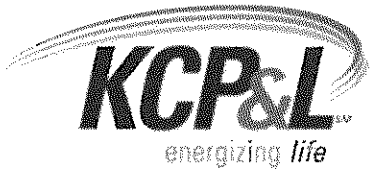
KANSAS CITY POWER & LIGHT COMPANY (KCP&L)

INTEGRATED RESOURCE PLAN

2013 ANNUAL UPDATE

JUNE, 2013



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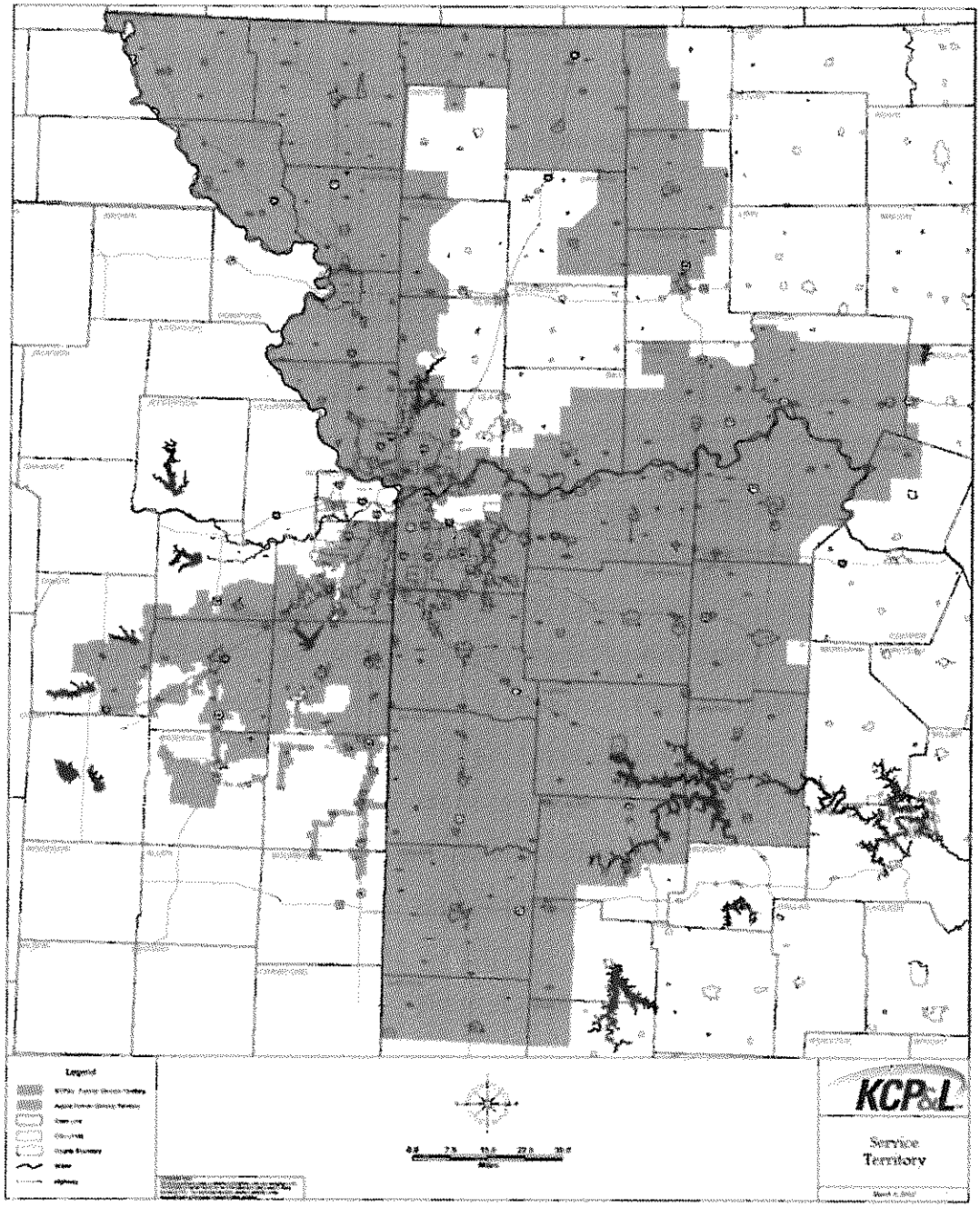
SECTION 1: EXECUTIVE SUMMARY

1.1 UTILITY INTRODUCTION

KCP&L is an integrated, mid-sized electric utility serving the metropolitan region surrounding the Kansas City, Missouri metropolitan area including customers in Kansas and Missouri. A map of the KCP&L service territory is provided in Figure 1 below:

Figure 1: KCP&L Service Territory



KCP&L is significantly impacted by seasonality with approximately one-third of its retail revenues recorded in the third quarter. Table 1 provides a snapshot of the number of customers served, estimated retail sales and peak demand.

Table 1: KCP&L Customers, NSI and Peak Demand

KCP&L 2013 Customers, Net System Input and Peak Demand			
State	Number of Retail Customers	Net System Input (MWh)	Projected Net Peak Demand (MW)
Missouri	270,783	9,075,501	1,968
Kansas	242,139	6,847,731	1,727
Total	511,100	15,923,232	3,695

KCP&L owns and operates a diverse generating portfolio and Power Purchase Agreements (PPA) to meet customer energy requirements. In 2011, KCP&L signed two wind energy PPAs that obtained commercial operation in June and September, 2012. The first PPA is with Duke Renewable Generation Services for the output of a 131.1 MW wind facility named Cimarron II, located in Gray County, Kansas. The second PPA is with EDF Renewables for the output of a 100.8 MW wind facility named Spearville 3. This facility is adjacent to the KCP&L owned Spearville 1 & 2 Wind Energy Facilities. These facilities will be used to fulfill a portion of KCP&L's Missouri and Kansas Renewable Energy requirements. Table 2, Figure 2, and Figure 3 below reflect current KCP&L generation assets including all current PPAs in place to serve KCP&L's capacity requirements.

Table 2: KCP&L Capacity and Energy By Resource Type

Resource Type	Capacity (MW)	% of Total Capacity	Estimated Energy (MWh)	% of Annual Energy
Coal	2,715	56%	15,067,800	74%
Nuclear	547	11%	4,169,030	20%
Gas	375	17%	146,270	0.7%
Oil	805	8%	706	0.003%
Wind	380*	8%	1,035,300	5%
Solar	0.107	0.002%	149	0.001%
Total	4,442	100%	20,419,255	100%
* Nameplate Capacity				

Figure 2: KCP&L Capacity By Resource Type

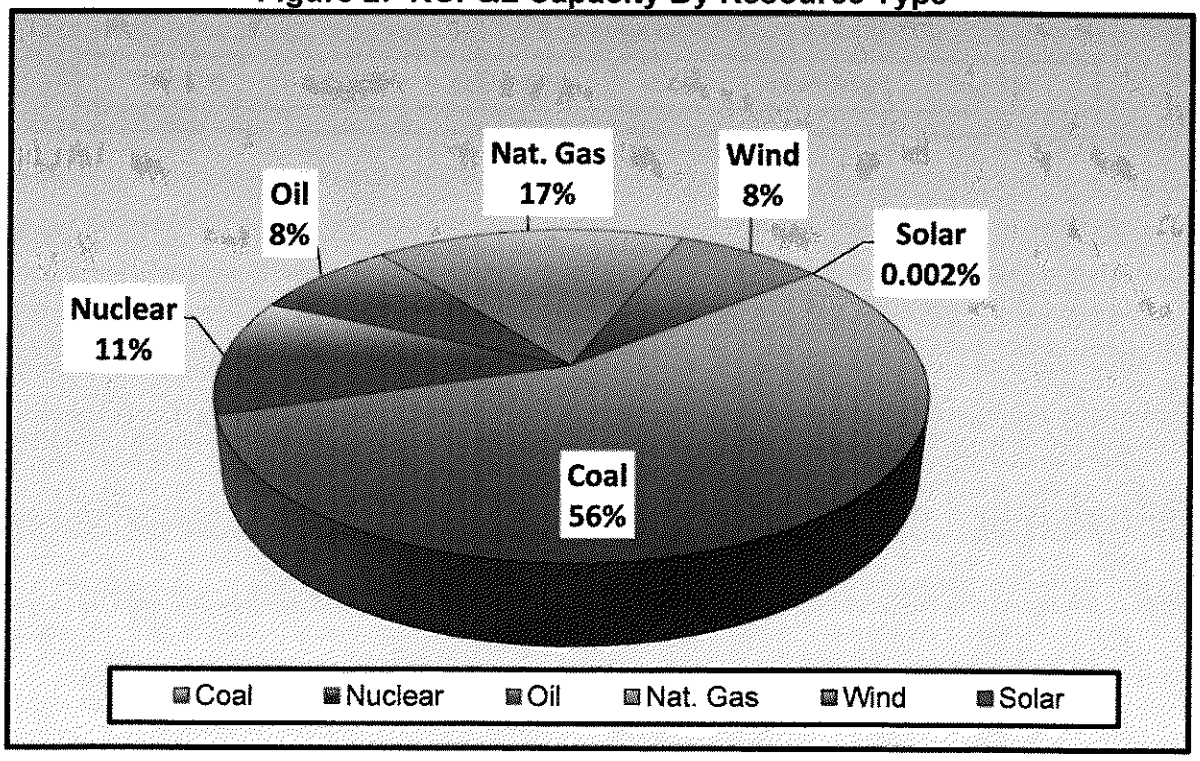
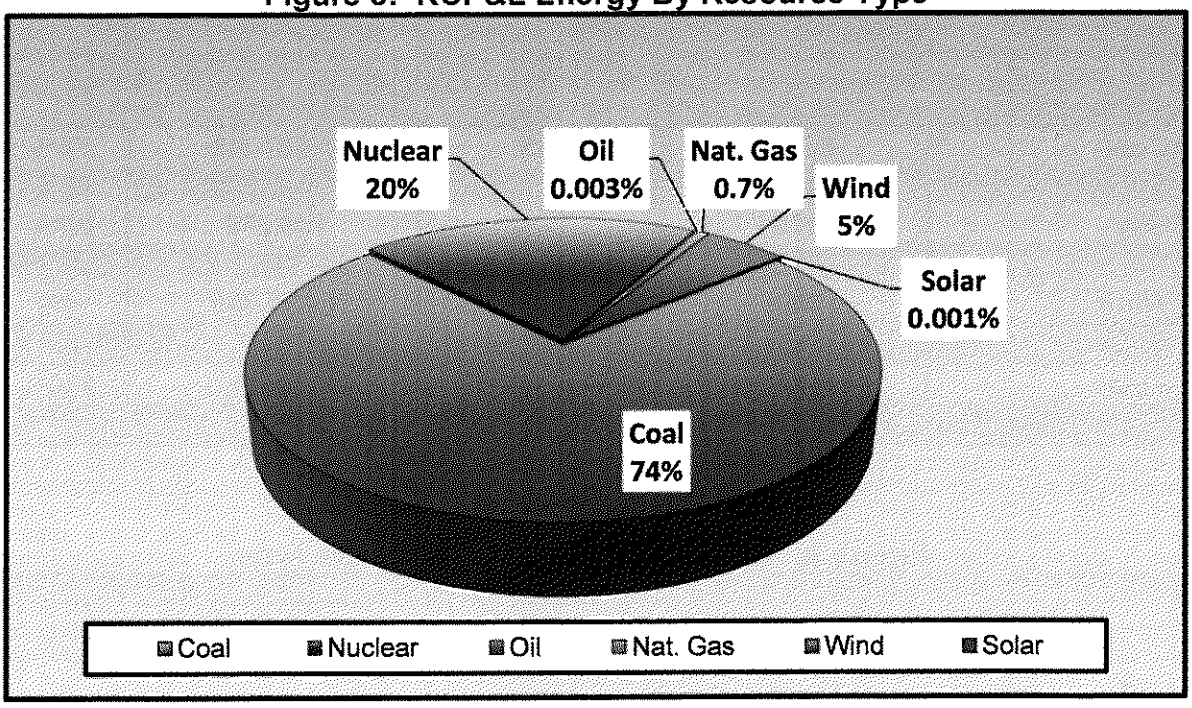


Figure 3: KCP&L Energy By Resource Type



1.2 CHANGES FROM THE 2012 TRIENNIAL IRP SUBMITTAL

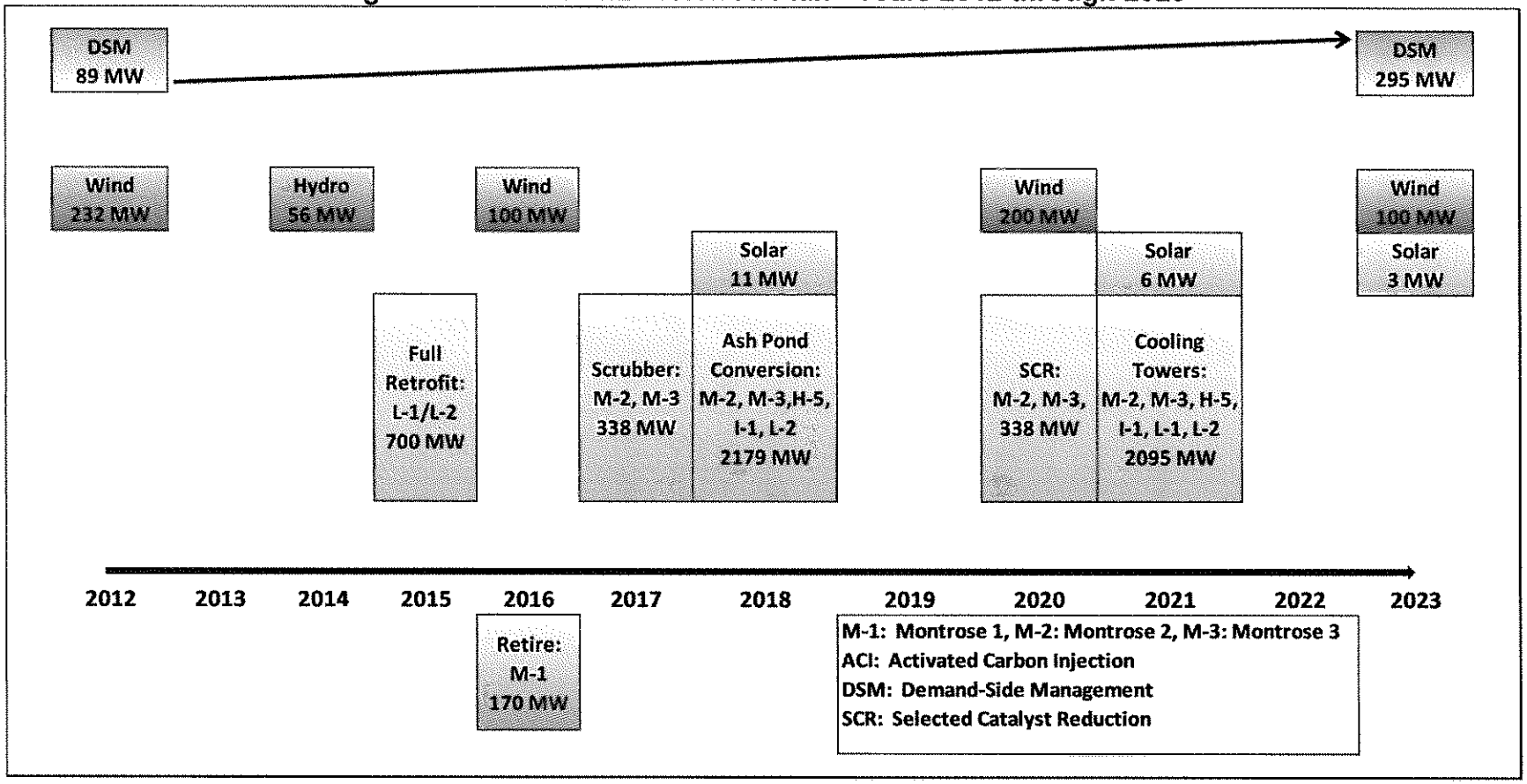
Since the April 2012 filing of the KCP&L Triennial IRP, several changing conditions have contributed to the Preferred Plan identified in 2012 filing as being obsolete. The changing conditions, or major drivers, that have contributed to KCP&L's need to develop new Alternative Resource Plans and therefore selection of a new Preferred Plan include:

- Proposed and Potential Environmental Regulations
- Load Forecast Projections
- Environmental Retrofit Cost Estimates
- Demand-Side Management Program levels

1.2.1 2012 KCP&L IRP PREFERRED PLAN

The 2012 KCP&L IRP resulted in the Preferred Plan for KCP&L being comprised of the following components for years 2012 – 2023 shown in Figure 4 below. Additionally, there was a 150 MW combined cycle addition in year 2028. Also, the Demand-Side Management programs comprised 433 MW of capacity reduction by the year 2031.

Figure 4: 2012 KCP&L Preferred Plan - Years 2012 through 2023



The 2012 KCP&L IRP Preferred for the 20-year planning period is shown in Table 3 below:

Table 3: 2012 KCP&L IRP Preferred Plan

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	4,397
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

1.2.2 2013 KCP&L ANNUAL UPDATE PREFERRED PLAN

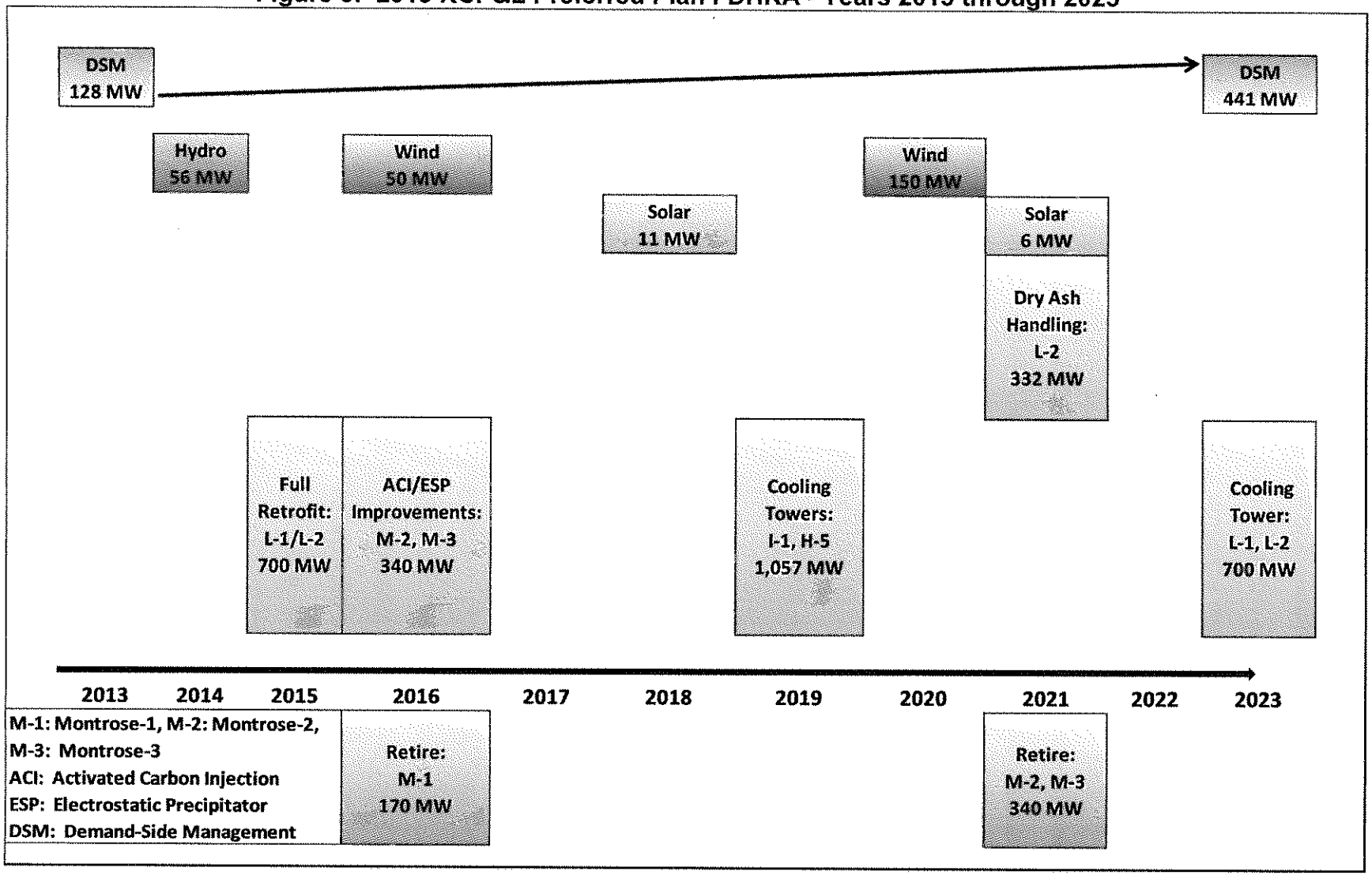
The 2013 Annual Update Preferred Plan for the entire 20-year period is shown in Table 4 below:

Table 4: 2013 Annual Update KCP&L Preferred Plan

Year	CT's (MW)	Solar (MW)	Wind (MW)	DSM (MW)	Retire (MW)	Existing Capacity (MW)
2013	-			128		4,393
2014	-			186		4,514
2015	-			193		4,503
2016	-		50	207	170	4,298
2017	-			239		4,343
2018	-	11		280		4,343
2019	-			320		4,343
2020	-		150	359		4,343
2021	-	6		391	340	4,003
2022	-			418		4,003
2023	-			441		4,018
2024	-		200	458		3,962
2025	-			463		3,962
2026	193			466		3,962
2027	-			466		3,962
2028	-			465		3,962
2029	-			463		3,962
2030	-			460		3,962
2031	193			458		3,962
2032	-			455		3,963
2033	-			453		3,963

The 2013 KCP&L Annual Update IRP resulted in the Preferred Plan for KCP&L being comprised of the following components for years 2013 – 2023 shown Figure 5 below. In the years 2024 through 2031, there is a 200 MW wind addition in year 2024, a 193 MW combustion turbine included in year 2026, and again in year 2031. Also, the Demand-Side Management programs comprised 453 MW of capacity reduction by the year 2033.

Figure 5: 2013 KCP&L Preferred Plan FDHKA - Years 2013 through 2023



Based upon current Missouri and Kansas RPS rule requirements, the Preferred Plan includes 17 MW of solar additions and 400 MW of wind additions over the twenty-year planning period. It should be noted that Missouri solar and wind additions could be obtained from power purchase agreements (PPA), purchasing of renewable energy credits (RECs), or utility ownership. Combustion turbine (CT) resource additions are included in 2026 and 2031.

The potential retirements of Montrose Unit 1 in 2016 and Montrose Units 2 and 3 in 2021 is partially attributed to current or proposed environmental regulations including Mercury and Air Toxics Standards Rule, Ozone National Ambient Air Quality Standards (NAAQS), PM NAAQS, SO_2 NAAQS Clean Water Act Section 316(a) and (b), Effluent Guidelines, and Coal Combustion Residuals Rule. These rules will be continually monitored by KCP&L prior to the projected retirement years to determine if any adjustment to this plan is needed.

The Preferred Plan was not the lowest cost plan from a Net Present Value of Revenue Requirement (NPVRR) perspective as a higher amount of DSM would reduce the NPVRR. KCP&L's Preferred Plan includes a modified RAP level of DSM for 2014, 2015 and 2016, followed by the RAP level starting in 2017. DSM for the Preferred Plan consists of a suite of fifteen Energy Efficiency programs, three Demand Response programs and two alternative rate plans that are based upon Navigant's DSM Potential Study results for realistically achievable potential (RAP) DSM. The modification in years 2014, 2015, and 2016 was based on the measure list from the Potential Study but at a reduced level to reflect a lower level of DSM spending. The modified DSM plan is named MEEIA/RAP. This plan assumes that the same list of programs and the program plans from the potential study RAP level of DSM would be used, but the amount of capacity and energy savings would be reduced proportionately to reflect the reduced amount of savings that could be achieved with the lower level of spending. The DSM savings levels for this scenario are based on the cost per kWh from the RAP level of DSM in the Potential Study results.

KCP&L developed the MEEIA/RAP alternative to reduce the short-term rate impacts that would result from the full RAP DSM levels. Assuming KCP&L was approved for the same DSM cost recovery treatment as GMO was under its MEEIA settlement agreement, implementing the full RAP DSM plan in 2014 would increase retail rates by a projected 8.3% in 2016 (the first year new rates would be in effect under a 2013 KCP&L MEEIA filing). This increase does not reflect any other potential non-DSM related costs that would also go into effect in 2016. The MEEIA/RAP alternative reduces the rate impact to 6.3%. At this time, the Company anticipates a 2013 MEEIA filing that would further define the DSM program offerings.

SECTION 2: LOAD ANALYSIS AND LOAD FORECASTING UPDATE

2.1 CHANGES FROM THE 2012 IRP SUBMITTAL

- The economic forecasts for the KC metro area were updated. In the 2012 IRP filing, KCP&L used forecasts produced by Moody's Analytics in June 2011. In this Annual Update filing the forecasts were produced in September 2012.

- Billing statistics were updated through August 2012 for this filing. In the 2012 IRP filing, the statistics were current through June 2011. These statistics include the number of customers, kWh sales and dollars per kWh.

- Forecasts of saturations and appliance use are updated annually by the US DOE. In this filing, KCP&L used the results from DOE's 2012 models. In the 2012 IRP filing, KCP&L used results from the 2011 models.

- The Company also updated the price elasticities used in the residential and commercial models and the income elasticity used in the residential model. The elasticities were estimated by sector, residential and commercial, and not by Class Cost of Service (CCOS) because rate switching adds too much noise to kWh sales. The data was pooled across GMO and KCP&L jurisdictions to add cross sectional variation. The residential results are shown in table below. In commercial models, the estimated elasticities were adjusted to increase the R^2 in the forecasting models because CCOS models were different than revenue class models used to estimate elasticities. The results for the residential sector are provided in Table 5 below:

Table 5: GPE Residential Elasticities

GPE Residential Elasticities		
Load	Coefficient	t-Stat
Base	-0.36	-4.1
Heating	-0.58	-5.3
Cooling	-0.20	-3.3
Income	0.20	7.0

The load forecast is shown in Table 6 below.

