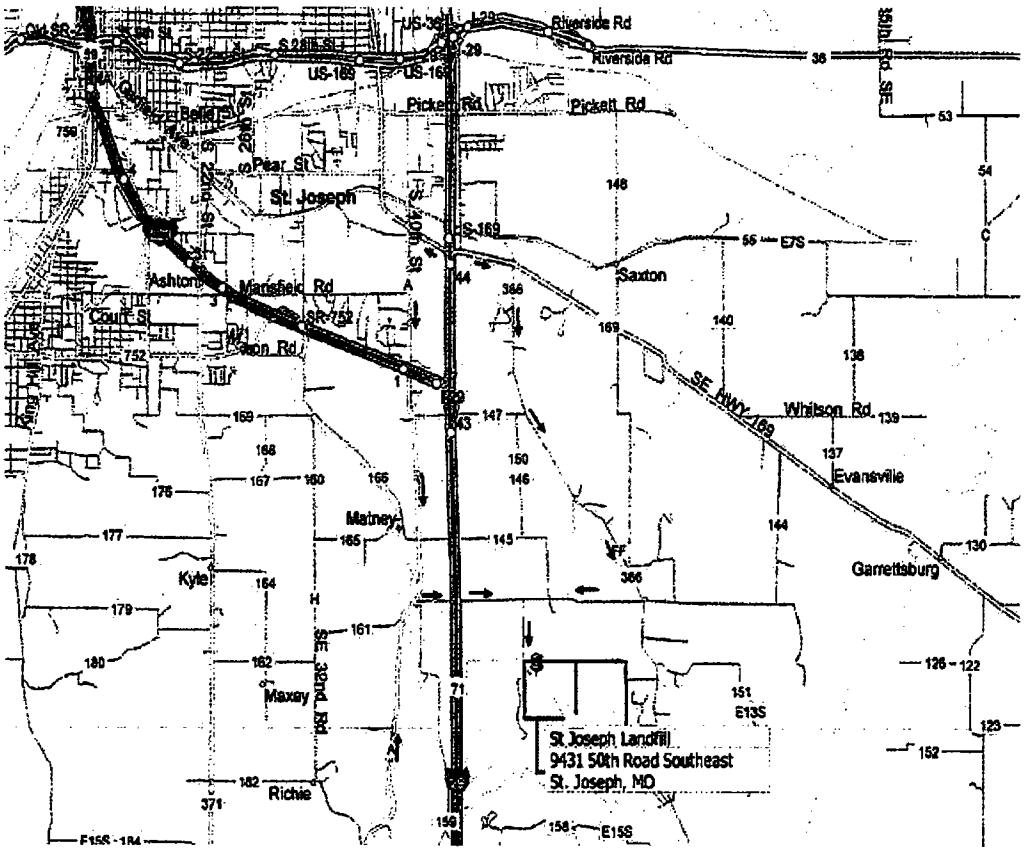
St. Joseph Landfill Gas Project		
Council Approves MOU via Resolution	3/8/2010	Complete
KCP&L GMO Submits MDNR Subgrant Application	4/30/2010	Complete
MDNR Subgrant Contract Executed	10/7/2010	Complete
Submit Asbestos Notification	10/25/2010	Complete
Submit Design for LFG Collection Const Permit	10/31/2010	Complete
Council Completes First Reading of Ordinance	11/1/2010	Complete
2nd Reading and Council Approves Ordinance	11/29/2010	Complete
Title V Plant Air Construction Permit Approved	12/30/2010	Complete
Obtain MDNR Permit for LFG Collection Sys Const	1/3/2011	Complete
NEPA Exclusion Granted	1/27/2011	Complete
PSC Approves CCN	2/4/2011	Complete
Submit City's Title V Operating Permit	2/5/2011	Complete
MDNR Notice to Proceed	2/14/2011	Complete
Received SWPPP (Storm Water Pollution & Prevention Plan) & Land Disturbance Permit for GCCS (Gas Conditioning & Control System)	3/14/2011	Complete
Execute Design & Construction Contract for GCCS	3/25/2011	Complete
GCCS Construction Start	3/30/2011	Complete
Submit Land Disturbance Permit application	6/17/2011	On Schedule
Start Underground Plant Construction	7/26/2011	On Schedule
Deliver GC (Gas Conditioning skid)	9/8/2011	On Schedule
Deliver Genset	9/16/2011	On Schedule
Start-Up Complete	11/28/2011	On Schedule
MDNR Operating Permit Approval	12/1/2011	On Schedule
Air Permit Startup Test	2/20/2012	On Schedule

The St. Joseph Landfill Gas project will turn a liability into an asset by collecting and destroying methane gas and producing revenue to help keep the St. Joseph landfill gate fee the lowest in the state. The project will increase local electric generation and provide KCP&L and the City of St. Joseph with greenhouse gas (carbon) credits and renewable energy credits (RECs). The project will include 52 new wells with coverage for over 70 acres that will condense and collect the methane gas; 2200 scfm (standard cubic feet per minute) compression and conditioning system with 70 inch vacuum to deliver landfill gas at 5 psi (per

square inch); and a 1.6 MW or equivalent turbine reciprocating engine / generator that will convert the gas to electricity distributed through KCP&L's grid.