Table 6: KCP&L Base Annual NSI and Peak Forecast

Base Annual 2013-2035 Net System Input (NSI) and Peak Forecast

	NSI (MWh)					Peak (MW)							
Date	Gross NSI		DSM	Net NSI		Gross Peak		DSM	DVC	Net Peak		Gross LF	Net LF
2002	14,810,168			14,810,168		3,229				3,229		0.5236	0.5236
2003	15,100,010	2.0%		15,100,010	2.0%	3,307	2.4%			3,307	2.4%	0.5212	0.5212
2004	15,434,710	2.2%		15,434,710	2.2%	3,600	8.9%			3,600	8.9%	0.4894	0.4894
2005	15,735,417	1.9%		15,735,417	1.9%	3,496	-2.9%			3,496	-2.9%	0.5138	0.5138
2006	15,960,834	1.4%		15,960,834	1.4%	3,416	-2.3%			3,416	-2.3%	0.5334	0.5334
2007	16,286,867	2.0%		16,286,867	2.0%	3,718	8.8%			3,718	8.8%	0.5001	0.5001
2008	16,306,299	0.1%		16,306,299	0.1%	3,703	-0.4%			3,703	-0.4%	0.5027	0.5027
2009	16,024,573	-1.7%		16,024,573	-1.7%	3,642	-1.6%			3,642	-1.6%	0.5023	0.5023
2010	16,057,247	0.2%		16,057,247	0.2%	3,605	-1.0%			3,605	-1.0%	0.5084	0.5084
2011	15,918,871	-0.9%		15,918,871	-0.9%	3,581	-0.7%			3,581	-0.7%	0.5075	0.5075
2012	15,642,354	-1.7%		15,642,354	-1.7%	3,426	-4.3%			3,426	-4.3%	0.5212	0.5212
2013	15,895,155	1.6%	(219,863)	15,675,292	0.2%	3,510	2.4%	(128)	(50)	3,332	-2.8%	0.5170	0.5371
2014	15,973,354	0.5%	(232,817)	15,740,537	0.4%	3,523	0.4%	(115)	(50)	3,358	0.8%	0.5177	0.5352
2015	16,093,806	0.8%	(232,819)	15,860,987	0.8%	3,539	0.5%	(109)	(50)	3,380	0.7%	0.5192	0.5357
2016	16,280,534	1.2%	(232,820)	16,047,714	1.2%	3,559	0.6%	(109)	(50)	3,400	0.6%	0.5222	0.5388
2017	16,352,968	0.4%	(232,821)	16,120,147	0.5%	3,568	0.3%	(106)	(50)	3,412	0.3%	0.5232	0.5393
2018	16,450,555	0.6%	(232,821)	16,217,734	0.6%	3,578	0.3%	(106)	(50)	3,422	0.3%	0.5248	0.5410
2019	16,566,687	0.7%	(232,821)	16,333,866	0.7%	3,593	0.4%	(106)	(50)	3,437	0.4%	0.5263	0.5425
2020	16,724,078	1.0%	(232,821)	16,491,258	1.0%	3,610	0.5%	(106)	(50)	3,453	0.5%	0.5289	0.5451
2021	16,825,710	0.6%	(232,821)	16,592,889	0.6%	3,632	0.6%	(106)	(50)	3,476	0.7%	0.5288	0.5449
2022	16,966,466	0.8%	(232,821)	16,733,645	0.8%	3,655	0.6%	(106)	(50)	3,499	0.7%	0.5299	0.5460
2023	17,113,483	0.9%	(232,821)	16,880,662	0.9%	3,679	0.7%	(106)	(50)	3,523	0.7%	0.5310	0.5470
2024	17,302,889	1.1%	(232,821)	17,070,068	1.1%	3,704	0.7%	(106)	(50)	3,548	0.7%	0.5332	0.5493
2025	17,427,131	0.7%	(232,821)	17,194,310	0.7%	3,732	0.7%	(106)	(50)	3,575	0.8%	0.5331	0.5490
2026	17,594,977	1.0%	(232,821)	17,362,156	1.0%	3,761	0.8%	(106)	(50)	3,605	0.8%	0.5340	0.5498
2027	17,771,206	1.0%	(232,821)	17,538,385	1.0%	3,795	0.9%	(106)	(50)	3,638	0.9%	0.5346	0.5503
2028	17,988,591	1.2%	(232,821)	17,755,770	1.2%	3,826	0.8%	(106)	(50)	3,670	0.9%	0.5367	0.5523
2029	18,133,671	0.8%	(232,821)	17,900,850	0.8%	3,859	0.9%	(106)	(50)	3,703	0.9%	0.5364	0.5518
2030	18,325,533	1.1%	(232,821)	18,092,712	1.1%	3,894	0.9%	(106)	(50)	3,737	0.9%	0.5373	0.5527
2031	18,522,978	1.1%	(232,821)	18,290,157	1.1%	3,930	0.9%	(106)	(50)	3,774	1.0%	0.5381	0.5533
2032	18,762,142	1.3%	(232,821)	18,529,322	1.3%	3,967	0.9%	(106)	(50)	3,811	1.0%	0.5399	0.5551
2033	18,919,294	0.8%	(232,821)	18,686,473	0.8%	4,003	0.9%	(106)	(50)	3,847	0.9%	0.5395	0.5546
2034	19,119,547	1.1%	(232,821)	18,886,726	1.1%	4,039	0.9%	(106)	(50)	3,882	0.9%	0.5404	0.5553
2035	19,319,805	1.0%	(232,821)	19,086,985	1.1%	4,075	0.9%	(106)	(50)	3,919	0.9%	0.5412	0.5560

Historical Numbers are Weather Normalized with Curtailment

2.2 LOAD ANALYSIS AND LOAD FORECASTING: AGREED UPON REMEDIES TO ALLEDGED DEFICIENCIES AND CONCERNS

The following section addresses the Alleged Deficiencies and Concerns from the 2012 KCP&L IRP, Case No. EO-2012-0323. The Resolutions are either verbatim or a shortened version of the agreed-to resolution from the Joint Filing filed in that case.

2.2.1 Staff's Concern A

KCP&L submitted energy and peak growth rates that are arithmetic averages. KCP&L 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.

Resolution: This issue has been addressed. KCP&L provided additional documentation to answer questions that included the information needed.

2.2.2 MDNR's Deficiency 1

Inadequate model specification in load analysis and load forecasting. In estimating the effect of weather on electric loads, the functional form of the models was not specified and neither were the goodness of fit measures reported for statistical models.

Resolution: In the 2013 Annual Update, KCP&L will create a Word document labeled as KCPL Model Statistics.docx for the models used to weather normalize sales and copy the goodness of fit statistics, residuals plots before correction for outliers, and residual plots after correction for outliers. This will make it easier for those stakeholders who do not have a license for MetrixND.

Comment:

The Word document is supplied in the workpapers for this filing labeled as KCPL Model Statistics.docx.

2.2.3 MDNR'S Deficiency 2

Overly optimistic forecast of household growth. Moody's forecast of economic activity may overestimate the growth in the number of households in the Kansas City metropolitan area.

Resolution: This issue has been addressed. KCP&L has conducted a discussion of its forecast of household growth with MDNR and its consultant.

2.2.4 MDNR'S Deficiency 3

Improper model specification of the weather normalization regression models. The weather normalization regression models used are not properly specified. No rationale provided for the choice of autoregressive models or the inclusion of specific month dummy variables.

Resolution: This issue has been addressed. KCP&L has conducted a discussion of these weather normalization models with MDNR and its consultant.

2.2.5 GDS' (MDNR) Deficiency 1

KCP&L failed to fully describe adjustments made to the historical data used in developing the energy sales forecasting models. KCP&L failed to fully describe how the historical energy consumption data series for each class were adjusted to reflect existing DSM programs.

Resolution: This issue has been addressed. KCP&L has conducted a discussion of this topic with MDNR and its consultant.

2.2.6 GDS' (MDNR) Concern 1

KCP&L's assumed forecast bandwidths for population and number of households appear to be too narrow. As a result, the high and low growth case load forecasts also do not reflect a reasonable bandwidth when compared to historical growth.

Resolution: This issue has been addressed. KCP&L has conducted a discussion of this topic with MDNR and its consultant.

2.2.7 GDS' (MDNR) Concern 2

KCP&L's use of certain independent variables in the models used to weather normalize energy sales is questionable. Most of the models developed by KCP&L to weather normalize historical class energy sales include one or more variables that are not statistically significant at a 95% confidence level. KCP&L fails to report the R-squares and goodness of fit measures for their models.

Resolution: In the 2013 Annual Update, KCP&L will create a Word document for the models used to weather normalize sales and copy the goodness of fit statistics, residuals plots before correction for outliers, and residual plots after correction for outliers. This will make it easier for those stakeholders who do not have a license for MetrixND labeled as KCPL Model Statistics.docx.

Comment: The Word document is supplied in the workpapers for this filing labeled as KCPL Model Statistics.docx.

SECTION 3: SUPPLY-SIDE RESOURCE ANALYSIS UPDATE

3.1 CHANGES FROM 2012 IRP SUBMISSION

The forecasts for coal, natural gas, fuel oil, SO_2, NO_x, NO_x Seasonal, and CO_2 have been updated for the 2013 Annual Update filing. Note that the methodology used in determining the forecast range has not changed from the 2012 IRP filing.

3.1.1 FUEL FORECASTS

The following tables provide the fuel forecasts that were utilized in the 2012 KCP&L IRP submittal and the fuel forecasts incorporated in the 2013 Annual Update. The various composite forecasts were updated to incorporate updated individual forecasts. For example, the 2012 forecast incorporated Annual Energy Outlook 2012 while the 2013 forecast incorporates Annual Energy Outlook 2013.

Table 7: Coal Forecasts - 2012 Vs. 2013 ** Highly Confidential **

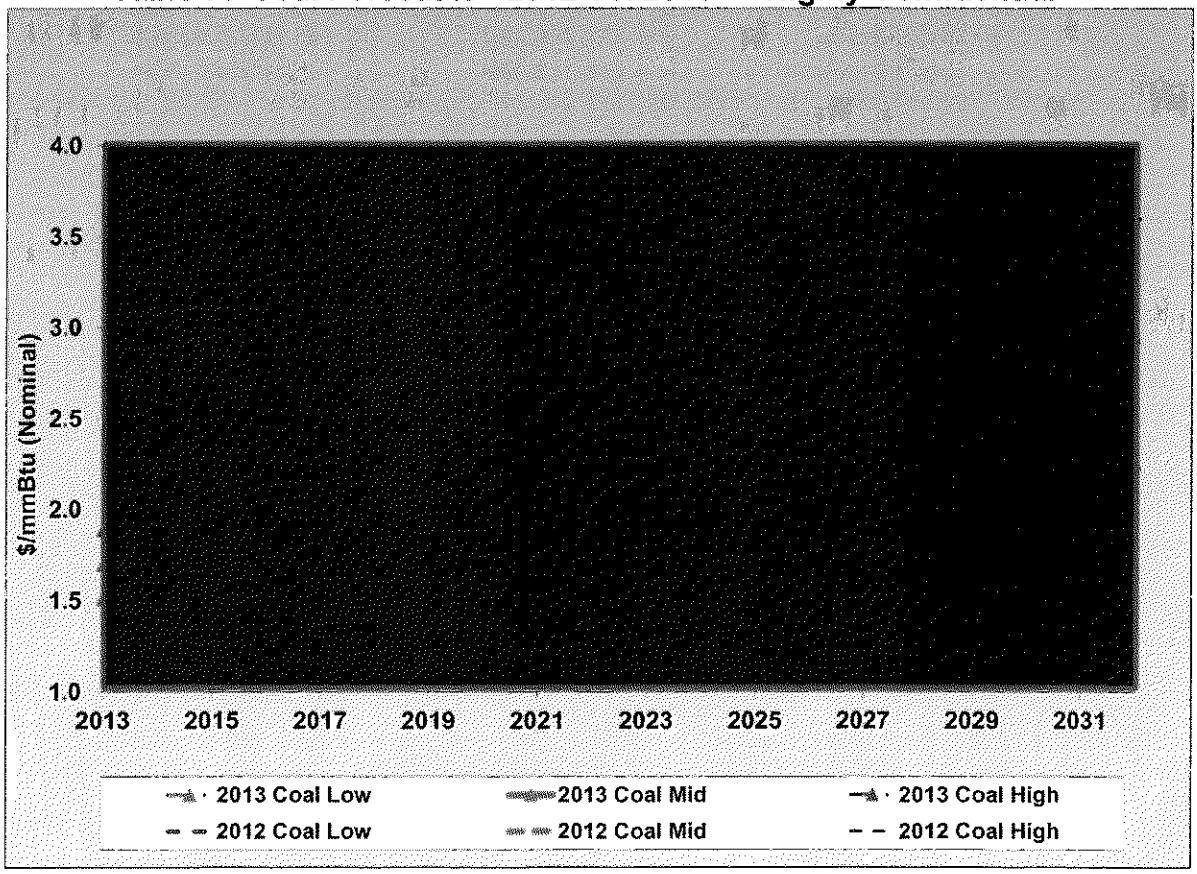


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Table 8: Natural Gas Forecasts - 2012 Vs. 2013 ** Highly Confidential **

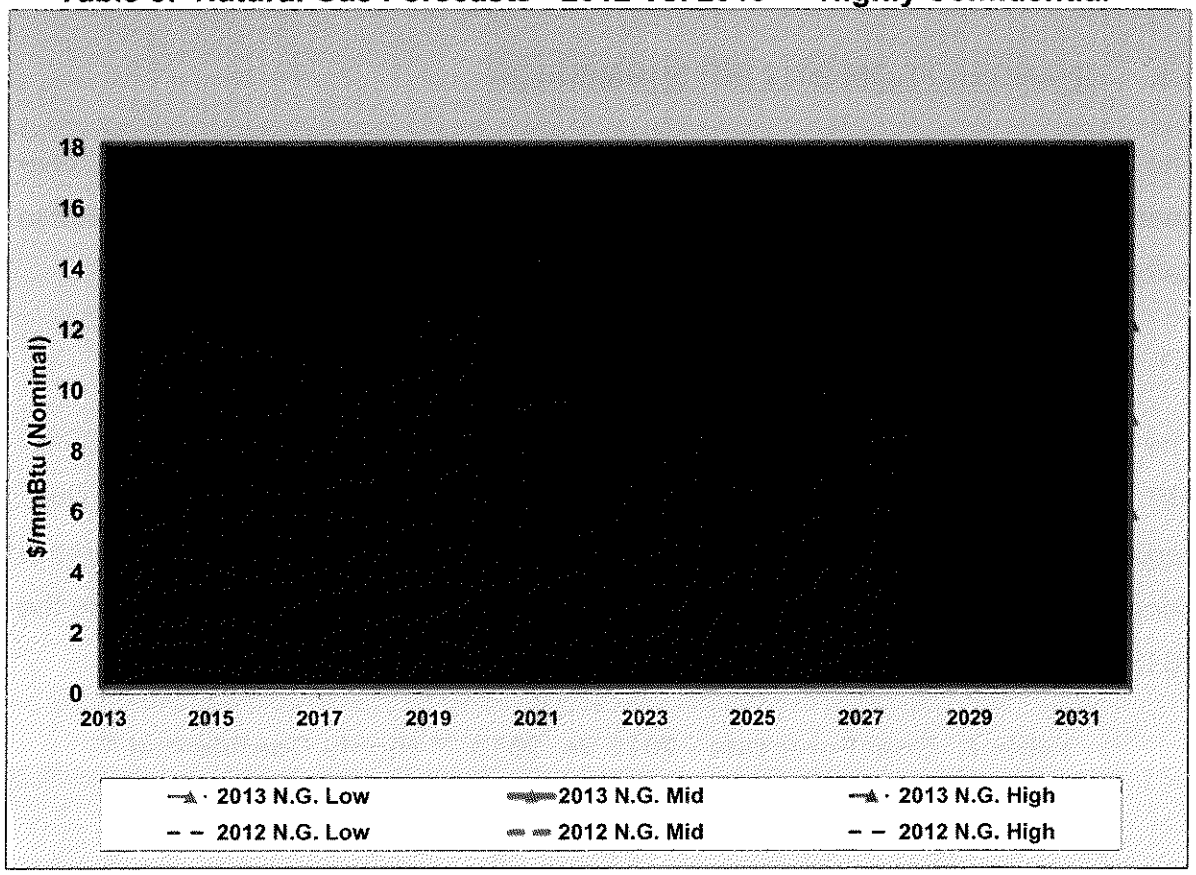

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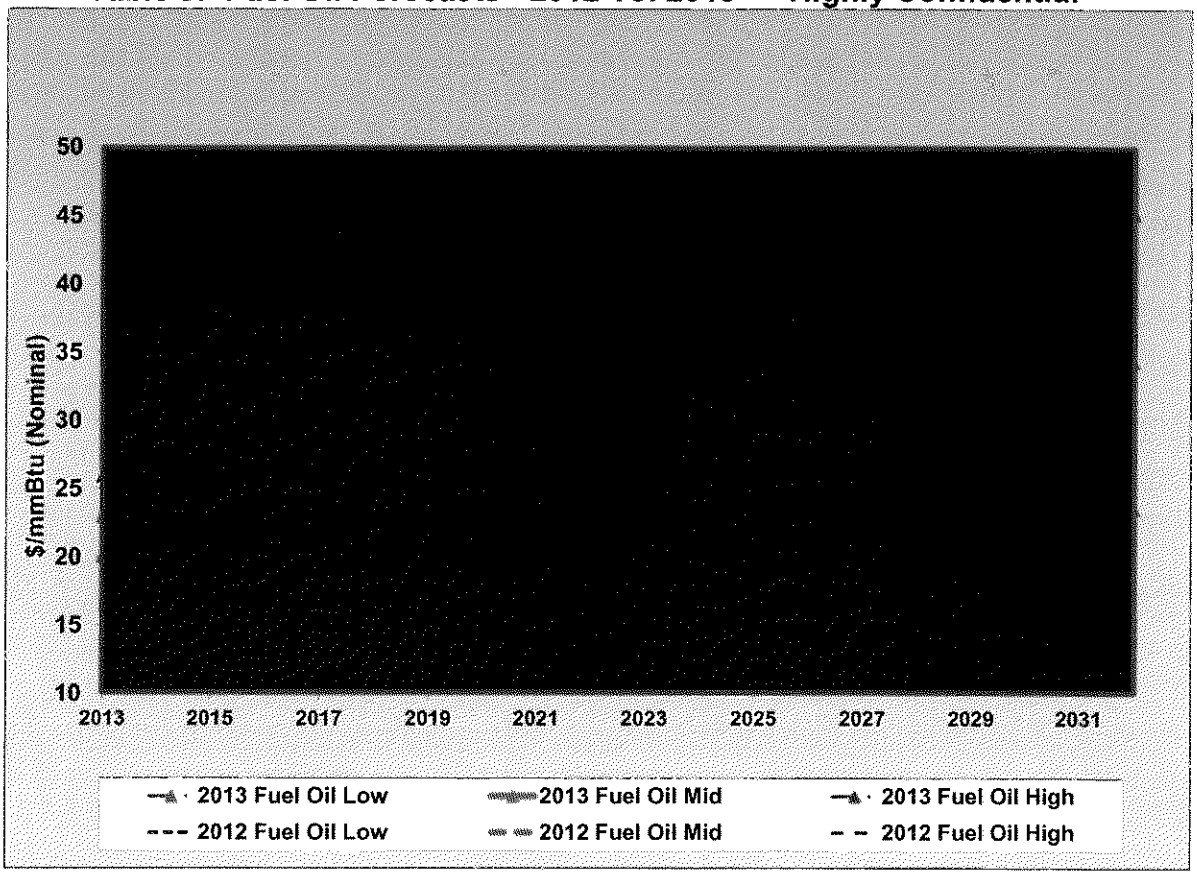
Table 9: Fuel Oil Forecasts - 2012 Vs. 2013 ** Highly Confidential **



3.1.2 EMISSIONS FORECASTS

The following tables provide the emission forecasts that were utilized in the 2012 KCP&L IRP submittal and the emissions forecasts incorporated in the 2013 Annual Update. It should be noted that the 2012 SO_2 emissions data is based upon an average of the Cross-States Air Pollution Rule (CSAPR) Group 1 and Group 2 SO_2 forecasts. CSAPR has since been vacated by the U.S. Court of Appeals for the District of Columbia. During the revision period of CSAPR, the court ruled to keep in place the Clean Air Interstate Rule (CAIR).

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Table 10: SO_2 Forecasts - 2012 Vs. 2013 ** Highly Confidential **

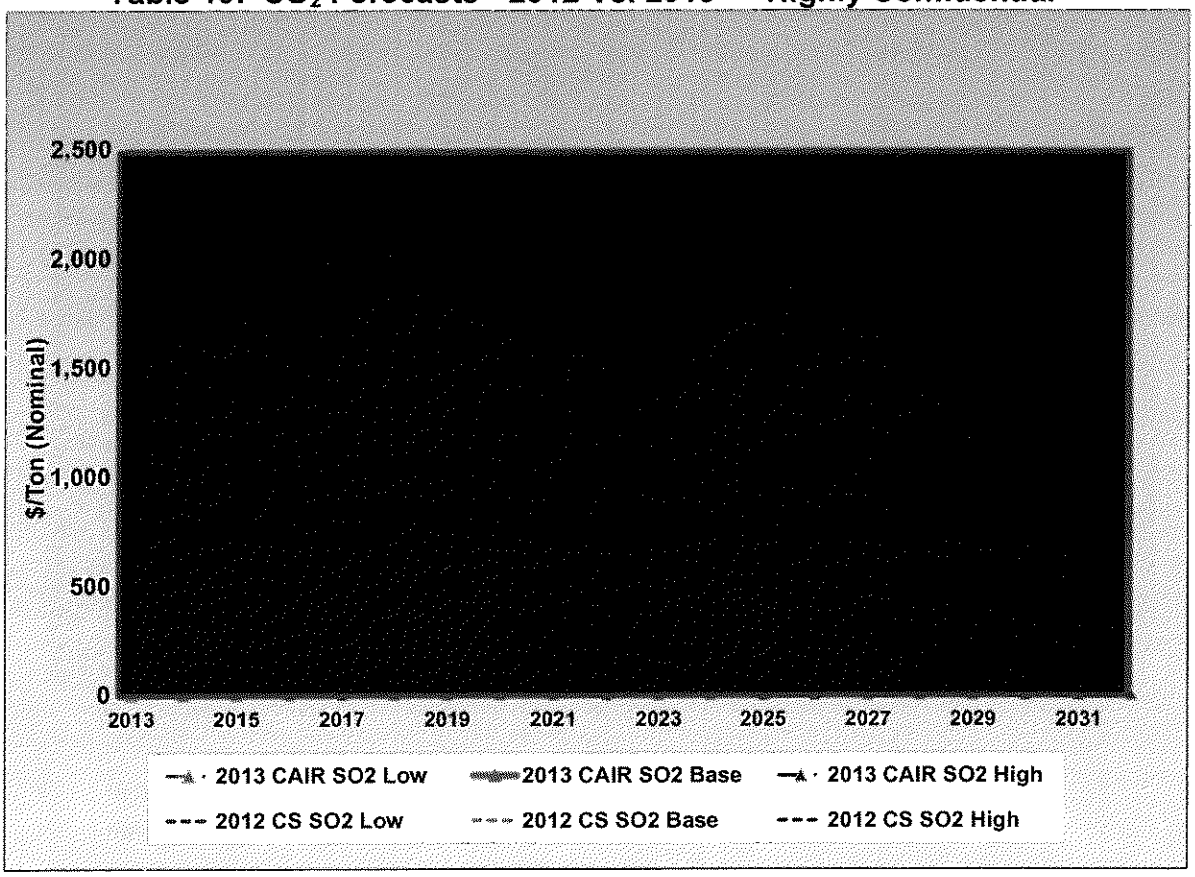

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Table 11: NO_x Annual Forecasts - 2012 Vs. 2013 ** Highly Confidential **

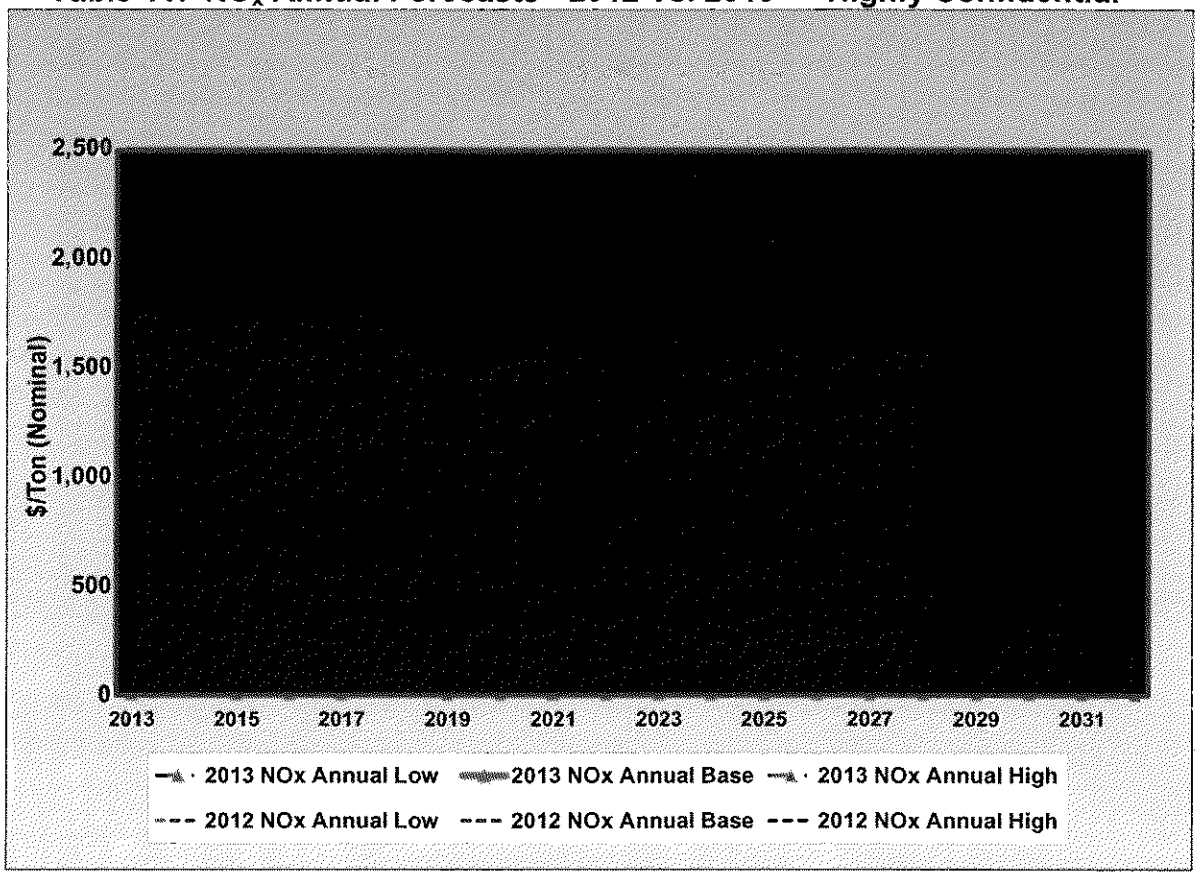

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Table 12: NO_x Seasonal Forecasts - 2012 Vs. 2013 ** Highly Confidential **

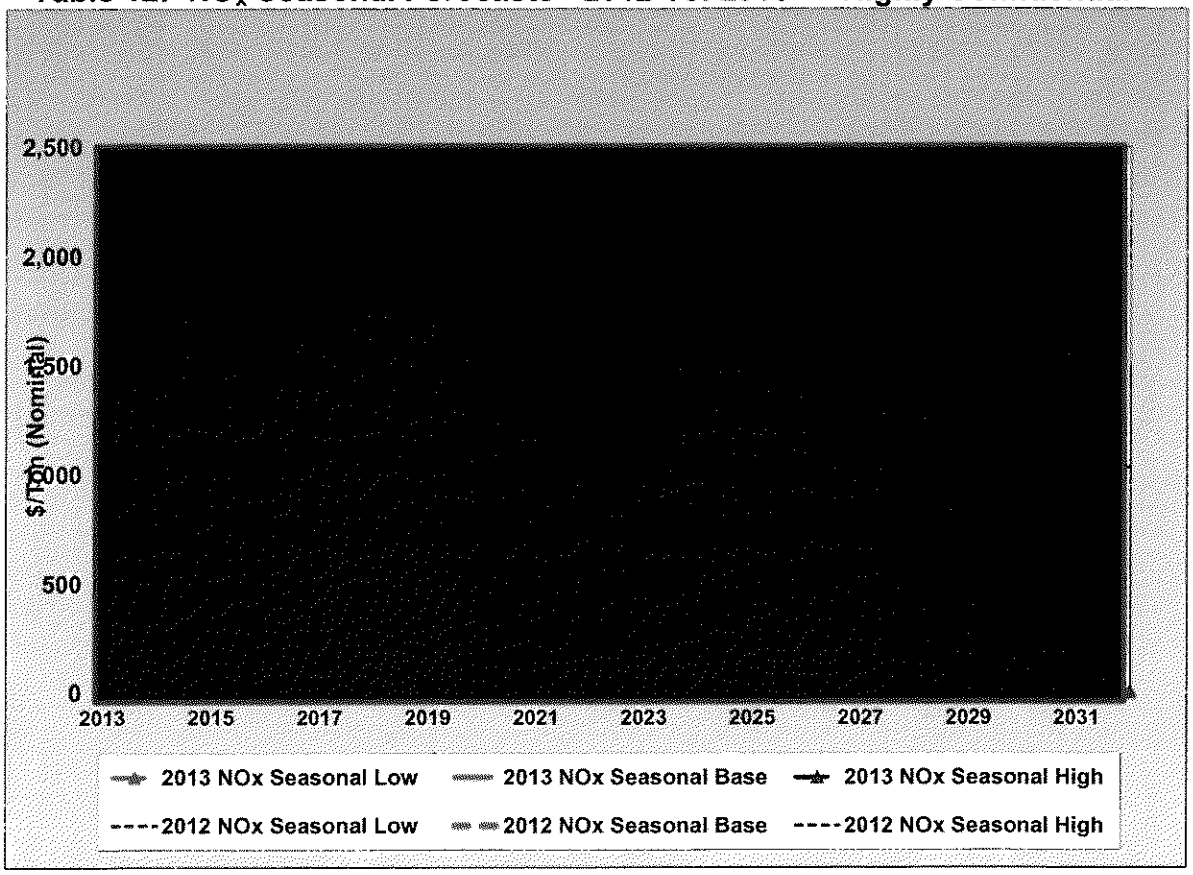

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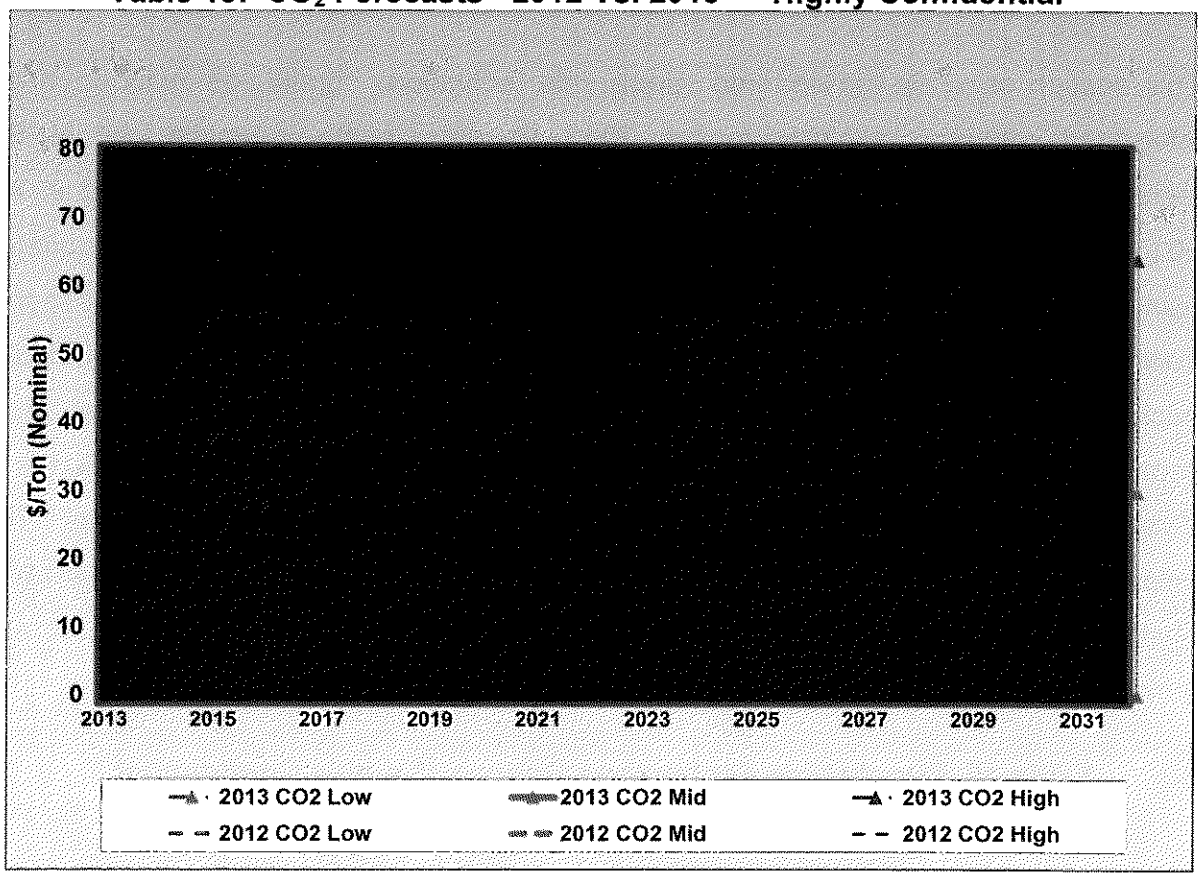
Table 13: CO_2 Forecasts - 2012 Vs. 2013 ** Highly Confidential **



The following table indicates the vendors that provided the fuel and emission forecasts reflected in the above charts.

Table 14: Fuel and Emission Forecast Sources

Forecast Source	Coal	Natural Gas	Fuel Oil	Nuclear	SO_2	NO_x	CO_2
CERA/Global Insight		x	x		x		x
EIA	x	x	x				
PIRA		x	x		x	x	x
Energy Ventures Analysis	x	x	x		x	x	x
Wood Mac							x
JD Energy	x				x	x	x
Synapse							x
SNL Financial	x						
Hanou Energy Consulting	x						
Global Energy				x			

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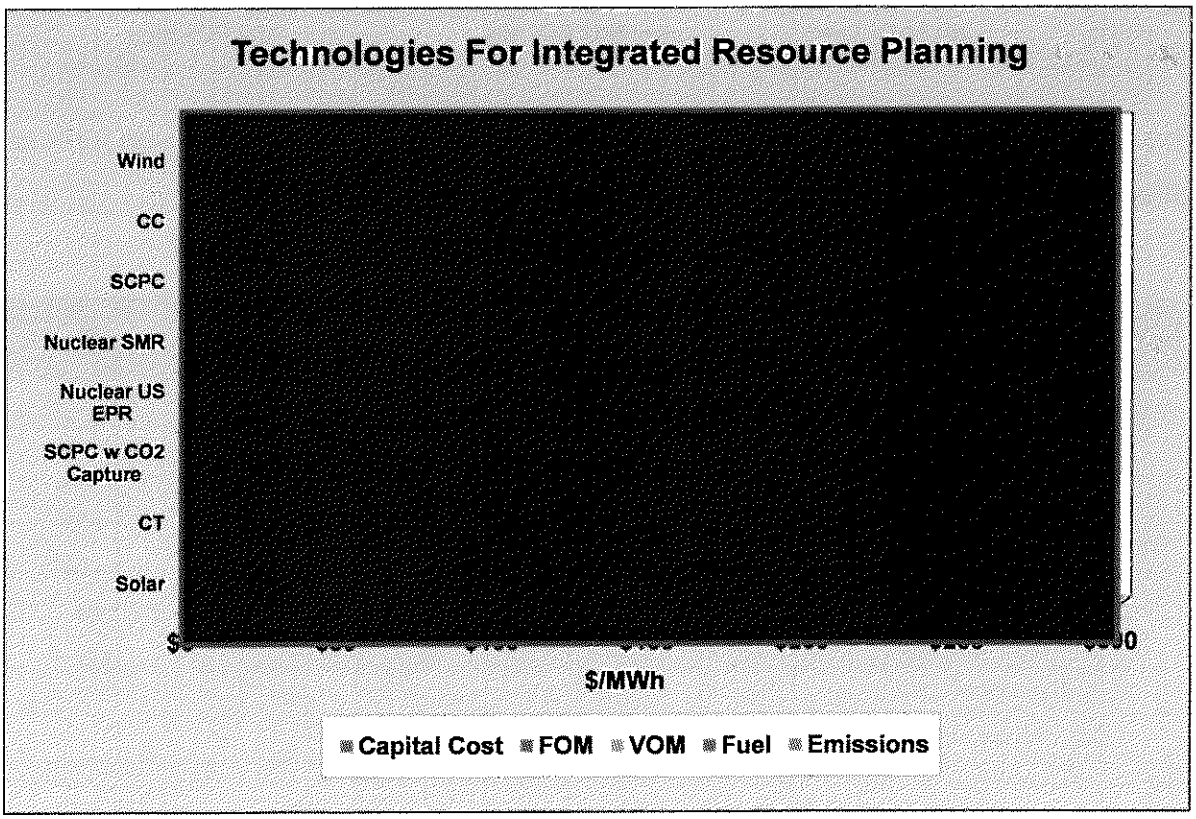
3.1.3 SUPPLY SIDE TECHNOLOGY CANDIDATE RESOURCE OPTIONS

This section provides the updated supply-side technology candidates included in the integrated resource analysis in the 2013 Annual Update submittal. All of the technologies included in the 2012 KCP&L IRP submittal were also included in the 2013 Annual Update. The cost and operating data for these technologies was updated using the most recent available market sources or the Electric Power Research Institute Technical Assessment Guide (EPRI-TAG®). In addition, small modular nuclear reactors (SMRs) were added as a potential resource alternative to meet future capacity requirements. The combination of potential resource options includes a diverse range of natural gas, coal, nuclear and renewable powered alternatives. The following table compares the all-in cost of the supply side options on a dollar per MWh basis, including the components of capital cost, fixed O&M, variable O&M, fuel, and emissions.

Table 15: Supply Side Technology Options ** Highly Confidential **



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3.1.4 LIFE ASSESSMENT & MANAGEMENT PROGRAM

This section provides the updated long-term plant equipment needs utilized in the 2013 Annual Update. These needs were developed using the Life Assessment and Management Program (LAMP) that was developed in the late 1980's for the purpose of identifying, evaluating, and recommending improvements and special maintenance requirements necessary for continued reliable operation of KCP&L coal-fired and Hawthorn 6/9 natural gas generating units.

Current schedules of identified LAMP projects and costs for Montrose Units 1, 2, 3, and LaCygne (KCP&L Share) are shown below in Table 16 through Table 27.

Table 16: Montrose Unit 1 LAMP Capital Plan Years 2018 - 2025 ($000's) **Highly Confidential**

Project Name	2018	2019	2020	2021	2022	2023	2024	2025
M1 Replace Low Pressure Heater 14								
M1 Middle Water Wall Replacement								
M1 Upper Water Wall Replacement								
M1 Replace Low Pressure Heater 16								
M1 Replace Reheat & Superheat outlet headers in 2025								
M1 Generator Rewind								
M1 Turbine Blading								
M1 Outer Reheat Pendant Replacement								
M1 Distributed Control System Replacement								
M1 Seconadry Superheat Replacement								
M1 6th Stage Heater Replacement								
M1 Turbine Blade Replacement								
M1 Windbox Replacement								
M1 Transformer Replacement								
M1 Generator Field Replacement								
M1 A Boiler Feed Pump Replacement								
M1 B Boiler Feed Pump Replacement								
M1 Ash Silo Replacement								
M1 Curtain Wall Replacement								
M1 Waterlance Sootblower								
M1 Economizer Replacement								
M1 Hot Reheat Piping Replacement								

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Table 17: Montrose Unit 1 LAMP Capital Plan Years 2026 - 2032 ($000's) **Highly Confidential**

Project Name	2026	2027	2028	2029	2030	2031	2032	Plant Total
M1 Replace Low Pressure Heater 14								
M1 Middle Water Wall Replacement								
M1 Upper Water Wall Replacement								
M1 Replace Low Pressure Heater 16								
M1 Replace reheat & superheat outlet headers in 2025								
M1 Generator Rewind								
M1 Turbine Blading								
M1 Outer Reheat Pendant Replacement								
M1 Distributed Control System Replacement								
M1 Seconadry Superheat Replacement								
M1 6th Stage Heater Replacement								
M1 Turbine Blade Replacement								
M1 Windbox Replacement								
M1 Transformer Replacement								
M1 Generator Field Replacement								
M1 A Boiler Feed Pump Replacement								
M1 B Boiler Feed Pump Replacement								
M1 Ash Silo Replacement								
M1 Curtain Wall Replacement								
M1 Waterlance Sootblower								
M1 Economizer Replacement								
M1 Hot Reheat Piping Replacement								

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Table 18: Montrose Unit 2 LAMP Capital Plan Years 2018 - 2025 ($000's) **Highly Confidential**

Project Name	2018	2019	2020	2021	2022	2023	2024	2025
M2 Transformer Replacement								
M2 Replace Main Steam Line								
M2 Replace Mud Drums								
M2 Repair and Paint								
M2 Replacement of Primary Superheat Outlet Header								
M2 Lower Water Wall Replacement								
M2 Middle Water Wall Replacement								
M2 Upper Water Wall Replacement								
M2 Replacement of Relief Tubes								
M2 Generator Field Replacement								
M2 Replace reheat & superheat outlet headers in 2029								
M2 Turbine Blading								
M2 Distributed Control System Replacement								
M2 Seconadry Superheat Relacement								
M2 6th Stage Heater Replacement								
M2 9th Stage Heater Replacement								
M2 Turbine Blade Replacement								
M2 Windbox Replacement								
M2 A Boiler Feed Pump Replacement								
M2 B Boiler Feed Pump Replacement								
M2 Ash Silo Replacement								
M2 Curtain Wall Replacement								
M2 Waterlance Sootblower								
M2 Economizer Hoppers								

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Table 19: Montrose Unit 2 LAMP Capital Plan Years 2026 - 2032 ($000's) **Highly Confidential**

Project Name	2026	2027	2028	2029	2030	2031	2032	Plant Total
M2 Transformer Replacement								
M2 Replace Main Steam Line								
M2 Replace Mud Drums								
M2 Repair and Paint								
M2 Replacement of Primary Superheat Outlet Header								
M2 Lower Water Wall Replacement								
M2 Middle Water Wall Replacement								
M2 Upper Water Wall Replacement								
M2 Replacement of Relief Tubes								
M2 Generator Field Replacement								
M2 Replace reheat & superheat outlet headers in 2029								
M2 Turbine Blading								
M2 Distributed Control System Replacement								
M2 Seconadry SupeReheateat Relacement								
M2 6th Stage Heater Replacement								
M2 9th Stage Heater Replacement								
M2 Turbine Blade Replacement								
M2 Windbox Replacement								
M2 A Boiler Feed Pump Replacement								
M2 B Boiler Feed Pump Replacement								
M2 Ash Silo Replacement								
M2 Curtain Wall Replacement								
M2 Waterlance Sootblower								
M2 Economizer Hoppers								

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Table 20: Montrose Unit 3 LAMP Capital Plan Years 2018 - 2025 ($000's) **Highly Confidential**

Project Name	2018	2019	2020	2021	2022	2023	2024	2025
M3 Reheater Replacement								
M3 Replace Main Steam Line								
M3 Replace Mud Drums								
M3 DC Rotating Exciter - Convection to Static Exciter								
M3 High Pressure/Intermediate Pressure Blading								
M3 Repair and Paint								
M3 Replacement of Primary Superheat Outlet Header								
M3 Middle Water Wall Replacement								
M3 Upper Water Wall Replacement								
M3 Replacement of Relief Tubes								
M3 Replacement of Supply Tubes								
M3 300# Oil Control System Upgrade Controls to Distributed Control System								
M3 Replacer Low Pressure Heaters 26 & 27								
M3 Distributed Control System Replacement								
M3 Seconadry Superheat Relacement								
M3 Main Transformer Replacement								
M3 10th Stage Heater Replacement								
M3 15th Stage Heater Replacement								
M3 Turbine Blade Replacement								
M3 Windbox Replacement								
M3 A Boiler Feed Pump Replacement								
M3 B Boiler Feed Pump Replacement								
M3 Ash Silo Replacement								
M2 Curtain Wall Replacement								
M3 Waterlance Sootblower								
M3 Economizer Hoppers								

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Table 21: Montrose Unit 3 LAMP Capital Plan Years 2026 - 2032 ($000's) **Highly Confidential**

Project Name	2026	2027	2028	2029	2030	2031	2032	Plant Total
M3 Reheater Replacement								
M3 Replace Main Steam Line								
M3 Replace Mud Drums								
M3 DC Rotating Exciter - Convection to Static Exciter								
M3 High Pressure/Intermediate Pressure Blading								
M3 Repair and Paint								
M3 Replacement of Primary Superheat Outlet Header								
M3 Middle Water Wall Replacement								
M3 Upper Water Wall Replacement								
M3 Replacement of Relief Tubes								
M3 Replacement of Supply Tubes								
M3 300# Oil Control System Upgrade Controls to Distributed Control System								
M3 Replacer Low Pressure Heaters 26 & 27								
M3 Distributed Control System Replacement								
M3 Seconadry SupeReheateat Relacement								
M3 Main Transformer Replacement								
M3 10th Stage Heater Replacement								
M3 15th Stage Heater Replacement								
M3 Turbine Blade Replacement								
M3 Windbox Replacement								
M3 A Boiler Feed Pump Replacement								
M3 B Boiler Feed Pump Replacement								
M3 Ash Silo Replacement								
M2 Curtain Wall Replacement								
M3 Waterlance Sootblower								
M3 Economizer Hoppers								

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Table 22: Montrose Station Common LAMP Capital Plan Years 2018 - 2032 ($000's) **Highly Confidential**

Project Name	2018	2019	2020	2021	2022	2023	2024	2025
MS Underground Piping Replacement								
MS 41 Conveyor Replacement								
MS 42 Conveyor Replacement								
MS 43 Conveyor Replacement								
MS Additional Spends								
MS Yearly								
Project Name								
MS Underground Piping Replacement								
MS 41 Conveyor Replacement								
MS 42 Conveyor Replacement								
MS 43 Conveyor Replacement								
MS Additional Spends								
MS Yearly								

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Table 23: KCP&L Share of LaCygne Unit 1 LAMP Capital Plan Years 2018 - 2025 ($000's) **Highly Confidential**

Project Name	2018	2019	2020	2021	2022	2023	2024	2025
Lac #1 - Condenser Replacement	[redacted]							
Lac #1 - Replace High Pressure Heater 2A								
Lac #1 - Replace Low Pressure Heater - Deaerator								
Lac #1 - Replace Reheat Outlet Headers								
Lac #1 - Replacement SupeReheatt. Outlet Headers								
Lac #1 - Replacement Main Steam Line								
Lac #1 - Replacement Sec. SupeReheatt Inlet Pend.								
Lac #1 - Air Heater Basket Replacement								
Lac #1 - Replacement Low Pressure Heaters 17 A&B								
Lac #1 - Replacement High Pressure Heater 1A								
Lac #1 - Replacement High Pressure Heater 1B								
Lac #1 - Replace Convection Pass Floor								
Lac #1 - Replacement Front Wall Mix Panels								
Lac #1 - Replacement Side Wall Mix Panels								
Lac #1 - Replacement SupeReheateat Inlet Bank								
Lac #1 - Replacement Furnace Floor								
Lac #1 - Replacement Vertical Reheater								
Lac #1 - Fuel Handling Conveyor Modernization								

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Table 24: KCP&L Share of LaCygne Unit 1 LAMP Capital Plan Years 2026 - 2032 ($000's) **Highly Confidential**

Project Name	2026	2027	2028	2029	2030	2031	2032	Plant Total
Lac #1 - Condenser Replacement								
Lac #1 - Replace High Pressure Heater 2A								
Lac #1 - Replace Low Pressure Heater - Deaerator								
Lac #1 - Replace Reheat Outlet Headers								
Lac #1 - Replacement Reheat Outlet Headers								
Lac #1 - Replacement Main Steam Line								
Lac #1 - Replacement Secondary Superheat Inlet Pendant								
Lac #1 - Air Heater Basket Replacement								
Lac #1 - Replacement Low Pressure Heaters 17 A&B								
Lac #1 - Replacement High Pressure Heater 1A								
Lac #1 - Replacement High Pressure Heater 1B								
Lac #1 - Replace Convection Pass Floor								
Lac #1 - Replacement Front Wall Mix Panels								
Lac #1 - Replacement Side Wall Mix Panels								
Lac #1 - Replacement Superheat Inlet Bank								
Lac #1 - Replacement Furnace Floor								
Lac #1 - Replacement Vertical Reheater								
Lac #1 - Fuel Handling Conveyor Modernization								

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Table 25: KCP&L Share of LaCygne Unit 2 LAMP Capital Plan Years 2018 - 2025 ($000's) **Highly Confidential**

Project Name	2018	2019	2020	2021	2022	2023	2024	2025
Lac #2 - Hot Reheat Pipe Under Turbine								
Lac #2 - Air Heater Basket Replacement								
Lac #2 - Replace High Pressure Heater 22								
Lac #2- Replace Deaerator								
Lac #2- Replace Reheat Outlet Headers								
Lac #2 - Replace/Upgrade Low Pressure Rotor								
Lac #2- Replace/Upgrade Low Pressure Rotor								
Lac #2 - High Pressure Dense Pack Upgrade								
Lac #2 - High Pressure Turbine Uprate								
Lac #2 - Replace Economizer Casing								
Lac #2 - Secondary Superheat Inlet Replacement								
Lac #2 - Replace High Pressure Heater 21								
Lac #2 - Replace Low Pressure Heaters 27 A&B								
Lac #2 - Condenser Retube								
Lac #2 - Replace 25% of Water Walls								
Lac #2 - Replace Economizer Inlet Hdr								
Lac #2 - Replace 25% of Water Walls								
Lac #2 - Replace Vertical Reheater								
Lac #2 - Replace Lower Slope								
Lac #2 - Fuel Handling Conveyor Modernization								

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Table 26: KCP&L Share of LaCygne Unit 2 LAMP Capital Plan Years 2026 - 2032 ($000's) **Highly Confidential**

Project Name	2026	2027	2028	2029	2030	2031	2032	Plant Total
Lac #2 - Hot Reheat Pipe Under Turbine								
Lac #2 - Air Heater Basket Replacement								
Lac #2 - Replace High Pressure Heater 22								
Lac #2- Replace Deaerator								
Lac #2- Replace Reheat Outlet Headers								
Lac #2 - Replace/Upgrade Low Pressure Rotor								
Lac #2- Replace/Upgrade Low Pressure Rotor								
Lac #2 - High Pressure Dense Pack Upgrade								
Lac #2 - High Pressure Turbine Uprate								
Lac #2 - Replace Economizer Casing								
Lac #2 - Ssh Inlet Replacement								
Lac #2 - Replace High Pressure Heater 21								
Lac #2 - Replace Low Pressure Heaters 27 A&B								
Lac #2 - Condenser Retube								
Lac #2 - Replace 25% of Water Walls								
Lac #2 - Replace Econ Inlet Hdr								
Lac #2 - Replace 25% of Water Walls								
Lac #2 - Replace Vertical Reheater								
Lac #2 - Replace Lower Slope								
Lac #2 - Fuel Handling Conveyor Modernization								

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Table 27: KCP&L Share of LaCygne Common LAMP Capital Plan Years 2018 - 2032 ($000's)**Highly Confidential**

Project Name	2018	2019	2020	2021	2022	2023	2024	2025
Lac Sta - Secondary Crusher Bldg Replacement	[redacted]							
Lac Sta - Fuel Yard Conveyor Modernization								
Lac Sta - Neural Network								
Lac Sta - Upgrade Car Dumper/150 Car Train								
Lac Sta - 2A Silo Structural Upgrades								
Lac Sta - Additional Spends								
Lac Sta - Yearly Projects								
Project Name								
Lac Sta - Sec Crusher Bldg Replacement								
Lac Sta - Fuel Yard Conveyor Modernization								
Lac Sta - Neural Network								
Lac Sta - Upgrade Car Dumper/150 Car Train								
Lac Sta - 2A Silo Structural Upgrades								
Lac Sta - Additional Spends								
Lac Sta - Yearly Projects								

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3.2 SUPPLY-SIDE RESOURCE ANALYSIS: AGREED UPON REMEDIES TO ALLEGED DEFICIENCIES AND CONCERNS

The following section addresses the Alleged Deficiencies and Concerns from the 2012 KCP&L IRP, Case No. EO-2012-0323. The Resolutions are either verbatim or a shortened version of the agreed-to resolution from the Joint Filing filed in that case.

3.2.1 Staff's Deficiency 1

KCP&L 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. Although KCP&L evaluated three nuclear technologies, KCP&L did not include SMR as a potential supply-side resource in its April 9, 2012 filing. KCP&L should provide its assessment of the SMR technology in its 2013 Annual Update.

Resolution: This issue has been addressed as KCP&L included SMR as a supply-side option in the 2013 Annual Update filing.

Comment: KCP&L included SMR technology as a resource option in the 2013 Annual Update. See Table 15 above.

3.2.2 MDNR's Deficiency 4

Estimates of natural gas prices were used in the fuel price forecasts are consistently high. The natural gas prices used for this analysis were consistently higher than the base case forecast for natural gas prices published in the United States Department of Energy's Annual Energy Outlook for 2011(AEO2011).

Resolution: KCP&L will update its natural gas forecast in the 2013 Annual Update filing.

Comment: KCP&L updated the natural gas forecast for the 2013 Annual Update. See Table 8 above.

3.2.3 MDNR's Concern 2

Compliance with alternative Missouri renewable energy standard. KCP&L addressed its attempts to comply with the current Missouri Renewable Energy Standard (RES) or Proposition C. However, the IRP does not discuss the compliance with the potentially modified or newly proposed renewable energy standard.

Resolution: KCP&L will develop an alternative resource plan in the 2013 Annual Update utilizing an aggressive level of renewable resource additions.

Comment: Plan FDHKW addressed this resolution, as this Alternative Resource Plan includes more than double the wind resources required by the current Missouri RES.

3.2.4 MDNR's Concern 3

Inadequate exploration of distributed generation ("DG") technologies in screening supply-side resources. KCP&L inadequately analyzes the role of distributed generation technologies, in particular combined heat and power (CHP), in its screening analysis of potential supply-side resources.

Resolution: The Company will include distributed generation as a supply-side option in its integrated resource analysis in the 2013 Annual Update filing.

Comment: KCP&L includes CHP in all of the Alternative Resource Plan evaluations in the 2013 Annual Update.

3.2.5 GDS' (MDNR) Deficiency 2

KCP&L has not considered ultra-low sulfur coal in its IRP ignoring its potential as a practical contingency option and its ability to address environmental compliance requirements.

Resolution: This has been resolved as the forecast used in the April 2012 IRP Filing covers this issue.

3.2.6 GDS' (MDNR) Deficiency 3

KCP&L did not provide adequate documentation to support the reasonableness of wind resource cost assumptions. By using the same inflation rate for capital and fixed O&M costs and maintaining a constant capacity factor, costs for wind energy are held constant relative to other supply side resources, providing the appearance of higher costs than may be reasonably expected over the next 20 years. The IRP is deficient in its failure to "fairly" analyze and compare costs of wind against other resources.

Resolution: The Company will analyze improving wind capacity factors and lower relative inflation rates before the 2013 Annual Update.

Comment: KCP&L developed alternative resource plans (ARPs) in the 2013 Annual Update filing that reflected zero inflation (FDHKF), and normal inflation rates for the wind capital and O&M costs (FHDKW). The wind capacity factors were analyzed and not increased because they are comparable with KCP&L's existing wind facilities, and capacity factors provided by developers for new future wind sites have been relatively stable and in the same range as existing facilities. Results indicate that if wind costs do not inflate over time that on an expected value basis, wind could become economic.

3.2.7 GDS' (MDNR) Deficiency 4

KCP&L did not provide adequate documentation to support the transmission interconnection costs for wind resources. The small sample size and wide range of costs gives rise to a question of whether the sample used to generate the interconnection costs is representative of past or future interconnection costs.

Resolution: The Company will identify a greater number of wind project transmission interconnection costs for inclusion into the 2013 Annual Update.

Comment: In the 2013 Annual Update, KCP&L included wind Interconnection costs updated based on 10 recent SPP wind interconnection studies.

3.2.8 GDS' (MDNR) Concern 3

KCP&L has not considered a broad enough range of potential coal prices in its IRP. A broader range in coal fuel prices should have been used in the development of KCP&L's preferred or alternative resource plans.

Resolution: This issue has been resolved.

3.2.9 GDS' (MDNR) Concern 4

KCP&L's assumed coal plant capacity factors are not representative of recent actual operating experience and the impact of these assumed higher capacity factors on wind options has been overlooked. This issue affects the ability of existing supply resources to meet expected demand and limits the potential role of new renewable resources such as wind in the preferred plan.

Resolution: This issue has been resolved.

3.2.10 GDS' (MDNR) Concern 5

KCP&L did not address the impact of natural disasters, such as the flood at the Iatan coal plant, in its contingency plans.

Resolution: This issue has been resolved.

SECTION 4: TRANSMISSION AND DISTRIBUTION UPDATE

4.1 CHANGES FROM 2012 IRP SUBMISSION

4.1.1 SMARTGRID DEMONSTRATION PROJECT - 2012 MID-PROJECT TECHNOLOGY PERFORMANCE REPORT (TPR)

As a DOE Smart Grid Demonstration Project requirement, KCP&L produced its first Interim Technology Performance Report (TPR) on December 31, 2012. That document summarized all achievements on the project through that date. Key topics include summaries of the project design, implementation, analysis, and some lessons learned thus far. Due to the voluminous size of this report, it has not been included in the Annual Update, but can be viewed at the following DOE website; http://www.smartgrid.gov/sites/default/files/KCPL_OE0000221_Interim%20TPR%201_20130328.pdf.

A second Interim Technology Performance Report will be produced at the end of 2013. This document will revisit preliminary assessments from the 2012 documentation, but will go into greater detail regarding the incremental implementation activities, operational tests, and initial results from analysis performed as of that date. A final Technology Performance Report will be produced in early 2015 following the conclusion of the project and will synthesize all learning's from the entirety of project.

4.2 TRANSMISSION AND DISTRIBUTION: AGREED UPON REMEDIES TO ALLEGED DEFICIENCIES AND DEFICIENCIES

The following section addresses the Alleged Deficiencies and Concerns from the 2012 KCP&L IRP, Case No. EO-2012-0323. The Resolutions are either verbatim or a shortened version of the agreed-to resolution from the Joint Filing filed in that case.

4.2.1 Staff's Deficiency 2

KCP&L 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 KCP&L 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. KCP&L should provide its assessments of the RTO expansion plans in its Annual Update.