The turbine generator being installed on site will operate 24 hours a day, seven days a week, and can convert captured methane gas provided by the City of St. Joseph into enough electricity to power nearly 1,000 homes per year. The project provides the opportunity to add additional generators in the future if it can be supported by the gas supply and both parties agree to expand the project.

Below is a photograph of the area in which the St. Joseph Landfill Gas facility is located.



1.4 CRITICAL PATH

(D) Identification of critical paths and major milestones for each resource acquisition project, including decision points for committing to major expenditures.

The major milestones for the St. Joseph Landfill Gas resource addition are shown in Figure 3 above. For the other resource additions identified in the Preferred Resource Plan, the critical paths and milestones are included as the implementation plans in Section 2.2, the Resource Acquisition Strategy.

GMO intends to make a filing for approval of DSM programs and associated cost recovery in August 2011 under the previously referenced MEEIA rules. It is GMO's expectation that the filing will receive Commission approval prior to the end of 2011. Without such approval, the Company cannot pursue the DSM plan included in this filing.

RESOURCE ACQUISITION STRATEGY

SECTION 2: RESOURCE ACQUISITION STRATEGY & CORPORATE APPROVAL STATEMENT

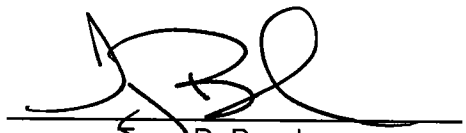
(10) The utility shall develop, document and officially adopt a resource acquisition strategy. This means that the utility's resource acquisition strategy shall be formally approved by the board of directors, a committee of senior management, an officer of the company or other responsible party who has been duly delegated the authority to commit the utility to the course of action described in the resource acquisition strategy. The officially adopted resource acquisition strategy shall consist of the following components:

The corporate approval statement is provided on the following page:

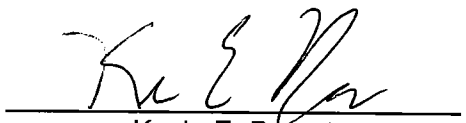
KCP&L Greater Missouri Operations Company
2011 INTEGRATED RESOURCE PLAN
CORPORATE APPROVAL STATEMENT FOR
RESOURCE ACQUISITION STRATEGY

KCP&L Greater Missouri Operations Company ("GMO") has completed the analysis for its Integrated Resource Plan and its Preferred Resource Plan. This work was prepared under our direction and control. This filing includes two (2) Volumes consisting of 4 CSR 240-22.060 Integrated Resource Analysis and 4 CSR 240-22.070 Risk Analysis and Strategy Selection. To the best of our knowledge, information, and belief, the methods used and the procedures followed by GMO in formulating the resource acquisition strategy contained in this filing comply with the provisions of Chapter 22* of the regulations of the Missouri Public Service Commission ("Commission") subject to waivers previously granted by the Commission. GMO has approved the Resource Acquisition Strategy shown as Appendix 7A.

As required by 4 CSR 240-22.080(10) the referenced resource acquisition strategy includes: 1) the Preferred Resource Plan, 2) an implementation plan for the new resource additions included in the Preferred Resource Plan, 3) ranges of the critical uncertain factors, 4) contingency options, and 5) monitoring and reporting processes of the critical uncertain factors. Pursuant to the requirements of the Commission's regulations, GMO will notify the Commission if GMO determines that circumstances have changed so that the Preferred Resource Plan provided here is no longer appropriate.



Terry D. Bassham
President and Chief Operating Officer
Great Plains Energy and Kansas City Power and Light Company



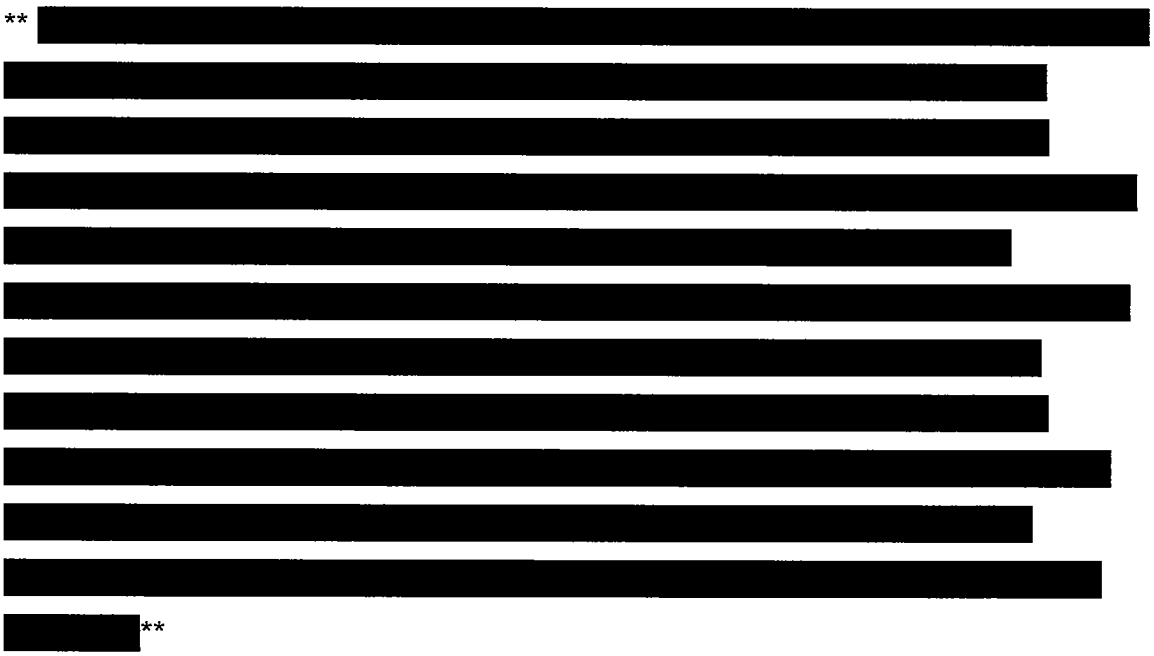
Kevin E. Bryant
Vice President, Strategy and Risk Management
Kansas City Power and Light Company and KCP&L Greater Missouri Operations Company