Resolution: The Company will provide its assessments of the RTO expansion plans in its 2013 Annual Update.

Comment: KCP&L assessment of RTO expansion plans is an ongoing process that occurs throughout the various regional planning processes conducted by SPP. These assessments include review and approval of plan scope documents, review and approval of plan input assumptions, review of plan study analysis and results with feedback from KCP&L staff, and review and approval of final plan reports. All transmission projects for the KCP&L service territory that are identified in SPP Regional Plans are included in KCP&L's annual Transmission Expansion Plan which performs an assessment of those projects for meeting the requirements of the NERC Reliability Standards. By meeting the performance standards established for transmission planning in the NERC Reliability Standards the assessment ensures that adequate transmission is available in the near term and long term to meet the firm load and transmission service requirements included in the SPP Regional Plan for KCP&L. This document is attached as Appendix A 2012 KCPL and GMO Transmission Expansion Plan Study.pdf.

4.2.2 Staff's Deficiency 3

KCP&L did not assess the RTO expansion plans as required by Rule 4 CSR 240-22.045(3)(B). Since KCP&L does not believe it is possible to conduct separate analysis for its Missouri customers, KCP&L should request a variance for Rule 4 CSR 240-22.045(3)(B)2 and Rule 4 CSR 240-22.045(3)(B)3.

Resolution: The Company will request a variance for Rule 4 CSR 240-22.045(3)(B)2 and Rule 4 CSR 240-22.045(3)(B)3 prior to the 2013 Annual Update.

Comment: KCP&L requested variances for these rules and they were granted.

4.2.3 Staff's Deficiency 4

KCP&L did not identify and describe all affiliates as required by Rule 4 CSR 240-22.045(5). KCP&L should identify and describe the relationship between the two companies (KCP&L and GMO) and conduct separate analysis of the RTO expansion plans for each company.

Resolution: KCP&L will identify and describe the relationship between KCP&L, Transource and GMO in its 2013 Annual Update.

Comment: For the purpose of this response, any Great Plains Energy ("GXP") affiliate is defined as those entities within the direct line of ownership of GXP.

While KCP&L Greater Missouri Operations Company ("GMO") is not a "transmission planning, designing, engineering, building, and/or construction management company," KCP&L identifies GMO in the interest of providing a response to this requirement. KCP&L and GMO are electric utilities wholly owned by Great Plains Energy Incorporated. While GMO has no employees, KCP&L employees perform transmission planning, designing, engineering, building, and construction management for both entities pursuant to the terms of the utilities' joint operation agreement and cost allocation manual. Transactions between KCP&L and GMO, however, are not subject to the Affiliate Transactions Rule found in 4 CSR 240-20.015, pursuant to a variance the Commission granted in Case No. EM-2007-0374.

On April 4, 2012 GXP, the holding company for both KCP&L and GMO, and American Electric Power ("AEP") announced the formation of a company to build and invest in transmission infrastructure. The new company, Transource Energy LLC ("Transource"), will pursue competitive transmission projects in the SPP region, the MISO and PJM regions, and potentially other regions in the future. GXP owns 13.5 percent of Transource through its newly-formed subsidiary, GPE Transmission Holding Company, LLC ("GPETHCO"). AEP owns the other 86.5 percent of Transource through its subsidiary, AEP Transmission Holding Company, LLC ("AEPTHC"). Transource Missouri, LLC is the only current subsidiary of Transource Energy, LLC and has applied to FERC in Docket No. ER12-2554-000 for authority to implement certain incentive rate treatments for the Iatan-Nashua regional transmission project and the Sibley-Nebraska City regional transmission project pursuant to Section 219 of the Federal Power Act and FERC Order No. 679.

4.2.4 Staff's 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. [KCP&L is affiliated with GMO.] Some of the analysis in volume 4.5 is based on a combination of KCP&L and GMO rather than KCP&L as a standalone company. KCP&L should provide its analysis of affiliate-built transmission in its 2013 Annual Update.

Resolution: The SPP RTO expansion plans included in the 2012 IRP filing provided separate analysis for KCP&L and GMO. GMO is identified as "MIPU" in some of the SPP RTO expansion plans. Therefore, this issue is resolved.

SECTION 5: DEMAND-SIDE RESOURCE ANALYSIS UPDATE

5.1 DEMAND-SIDE MANAGEMENT LEVEL UPDATE

The 2013 Annual Update utilized the results of the Navigant Demand-Side Management Potential Study. Six DSM alternatives were created for KCP&L. The six alternatives were based on the Realistic Achievable Potential (RAP) and The Maximum Achievable Potential (MAP), which were identified in the study. The five DSM alternatives are RAP, MAP, RAP plus 1/3 of the difference between RAP and MAP, RAP plus 2/3 the difference between RAP and MAP, and approximately half-RAP. One additional alternative was created for KCP&L, which is described later in this section. The draft version of the Navigant DSM Potential Study used in the analysis was available in March of 2013. A finalized version will be available after the date of this filing.*

**Note: At the time of the filing of this Annual Update, the Navigant DSM Potential Study was not yet finalized due to changes requested by stakeholders. As such, GMO utilized a draft version of the report that was available as of March 2013.*

5.2 MODIFICATIONS MADE TO THE DSM LEVELS FROM THE POTENTIAL STUDY

The Navigant DSM Potential Study data, that was used for this update, included all C&I customers. GMO received Opt-Out requests from some of the large Commercial and Industrial (C&I) customers that were eligible to do so. The customers requesting to Opt-Out of DSM amounted to 18% of GMO's large C&I load, which amounts to 15% of GMO's total C&I load. In order to account for the resulting reduction in potential C&I DSM due to those customers who Opted-Out, the company reduced the DSM from C&I customers by 15%.

Unlike GMO, KCP&L has not made a MEEIA filing. Therefore, KCP&L does not have a list of customers who have, or will, Opt-Out. For purposes of this update, the company assumed that the same percentage of C&I load would Opt-Out that did in

GMO. So the company reduced the total amount of DSM from C&I customers, in KCP&L, by 15%.

5.3 THE MEEIA/RAP ALTERNATIVE

KCP&L developed a modified RAP level of DSM for 2014, 2015 and 2016, followed by the RAP level starting in 2017. The modification was based on the measure list from the Potential Study but at a reduced level to reflect a lower level of DSM spending. The modified DSM plan is named MEEIA/RAP. This plan assumes that the same list of programs and the program plans from the potential study RAP level of DSM would be used, but the amount of capacity and energy savings would be reduced proportionately to reflect the reduced amount of savings that could be achieved with the lower level of spending. The DSM savings levels for this scenario are based on the cost per kWh from the RAP level of DSM in the Potential Study results.

KCP&L developed the MEEIA/RAP alternative to reduce the short-term rate impacts that would result from the full RAP DSM levels. Assuming KCP&L was approved for the same DSM cost recovery treatment as GMO was under its MEEIA settlement agreement, implementing the full RAP DSM plan in 2014 would increase retail rates by a projected 8.3% in 2016 (the first year new rates would be in effect under a 2013 KCP&L MEEIA filing). This increase does not reflect any other potential non-DSM related costs that would also go into effect in 2016. The MEEIA/RAP alternative reduces the rate impact to 6.3%.

KCP&L anticipates that it will file a MEEIA case during 2013.

5.4 DEMAND-SIDE RESOURE ANALYSIS: AGREED UPON REMEDIES ALLEGED DEFICIENCIES AND CONCERNS

The following section addresses the Alleged Deficiencies and Concerns from the 2012 KCP&L IRP, Case No. EO-2012-0323. The Resolutions are either verbatim or a shortened version of the agreed-to resolution from the Joint Filing filed in that case.

5.4.1 Staff's Deficiency 5

The Company has no current market research study that identifies the maximum achievable potential ("MAP"), technical potential and realistic achievable potential ("RAP") of potential demand-side resource options. The Company should utilize the results of the Navigant Demand-Side Management Potential as input in the preparation of its 2013 Annual Update.

Resolution: The Company will utilize the results of the Navigant Demand-Side Management Potential Study in its 2013 Annual Update.

Comment: This issue has been addressed as KCP&L utilized the results of the Navigant DSM Potential Study in the 2013 Annual Update.

5.4.2 Staff's Deficiency 6

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. 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 2013 Annual Update.

Resolution: The Company will utilize the results of the Navigant Demand-Side Management Potential Study in its 2013 Annual Update and the Smart Grid Residential TOU Pilot Tariff.

Comment: This issue has been addressed as KCP&L utilized the results of the Navigant DSM Potential Study and has provided the results of the Smart Grid Residential TOU Pilot Tariff in the 2013 Annual Update. These are included in the appendices "Appendix C KCPL Preliminary IHD and TOU Evaluation Rev Oct 24 2012.pdf" and "Appendix D 2012 OnPeak Hours.xls ".

5.4.3 Staff's Concern C

KCP&L is constraining both the Energy Optimizer and MPower programs. KCP&L 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. The Company should utilize the results of the Navigant Demand-Side Management Potential study meeting the requirements of Rule 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 2013 Annual Update.

Resolution: The Company will utilize the results of the Navigant Demand-Side Management Potential Study in its 2013 Annual Update.

Comment: This issue has been addressed as KCP&L utilized the results of the Navigant DSM Potential Study in the 2013 Annual Update.

5.4.4 Staff's Concern D

The Total Resource Cost ("TRC") value of 0.43 for the Energy Star New Homes program indicates that this program is not cost effective. The Company should carefully review all TRC values for all DSM programs for consideration in the preparation of its 2013 Annual Update. If the results of this review indicate some programs are indeed not cost effective and do not meet the requirements of 4 CSR

240-20.094 (3)(B) and (C), they should not be included in the Company's 2013 Annual Update.

Resolution: The Company will utilize the results of the Navigant Demand-Side Management Potential Study in its 2013 Annual Update. The Company will carefully review all TRC values for all DSM programs. If any programs are not cost effective and do not meet the requirements of 4 CSR 240-20.094(3)(B) and (C), they will not be included in the Company's Annual Update.

Comment: This issue has been addressed. KCP&L utilized the results of the Navigant DSM Potential Study to review all TRC values for all DSM programs and excluded measures that had a TRC value below 1.

5.4.5 MDNR's Deficiency 5

No clear analysis of interactive factors in assessing DSM program cost-effectiveness. Analysis of the interactive effects of efficiency measures was not performed in the estimation of program cost-effectiveness.

Resolution: The Company will utilize the results of the Navigant Demand-Side Management Potential Study in its 2013 Annual Update. Interactive effects will be included in the assessment of future programs. The program-level-cost-effectiveness will be recalculated after the completion of the potential study.

Comment: This issue has been addressed. In the 2013 Annual Update, KCP&L utilized the results of the Navigant DSM Potential Study to include interactive effects in the assessment of future programs. Also, the program-level-cost-effectiveness was recalculated based on the potential study.

5.4.6 MDNR's Deficiency 6

No identification of DSM portfolios that address "maximum achievable potential" and "realistic achievable potential." KCP&L has deferred all estimation and analysis of "maximum achievable potential" and "realistic achievable potential" to the completion of its market potential study.

Resolution: The Company will utilize the results of the Navigant Demand-Side Management Potential Study in its 2013 Annual Update. DSM portfolios that meet the definition of "maximum achievable potential" and "realistic achievable potential" will be included in the 2013 Annual Update.

Comment: This issue has been addressed. KCP&L utilized the results of the Navigant DSM Potential Study to include DSM portfolios that meet the definition of "maximum achievable potential" and "realistic achievable potential" in the 2013 Annual Update.

5.4.7 MDNR's Concern 4

The 1% DSM portfolio agreed upon in Stipulation to EE-2008-0034 is not identified. The required DSM portfolio from the Stipulation and Agreement to File No. EE-2008-0034, KCP&L's 2008 IRP, has not been identified among the three DSM portfolios presented by the Company, citing Stipulation and Agreement, Case No. EE-2008-0034, DNR Deficiency #2.

Resolution: This issue was resolved over the phone in conversations with Adam Bickford, MDNR. The 1% portfolio was DSM plan D, however, the 1% only applied to KCP&L Missouri.

5.4.8 MDNR'S Deficiency 7

The Key metrics for the "aggressive" and "very aggressive" DSM portfolios are not provided. Required data on number of participants, incentive payments and administrative costs are not provided for the "aggressive" and "very aggressive" DSM portfolios.

Resolution: The Company will include in the 2013 Annual Update, program metrics as described in 4 CSR 240-22.050(4)(G) for each of its DSM portfolios.

Comment: This issue has been addressed. KCP&L utilized the results of the Navigant DSM Potential Study to include program metrics for each the DSM portfolios in the 2013 Annual Update.

5.4.9 MDNR'S Deficiency 8

Savings estimates for "Aggressive" (DSM D) and "Very Aggressive" (DSM E) DSM portfolios are simple extrapolations from a common base case. KCP&L should reconsider its program design when estimating its aggressive DSM planning cases rather than relying on "technologies not known or defined."

Resolution: The Company will utilize the results of the Navigant Demand-Side Management Potential Study in its 2013 Annual Update.

Comment: This issue has been addressed. KCP&L utilized the results of the Navigant DSM Potential Study for the DSM Portfolios in the 2013 Annual Update.

SECTION 6: INTEGRATED RESOURCE PLAN AND RISK ANALYSIS UPDATE

6.1 CHANGES FROM 2012 IRP SUBMITTAL

The changing conditions, or major drivers, that have contributed to KCP&L's need to develop new Alternative Resource Plans and therefore selection of a new Preferred Plan include:

- Proposed and Potential Environmental Regulations
- Load Forecast Projections
- Environmental Retrofit Cost Estimates
- Demand-Side Management Program levels

6.2 CRITICAL UNCERTAIN FACTORS

The Critical Uncertain Factors for the 2013 Annual Update were same as those in the 2012 IRP filing. The Critical Uncertain Factors identified were incorporated into a decision tree representation of the risks that will impact the performance of the alternative resource plans. A graphical representation of the decision tree risks is provided in Figure 6 below:

Figure 6: Decision Tree With Conditional Probabilities

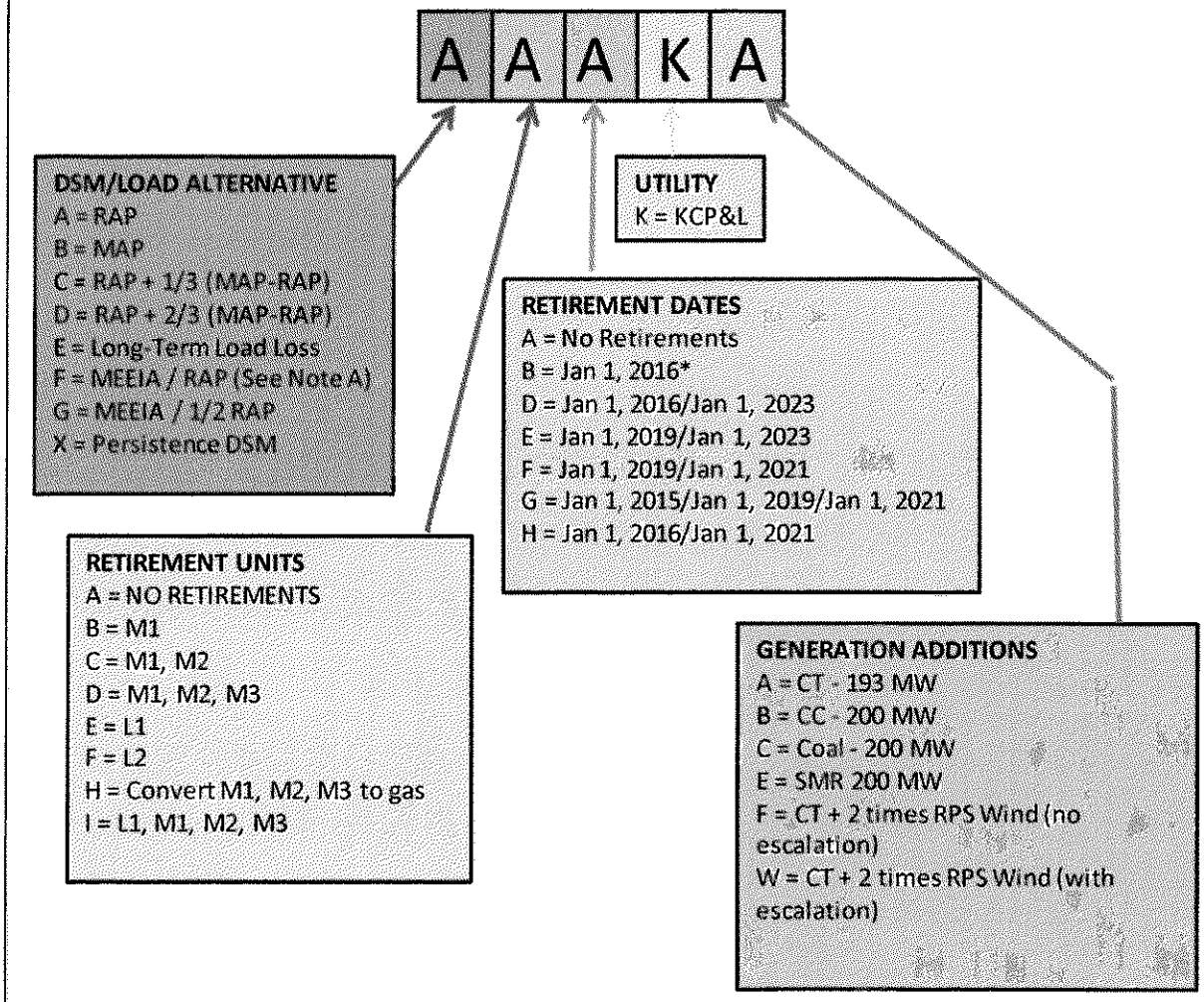
Endpoint	Load Growth	Natural Gas	CO_2	Endpoint Probability
1	High	High	High	1.6%
2	High	High	Mid	3.1%
3	High	High	Low	1.6%
4	High	Mid	High	3.1%
5	High	Mid	Mid	6.3%
6	High	Mid	Low	3.1%
7	High	Low	High	1.6%
8	High	Low	Mid	3.1%
9	High	Low	Low	1.6%
10	Mid	High	High	3.1%
11	Mid	High	Mid	6.3%
12	Mid	High	Low	3.1%
13	Mid	Mid	High	6.3%
14	Mid	Mid	Mid	12.5%
15	Mid	Mid	Low	6.3%
16	Mid	Low	High	3.1%
17	Mid	Low	Mid	6.3%
18	Mid	Low	Low	3.1%
19	Low	High	High	1.6%
20	Low	High	Mid	3.1%
21	Low	High	Low	1.6%
22	Low	Mid	High	3.1%
23	Low	Mid	Mid	6.3%
24	Low	Mid	Low	3.1%
25	Low	Low	High	1.6%
26	Low	Low	Mid	3.1%
27	Low	Low	Low	1.6%

6.3 ALTERNATIVE RESOURCE PLAN DEVELOPMENT

Alternative resource plans were developed using a combination of supply-side resources, demand-side resources, various resource addition timings, as well as generation retirement options and timings. The plan-naming convention utilized for the alternative resource plans developed is shown in Table 28 below:

Table 28: Alternative Resource Plan Naming Convention

NAMING CONVENTION FOR ALTERNATIVE RESOURCE PLANS IN THE 2013 KCP&L IRP UPDATE



Definitions:

DSM - Demand-Side Management	M1 - Montrose Unit 1	CT - Combustion Turbine
RAP - Realistic Achievable Potential	M2 - Montrose Unit 2	CC - Combined Cycle
MAP - Maximum Achievable Potential	M3 - Montrose Unit 3	SMR - Small Modular Reactor
DR - Demand Response	L1 - LaCygne Unit 1	
EE - Energy Efficiency	L2 - LaCygne Unit 2	
* June 1, 2015 if "Retirement Unit" E or F	RPS - Renewable Portfolio Standard	

Note A: The MEEIA / RAP scenario contains a level of DSM in 2014 – 2016 that serves as a placeholder for a future MEEIA filing, then transitions to RAP in 2017.

Alternative Resource Plans were developed using a combination of various supply-side resources and demand-side resources. An overview of the Alternative Resource Plans is shown in Table 29 to Table 33 below.

Table 29: Overview of Alternative Resource Plans

Plan Name	DSM Level	Retirement Assumption	Retirement Year	Renewable Additions		Generation Addition (if needed)
AAAKA	RAP	No Retirements	n/a	Solar: 2018 - 11 MW 2021 - 6 MW	Wind: 2016 - 50 MW 2020- 150 MW 2024 - 200 MW	n/n
ABBKA	RAP	Montrose-1	2016	Solar: 2018 - 11 MW 2021 - 6 MW	Wind: 2016 - 50 MW 2020- 150 MW 2024 - 200 MW	n/n
ACBKA	RAP	Montrose-1 Montrose-2	2016	Solar: 2018 - 11 MW 2021 - 6 MW	Wind: 2016 - 50 MW 2020- 150 MW 2024 - 200 MW	193 MW CT in 2032
AEBKA	RAP	LaCygne-1	2015	Solar: 2018 - 11 MW 2021 - 6 MW	Wind: 2016 - 50 MW 2020- 150 MW 2024 - 200 MW	193 MW CT in 2031
AFBKA	RAP	LaCygne-2	2015	Solar: 2018 - 11 MW 2021 - 6 MW	Wind: 2016 - 50 MW 2020- 150 MW 2024 - 200 MW	193 MW CT in 2031

Note: MEEIA/RAP for KCP&L contains a level of DSM in 2014-2016 that serves as a placeholder for a future MEEIA filing, then transitions to RAP.

Table 30: Overview of Alternative Resource Plans (continued)

Plan Name	DSM Level	Retirement Assumption	Retirement Year	Renewable Additions		Generation Addition (if needed)
AHBKA	RAP	Convert to NG: Montrose-1 Montrose-2 Montrose-3	2016*	Solar: 2018 - 11 MW 2021 - 6 MW	Wind: 2016 - 50 MW 2020- 150 MW 2024 - 200 MW	n/n
BDFKA	MAP	Montrose-1 Montrose-2 Montrose-3	2019 2021 2021	Solar: 2018 - 11 MW 2021 - 6 MW	Wind: 2016 - 50 MW 2020- 150 MW 2024 - 200 MW	n/n
CDBKA	RAP + 1/3(MAP-RAP)	Montrose-1 Montrose-2 Montrose-3	2016 2016 2016	Solar: 2018 - 11 MW 2021 - 6 MW	Wind: 2016 - 50 MW 2020- 150 MW 2024 - 200 MW	193 MW CT in 2033
DDBKA	RAP + 2/3(MAP-RAP)	Montrose-1 Montrose-2 Montrose-3	2016 2016 2016	Solar: 2018 - 11 MW 2021 - 6 MW	Wind: 2016 - 50 MW 2020- 150 MW 2024 - 200 MW	n/n
FDBKA	MEEIA / RAP	Montrose-1 Montrose-2 Montrose-3	2016 2016 2016	Solar: 2018 - 11 MW 2021 - 6 MW	Wind: 2016 - 50 MW 2020- 150 MW 2024 - 200 MW	193 MW CT in 2026 193 MW CT in 2031

Table 31: Overview of Alternative Resource Plans (continued)

Plan Name	DSM Level	Retirement Assumption	Retirement Year	Renewable Additions		Generation Addition (if needed)
FDDKA	MEEIA / RAP	Montrose-1 Montrose-2 Montrose-3	2016 2023 2023	Solar: 2018 - 11 MW 2021 - 6 MW	Wind: 2016 - 50 MW 2020- 150 MW 2024 - 200 MW	193 MW CT in 2026 193 MW CT in 2031
FDEKA	MEEIA / RAP	Montrose-1 Montrose-2 Montrose-3	2019 2023 2023	Solar: 2018 - 11 MW 2021 - 6 MW	Wind: 2016 - 50 MW 2020- 150 MW 2024 - 200 MW	193 MW CT in 2026 193 MW CT in 2031
FDFKA	MEEIA / RAP	Montrose-1 Montrose-2 Montrose-3	2019 2021 2021	Solar: 2018 - 11 MW 2021 - 6 MW	Wind: 2016 - 50 MW 2020- 150 MW 2024 - 200 MW	193 MW CT in 2026 193 MW CT in 2031
FDHKA	MEEIA / RAP	Montrose-1 Montrose-2 Montrose-3	2016 2021 2021	Solar: 2018 - 11 MW 2021 - 6 MW	Wind: 2016 - 50 MW 2020- 150 MW 2024 - 200 MW	193 MW CT in 2026 193 MW CT in 2031
FDHKB	MEEIA / RAP	Montrose-1 Montrose-2 Montrose-3	2016 2021 2021	Solar: 2018 - 11 MW 2021 - 6 MW	Wind: 2016 - 50 MW 2020- 150 MW 2024 - 200 MW	200 MW CC in 2026 200 MW CC in 2031

Table 32: Overview of Alternative Resource Plans (continued)

Plan Name	DSM Level	Retirement Assumption	Retirement Year	Renewable Additions		Generation Addition (if needed)
FDHKE	MEEIA / RAP	Montrose-1 Montrose-2 Montrose-3	2016 2021 2021	Solar: 2018 - 11 MW 2021 - 6 MW	Wind: 2016 - 50 MW 2020- 150 MW 2024 - 200 MW	200 MW SMR in 2026 200 MW SMR in 2031
FDHKW	MEEIA / RAP	Montrose-1 Montrose-2 Montrose-3	2016 2021 2021	Solar: 2018 - 22 MW 2021 - 12 MW	Wind: 2016 - 100 MW 2020- 300 MW 2024 - 400 MW	193 MW CT in 2027 193 MW CT in 2032
FIBKA	MEEIA / RAP	LaCygne-1 Montrose-1 Montrose-2 Montrose-3	2015 2016 2016 2016	Solar: 2018 - 11 MW 2021 - 6 MW	Wind: 2016 - 50 MW 2020- 150 MW 2024 - 200 MW	579 MW CT in 2016 193 MW CT in 2031
FIGKA	MEEIA / RAP	LaCygne-1 Montrose-1 Montrose-2 Montrose-3	2015 2019 2021 2021	Solar: 2018 - 11 MW 2021 - 6 MW	Wind: 2016 - 50 MW 2020- 150 MW 2024 - 200 MW	386 MW CT in 2021 193 MW CT in 2027 193 MW CT in 2031
GDBKA	MEEIA / 1/2 RAP	Montrose-1 Montrose-2 Montrose-3	2016 2016 2016	Solar: 2018 - 11 MW 2021 - 6 MW	Wind: 2016 - 50 MW 2020- 150 MW 2024 - 200 MW	193 MW CT in 2022 193 MW CT in 2028 193 MW CT in 2032

Table 33: Overview of Alternative Resource Plans (continued)

Plan Name	DSM Level	Retirement Assumption	Retirement Year	Renewable Additions		Generation Addition (if needed)
GDHKA	MEEIA / 1/2 RAP	Montrose-1 Montrose-2 Montrose-3	2016 2021 2021	Solar: 2018 - 11 MW 2021 - 6 MW	Wind: 2016 - 50 MW 2020- 150 MW 2024 - 200 MW	193 MW CT in 2022 193 MW CT in 2028 193 MW CT in 2032
GDHKB	MEEIA / 1/2 RAP	Montrose-1 Montrose-2 Montrose-3	2016 2021 2021	Solar: 2018 - 11 MW 2021 - 6 MW	Wind: 2016 - 50 MW 2020- 150 MW 2024 - 200 MW	20 MW CC in 2022 200 MW CC in 2028 200 MW CC in 2032
XDFKA	Persistence Only	Montrose-1 Montrose-2 Montrose-3	2019 2021 2021	Solar: 2018 - 11 MW 2021 - 6 MW	Wind: 2016 - 50 MW 2020- 150 MW 2024 - 200 MW	386 MW CT in 2021 193 MW CT in 2026 193 MW CT in 2031
* Convert to Natural Gas						

See Appendix B for tables which provide the KCP&L forecast of capacity balance for the next 20 years for each of the Alternative Resource Plans outlined above. These capacity forecasts include renewable and generation additions. The capacity for wind facilities is based on SPP's criteria for calculating wind net capability using actual generation or wind data. Solar capacity is based on SPP criteria indicating that absent a net capability calculation, 10% for solar facilities of the facility's nameplate rating be used. Additionally, the 56 MW hydro facility is currently allocated 100% to KCP&L's Kansas jurisdiction for the purpose of state RES compliance.

6.4 REVENUE REQUIREMENT AND PROBABLE ENVIRONMENTAL COSTS

For each of the Alternative Resource Plans developed, integrated analysis yielded an expected value of the Net Present Value of Revenue Requirement shown in Table 34 below. For each of the Alternative Resource Plans, the Probable Environmental Costs are shown in Table 35 below.

Table 34: Total Revenue Requirement

Rank (L-H)	Plan	NPVRR ($mm)	Delta
1	FDHKA	$20,797	$0.0
2	FDBKA	$20,799	$1.8
3	FDFKA	$20,806	$9.0
4	FDDKA	$20,832	$34.8
5	FDHKB	$20,833	$35.5
6	FDEKA	$20,843	$45.2
7	FIGKA	$20,844	$46.8
8	ACBKA	$20,907	$109.2
9	CDBKA	$20,908	$110.1
10	GDHKA	$20,918	$120.3
11	GDBKA	$20,923	$125.3
12	FDHKW	$20,945	$147.2
13	GDHKB	$20,958	$160.3
14	AEBKA	$21,033	$235.5
15	AFBKA	$21,039	$241.8
16	FDHKE	$21,063	$265.8
17	ABBKA	$21,071	$273.8
18	DDBKA	$21,144	$346.5
19	FIBKA	$21,175	$377.8
20	XDFKA	$21,239	$441.7
21	AAAKA	$21,356	$558.7
22	AHBKA	$21,383	$585.2
23	BDFKA	$21,503	$705.9

Table 35: Probable Environmental Cost

Plan	PEC NPVRR ($mm)
AAAKA	$1,815
ABBKA	$1,594
ACBKA	$1,414
AEBKA	$1,486
AFBKA	$1,333
AHBKA	$1,208
BDFKA	$1,254
CDBKA	$1,207
DDBKA	$1,207
FDBKA	$1,208
FDDKA	$1,262
FDEKA	$1,275
FDFKA	$1,254
FDHKA	$1,241
FDHKB	$1,244
FDHKE	$1,240
FDHKW	$1,237
FIBKA	$862
FIGKA	$909
GDBKA	$1,208
GDHKA	$1,241
GDHKB	$1,246
XDFKA	$1,255

6.5 PERFORMANCE MEASURES

A summary tabulation of the expected value of all performance measures is provided in Table 36 below. Plan detail results behind this summary tabulation are attached in Appendix G.

Table 36: Expected Value of Performance Measures ** Highly Confidential **

Plan	NPVRR	Probable Environmental Costs ($MM)	DSM Costs ($MM)	Levelized Annual Rates ($/kw-hr)	Maximum Rate Increase	Times Interest Earned	Total Debt to Capital	Cap Ex to FFO
FDHKA	$ 20,797	$ 1,241	$ 336.8					
FDBKA	$ 20,799	$ 1,208	$ 336.8					
FDFKA	$ 20,806	$ 1,254	$ 336.8					
FDDKA	$ 20,832	$ 1,262	$ 336.8					
FDHKB	$ 20,833	$ 1,244	$ 336.8					
FDEKA	$ 20,843	$ 1,275	$ 336.8					
FIGKA	$ 20,844	$ 909	$ 336.8					
ACBKA	$ 20,907	$ 1,414	$ 386.8					
CDBKA	$ 20,908	$ 1,207	$ 758.1					
GDHKA	$ 20,918	$ 1,241	$ 204.6					
GDBKA	$ 20,923	$ 1,208	$ 204.6					
FDHKW	$ 20,945	$ 1,237	$ 336.8					
GDHKB	$ 20,958	$ 1,246	$ 204.6					
AEBKA	$ 21,033	$ 1,486	$ 386.8					
AFBKA	$ 21,039	$ 1,333	$ 386.8					
FDHKE	$ 21,063	$ 1,240	$ 336.8					
ABBKA	$ 21,071	$ 1,594	$ 386.8					
DDBKA	$ 21,144	$ 1,207	$ 1,095.7					
FIBKA	$ 21,175	$ 862	$ 336.8					
XDFKA	$ 21,239	$ 1,255	$ -					
AAAKA	$ 21,356	$ 1,815	$ 386.8					
AHBKA	$ 21,383	$ 1,208	$ 386.8					
BDFKA	$ 21,503	$ 1,254	$ 1,433.4					

HC

6.5.1 CUMULATIVE PROBABILITIES FOR PERFORMANCE MEASURES

Table 37: Cumulative Probability - NPVRR

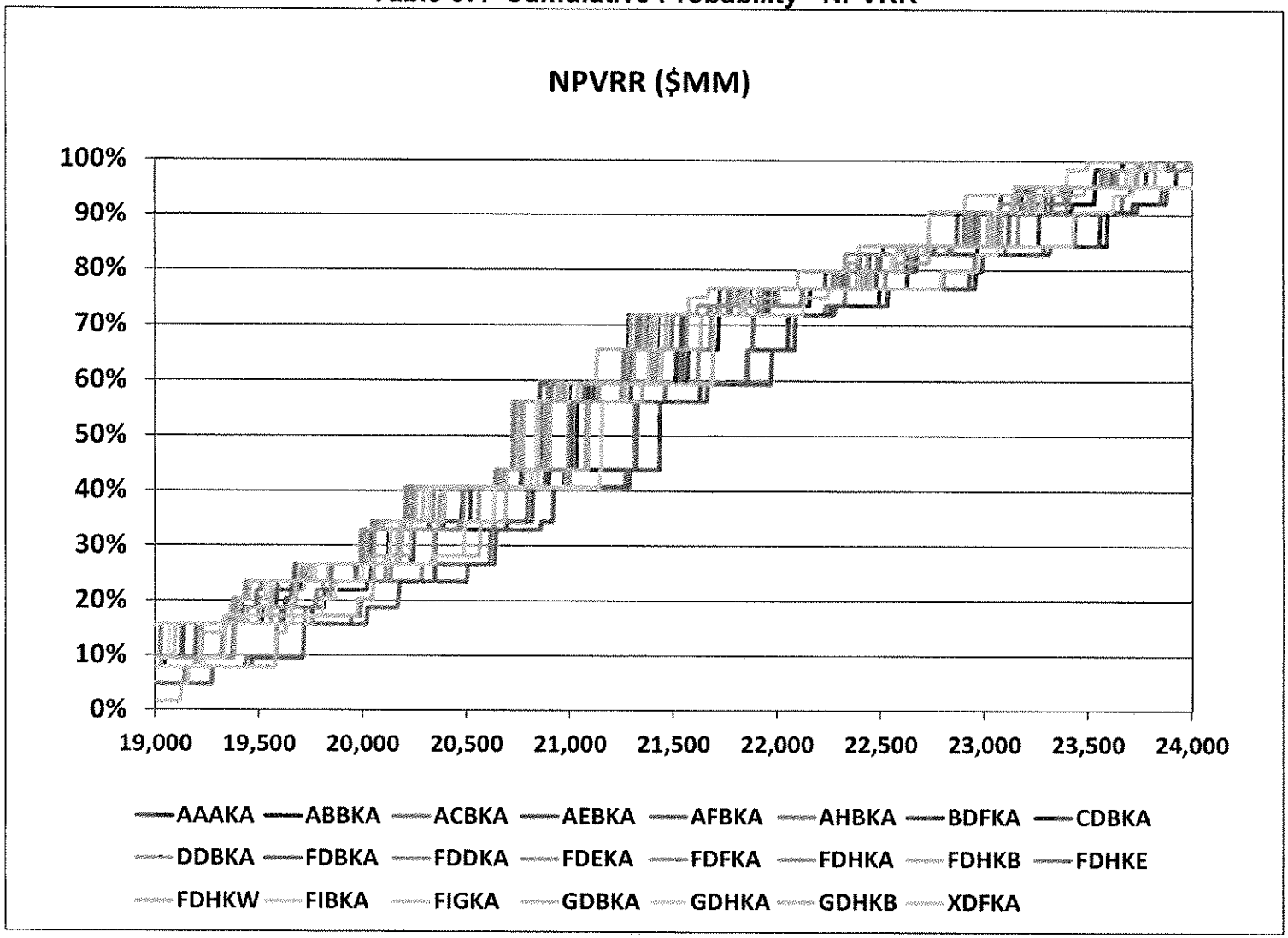


Table 38: Cumulative Probability - Probable Environmental Costs

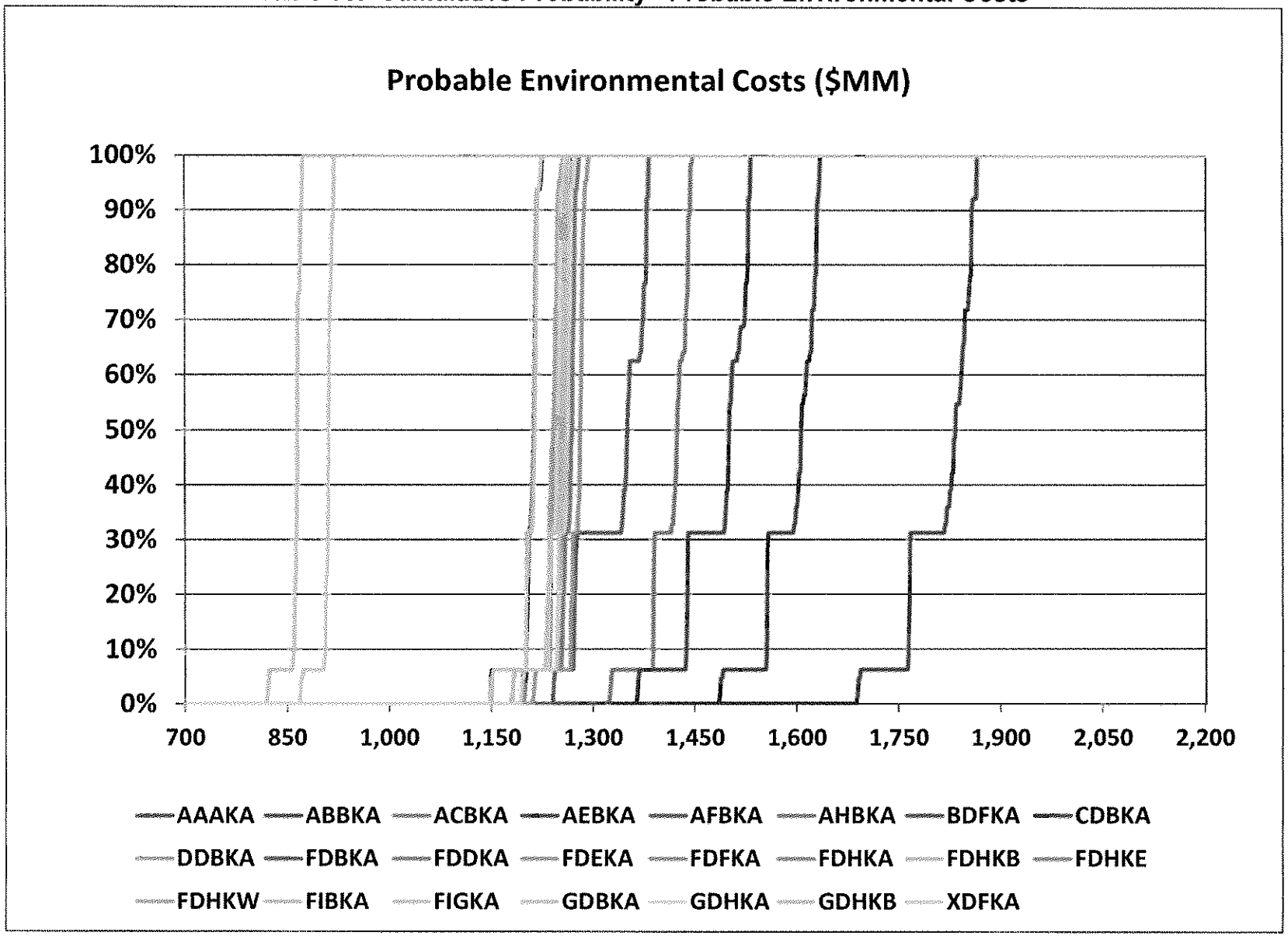


Table 39: Cumulative Probability - Annual Average Rates

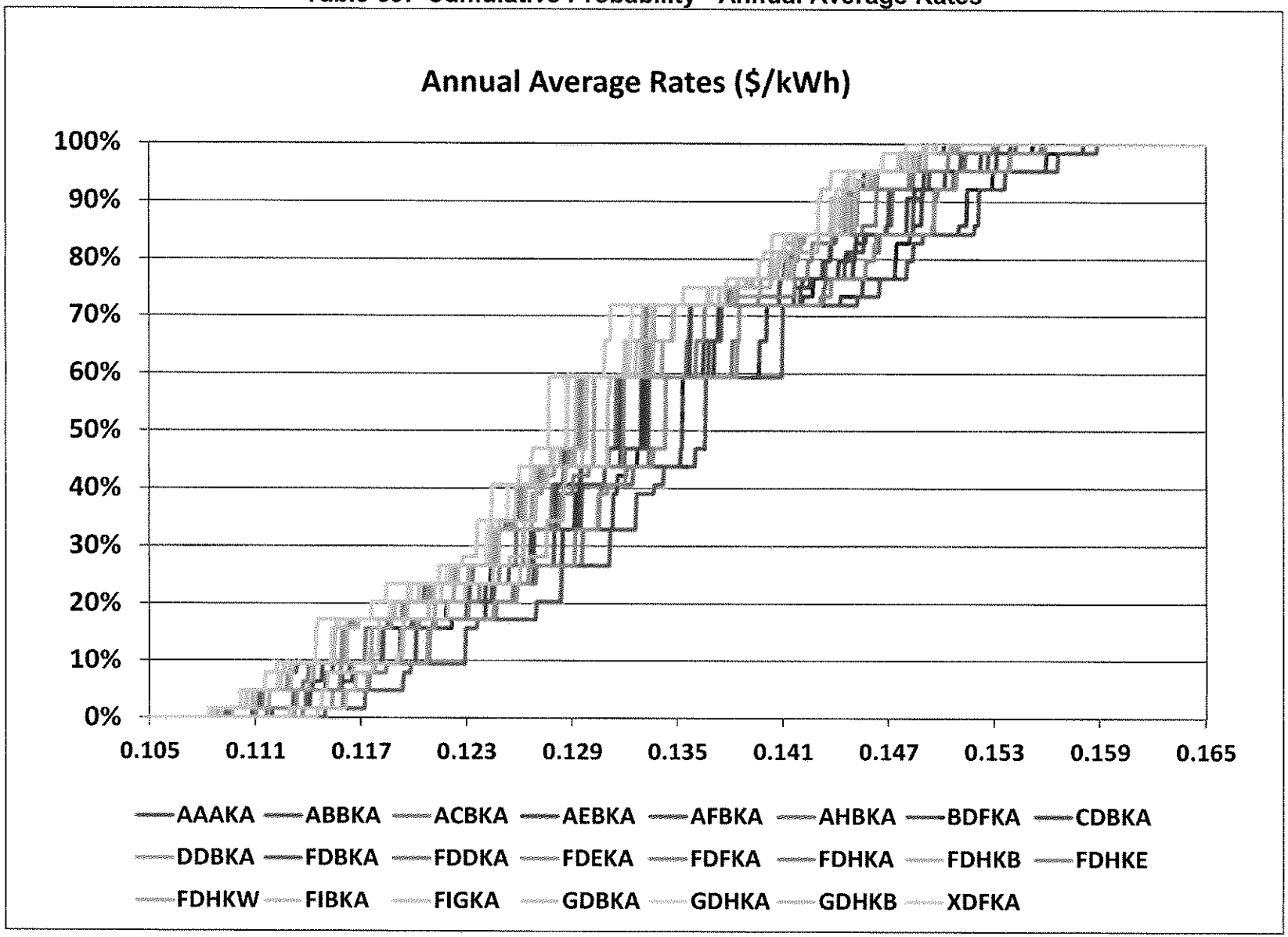
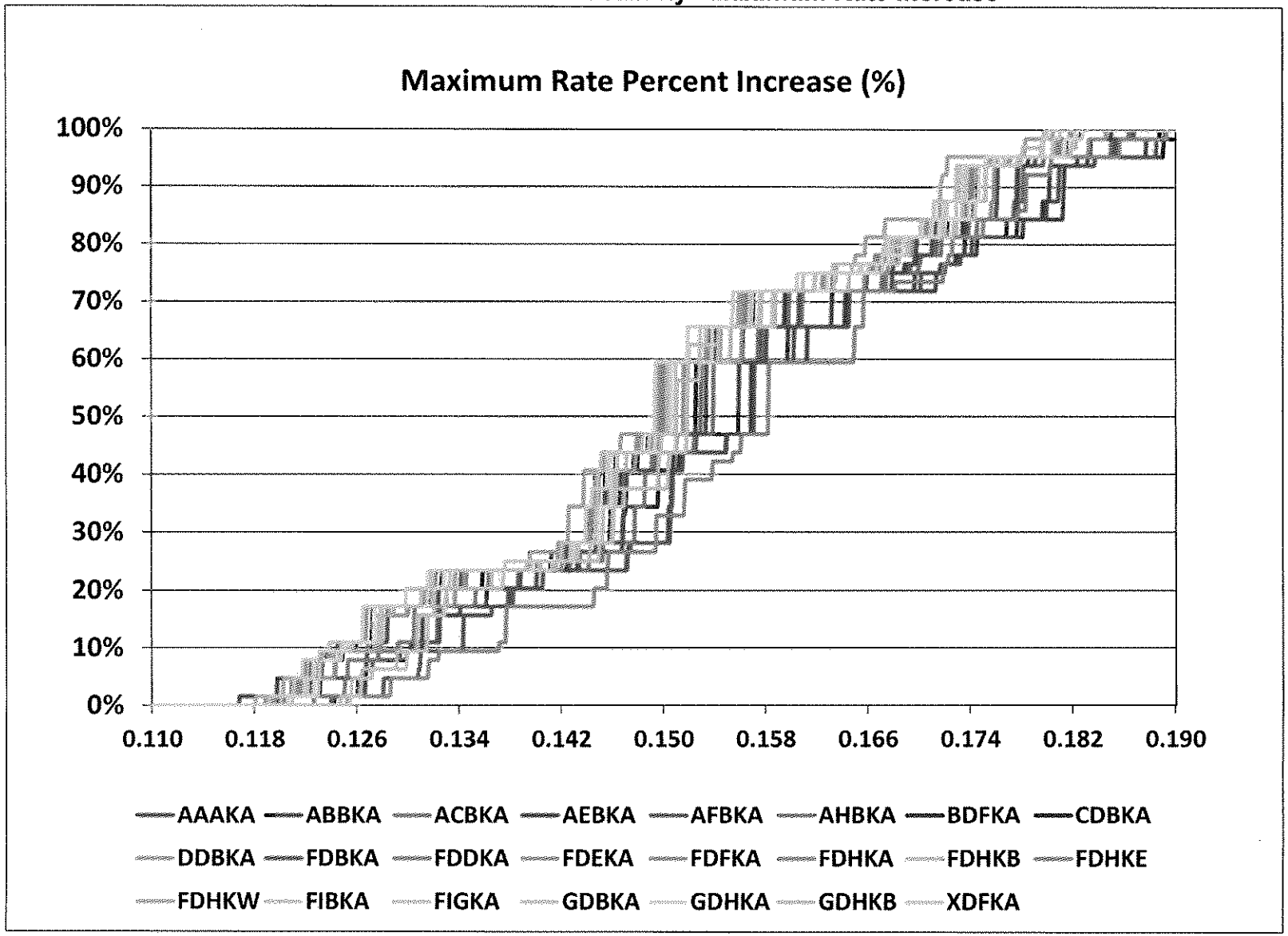


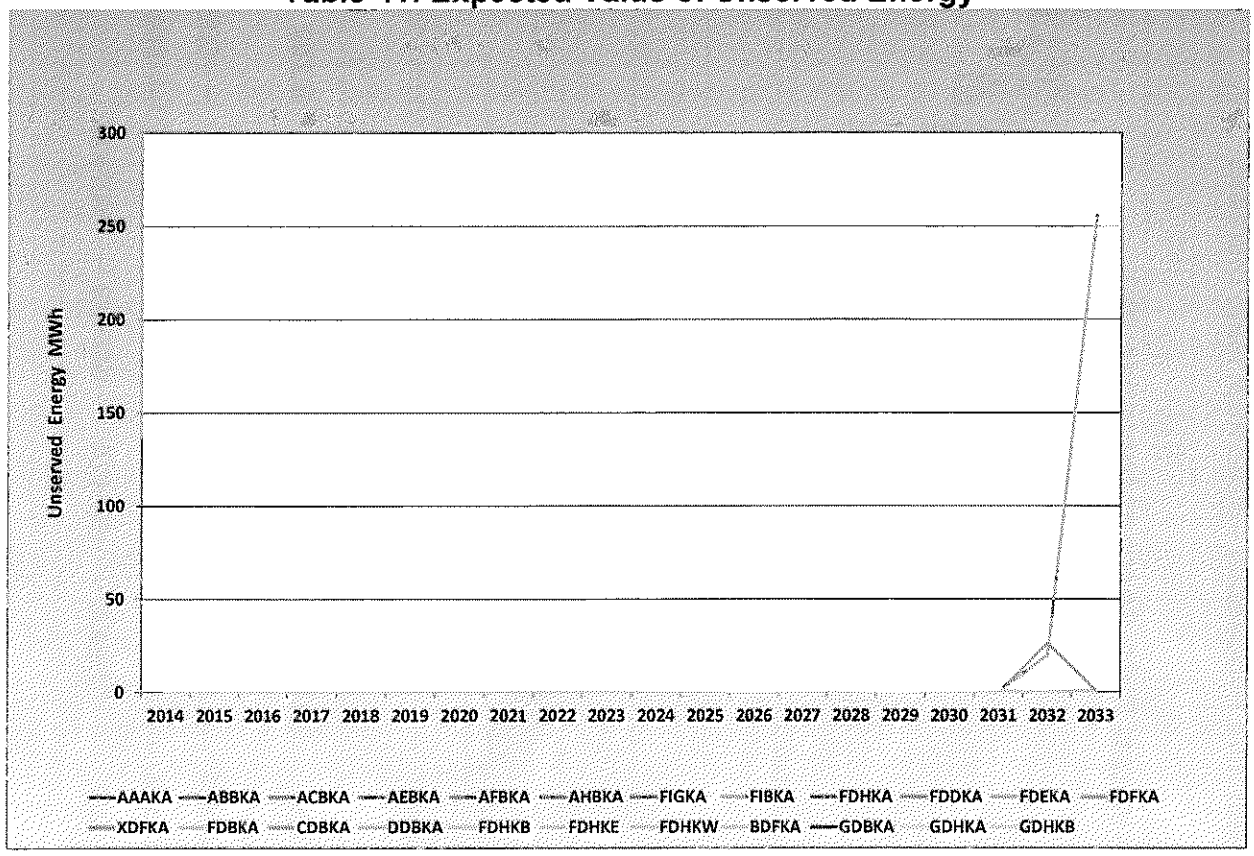
Table 40: Cumulative Probability –Maximum Rate Increase



6.6 UNSERVED ENERGY

The expected value of unserved energy for all Alternative Resource Plans is provided in Table 41 below:

Table 41: Expected Value of Unserved Energy



6.7 COMBINED KCP&L/GMO RESOURCE PLANS

KCP&L/GMO are both held by Great Plains Energy, additional alternative resource plans were developed to determine if the KCP&L and/or GMO stand-alone resource plans should be modified to reflect potential combined company operations. This additional analysis is intended to minimize the risk that either stand-alone utility would implement an alternative resource plan that would not be in the best interests of Missouri retail customers under combined-company operations. For example, KCP&L has more base load resources available for service to its retail customers than does GMO. While the planning results indicate that KCP&L's Montrose station should be retired over the next several years, a combined KCP&L/GMO asset analysis could indicate that it is in the best interests of Missouri retail customers to keep Montrose in service for a longer period of time under a combined company scenario.

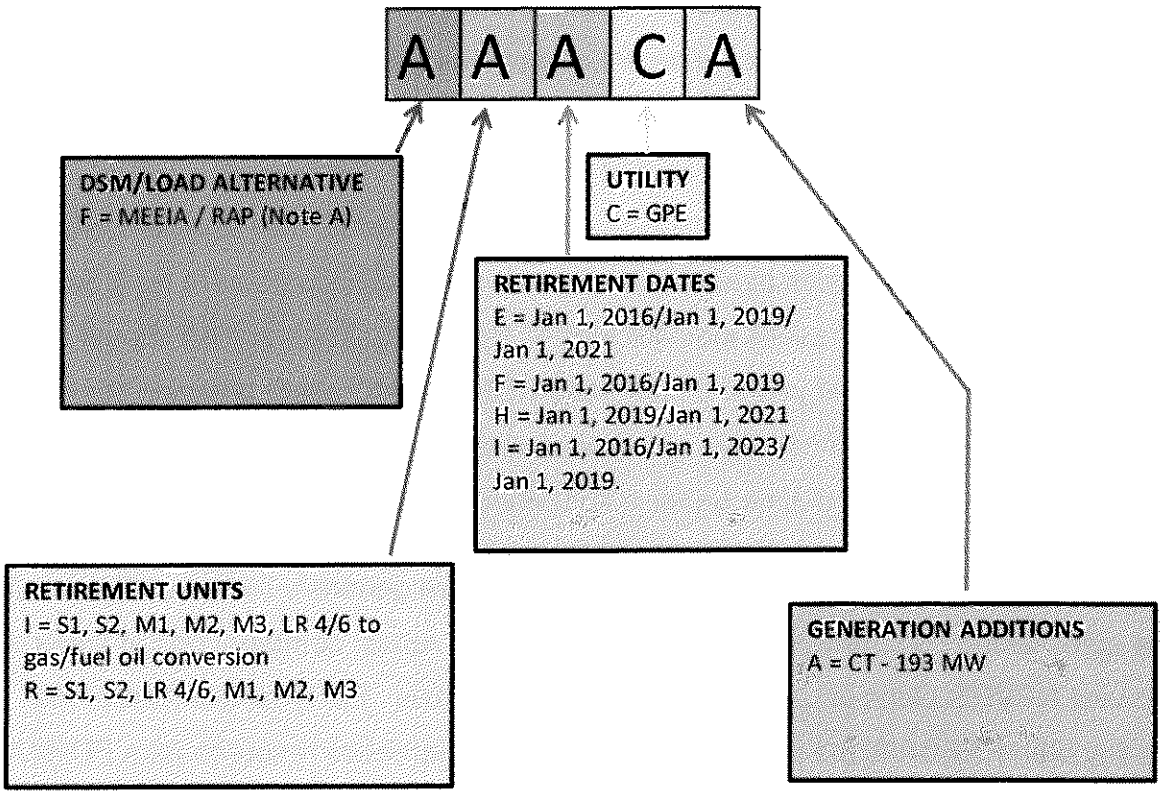
The combined company alternative resource plans were generally based on the results of the stand-alone company analysis. In general, they reflect combinations of several of the lowest NPVRR plans on a stand-alone company basis. For example, combined company plan FRECA is the combination of KCP&L alternative resource plan FDHKA (retire Montrose 1 in 2016 and Montrose 2&3 in 2021) and GMO alternative resource plan AEFGA (retire Lake Road 4/6 in 2016 and Sibley 1&2 in 2019) with slight changes to the timing of future resource additions.

The NPVRR for each combined company alternative resource plan was determined under the same 27 scenarios analyzed for the stand alone companies. For example, electricity market prices, natural gas prices, CO_2 allowance prices, etc. were unchanged from the stand-alone company scenarios.

The plan-naming convention utilized for the combined company Alternative Resource Plans developed is shown in Table 42 below.

Table 42: Combined Company Alternative Resource Plan Naming Convention

NAMING CONVENTION FOR ALTERNATIVE RESOURCE PLANS IN THE 2013 GPE IRP UPDATE



Definitions:

DSM - Demand-Side Management	
RAP - Realistic Achievable Potential	
CT - Combustion Turbine	LR 4/6 - Lake Road 4/6
M1 - Montrose Unit 1	S1 - Sibley Unit 1
M2 - Montrose Unit 2	S2 - Sibley Unit 2
M3 - Montrose Unit 3	S3 - Sibley Unit 3

Note A: The KCP&L MEEIA / RAP scenario contains a level of DSM in 2014 – 2016 that serves as a placeholder for a future MEEIA filing, then transitions to RAP in 2017.

Alternative Resource Plans were developed using various capacities of supply-side resources and demand-side resources. In total, five combined company Alternative Resource Plans were developed for the integrated resource analysis for this 2013 Annual Update. An overview of the Alternative Resource Plans is shown in Table 43 below.