*The Chapter 22 rules referenced here are those bearing the date 3/29/1993.

2.1 PREFERRED RESOURCE PLAN

(A) A preferred resource plan selected pursuant to the requirements of section (6) of this rule;

A total of twelve (12) alternative resource plans are included in this revised integrated analysis. Each of the twelve alternative resource plans evaluated included adequate renewable generation to meet the future Missouri renewable energy requirements. Results from the twelve alternative resource plans ranked by NPVRR demonstrate that the Preferred Resource Plan includes the Enhanced level of proposed DSM programs starting in 2012, subject to receiving acceptable approval under MEEIA, and renewable resources additions beginning in 2014. Note that GMO plans to make such MEEIA filing in August 2011 and anticipate approval by the end of 2011.



The Preferred Resource Plan is shown in Table 1 below:

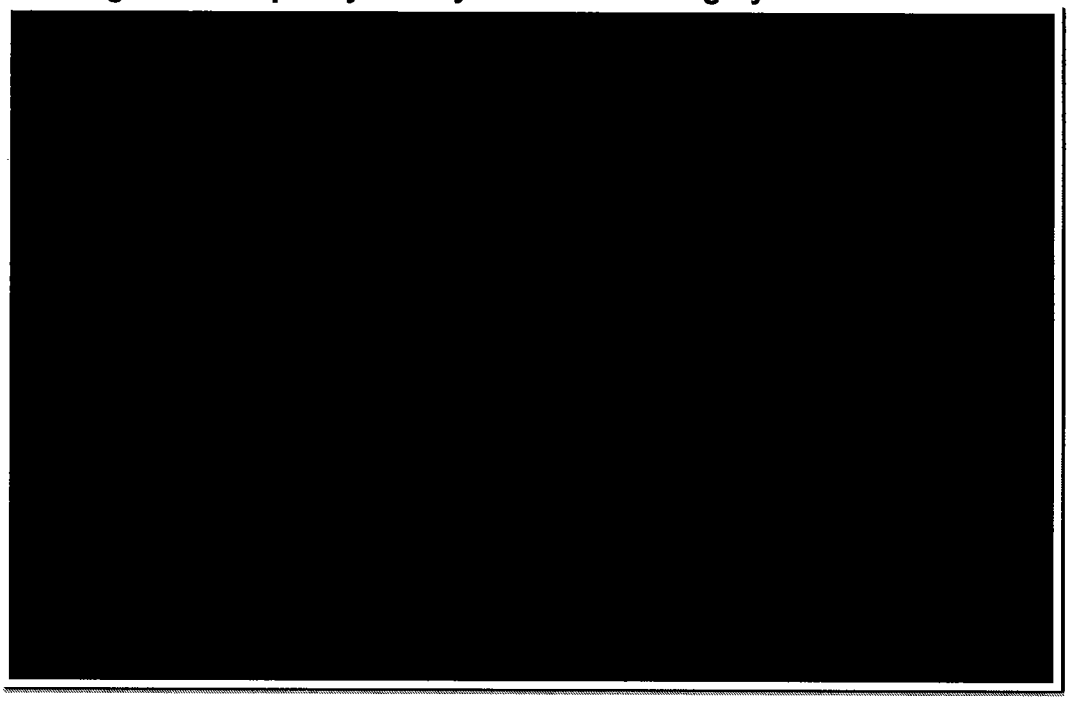
Table 1: Preferred Resource Plan ** Highly Confidential **

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	

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. Also, although ownership of these resources was modeled for in the alternative resource plans, future RFP responses may result in lower costs based on either purchase power agreements (PPA) or ownership.