Table 43: Overview of Combined Company Resource Plans

Plan Name	DSM Level	Retirement Assumption	Retirement Year	Renewable Additions			Generation Addition (if needed)
FIECA	MEEIA/RAP (KCP&L), RAP (GMO)	Convert to NG-FO: Lake Road 4/6	2016	Solar: 2018 - 21 MW 2021 - 12 MW 2023 - 3 MW	Wind: 2016 - 50 MW 2019 - 150 MW 2020 - 150 MW 2021- 100 MW 2024 - 200 MW 2025 - 100 MW	Hydro*: 2014 - 56 MW	193 MW CT in 2027 193 MW CT in 2030 193 MW CT in 2032
		Retire: Montrose-1	2016				
		Montrose-2 Montrose-3	2021				
		Sibley-1 Sibley-2	2019				
FIFCA	MEEIA/RAP (KCP&L), RAP (GMO)	Convert to NG-FO: Lake Road 4/6	2016	Solar: 2018 - 21 MW 2021 - 12 MW 2023 - 3 MW	Wind: 2016 - 50 MW 2019 - 150 MW 2020 - 150 MW 2021- 100 MW 2024 - 200 MW 2025 - 100 MW	Hydro*: 2014 - 56 MW	193 MW CT in 2016 193 MW CT in 2030 193 MW CT in 2032
		Retire: Montrose-1 Montrose-2 Montrose-3	2016				
		Sibley-1 Sibley-2	2019				
FIHCA	MEEIA/RAP (KCP&L), RAP (GMO)	Convert to NG-FO: Lake Road 4/6	2016	Solar: 2018 - 21 MW 2021 - 12 MW 2023 - 3 MW	Wind: 2016 - 50 MW 2019 - 150 MW 2020 - 150 MW 2021- 100 MW 2024 - 200 MW 2025 - 100 MW	Hydro*: 2014 - 56 MW	193 MW CT in 2027 193 MW CT in 2030 193 MW CT in 2032
		Retire: Montrose-1 Sibley-1 Sibley-2	2019				
		Montrose-2 Montrose-3	2021				
FIICA	MEEIA/RAP (KCP&L), RAP (GMO)	Convert to NG-FO: Lake Road 4/6	2016	Solar: 2018 - 21 MW 2021 - 12 MW 2023 - 3 MW	Wind: 2016 - 50 MW 2019 - 150 MW 2020 - 150 MW 2021- 100 MW 2024 - 200 MW 2025 - 100 MW	Hydro*: 2014 - 56 MW	193 MW CT in 2027 193 MW CT in 2030 193 MW CT in 2032
		Retire: Montrose-1	2016				
		Sibley-1 Sibley-2	2019				
		Montrose-2 Montrose-3	2023				
FRECA	MEEIA/RAP (KCP&L), RAP (GMO)	Lake Road 4/6 Montrose-1	2016	Solar: 2018 - 21 MW 2021 - 12 MW 2023 - 3 MW	Wind: 2016 - 50 MW 2019 - 150 MW 2020 - 150 MW 2021- 100 MW 2024 - 200 MW 2025 - 100 MW	Hydro*: 2014 - 56 MW	193 MW CT in 2026 193 MW CT in 2029 193 MW CT in 2031
		Montrose-2 Montrose-3	2021				
		Sibley-1 Sibley-2	2019				

* The 56 MW hydro facility is currently allocated 100% to KCP&L's Kansas jurisdiction for state Renewable Energy Standard compliance purposes

Note: MEEIA/RAP for KCP&L contains a level of DSM in 2014-2016 that serves as a placeholder for a future MEEIA filing, then transitions to RAP.

Revenue requirement results for each of the combined company Alternative Resource Plans are shown in Table 44 below. For each of the Alternative Resource Plans, the Probable Environmental Costs are shown in Table 45 below.

Table 44: Combined-Company Total Revenue Requirement

Rank (L-H)	Plan	NPVRR ($mm)	Delta
1	FRECA	$32,500	$0
2	FIECA	$32,513	$13
3	FIHCA	$32,516	$16
4	FIICA	$32,564	$64
5	FIFCA	$32,676	$176

Table 45: Combined-Company Probable Environmental Cost

Plan	PEC NPVRR ($mm)
FRECA	$1,581
FIECA	$1,591
FIHCA	$1,602
FIICA	$1,610
FIFCA	$1,581

In general, the plan rankings are consistent with the stand-alone company plan results. As such, there was no need to adjust the KCP&L or GMO stand-alone Preferred Plans to accommodate future potential combined operations.

A summary tabulation of the expected value of all performance measures is provided in Table 46 below. Detailed results behind this summary tabulation are attached in Appendix G.

Table 46: Combined-Company Expected Value of Performance Measures ** Highly Confidential **

Plan	NPVRR	Probable Environmental Costs ($MM)	DSM Costs ($MM)	Levelized Annual Rates ($/kw-hr)	Maximum Rate Increase	Times Interest Earned	Total Debt to Capital	Cap Ex to FFO
FRECA	$ 32,500	$ 1,580.8	$ 444.9	[redacted]				
FIECA	$ 32,513	$ 1,590.7	$ 444.9					
FIHCA	$ 32,516	$ 1,602.3	$ 444.9					
FIICA	$ 32,564	$ 1,610.3	$ 444.9					
FIFCA	$ 32,676	$ 1,581.4	$ 444.9					

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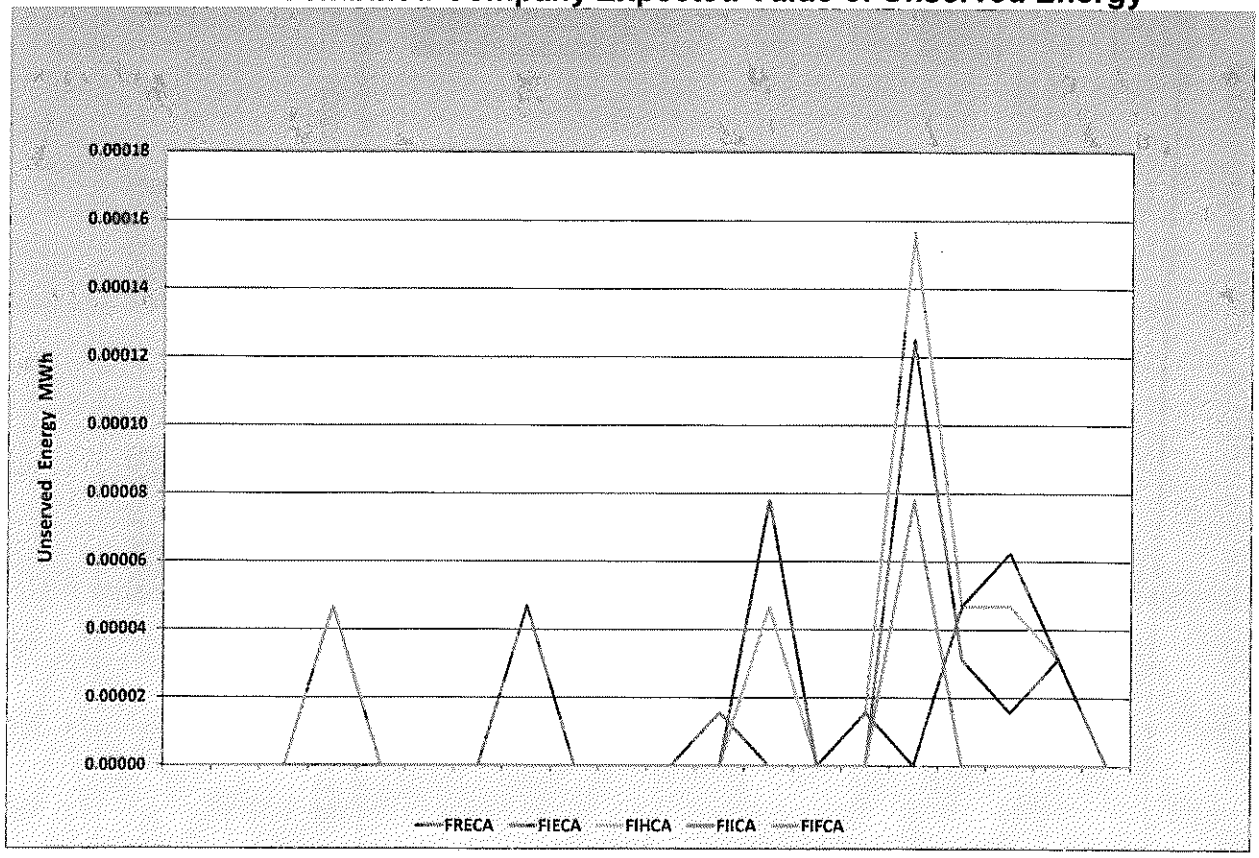
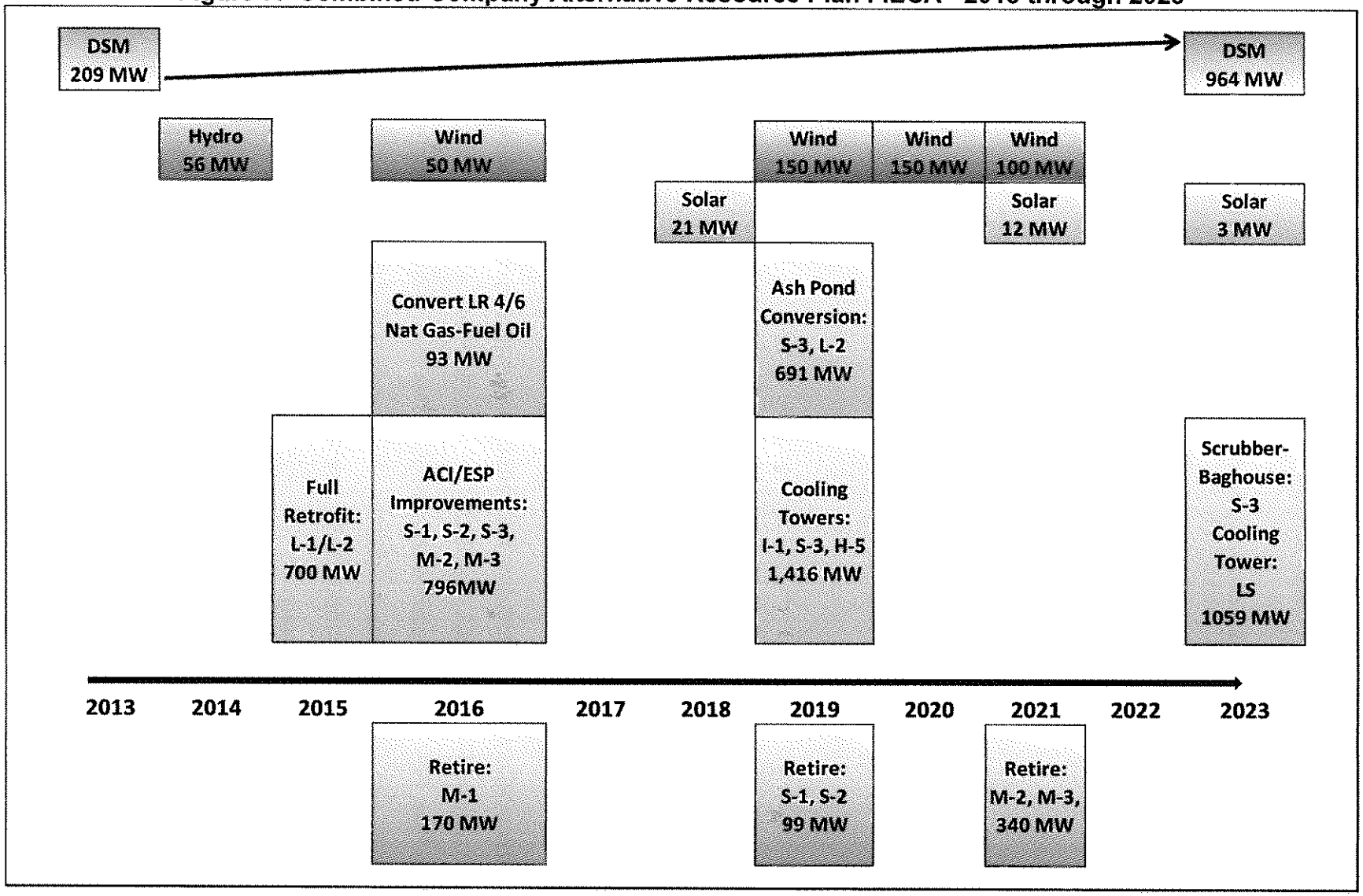
The expected value of unserved energy for all Combined-Company Alternative Resource Plans is provided in Table 47 below:

Table 47: Combined-Company Expected Value of Unserved Energy



The Combined-Company Alternative Resource Plan that reflects the combination of the KCP&L Preferred Plan, FDHKA, and GMO's Preferred Plan, AICGA, is Alternative Resource Plan FIECA. This plan is comprised of the following components for years 2013 – 2023 and shown in Figure 7 below. The combined-company additions shown are equivalent to the stand-alone KCP&L and GMO Alternative Resource Plans, FDHKA and AICGA, respectively.

Figure 7: Combined-Company Alternative Resource Plan FIECA - 2013 through 2023



6.8 COMBINED-COMPANY ECONOMIC IMPACT

The economic impact by year of the Combined-Company Alternative Resource Plan FIECA is represented in Table 48 below. The economic impact of all plans can be found in Appendix G.

Table 48: Combined-Company Alternative Resource Plan FIECA Economic Impact ** Highly Confidential **

Year	Revenue Requirement ($MM)	Levelized Annual Rates ($/kw-hr)	Rate Increase	Times Interest Earned	Debt to Capital	Internal Cash to Construction Expense
2014	[redacted]					
2015						
2016						
2017						
2018						
2019						
2020						
2021						
2022						
2023						
2024						
2025						
2026						
2027						
2028						
2029						
2030						
2031						
2032						
2033						

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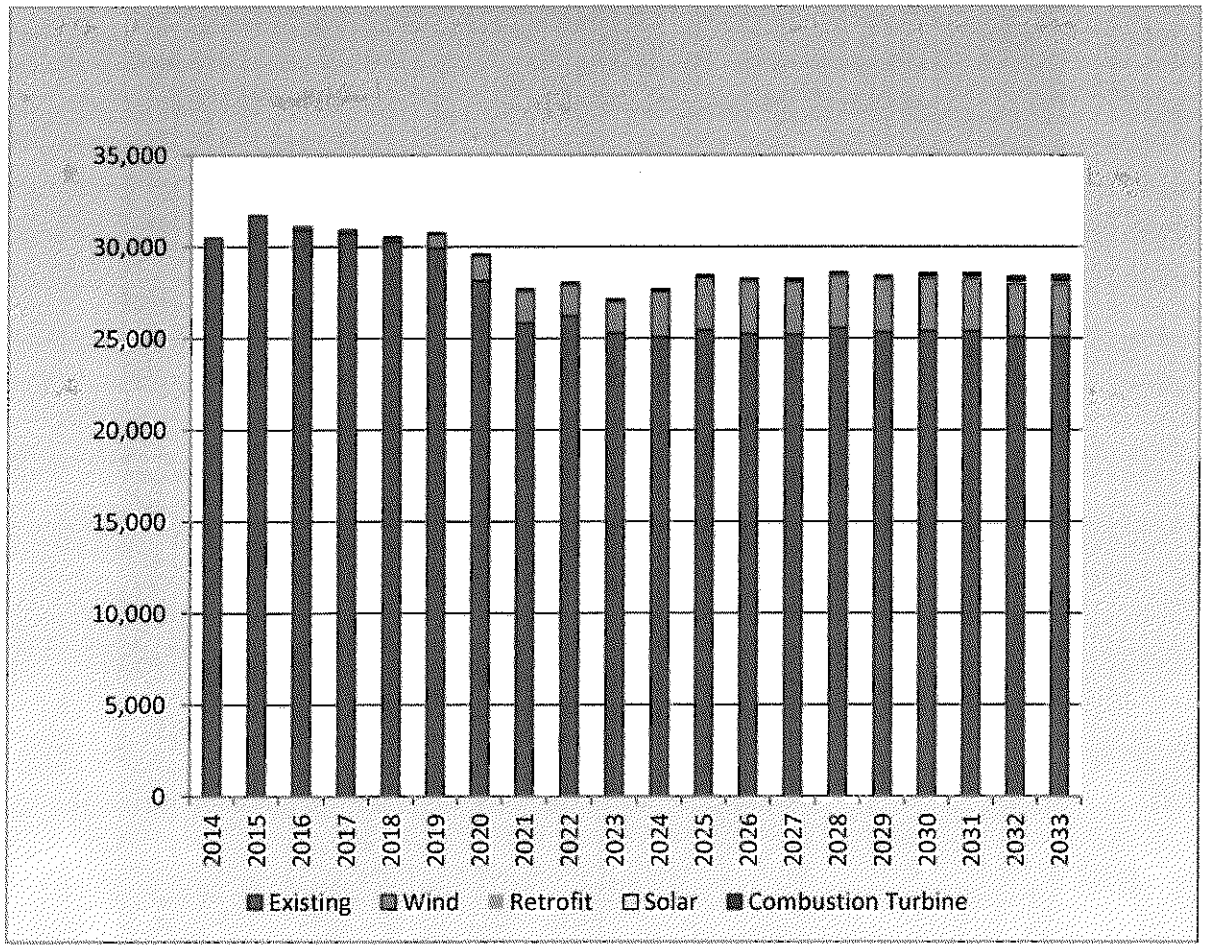
6.9 COMBINED-COMPANY ANNUAL GENERATION

The annual generation of the Combined-Company Alternative Resource Plan FIECA is represented in Table 49 below. The annual generation of all Combined-Company plans can be found in Appendix E.

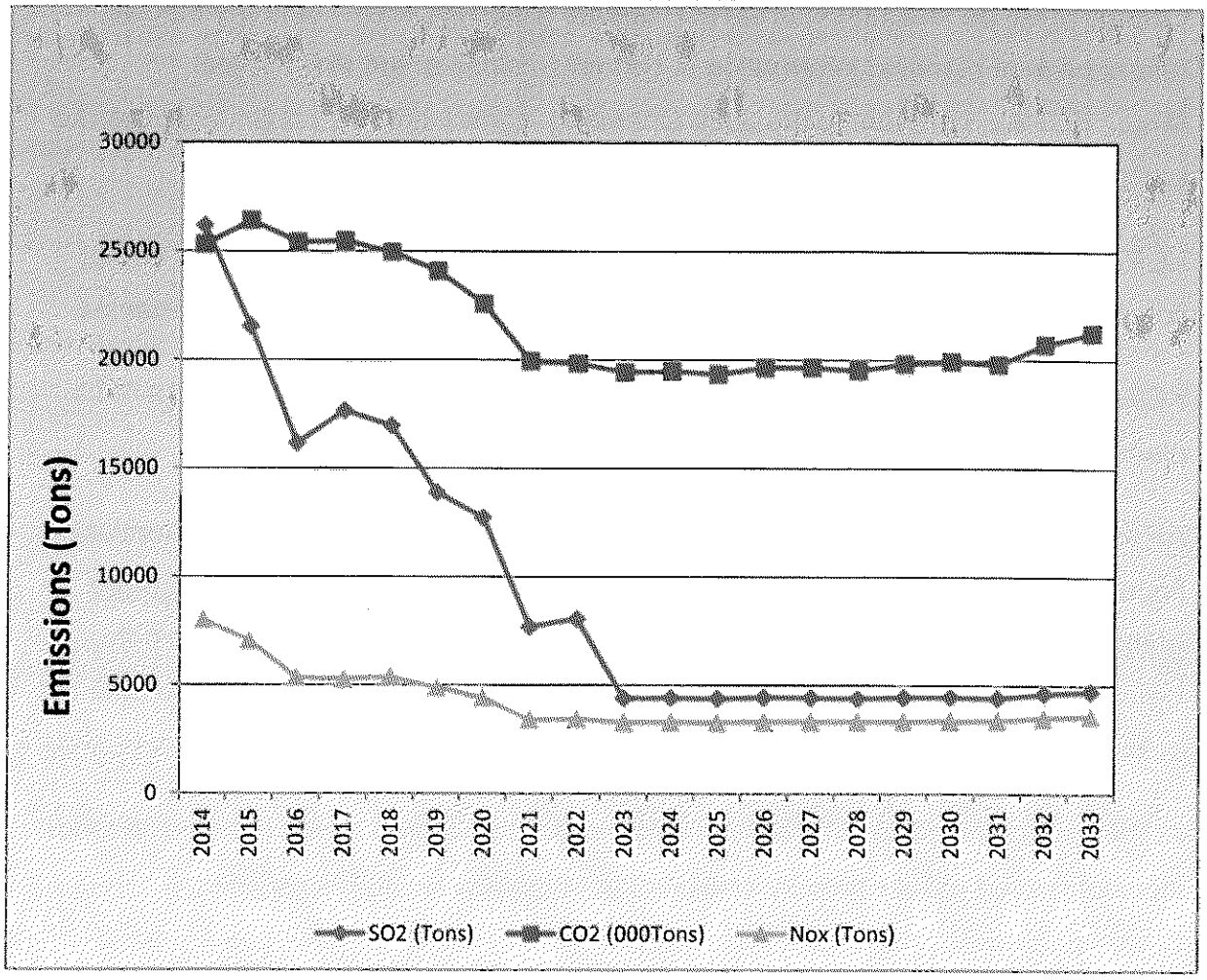
Table 49: Combined-Company Alternative Resource Plan FIECA Annual Generation



6.10 COMBINED-COMPANY ANNUAL EMISSIONS

The annual emissions of the Combined-Company Alternative Resource Plan FIECA are represented in Table 50 below. The annual emissions of all Combined-Company plans can be found in Appendix E.

Table 50: Combined-Company Alternative Resource Plan FIECA Annual Emissions



6.11 REQUIREMENTS FOR JOINT PLANNING

KCP&L has researched what agreements and/or contracts must be in place to analyze joint company plans and makes the following findings:

The IRP rules (4 CSR 240-22. 080(1)) require that each electric utility selling over 1 million megawatt hours in Missouri must make a triennial compliance filing. The Company will be making separate IRP update filings for each Company that will reference joint planning information in certain sections of the IRP update filing. KCP&L, pursuant to the Joint Operating Agreement, will continue to operate and plan for GMO as a separate control area.

KCP&L and GMO believe this element of planning—planning that includes a joint company view—is an important element of resource planning for both companies.

KCP&L respectfully requests Commission acknowledgement of this element of its planning process, under 4 CSR 22.080(17).

As defined in 4 CSR 240-22.020 (1), 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 the utility's Chapter 22 compliance filing or the date the acknowledgment is given. (emphasis added)

At the time of this filing, KCP&L and GMO share the unique status of being Missouri investor owned utilities held by one holding company, Great Plains Energy. The Chapter 22 rules governing resource planning in Missouri are silent as to how planning should be conducted given this unique relationship.

Consequently, KCP&L and GMO are requesting that the ***specified element***—planning that includes a joint company view—consistent with GMO's and KCP&L's business planning processes, is reasonable.

6.12 INTEGRATED RESOURCE PLAN AND RISK ANALYSIS: AGREED UPON REMEDIES TO ALLEGED DEFICIENCIES AND CONCERNS

The following section addresses the Alleged Deficiencies and Concerns from the 2012 KCP&L IRP, Case No. EO-2012-0323. The Resolutions are either verbatim or a shortened version of the agreed-to resolution from the Joint Filing filed in that case.

6.12.1 Staff's Deficiency 7

KCP&L 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.

Resolution: To resolve this deficiency, the Company will use the results of the DSM Potential Study as primary data when developing demand-side resources for alternative resource plans to meet the requirements of the rule. It is understood that the DSM Potential Study will provide DSM programs' impacts and costs for the RAP, MAP, and economic potential levels for both energy savings and demand savings. The Company will include the following in separate 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: (1) MAP, (2) RAP, (3) approximately the RAP plus one-third of the difference between RAP and MAP, and (4) approximately the RAP plus two-thirds of the difference between RAP and MAP.

Comment: This issue has been addressed. In the 2013 Annual Update, KCP&L utilized the results of the Navigant DSM Potential Study as primary data when developing demand-side resource alternatives.

6.12.2 Staff's 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, while it is Staff's understanding that SPP policies require that solar capacity credit be 10% of name plate capacity. KCP&L should document the SPP policy for solar capacity credits in its 2013 Annual Update. KCP&L should follow the then-current SPP policy for solar capacity credits when developing capacity balance sheets when required for all future Chapter 22 filings.

Resolution: The Company will document the appropriate amount of accredited capacity solar resources that should be assigned for use in its capacity balance sheets for the 2013 Annual Update.

Comment: KCP&L documented and utilized the appropriate amount of accredited capacity solar resources in its capacity balance sheets for the 2013 Annual Update.

6.12.3 MDNR'S Deficiency 9

Documentation of the screening of critical uncertain factors is inadequate. Quantitative details describing the screening and selection process should be provided in either Volume 6 or in the workpapers.

Resolution: This issue is resolved. The Company provided the workpaper associated with critical uncertain factor documentation in file "CapEx Results (2012KCPL IRP).XLS" as part of the April 2012 filing.

6.12.4 MDNR'S Deficiency 10

The number of "subject matter experts" consulted by KCP&L is inadequate to establish subjective probabilities necessary to assess critical uncertain factor(s).

Resolution: MDNR and the Company have resolved this deficiency.

6.12.5 MDNR'S Deficiency 11

No "aggressive renewable energy resource plan." An alternative resource plan that utilizes only renewable energy resources has not been included in KCP&L's suite of plans.

Resolution: This issue is resolved.

6.12.6 MDNR'S Deficiency 12

Performance measures specified in 4 CSR 240-22.060(2) for the Combined Company Plans are not provided.

Resolution: The Company will provide a more full discussion and document the results and performance measures of all alternative resource plans in the 2013 Annual Update.

Comment: KCP&L documented the performance measures of all alternative resource plans in the 2013 Annual Update.

6.12.7 GDS' (MDNR) Deficiency 5

KCP&L has not clearly shown in the IRP how the allocation of resources from the Combined-Company to each separate Company is determined.

Resolution: This deficiency has been resolved.

SECTION 7: RESOURCE ACQUISITION STRATEGY

7.1 CORPORATE APPROVAL AND STATEMENT OF COMMITMENT

KANSAS CITY POWER & LIGHT COMPANY

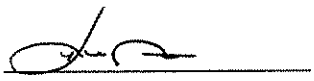
INTEGRATED RESOURCE PLAN-2013 ANNUAL UPDATE

CORPORATE APPROVAL & STATEMENT OF COMMITMENT FOR

RESOURCE ACQUISITION STRATEGY

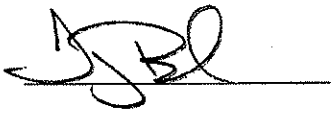
In accordance with Missouri Public Service Commission rules found in 4 CSR 240-22 and 4 CSR 240-22-080 (3), Kansas City Power & Light Company ("KCP&L") now officially adopts for implementation the resource acquisition strategy contained in this Annual Update filing.

With the objective of providing the public with energy services that are safe, reliable, and efficient at just and reasonable rates, KCP&L is committed to the full implementation of the Resource Acquisition Strategy contained herein.



Kevin Noblet

Vice President - Generation



Terry D. Bassham

President and Chief Operating Officer

7.2 2013 KCP&L ANNUAL UPDATE PREFERRED PLAN

The Preferred Plan, Plan FDHKA, that has been selected for KCP&L is shown in Table 51 below:

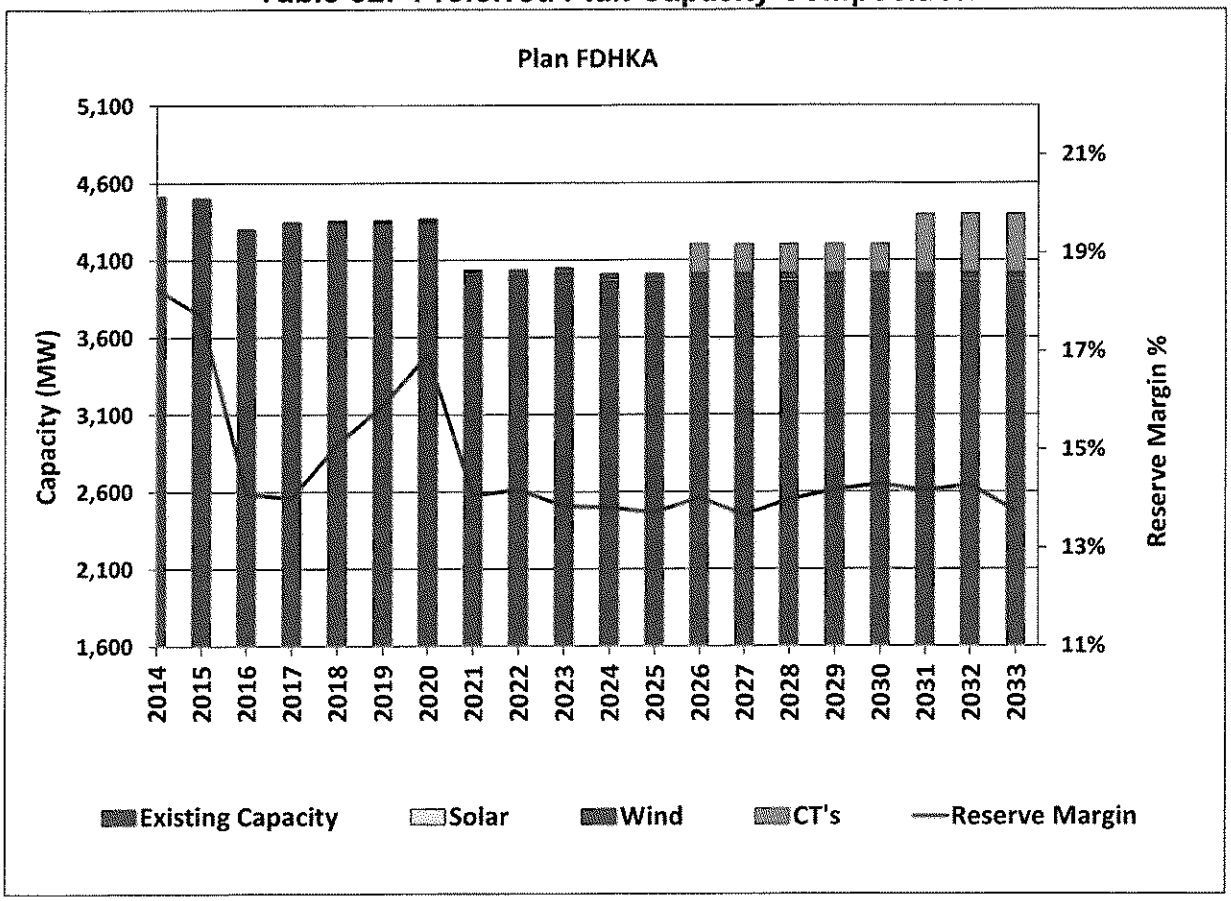
Table 51: KCP&L Annual Update Preferred Plan

Year	CT's (MW)	Solar (MW)	Wind (MW)	DSM (MW)	Retire (MW)	Existing Capacity (MW)
2013	-			128		4,393
2014	-			186		4,514
2015	-			193		4,503
2016	-		50	207	170	4,298
2017	-			239		4,343
2018	-	11		280		4,343
2019	-			320		4,343
2020	-		150	359		4,343
2021	-	6		391	340	4,003
2022	-			418		4,003
2023	-			441		4,018
2024	-		200	458		3,962
2025	-			463		3,962
2026	193			466		3,962
2027	-			466		3,962
2028	-			465		3,962
2029	-			463		3,962
2030	-			460		3,962
2031	193			458		3,962
2032	-			455		3,963
2033	-			453		3,963

7.2.1 PREFERRED PLAN COMPOSITION

The capacity composition by supply-side resource and Reserve Margin for the Preferred Resource Plan is provided in Table 52 below:

Table 52: Preferred Plan Capacity Composition



Based upon current Missouri and Kansas RPS rule requirements, the Preferred Plan includes 17 MW of solar additions and 400 MW of wind additions over the twenty-year planning period. It should be noted that the Missouri RPS-required solar and all wind additions could be obtained from power purchase agreements (PPA), purchasing of renewable energy credits (RECs), or utility ownership. A combustion turbine (CT) resource addition is included in 2026 and in 2031. DSM for the first 3 years of the plan consists of the same programs and program plans from the DSM Potential Study modified to reflect a lower level of spending in an effort to reduce the short-term rate impact that would result from full RAP DSM levels. At this time, the company

anticipates a 2013 MEEIA filing that will further refine the program offerings. DSM for the remaining years of the plan consists of a suite of fifteen Energy Efficiency programs, three Demand Response programs and two alternative rate plans that are based upon Navigant's DSM Potential Study results for realistically achievable potential (RAP) DSM. The potential retirements of Montrose Unit 1 in 2016 and Montrose Units 2 and 3 in 2021 is partially attributed to current or proposed environmental regulations including Mercury and Air Toxics Standards Rule, Ozone National Ambient Air Quality Standards (NAAQS), PM NAAQS, SO_2 NAAQS Clean Water Act Section 316(a) and (b), Effluent Guidelines, and Coal Combustion Residuals Rule. These rules will be monitored by KCP&L prior to the projected retirement years to determine if changes to the Preferred Plan are warranted.

7.2.2 PREFERRED PLAN ECONOMIC IMPACT

The economic impact by year of the selected Preferred Plan is represented in Table 53 below. The economic impact of all plans can be found in Appendix G.

Table 53: Preferred Plan Economic Impact ** Highly Confidential **

Year	Revenue Requirement ($MM)	Levelized Annual Rates ($/kw-hr)	Rate Increase	Times Interest Earned	Debt to Capital	Internal Cash to Construction Expense
2014	[redacted]					
2015						
2016						
2017						
2018						
2019						
2020						
2021						
2022						
2023						
2024						
2025						
2026						
2027						
2028						
2029						
2030						
2031						
2032						
2033						

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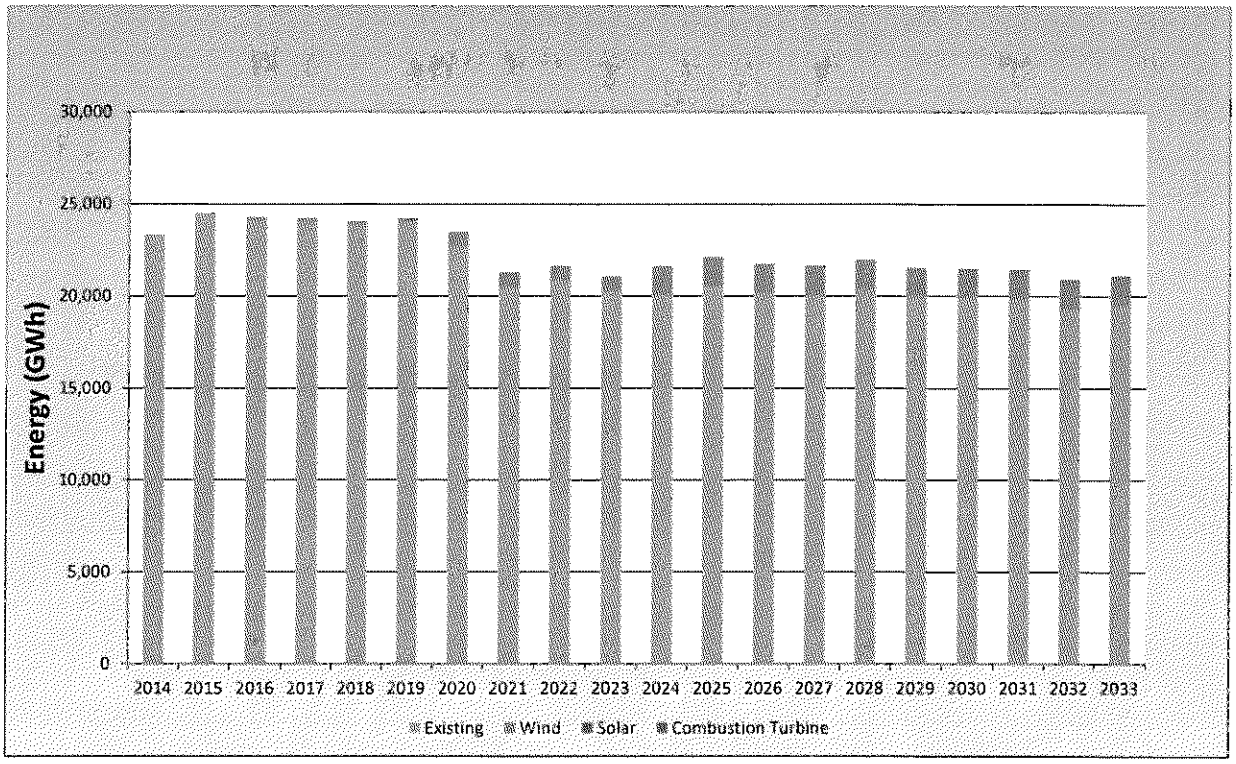
7.2.3 PREFERRED PLAN ANNUAL GENERATION

Annual generation for the Preferred Plan is shown in Table 54 below. The annual generation for all plans is included in Appendix E.

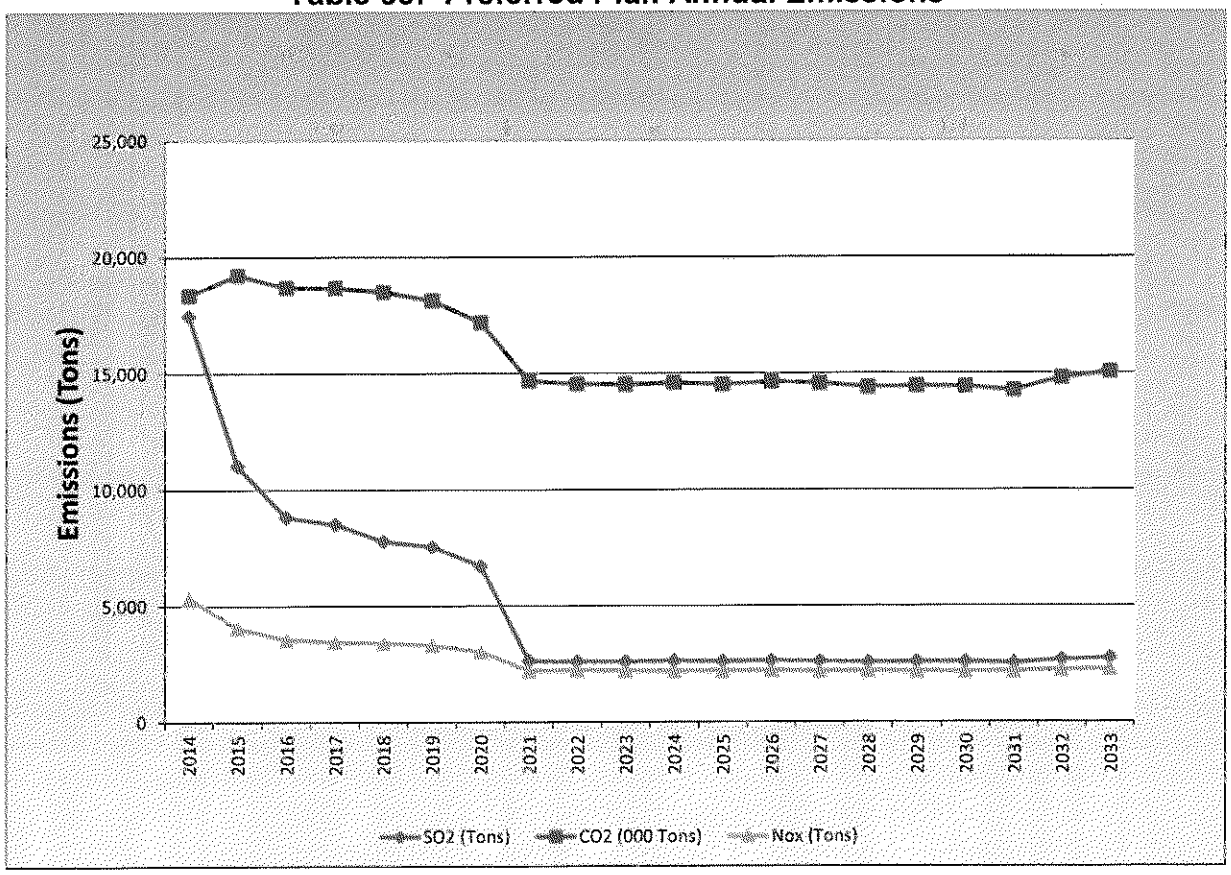
Table 54: Preferred Plan Annual Generation



7.2.4 PREFERRED PLAN ANNUAL EMISSIONS

Annual emissions for the Preferred Plan are shown in Table 55 below. The annual generation for all plans is included in Appendix E.

Table 55: Preferred Plan Annual Emissions



7.2.5 PREFERRED PLAN DISCUSSION

The Preferred Plan was not the lowest cost plan from a Net Present Value of Revenue Requirement (NPVRR) perspective as a higher amount of DSM would reduce the NPVRR. KCP&L's Preferred Plan includes a modified RAP level of DSM for 2014, 2015 and 2016, followed by the RAP level starting in 2017. The modification was based on the measure list from the Potential Study but at a reduced level to reflect a lower level of DSM spending. The modified DSM plan is named MEEIA/RAP. This plan assumes that the same list of programs and the marketing plan from the potential study RAP level of DSM would be used, but the amount of capacity and energy savings would be reduced proportionately to reflect the reduced amount of savings that could be achieved with the lower level of spending. The DSM savings levels for this scenario are based on the cost per kWh from the RAP level of DSM in the Potential Study results.

KCP&L developed the MEEIA/RAP alternative to reduce the short-term rate impacts that would result from the full RAP DSM levels. Assuming KCP&L was approved for the same DSM cost recovery treatment as GMO was under its MEEIA settlement agreement, implementing the full RAP DSM plan in 2014 would increase retail rates by a projected 8.3% in 2016 (the first year new rates would be in effect under a 2013 KCP&L MEEIA filing). This increase does not reflect any other potential non-DSM related costs that would also go into effect in 2016. The MEEIA/RAP alternative reduces the rate impact to 6.3%.

7.3 CRITICAL UNCERTAIN FACTORS

The integrated analysis performed for the 2013 Annual Update utilized the same critical uncertain factors as the Triennial filing. The critical uncertain factors are load, natural gas prices and CO_2 prices. Assumptions regarding the values and ranges of these inputs are covered in the relevant sections that discuss load, gas and CO_2 prices. Table 56 below represents the three Critical Uncertain Factors and the 27 endpoint scenarios that were developed from them.

Table 56: Critical Uncertain Factor Tree

Endpoint	Load Growth	Natural Gas	CO_2	Endpoint Probability
1	High	High	High	1.6%
2	High	High	Mid	3.1%
3	High	High	Low	1.6%
4	High	Mid	High	3.1%
5	High	Mid	Mid	6.3%
6	High	Mid	Low	3.1%
7	High	Low	High	1.6%
8	High	Low	Mid	3.1%
9	High	Low	Low	1.6%
10	Mid	High	High	3.1%
11	Mid	High	Mid	6.3%
12	Mid	High	Low	3.1%
13	Mid	Mid	High	6.3%
14	Mid	Mid	Mid	12.5%
15	Mid	Mid	Low	6.3%
16	Mid	Low	High	3.1%
17	Mid	Low	Mid	6.3%
18	Mid	Low	Low	3.1%
19	Low	High	High	1.6%
20	Low	High	Mid	3.1%
21	Low	High	Low	1.6%
22	Low	Mid	High	3.1%
23	Low	Mid	Mid	6.3%
24	Low	Mid	Low	3.1%
25	Low	Low	High	1.6%
26	Low	Low	Mid	3.1%
27	Low	Low	Low	1.6%

The company performed an analysis to address the impact of the critical uncertain factors on Preferred Plan selection. This analysis ranks how plans perform relative to

the representation of the twenty-seven endpoint tree. The results of the analysis are represented in the following tables.

7.3.1 CRITICAL UNCERTAIN FACTOR – HIGH LOAD GROWTH

HIGH LOAD GROWTH

HIGH GAS

HIGH CO2		MID CO2		LOW CO2	
Endpoint 1		Endpoint 2		Endpoint 3	
PLAN	NPVRR	PLAN	NPVRR	PLAN	NPVRR
FDHKW	23,074	FDFKA	20,639	ACBKA	18,745
FDHKA	23,134	FDHKA	20,640	ABBKA	18,766
FDFKA	23,140	FDDKA	20,650	FDEKA	18,769
FIGKA	23,143	FDEKA	20,651	FDDKA	18,771
FDBKA	23,147	FDHKB	20,668	FDFKA	18,779
FDDKA	23,178	ACBKA	20,675	FDHKA	18,782
FDHKB	23,183	FDHKW	20,693	FDHKB	18,788
FDEKA	23,186	FDBKA	20,698	FDBKA	18,859
CDBKA	23,193	ABBKA	20,762	GDHKB	18,899
FDHKE	23,226	CDBKA	20,774	GDHKA	18,907
ACBKA	23,247	GDHKA	20,763	AAAKA	18,919
GDHKA	23,301	GDHKB	20,812	FDHKW	18,922
GDBKA	23,317	FDHKE	20,813	CDBKA	18,958
GDHKB	23,363	GDBKA	20,845	AFBKA	18,986
AEBKA	23,373	AFBKA	20,879	GDBKA	18,988
DDBKA	23,398	AEBKA	20,898	FDHKE	19,027
AFBKA	23,416	FIGKA	20,947	AEBKA	19,041
ABBKA	23,421	AAAKA	20,975	DDBKA	19,192
FIBKA	23,484	DDBKA	20,996	XDFKA	19,230
AHBKA	23,704	XDFKA	21,142	FIGKA	19,322
AAAKA	23,710	AHBKA	21,266	AHBKA	19,435
XDFKA	23,715	BDFKA	21,286	BDFKA	19,463
BDFKA	23,739	FIBKA	21,349	FIBKA	19,749

MID GAS

HIGH CO2		MID CO2		LOW CO2	
Endpoint 4		Endpoint 5		Endpoint 6	
PLAN	NPVRR	PLAN	NPVRR	PLAN	NPVRR
FIGKA	23,399	FDHKA	21,260	FDHKA	19,428
FDBKA	23,532	FDFKA	21,267	FDFKA	19,433
FDHKA	23,563	FDBKA	21,269	FDDKA	19,442
FDFKA	23,577	FIGKA	21,292	FDEKA	19,448
FDHKW	23,582	FDDKA	21,294	FDHKB	19,454
FDHKB	23,598	FDEKA	21,302	FDBKA	19,454
CDBKA	23,605	FDHKB	21,309	ACBKA	19,481
FDDKA	23,620	GDHKA	21,377	GDHKA	19,527
FDEKA	23,635	CDBKA	21,379	GDHKB	19,554
GDBKA	23,682	GDBKA	21,390	GDBKA	19,557
FIBKA	23,683	ACBKA	21,394	ABBKA	19,584
ACBKA	23,706	FDHKW	21,416	CDBKA	19,588
GDHKA	23,710	GDHKB	21,443	AFBKA	19,654
FDHKE	23,731	FDHKE	21,531	FDHKW	19,675
GDHKB	23,743	AEBKA	21,537	AEBKA	19,680
AEBKA	23,744	AFBKA	21,547	FIGKA	19,685
AFBKA	23,777	ABBKA	21,567	FDHKE	19,773
DDBKA	23,825	DDBKA	21,619	XDFKA	19,803
ABBKA	23,922	FIBKA	21,631	AAAKA	19,812
XDFKA	24,087	XDFKA	21,691	DDBKA	19,842
AHBKA	24,102	AHBKA	21,853	FIBKA	20,047
BDFKA	24,221	AAAKA	21,856	AHBKA	20,047
AAAKA	24,250	BDFKA	21,970	BDFKA	20,174

LOW GAS

HIGH CO2		MID CO2		LOW CO2	
Endpoint 7		Endpoint 8		Endpoint 9	
PLAN	NPVRR	PLAN	NPVRR	PLAN	NPVRR
FIGKA	23,497	FIGKA	21,570	FDBKA	20,023
FDBKA	23,666	FDBKA	21,724	FIGKA	20,029
FIBKA	23,727	FDHKA	21,762	FDHKA	20,045
FDHKB	23,734	FDFKA	21,777	FDFKA	20,058
FDHKA	23,736	FDHKB	21,805	FDDKA	20,084
FDFKA	23,757	FDDKA	21,819	FDHKB	20,089
CDBKA	23,763	GDBKA	21,822	FDEKA	20,096
GDBKA	23,796	FDEKA	21,835	GDBKA	20,100
FDDKA	23,799	FIBKA	21,849	GDHKA	20,120
FDEKA	23,821	GDHKA	21,857	GDHKB	20,179
FDHKW	23,824	CDBKA	21,866	CDBKA	20,192
GDHKB	23,829	GDHKB	21,907	ACBKA	20,199
GDHKA	23,866	ACBKA	21,937	AEBKA	20,319
AEBKA	23,881	AEBKA	21,958	AFBKA	20,321
ACBKA	23,883	AFBKA	21,985	FIBKA	20,327
AFBKA	23,910	FDHKW	22,006	XDFKA	20,349
FDHKE	23,972	FDHKE	22,119	ABBKA	20,388
DDBKA	23,997	DDBKA	22,123	FDHKW	20,395
ABBKA	24,119	XDFKA	22,130	DDBKA	20,464
XDFKA	24,212	ABBKA	22,158	FDHKE	20,484
AHBKA	24,251	AHBKA	22,325	AHBKA	20,635
BDFKA	24,441	AAAKA	22,492	AAAKA	20,693
AAAKA	24,467	BDFKA	22,530	BDFKA	20,856

7.3.2 CRITICAL UNCERTAIN FACTOR – LOW LOAD GROWTH

LOW LOAD GROWTH

HIGH GAS

HIGH CO2		MID CO2		LOW CO2	
Endpoint 19		Endpoint 20		Endpoint 21	
PLAN	NPVRR	PLAN	NPVRR	PLAN	NPVRR
FDHKW	21,614	FDHKA	19,367	ACBKA	17,635
FDHKA	21,667	FDFKA	19,369	FDDKA	17,648
FIGKA	21,668	FDDKA	19,380	FDEKA	17,649
FDFKA	21,675	FDEKA	19,383	FDFKA	17,655
FDBKA	21,676	FDHKB	19,396	FDHKA	17,655
FDDKA	21,712	ACBKA	19,410	FDHKB	17,666
FDHKB	21,717	FDBKA	19,417	ABBKA	17,685
FDEKA	21,722	FDHKW	19,442	FDBKA	17,722
CDBKA	21,723	CDBKA	19,498	GDHKA	17,779
FDHKE	21,765	GDHKA	19,508	GDHKB	17,780
ACBKA	21,779	ABBKA	19,513	CDBKA	17,828
GDHKA	21,833	GDHKB	19,544	FDHKW	17,832
GDBKA	21,844	FDHKE	19,559	GDBKA	17,850
GDHKB	21,898	GDBKA	19,562	AFBKA	17,863
AEBKA	21,901	AFBKA	19,603	AAAKA	17,877
DDBKA	21,927	AEBKA	19,620	AEBKA	17,914
AFBKA	21,945	FIGKA	19,653	FDHKE	17,932
ABBKA	21,959	DDBKA	19,717	DDBKA	18,058
FIBKA	22,007	AAAKA	19,751	XDFKA	18,099
AHBKA	22,232	XDFKA	19,866	FIGKA	18,163
XDFKA	22,248	AHBKA	19,986	AHBKA	18,300
AAAKA	22,257	BDFKA	20,017	BDFKA	18,340
BDFKA	22,276	FIBKA	20,054	FIBKA	18,588

MID GAS

HIGH CO2		MID CO2		LOW CO2	
Endpoint 22		Endpoint 23		Endpoint 24	
PLAN	NPVRR	PLAN	NPVRR	PLAN	NPVRR
FIGKA	22,097	FDHKA	20,203	FDHKA	18,523
FDBKA	22,232	FDBKA	20,207	FDFKA	18,530
FDHKA	22,266	FDFKA	20,212	FDDKA	18,539
FDFKA	22,281	FIGKA	20,226	FDBKA	18,543
FDHKW	22,285	FDDKA	20,239	FDEKA	18,548
FDHKB	22,300	FDEKA	20,249	FDHKB	18,553
CDBKA	22,306	FDHKB	20,255	ACBKA	18,585
FDDKA	22,324	GDHKA	20,320	GDHKA	18,621
FDEKA	22,340	CDBKA	20,320	GDBKA	18,644
FIBKA	22,380	GDBKA	20,327	GDHKB	18,655
GDBKA	22,382	ACBKA	20,338	CDBKA	18,681
ACBKA	22,408	FDHKW	20,369	ABBKA	18,706
GDHKA	22,413	GDHKB	20,390	AFBKA	18,749
FDHKE	22,434	AEBKA	20,475	FIGKA	18,761
AEBKA	22,444	FDHKE	20,482	AEBKA	18,772
GDHKB	22,445	AFBKA	20,485	FDHKW	18,793
AFBKA	22,479	ABBKA	20,517	FDHKE	18,868
DDBKA	22,525	DDBKA	20,558	XDFKA	18,896
ABBKA	22,626	FIBKA	20,563	DDBKA	18,932
XDFKA	22,792	XDFKA	20,634	AAAKA	18,957
AHBKA	22,803	AHBKA	20,792	FIBKA	19,121
BDFKA	22,925	AAAKA	20,816	AHBKA	19,138
AAAKA	22,958	BDFKA	20,917	BDFKA	19,273

LOW GAS

HIGH CO2		MID CO2		LOW CO2	
Endpoint 25		Endpoint 26		Endpoint 27	
PLAN	NPVRR	PLAN	NPVRR	PLAN	NPVRR
FIGKA	22,345	FIGKA	20,698	FDBKA	19,327
FDBKA	22,514	FDBKA	20,854	FIGKA	19,328
FIBKA	22,575	FDHKA	20,894	FDHKA	19,353
FDHKB	22,585	FDFKA	20,910	FDFKA	19,367
FDHKA	22,585	FDHKB	20,936	FDDKA	19,393
FDFKA	22,607	FDDKA	20,951	FDHKB	19,400
CDBKA	22,612	GDBKA	20,952	GDBKA	19,404
GDBKA	22,647	FDEKA	20,968	FDEKA	19,409
FDDKA	22,648	FIBKA	20,976	GDHKA	19,427
FDEKA	22,671	GDHKA	20,989	GDHKB	19,493
FDHKW	22,672	CDBKA	20,996	CDBKA	19,499
GDHKB	22,678	GDHKB	21,037	ACBKA	19,508
GDHKA	22,715	ACBKA	21,068	AEBKA	19,623
AEBKA	22,728	AEBKA	21,087	AFBKA	19,625
ACBKA	22,731	AFBKA	21,115	FIBKA	19,626
AFBKA	22,757	FDHKW	21,138	XDFKA	19,656
FDHKE	22,825	FDHKE	21,250	ABBKA	19,702
DDBKA	22,843	DDBKA	21,250	FDHKW	19,712
ABBKA	22,968	XDFKA	21,264	DDBKA	19,768
XDFKA	23,062	ABBKA	21,290	FDHKE	19,800
AHBKA	23,100	AHBKA	21,455	AHBKA	19,941
BDFKA	23,289	AAAKA	21,627	AAAKA	20,015
AAAKA	23,317	BDFKA	21,663	BDFKA	20,166

7.3.3 CRITICAL UNCERTAIN FACTOR – HIGH NATURAL GAS PRICES

HIGH NATURAL GAS PRICES

HIGH LOAD

HIGH CO2		MID CO2		LOW CO2	
Endpoint	1	Endpoint	2	Endpoint	3
PLAN	NPVRR	PLAN	NPVRR	PLAN	NPVRR
FDHKW	23,074	FDFKA	20,639	ACBKA	18,745
FDHKA	23,134	FDHKA	20,640	ABBKA	18,766
FDFKA	23,140	FDDKA	20,650	FDEKA	18,769
FIGKA	23,143	FDEKA	20,651	FDDKA	18,771
FDBKA	23,147	FDHKB	20,668	FDFKA	18,779
FDDKA	23,178	ACBKA	20,675	FDHKA	18,782
FDHKB	23,183	FDHKW	20,693	FDHKB	18,788
FDEKA	23,186	FDBKA	20,698	FDBKA	18,859
CDBKA	23,193	ABBKA	20,762	GDHKB	18,899
FDHKE	23,226	CDBKA	20,774	GDHKA	18,907
ACBKA	23,247	GDHKA	20,783	AAAKA	18,919
GDHKA	23,301	GDHKB	20,812	FDHKW	18,922
GDBKA	23,317	FDHKE	20,813	CDBKA	18,958
GDHKB	23,363	GDBKA	20,845	AFBKA	18,986
AEBKA	23,373	AFBKA	20,879	GDBKA	18,988
DDBKA	23,398	AEBKA	20,898	FDHKE	19,027
AFBKA	23,416	FIGKA	20,947	AEBKA	19,041
ABBKA	23,421	AAAKA	20,975	DDBKA	19,192
FIBKA	23,484	DDBKA	20,996	XDFKA	19,230
AHBKA	23,704	XDFKA	21,142	FIGKA	19,322
AAAKA	23,710	AHBKA	21,266	AHBKA	19,435
XDFKA	23,715	BDFKA	21,286	BDFKA	19,483
BDFKA	23,739	FIBKA	21,349	FIBKA	19,749