The generation mix of the Preferred Resource Plan by the year 2028 is shown in Figure 4 below:

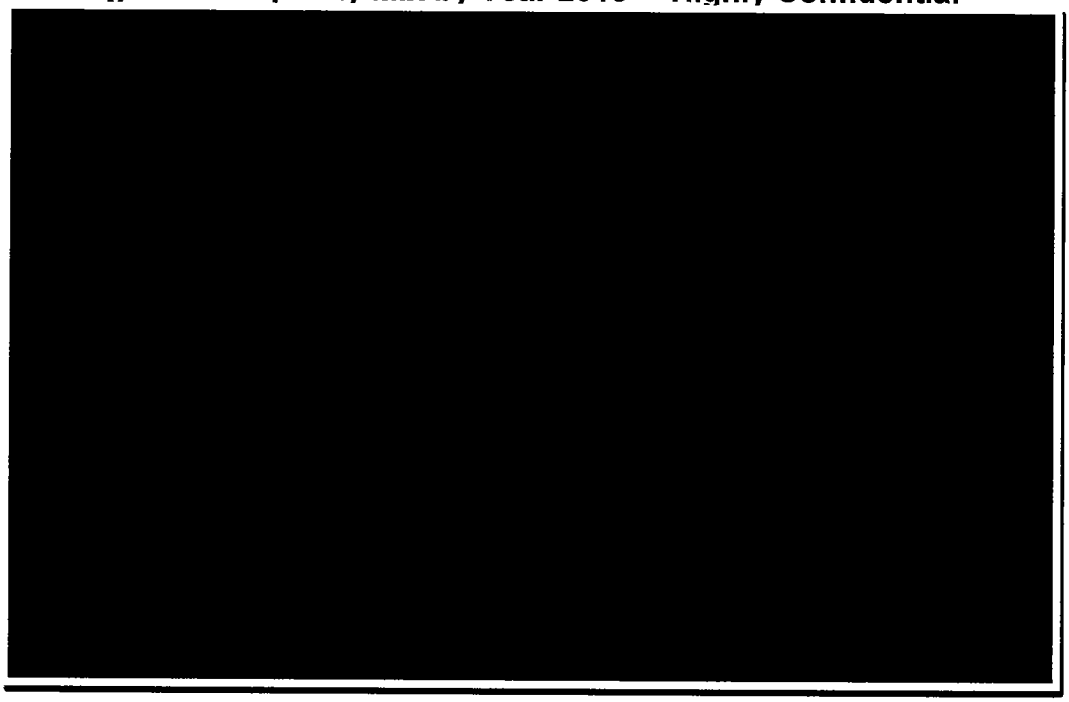
Figure 4: Capacity Mix by Year 2028 ** Highly Confidential **



Comparing the capacity mix expected by the year 2028 to the capacity mix **

The capacity mix for the year 2013 is shown in Figure 5 below:

Figure 5: Capacity Mix by Year 2013 ** Highly Confidential **



2.2 IMPLEMENTATION PLAN

(B) An implementation plan developed pursuant to the requirements of section (9) of this rule;

2.2.1 WIND & SOLAR IMPLEMENTATION

Figure 6 below shows the expected milestones and critical paths required to meet a 2014 in-service date for new wind.

Figure 6: 2014 Wind Milestones

100 MW Wind Resource in 2014		
Milestone	**Completion Date**	**Status**
Issue 100 MW RFP	6/1/12	On Schedule
Proposals Due	8/3/12	On Schedule
Proposal Evaluation Complete	10/12/12	On Schedule
Contract Negotations Complete	12/14/12	On Schedule
Contract Executed	1/7/13	On Schedule
Construction Begins	6/3/13	On Schedule
Construction Complete	12/2/13	On Schedule
Commerical Operation	1/1/14	On Schedule

Figure 7 below shows the expected milestones and critical paths required to meet a 2014 in-service date for solar-based generation.

Figure 7: 2014 Solar Milestones

3 MW Solar Resource in 2014		
Milestone	**Completion Date**	**Status**
Issue Solar RFP	6/1/12	On Schedule
Proposals Due	7/15/12	On Schedule
Proposal Evalution Complete	9/1/12	On Schedule
Contract Negotiations	11/1/12	On Schedule
Contract Executed	12/1/12	On Schedule
Steps if 'Build' option chosen:		
Construction Begins	5/1/13	On Schedule
Construction Complete	10/1/13	On Schedule
Commercial Operation	11/1/13	On Schedule
Steps if 'SREC' purchases option chosen:		
SREC Purchases Complete	1/1/14	On Schedule

2.2.2 DSM IMPLEMENTATION

The critical paths and major milestones for DSM implementation are shown above in Section 1.2.

2.3 RANGES OF CRITICAL UNCERTAIN FACTORS

(C) A specification of the ranges or combinations of outcomes for the critical uncertain factors that define the limits within which the preferred resource plan is judged to be appropriate and an explanation of how these limits were determined;

The ranges of critical uncertain factors are calculated by estimating the value the critical uncertain factor needs to exceed in order for the Preferred Resource Plan to no longer be the lowest cost option. The NPVRR values for the Preferred Resource Plan and the lowest cost plan under extreme conditions are compared. By using linear interpolation a crossover point value is calculated and expressed as a percent of the range of the critical uncertain factor values used in the

Integrated and Risk Analyses. These percentages are superimposed on the high, mid and low forecasts for each critical uncertain factor to develop the resulting critical ranges.

2.3.1 CRITICAL UNCERTAIN FACTOR: CO_2

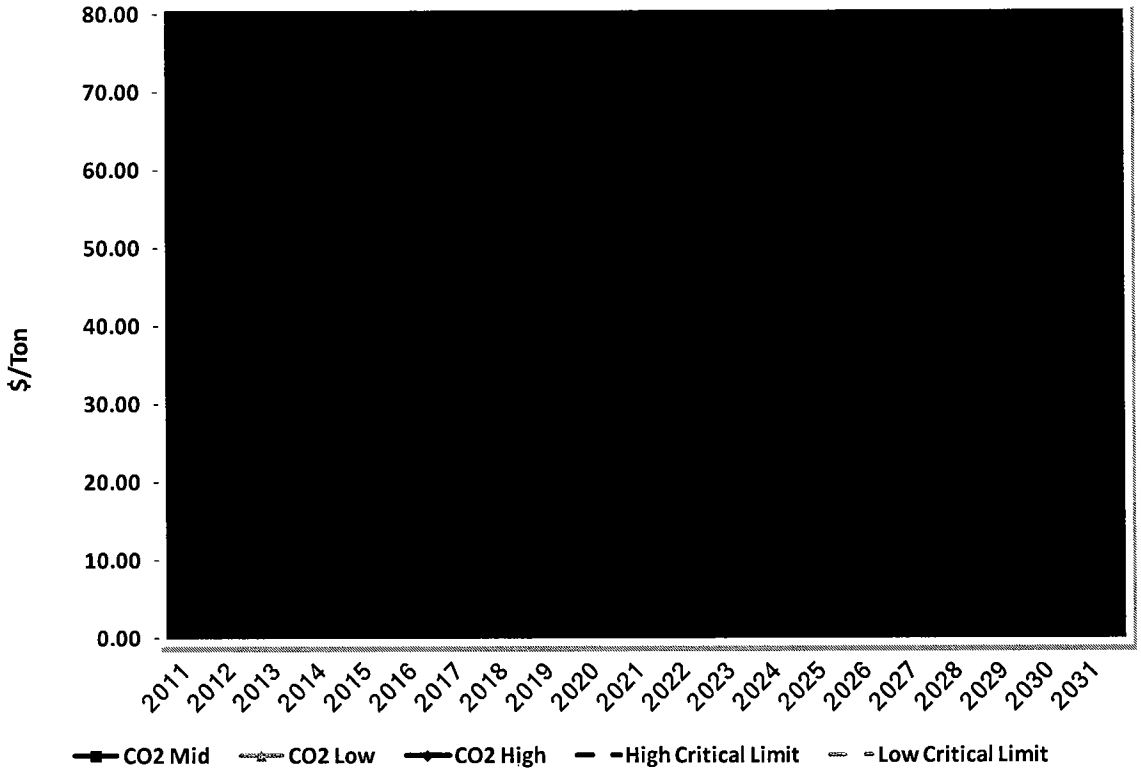
The uncertain factor range calculation is detailed in Table 2 below:

Table 2: CO_2 Uncertain Factor Range

CO_2		
Plan	**Mid**	**High**
CAB01	12,744	13,302
CAB00	12,644	13,375
Percent	**from Mid**	**from Low**
Upper %	**57.76%**	**78.88%**
Plan	**Mid**	**Low**
CXX00	12,808	11,003
CAB00	12,644	11,033
Percent	**from Mid**	**from Low**
Lower %	**-84.17%**	**7.91%**

The resulting limits of the range of this critical uncertain factor are detailed in Figure 8 below:

Figure 8: CO_2 Uncertain Factor Range Limits ** Highly Confidential **



2.3.2 CRITICAL UNCERTAIN FACTOR: COAL

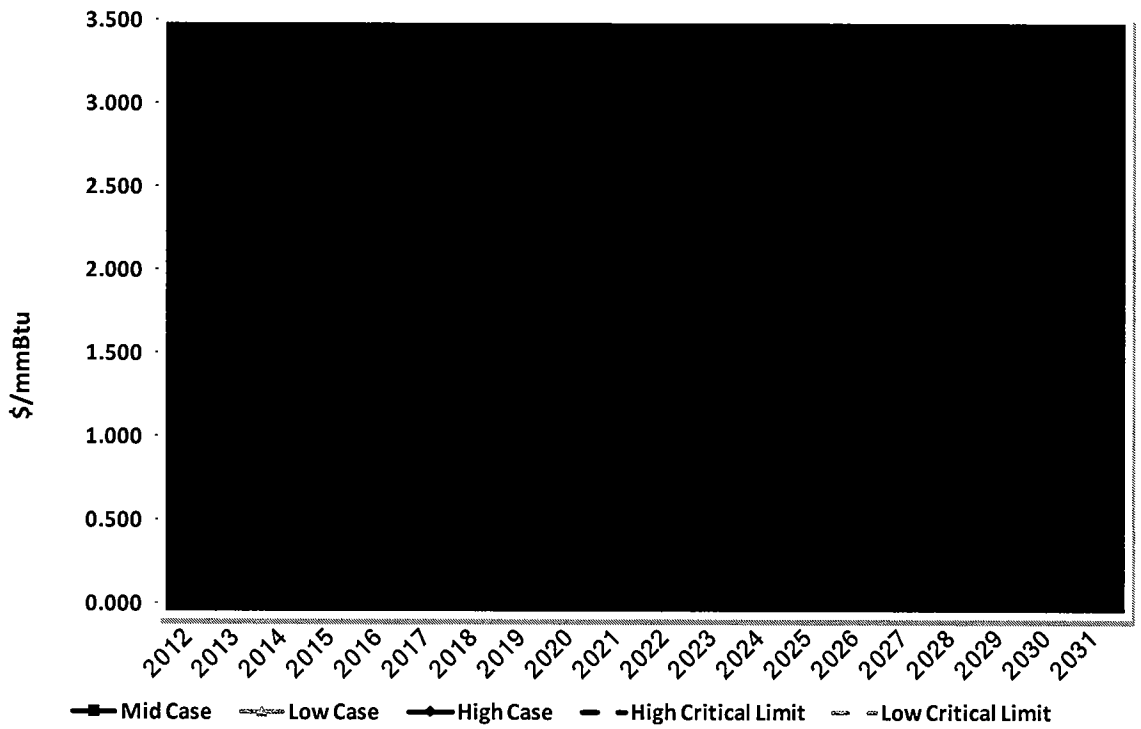
The uncertain factor range calculation is detailed in Table 3 below:

Table 3: Coal Uncertain Factor Range

Coal		
Plan	Mid	High
CXX00	12,808	11,395
CAB00	12,644	11,510
Percent	from Mid	from Low
Upper %	58.68%	79.34%
Plan	Mid	Low
CXX00	12,808	10,844
CAB00	12,644	10,903
Percent	from Mid	from Low
Lower %	-73.46%	13.27%

The resulting limits of the range of this critical uncertain factor are detailed in Figure 9 below:

Figure 9: Coal Uncertain Factor Range Limits ** Highly Confidential **



2.3.3 CRITICAL UNCERTAIN FACTOR: CONSTRUCTION COSTS

The uncertain factor range calculation is detailed in Table 4 below:

Table 4: Construction Costs Uncertain Factor Range

Construction		
Plan	Mid	High
CXX00	12,808	11,128
CAB00	12,644	11,178
Percent	from Mid	from Low
Upper %	76.74%	88.37%
Plan	Mid	Low
CXX00	12,808	10,878
CAB00	12,644	10,891
Percent	from Mid	from Low
Lower %	-92.57%	3.71%

The resulting limits of the critical uncertain factor must be compared on a technology by technology basis.

2.3.4 CRITICAL UNCERTAIN FACTOR: LOAD

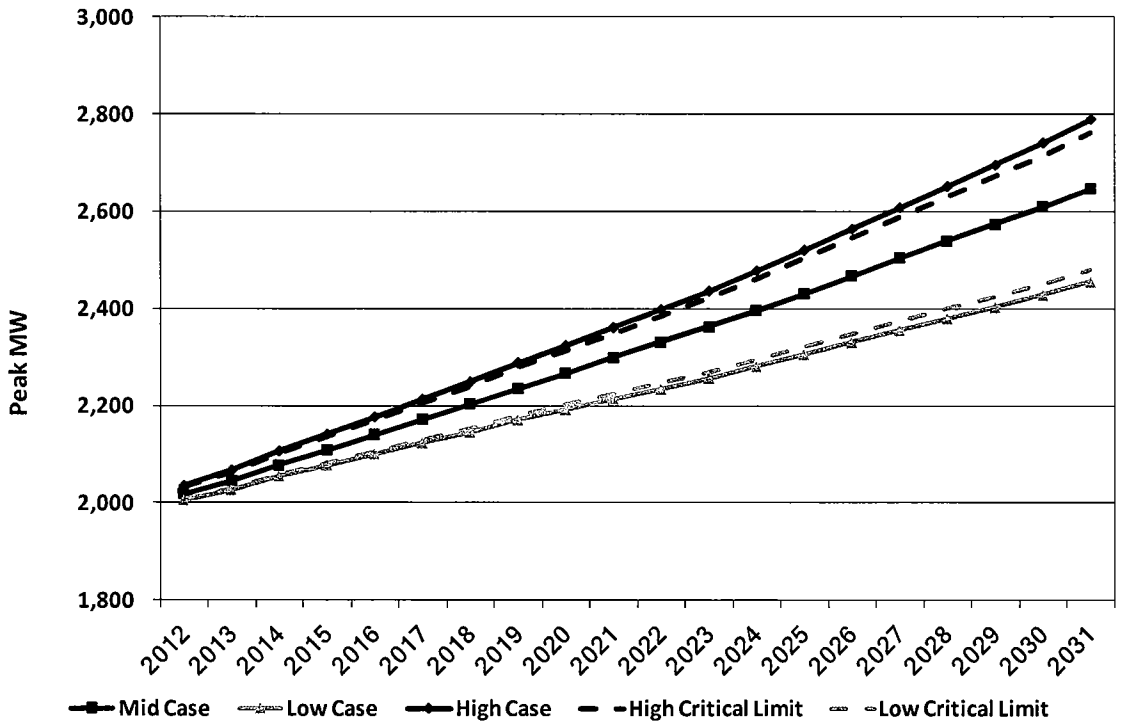
The uncertain factor range calculation is detailed in Table 5 below:

Table 5: Load Uncertain Factor Range

Load		
Plan	Mid	High
CXX00	12,808	11,147
CAB00	12,644	11,178
Percent	from Mid	from Low
Upper %	83.80%	91.90%
Plan	Mid	Low
CXX00	12,808	10,823
CAB00	12,644	10,850
Percent	from Mid	from Low
Lower %	-85.51%	7.25%

The resulting limits of the range of this critical uncertain factor are detailed in Figure 10 below:

Figure 10: Load Uncertain Factor Range Limits



2.3.5 CRITICAL UNCERTAIN FACTOR: NATURAL GAS

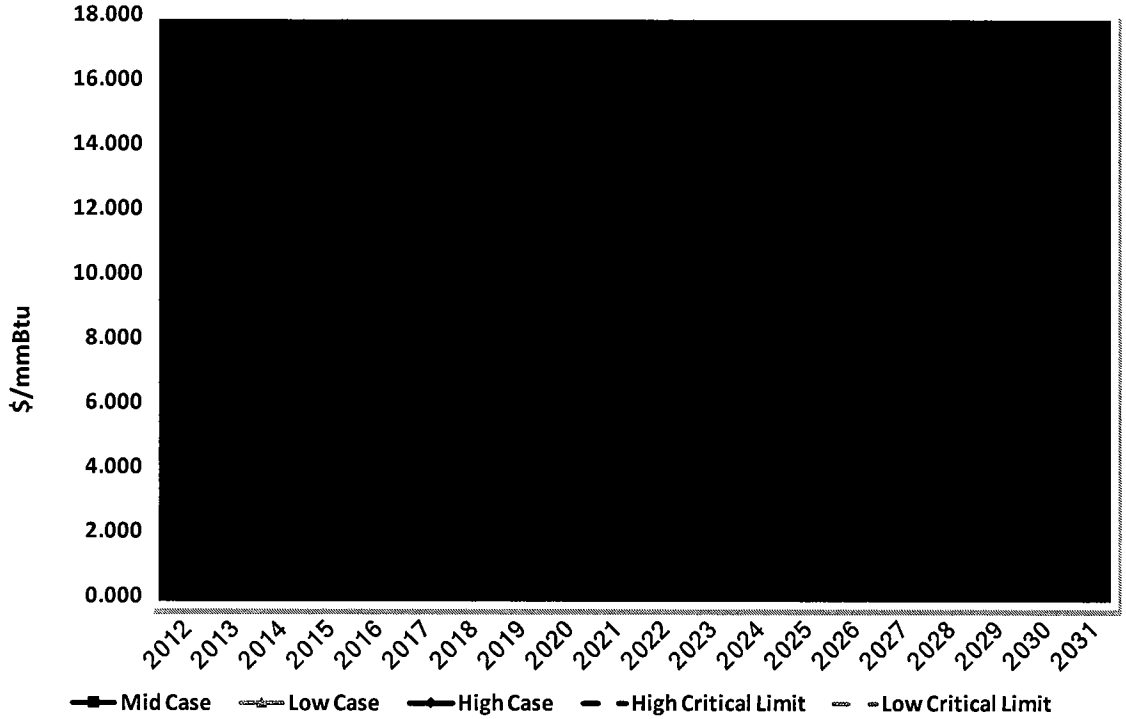
The uncertain factor range calculation is detailed in Table 6 below:

Table 6: Natural Gas Uncertain Factor Range

Natural Gas		
Plan	Mid	High
CXX00	12,808	11,330
CAB00	12,644	11,540
Percent	from Mid	from Low
Upper %	43.85%	71.93%
Plan	Mid	Low
CAB01	12,744	13,538
CAB00	12,644	13,576
Percent	from Mid	from Low
Lower %	-72.67%	13.66%

The resulting limits of the range of this critical uncertain factor are detailed in Figure 11 below:

Figure 11: Natural Gas Uncertain Factor Range Limits ** Highly Confidential **



2.3.6 CRITICAL UNCERTAIN FACTOR: FINANCIAL DRIVERS

In the preliminary sensitivity studies, it was determined that the plans would only be sensitive to an upward movement in financial drivers. The uncertain factor range calculation is detailed in Table 7 below:

Table 7: Financial Drivers Uncertain Factor Range

Financial		
Plan	Mid	High
CAB01	12,744	13,302
CAB00	12,644	13,375
Percent	from Mid	from Low
Upper %	57.76%	N/A

The resulting limits of the range of this critical uncertain factor are detailed in Table 8 below:

HC

Table 8: Financial Drivers Uncertain Factor Range Limits ** Highly Confidential **

Factor	Mid	Critical Limit	High
Short-term Rate	[redacted]		
Long-term Rate			
Return on Equity			
Debt Ratio			
Pre-tax Return on Ratebase			
After-tax Return on Ratebase (t=39%)			
AFUDC Equity Rate			
AFUDC Debt Rate			
AFUDC Rate			

2.4 CONTINGENCY OPTIONS

(D) A set of contingency options that are judged to be appropriate responses to extreme outcomes of the critical uncertain factors and an explanation of why these options are judged to be appropriate responses to the specified outcomes; and

The risk analysis demonstrates that should any critical uncertain factor limit be exceeded, the current Preferred Resource Plan should be reviewed with a number of Alternative Resource Plans. Each uncertain factor risk can cause different Alternative Resource Plan to perform better. The Alternative Resource Plans that should be evaluated along with the Preferred Resource Plan for each uncertain factor are listed in Table 9 below.

Table 9: Alternative Plans for Each 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	

The description of each Alternative Resource Plan is given in Table 10 below. Please note that Table 10 is identical to the Table of Alternative Resource Plans included in Section 3, Volume 6 of this filing. Each of the contingency plans shown above are identical to the preferred plan during the 3-year implementation period.

Table 10: 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				

The most significant potential impact on the Preferred Plan after the Implementation Period comes from the possibility of high natural gas prices or strong load growth or low CO_2 prices. In each case, ** [redacted] **

The strategy is summarized in Figure 12 below. The Company's Preferred Plan should be implemented. The Preferred Plan must have its cost-performance reviewed under the following conditions:

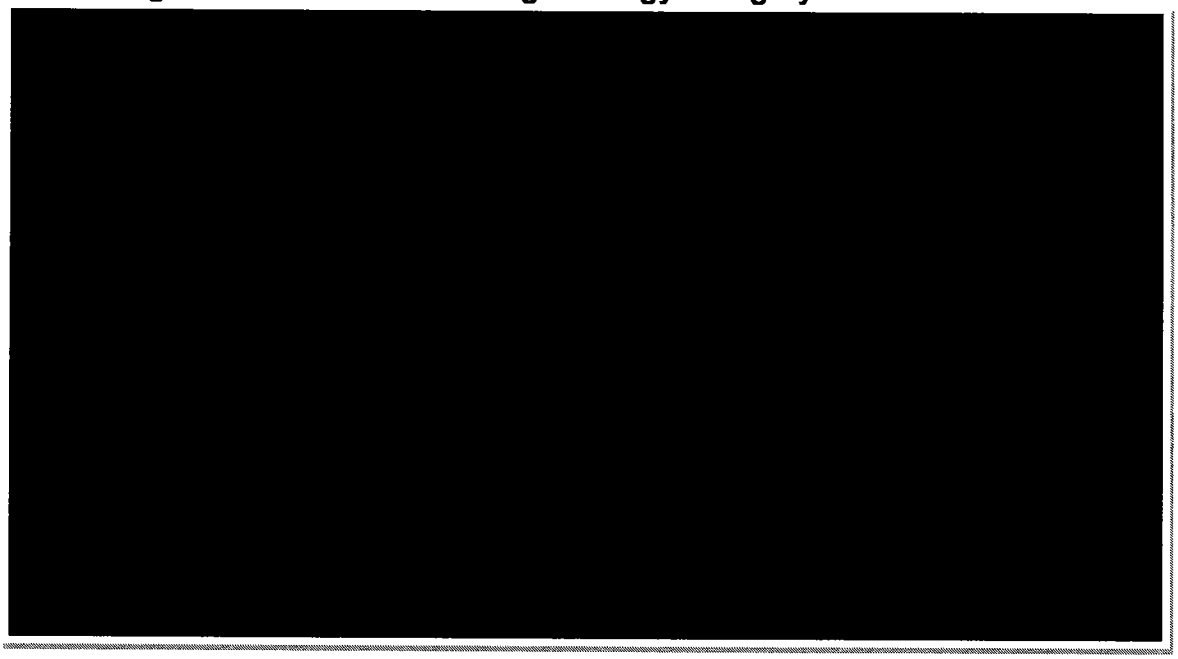
-If natural gas prices increase, load growth rebounds or if the CO_2 Market continues to be delayed or its prices are relatively low, ** [redacted] **

-If environmental regulations become more aggressively implemented, ** [redacted] **

-If a Federal Energy Efficiency Standard similar to that proposed in the Save American Energy Act, HR 889 is instituted; no additional combustion turbine capacity would be needed.

-If DSM programs are not implemented or adopted consistent with the Preferred Resource Plan, it may become necessary to accelerate the timing of the combustion turbine additions. Reasons for a lack of implementation or adoption consistent with the Preferred Resource Plan may include, but are not limited to, a lack of, or delayed, approval of acceptable cost recovery via the MEEIA filing, slower than expected customer adoption, and delays in establishing optimal program delivery channels.

Figure 12: Decision Making Strategy ** Highly Confidential **



2.5 MONITORING CRITICAL UNCERTAIN FACTORS

(E) A process for monitoring the critical uncertain factors on a continuous basis and reporting significant changes in a timely fashion to those managers or officers who have the authority to direct the implementation of contingency options when the specified limits for uncertain factors are exceeded.

Each critical uncertain factor is reviewed on an individual basis due to the varied nature of the information sources used in its review.

Critical Uncertain Factor: CO_2

CO_2 credit prices are reviewed on a continual basis. The data sources used are third party views predicting the price of the credits. Most of these third party studies are sparked by proposed legislation or are updated up to a quarterly basis. This review and update is conducted by the Fuels department with a full review conducted on an annual basis.

Critical Uncertain Factor: Coal

HC

Coal prices are updated for all purposes within the company on a monthly basis. This review is conducted by the Fuel department.

Critical Uncertain Factor: Construction Costs

Construction costs are updated as new information comes in from sources such as EPRI TAG, published third party reports, RFP responses, etc. This review and updating is a continual process.

Critical Uncertain Factor: Load

Load forecasts are updated on an annual basis as part of the company's annual budgeting process.

Critical Uncertain Factor: Natural Gas

Natural Gas forecasts are updated weekly with executive updates provided on a monthly basis.

Critical Uncertain Factor: Financial Drivers

Financial measures are updated annually as part of the annual budget process.

Market conditions may change the time frame under which a new review of any of these aforementioned forecasts would occur.