MID LOAD

HIGH CO2		MID CO2		LOW CO2	
Endpoint	10	Endpoint	11	Endpoint	12
PLAN	NPVRR	PLAN	NPVRR	PLAN	NPVRR
FDHKW	22,329	FDHKA	19,990	ACBKA	18,176
FDHKA	22,386	FDFKA	19,990	FDEKA	18,197
FIGKA	22,391	FDDKA	20,001	FDDKA	18,197
FDFKA	22,393	FDEKA	20,003	FDFKA	18,205
FDBKA	22,397	FDHKB	20,019	FDHKA	18,206
FDDKA	22,430	ACBKA	20,028	ABBKA	18,213
FDHKB	22,435	FDBKA	20,044	FDHKB	18,214
FDEKA	22,439	FDHKW	20,053	FDBKA	18,278
CDBKA	22,445	ABBKA	20,123	GDHKB	18,325
FDHKE	22,480	CDBKA	20,125	GDHKA	18,329
ACBKA	22,498	GDHKA	20,131	FDHKW	18,364
GDHKA	22,552	GDHKB	20,163	CDBKA	18,382
GDBKA	22,566	FDHKE	20,171	AAAKA	18,383
GDHKB	22,615	GDBKA	20,189	GDBKA	18,406
AEBKA	22,623	AFBKA	20,226	AFBKA	18,411
DDBKA	22,648	AEBKA	20,244	AEBKA	18,464
AFBKA	22,666	FIGKA	20,268	FDHKE	18,464
ABBKA	22,674	DDBKA	20,343	DDBKA	18,612
FIBKA	22,731	AAAKA	20,347	XDFKA	18,651
AHBKA	22,953	XDFKA	20,490	FIGKA	18,733
XDFKA	22,967	AHBKA	20,613	AHBKA	18,856
AAAKA	22,987	BDFKA	20,636	BDFKA	18,885
BDFKA	22,992	FIBKA	20,689	FIBKA	19,158

LOW LOAD

HIGH CO2		MID CO2		LOW CO2	
Endpoint	19	Endpoint	20	Endpoint	21
PLAN	NPVRR	PLAN	NPVRR	PLAN	NPVRR
FDHKW	21,614	FDHKA	19,367	ACBKA	17,635
FDHKA	21,667	FDFKA	19,369	FDDKA	17,648
FIGKA	21,668	FDDKA	19,380	FDEKA	17,649
FDFKA	21,675	FDEKA	19,383	FDFKA	17,655
FDBKA	21,676	FDHKB	19,398	FDHKA	17,655
FDDKA	21,712	ACBKA	19,410	FDHKB	17,666
FDHKB	21,717	FDBKA	19,417	ABBKA	17,685
FDEKA	21,722	FDHKW	19,442	FDBKA	17,722
CDBKA	21,723	CDBKA	19,498	GDHKA	17,779
FDHKE	21,765	GDHKA	19,508	GDHKB	17,780
ACBKA	21,779	ABBKA	19,513	CDBKA	17,828
GDHKA	21,833	GDHKB	19,544	FDHKW	17,832
GDBKA	21,844	FDHKE	19,559	GDBKA	17,850
GDHKB	21,898	GDBKA	19,582	AFBKA	17,863
AEBKA	21,901	AFBKA	19,603	AAAKA	17,877
DDBKA	21,927	AEBKA	19,620	AEBKA	17,914
AFBKA	21,945	FIGKA	19,653	FDHKE	17,932
ABBKA	21,959	DDBKA	19,717	DDBKA	18,058
FIBKA	22,007	AAAKA	19,751	XDFKA	18,099
AHBKA	22,232	XDFKA	19,866	FIGKA	18,163
XDFKA	22,248	AHBKA	19,986	AHBKA	18,300
AAAKA	22,257	BDFKA	20,017	BDFKA	18,340
BDFKA	22,276	FIBKA	20,054	FIBKA	18,568

7.3.4 CRITICAL UNCERTAIN FACTOR – LOW NATURAL GAS PRICES

LOW NATURAL GAS PRICES

HIGH LOAD

HIGH CO2		MID CO2		LOW CO2	
Endpoint 7		Endpoint 8		Endpoint 9	
PLAN	NPVRR	PLAN	NPVRR	PLAN	NPVRR
FIGKA	23,497	FIGKA	21,570	FDBKA	20,023
FDBKA	23,666	FDBKA	21,724	FIGKA	20,029
FIBKA	23,727	FDHKA	21,762	FDHKA	20,045
FDHKB	23,734	FDFKA	21,777	FDFKA	20,058
FDHKA	23,736	FDHKB	21,805	FDDKA	20,064
FDFKA	23,757	FDDKA	21,819	FDHKB	20,089
CDBKA	23,763	GDBKA	21,822	FDEKA	20,098
GDBKA	23,798	FDEKA	21,835	GDBKA	20,100
FDDKA	23,799	FIBKA	21,849	GDHKA	20,120
FDEKA	23,821	GDHKA	21,857	GDHKB	20,179
FDHKW	23,824	CDBKA	21,866	CDBKA	20,192
GDHKB	23,829	GDHKB	21,907	ACBKA	20,199
GDHKA	23,868	ACBKA	21,937	AEBKA	20,319
AEBKA	23,881	AEBKA	21,958	AFBKA	20,321
ACBKA	23,883	AFBKA	21,965	FIBKA	20,327
AFBKA	23,910	FDHKW	22,006	XDFKA	20,349
FDHKE	23,972	FDHKE	22,119	ABBKA	20,388
DDBKA	23,997	DDBKA	22,123	FDHKW	20,395
ABBKA	24,119	XDFKA	22,130	DDBKA	20,464
XDFKA	24,212	ABBKA	22,158	FDHKE	20,484
AHBKA	24,251	AHBKA	22,325	AHBKA	20,635
BDFKA	24,441	AAAKA	22,492	AAAKA	20,693
AAAKA	24,467	BDFKA	22,530	BDFKA	20,856

MID LOAD

HIGH CO2		MID CO2		LOW CO2	
Endpoint 16		Endpoint 17		Endpoint 18	
PLAN	NPVRR	PLAN	NPVRR	PLAN	NPVRR
FIGKA	22,910	FIGKA	21,126	FDBKA	19,669
FDBKA	23,078	FDBKA	21,281	FIGKA	19,672
FIBKA	23,139	FDHKA	21,320	FDHKA	19,693
FDHKA	23,148	FDFKA	21,335	FDFKA	19,706
FDHKB	23,148	FDHKB	21,362	FDDKA	19,732
FDFKA	23,170	FDDKA	21,377	FDHKB	19,738
CDBKA	23,176	GDBKA	21,379	GDBKA	19,745
GDBKA	23,210	FDEKA	21,393	FDEKA	19,747
FDDKA	23,211	FIBKA	21,404	GDHKA	19,786
FDEKA	23,234	GDHKA	21,415	GDHKB	19,826
FDHKW	23,237	CDBKA	21,424	CDBKA	19,840
GDHKB	23,242	GDHKB	21,464	ACBKA	19,847
GDHKA	23,278	ACBKA	21,494	AEBKA	19,965
AEBKA	23,293	AEBKA	21,515	AFBKA	19,967
ACBKA	23,295	AFBKA	21,543	FIBKA	19,970
AFBKA	23,322	FDHKW	21,564	XDFKA	19,996
FDHKE	23,388	FDHKE	21,676	ABBKA	20,038
DDBKA	23,409	DDBKA	21,679	FDHKW	20,046
ABBKA	23,531	XDFKA	21,689	DDBKA	20,110
XDFKA	23,624	ABBKA	21,716	FDHKE	20,135
AHBKA	23,663	AHBKA	21,883	AHBKA	20,281
BDFKA	23,855	AAAKA	22,052	AAAKA	20,347
AAAKA	23,880	BDFKA	22,089	BDFKA	20,504

LOW LOAD

HIGH CO2		MID CO2		LOW CO2	
Endpoint 25		Endpoint 26		Endpoint 27	
PLAN	NPVRR	PLAN	NPVRR	PLAN	NPVRR
FIGKA	22,345	FIGKA	20,696	FDBKA	19,327
FDBKA	22,514	FDBKA	20,854	FIGKA	19,328
FIBKA	22,575	FDHKA	20,894	FDHKA	19,353
FDHKB	22,585	FDFKA	20,910	FDFKA	19,367
FDHKA	22,585	FDHKB	20,936	FDDKA	19,393
FDFKA	22,607	FDDKA	20,951	FDHKB	19,400
CDBKA	22,612	GDBKA	20,952	GDBKA	19,404
GDBKA	22,647	FDEKA	20,968	FDEKA	19,409
FDDKA	22,648	FIBKA	20,976	GDHKA	19,427
FDEKA	22,671	GDHKA	20,989	GDHKB	19,493
FDHKW	22,672	CDBKA	20,996	CDBKA	19,499
GDHKB	22,678	GDHKB	21,037	ACBKA	19,508
GDHKA	22,715	ACBKA	21,068	AEBKA	19,623
AEBKA	22,728	AEBKA	21,087	AFBKA	19,625
ACBKA	22,731	AFBKA	21,115	FIBKA	19,626
AFBKA	22,757	FDHKW	21,138	XDFKA	19,656
FDHKE	22,825	FDHKE	21,250	ABBKA	19,702
DDBKA	22,843	DDBKA	21,250	FDHKW	19,712
ABBKA	22,968	XDFKA	21,264	DDBKA	19,768
XDFKA	23,062	ABBKA	21,290	FDHKE	19,800
AHBKA	23,100	AHBKA	21,455	AHBKA	19,941
BDFKA	23,289	AAAKA	21,627	AAAKA	20,015
AAAKA	23,317	BDFKA	21,663	BDFKA	20,166

7.3.5 CRITICAL UNCERTAIN FACTOR – HIGH CO_2

HIGH CO_2 CREDIT PRICES

	HIGH GAS		MID GAS		LOW GAS	
HIGH LOAD	Endpoint 1		Endpoint 4		Endpoint 7	
	PLAN	NPVRR	PLAN	NPVRR	PLAN	NPVRR
	FDHKW	23,074	FIGKA	23,399	FIGKA	23,497
	FDHKA	23,134	FDBKA	23,532	FDBKA	23,666
	FDFKA	23,140	FDHKA	23,563	FIBKA	23,727
	FIGKA	23,143	FDFKA	23,577	FDHKB	23,734
	FDBKA	23,147	FDHKW	23,582	FDHKA	23,736
	FDDKA	23,178	FDHKB	23,598	FDFKA	23,757
	FDHKB	23,183	CDBKA	23,605	CDBKA	23,763
	FDEKA	23,186	FDDKA	23,620	GDBKA	23,798
	CDBKA	23,193	FDEKA	23,635	FDDKA	23,799
	FDHKE	23,226	GDBKA	23,682	FDEKA	23,821
	ACBKA	23,247	FIBKA	23,683	FDHKW	23,824
	GDHKA	23,301	ACBKA	23,706	GDHKB	23,829
	GDBKA	23,317	GDHKA	23,710	GDHKA	23,866
	GDHKB	23,363	FDHKE	23,731	AEBKA	23,881
	AEBKA	23,373	GDHKB	23,743	ACBKA	23,883
	DDBKA	23,398	AEBKA	23,744	AFBKA	23,910
	AFBKA	23,416	AFBKA	23,777	FDHKE	23,972
	ABBKA	23,421	DDBKA	23,825	DDBKA	23,997
	FIBKA	23,484	ABBKA	23,922	ABBKA	24,119
	AHBKA	23,704	XDFKA	24,087	XDFKA	24,212
	AAAKA	23,710	AHBKA	24,102	AHBKA	24,251
	XDFKA	23,715	BDFKA	24,221	BDFKA	24,441
	BDFKA	23,739	AAAKA	24,250	AAAKA	24,467

	HIGH GAS		MID GAS		LOW GAS	
MID LOAD	Endpoint 10		Endpoint 13		Endpoint 16	
	PLAN	NPVRR	PLAN	NPVRR	PLAN	NPVRR
	FDHKW	22,329	FIGKA	22,735	FIGKA	22,910
	FDHKA	22,386	FDBKA	22,869	FDBKA	23,078
	FIGKA	22,391	FDHKA	22,902	FIBKA	23,139
	FDFKA	22,393	FDFKA	22,916	FDHKA	23,148
	FDBKA	22,397	FDHKW	22,921	FDHKB	23,148
	FDDKA	22,430	FDHKB	22,936	FDFKA	23,170
	FDHKB	22,435	CDBKA	22,944	CDBKA	23,176
	FDEKA	22,439	FDDKA	22,959	GDBKA	23,210
	CDBKA	22,445	FDEKA	22,975	FDDKA	23,211
	FDHKE	22,480	FIBKA	23,018	FDEKA	23,234
	ACBKA	22,498	GDBKA	23,019	FDHKW	23,237
	GDHKA	22,552	ACBKA	23,044	GDHKB	23,242
	GDBKA	22,566	GDHKA	23,049	GDHKA	23,278
	GDHKB	22,615	FDHKE	23,069	AEBKA	23,293
	AEBKA	22,623	GDHKB	23,081	ACBKA	23,295
	DDBKA	22,648	AEBKA	23,081	AFBKA	23,322
	AFBKA	22,666	AFBKA	23,116	FDHKE	23,386
	ABBKA	22,674	DDBKA	23,163	DDBKA	23,409
	FIBKA	22,731	ABBKA	23,261	ABBKA	23,531
	AHBKA	22,953	XDFKA	23,427	XDFKA	23,624
	XDFKA	22,967	AHBKA	23,440	AHBKA	23,663
	AAAKA	22,967	BDFKA	23,560	BDFKA	23,855
	BDFKA	22,992	AAAKA	23,591	AAAKA	23,880

	HIGH GAS		MID GAS		LOW GAS	
LOW LOAD	Endpoint 19		Endpoint 22		Endpoint 25	
	PLAN	NPVRR	PLAN	NPVRR	PLAN	NPVRR
	FDHKW	21,614	FIGKA	22,097	FIGKA	22,345
	FDHKA	21,667	FDBKA	22,232	FDBKA	22,514
	FIGKA	21,668	FDHKA	22,266	FIBKA	22,575
	FDFKA	21,675	FDFKA	22,281	FDHKB	22,585
	FDBKA	21,676	FDHKW	22,285	FDHKA	22,585
	FDDKA	21,712	FDHKB	22,300	FDFKA	22,607
	FDHKB	21,717	CDBKA	22,306	CDBKA	22,612
	FDEKA	21,722	FDDKA	22,324	GDBKA	22,647
	CDBKA	21,723	FDEKA	22,340	FDDKA	22,648
	FDHKE	21,765	FIBKA	22,380	FDEKA	22,671
	ACBKA	21,779	GDBKA	22,382	FDHKW	22,672
	GDHKA	21,833	ACBKA	22,408	GDHKB	22,678
	CDBKA	21,844	GDHKA	22,413	GDHKA	22,715
	GDHKB	21,896	FDHKE	22,434	AEBKA	22,728
	AEBKA	21,901	AEBKA	22,444	ACBKA	22,731
	DDBKA	21,927	GDHKB	22,445	AFBKA	22,757
	AFBKA	21,945	AFBKA	22,479	FDHKE	22,825
	ABBKA	21,959	DDBKA	22,525	DDBKA	22,843
	FIBKA	22,007	ABBKA	22,626	ABBKA	22,968
	AHBKA	22,232	XDFKA	22,792	XDFKA	23,062
	XDFKA	22,248	AHBKA	22,803	AHBKA	23,100
	AAAKA	22,257	BDFKA	22,925	BDFKA	23,269
	BDFKA	22,276	AAAKA	22,956	AAAKA	23,317

7.3.6 CRITICAL UNCERTAIN FACTOR – LOW CO_2

LOW CO_2 CREDIT PRICES

HIGH LOAD

HIGH GAS		MID GAS		LOW GAS	
Endpoint 3		Endpoint 6		Endpoint 9	
PLAN	NPVRR	PLAN	NPVRR	PLAN	NPVRR
ACBKA	18,745	FDHKA	19,428	FDBKA	20,023
ABBKA	18,766	FDFKA	19,433	FIGKA	20,029
FDEKA	18,769	FDDKA	19,442	FDHKA	20,045
FDDKA	18,771	FDEKA	19,448	FDFKA	20,058
FDFKA	18,779	FDHKB	19,454	FDDKA	20,064
FDHKA	18,782	FDBKA	19,454	FDHKB	20,089
FDHKB	18,788	ACBKA	19,481	FDEKA	20,096
FDBKA	18,859	GDHKA	19,527	GDBKA	20,100
GDHKB	18,899	GDHKB	19,554	GDHKA	20,120
GDHKA	18,907	GDBKA	19,557	GDHKB	20,179
AAAKA	18,919	ABBKA	19,584	CDBKA	20,192
FDHKW	18,922	CDBKA	19,588	ACBKA	20,199
CDBKA	18,958	AFBKA	19,654	AEBKA	20,319
AFBKA	18,986	FDHKW	19,675	AFBKA	20,321
GDBKA	18,988	AEBKA	19,680	FIBKA	20,327
FDHKE	19,027	FIGKA	19,685	XDFKA	20,349
AEBKA	19,041	FDHKE	19,773	ABBKA	20,388
DDBKA	19,192	XDFKA	19,803	FDHKW	20,395
XDFKA	19,230	AAAKA	19,812	DDBKA	20,464
FIGKA	19,322	DDBKA	19,842	FDHKE	20,484
AHBKA	19,435	FIBKA	20,047	AHBKA	20,635
BDFKA	19,463	AHBKA	20,047	AAAKA	20,693
FIBKA	19,749	BDFKA	20,174	BDFKA	20,856

MID LOAD

HIGH GAS		MID GAS		LOW GAS	
Endpoint 12		Endpoint 15		Endpoint 18	
PLAN	NPVRR	PLAN	NPVRR	PLAN	NPVRR
ACBKA	18,176	FDHKA	18,906	FDBKA	19,689
FDEKA	18,197	FDFKA	18,972	FIGKA	19,672
FDDKA	18,197	FDDKA	18,981	FDHKA	19,693
FDFKA	18,205	FDEKA	18,988	FDFKA	19,706
FDHKA	18,206	FDBKA	18,989	FDDKA	19,712
ABBKA	18,213	FDHKB	18,993	FDHKB	19,738
FDHKB	18,214	ACBKA	19,023	GDBKA	19,745
FDBKA	18,278	GDHKA	19,064	FDEKA	19,747
GDHKB	18,325	GDBKA	19,091	GDHKA	19,766
GDHKA	18,329	GDHKB	19,093	GDHKB	19,828
FDHKW	18,364	CDBKA	19,127	CDBKA	19,840
CDBKA	18,382	ABBKA	19,135	ACBKA	19,847
AAAKA	18,383	AFBKA	19,191	AEBKA	19,965
GDBKA	18,406	FIGKA	19,215	AFBKA	19,967
AFBKA	18,411	AEBKA	19,216	FIBKA	19,970
AEBKA	18,464	FDHKW	19,224	XDFKA	19,996
FDHKE	18,464	FDHKE	19,319	ABBKA	20,038
DDBKA	18,612	XDFKA	19,339	FDHKW	20,046
XDFKA	18,651	AAAKA	19,373	DDBKA	20,110
FIGKA	18,733	DDBKA	19,377	FDHKE	20,135
AHBKA	18,856	FIBKA	19,576	AHBKA	20,281
BDFKA	18,885	AHBKA	19,583	AAAKA	20,347
FIBKA	19,158	BDFKA	19,712	BDFKA	20,504

LOW LOAD

HIGH GAS		MID GAS		LOW GAS	
Endpoint 21		Endpoint 24		Endpoint 27	
PLAN	NPVRR	PLAN	NPVRR	PLAN	NPVRR
ACBKA	17,635	FDHKA	18,523	FDBKA	19,327
FDDKA	17,648	FDFKA	18,530	FIGKA	19,328
FDEKA	17,649	FDDKA	18,539	FDHKA	19,353
FDFKA	17,655	FDBKA	18,543	FDFKA	19,367
FDHKA	17,655	FDEKA	18,548	FDDKA	19,393
FDHKB	17,666	FDHKB	18,553	FDHKB	19,400
ABBKA	17,685	ACBKA	18,585	GDBKA	19,404
FDBKA	17,722	GDHKA	18,621	FDEKA	19,409
GDHKA	17,779	GDBKA	18,644	GDHKA	19,427
GDHKB	17,780	GDHKB	18,655	GDHKB	19,493
CDBKA	17,828	CDBKA	18,681	CDBKA	19,499
FDHKW	17,832	ABBKA	18,706	ACBKA	19,508
GDBKA	17,850	AFBKA	18,749	AEBKA	19,623
AFBKA	17,863	FIGKA	18,761	AFBKA	19,625
AAAKA	17,877	AEBKA	18,772	FIBKA	19,626
AEBKA	17,914	FDHKW	18,793	XDFKA	19,656
FDHKE	17,932	FDHKE	18,888	ABBKA	19,702
DDBKA	18,058	XDFKA	18,896	FDHKW	19,712
XDFKA	18,099	DDBKA	18,932	DDBKA	19,768
FIGKA	18,163	AAAKA	18,957	FDHKE	19,800
AHBKA	18,300	FIBKA	19,121	AHBKA	19,941
BDFKA	18,340	AHBKA	19,138	AAAKA	20,015
FIBKA	18,588	BDFKA	19,273	BDFKA	20,166

7.3.7 CRITICAL UNCERTAIN FACTORS – SUMMARY AND EVALUATION

This summary table, Table , provides the expected value for NPVRR across the twenty-seven endpoint tree by plan and the value for NPVRR for the mid-load, mid-gas and mid-CO_2 scenario, Endpoint 14.

Table 57: Alternative Resource Plan NPVRRs

Expected Value PLAN	NPVRR	Delta	Endpoint 14 PLAN	NPVRR	Delta
FDHKA	20,797	-	FDHKA	20,721	-
FDBKA	20,799	2	FDBKA	20,727	7
FDFKA	20,806	9	FDFKA	20,729	8
FDDKA	20,832	35	FIGKA	20,748	28
FDHKB	20,833	36	FDDKA	20,755	34
FDEKA	20,843	45	FDEKA	20,764	44
FIGKA	20,844	47	FDHKB	20,771	50
ACBKA	20,907	109	GDHKA	20,838	117
CDBKA	20,908	110	CDBKA	20,840	120
GDHKA	20,918	120	GDBKA	20,847	127
GDBKA	20,923	125	ACBKA	20,855	135
FDHKW	20,945	147	FDHKW	20,881	160
GDHKB	20,958	160	GDHKB	20,904	184
AEBKA	21,033	236	FDHKE	20,995	274
AFBKA	21,039	242	AEBKA	20,996	275
FDHKE	21,063	266	AFBKA	21,006	285
ABBKA	21,071	274	ABBKA	21,031	310
DDBKA	21,144	347	DDBKA	21,079	358
FIBKA	21,175	378	FIBKA	21,087	366
XDFKA	21,239	442	XDFKA	21,152	431
AAAKA	21,356	559	AHBKA	21,312	591
AHBKA	21,383	585	AAAKA	21,324	604
BDFKA	21,503	706	BDFKA	21,432	711

Table 58 below provides the Alternative Resource Plan that had the lowest NPVRR for each endpoint scenario.

Table 58: Endpoint/Lowest NPVRR Alternative Resource Plan

EP	Plan	NPVRR $MM	Conditional Probability
1	FDHKW	23,074	2%
2	FDFKA	20,639	3%
3	ACBKA	18,745	2%
4	FIGKA	23,399	3%
5	FDHKA	21,260	6%
6	FDHKA	19,428	3%
7	FIGKA	23,497	2%
8	FIGKA	21,570	3%
9	FDBKA	20,023	2%
10	FDHKW	22,329	3%
11	FDHKA	19,990	6%
12	ACBKA	18,176	3%
13	FIGKA	22,735	6%
14	FDHKA	20,721	13%
15	FDHKA	18,966	6%
16	FIGKA	22,910	3%
17	FIGKA	21,126	6%
18	FDBKA	19,669	3%
19	FDHKW	21,614	2%
20	FDHKA	19,367	3%
21	ACBKA	17,635	2%
22	FIGKA	22,097	3%
23	FDHKA	20,203	6%
24	FDHKA	18,523	3%
25	FIGKA	$22,345	2%
26	FIGKA	$20,698	3%
27	FDBKA	$19,327	2%

The sum of the conditional probabilities and the count of the number of times an Alternative Resource Plan is the low cost scenario endpoint is shown below:

Table 59: Conditional Probabilities of Lowest NPVRR Plans

Plan	Conditional Probability	Count
ACBKA	6%	3
FDBKA	6%	3
FDFKA	3%	1
FDHKA	47%	8
FDHKW	6%	3
FIGKA	31%	9
Total	100%	27

7.3.8 ADDITIONAL UNCERTAIN FACTOR

The primary other uncertain factor that could materially impact the Preferred Plan is changes to the assumptions surrounding proposed and projected environmental regulations. The Preferred Plan calls for Montrose 1 to be retired in 2016. This is primarily driven by the need to add environmental retrofits by early 2016 for MATS compliance and the projected need to add additional NO_x controls by 2019 to meet potential Ozone NAAQS requirements. Based on current assumptions regarding compliance requirements and costs, it would not be economic to invest in MATS required controls for a 2016 compliance start date to then retire the unit in 2019 due to the need to add additional NO_x controls.

While the MATS rules are final, there are several outstanding court challenges that have the potential to delay the 2016 compliance date. If the compliance date were to be delayed, the Montrose 1 retirement would likely be delayed as well. This could push the retirement date to 2019 when the additional NOx controls (for future Ozone NAAQS compliance) may be needed.

The Preferred Plan currently indicates that Montrose Units 2 and 3 would be retired in 2021. Like Montrose Unit 1, this retirement date could be delayed depending on future environmental regulations. KCP&L's current assumption is that proposed coal combustion residual rules will require the wet ash handling systems at Montrose to be converted to a dry handling system by 2021. Based on the current assumptions regarding compliance requirements, costs, and the assumption that a scrubber, bag

house, and SCR would be needed by 2023 for Ozone NAAQS and Particulate Matter NAAQS compliance, it would not be economic to convert these systems by 2021 and the Units would be retired. Given that the rules concerning coal combustion residuals are not final, this could change the 2021 retirement date. If the projected coal combustion residual rules compliance date was delayed, this could shift the retirement date to 2023 when additional environmental controls may be needed.

7.4 BETTER INFORMATION

The Company calculated the value of better information for each of the critical uncertain factors. For each uncertainty, the preferred plan NPVRR for the specific uncertainty scenarios (or endpoints) was compared to the better plan under each extreme uncertainty condition. The comparison was made on an expected value basis assuming that only those three particular scenarios (high value uncertainty, mid value and low value uncertainty) would occur. Baye's Theorem was applied to the endpoint probabilities to develop conditional probabilities for the calculation scenarios. The difference between the expected value of the preferred plan and the expected value of the better information results is the expected value of better information.

These values represent the maximum amount the company should be willing to spend to study each of these uncertainties. It must be noted that should a Preferred Plan out-perform all alternatives across the range of a critical risk, the calculation for better information will yield a value of zero.

The results for these calculations are shown in below.

Load						
Preferred Plan	Endpoint	Plan	NPVRR	EP Prob	Cond. Prob	Expected Value
High Load	5	FDHKA	21,260	6.25%	25.00%	20,726
Mid	14	FDHKA	20,721	12.50%	50.00%	
Low Load	23	FDHKA	20,203	6.25%	25.00%	
Better Information	Endpoint	Plan	NPVRR	EP Prob	Cond. Prob	Expected Value
High Load	5	FDHKA	21,260	6.25%	25.00%	20,726
Mid	14	FDHKA	20,721	12.50%	50.00%	
Low Load	23	FDHKA	20,203	6.25%	25.00%	
Expected Value of Better Information			-	Million		

Natural Gas						
Preferred Plan	Endpoint	Plan	NPVRR	EP Prob	Cond. Prob	Expected Value
High Natural Gas	11	FDHKA	19,990	6.25%	25.00%	20,688
Mid	14	FDHKA	20,721	12.50%	50.00%	
Low Natural Gas	17	FDHKA	21,320	6.25%	25.00%	
Better Information	Endpoint	Plan	NPVRR	EP Prob	Cond. Prob	Expected Value
High Natural Gas	11	FDHKA	19,990	6.25%	25.00%	20,639
Mid	14	FDHKA	20,721	12.50%	50.00%	
Low Natural Gas	17	FIGKA	21,126	6.25%	25.00%	
Expected Value of Better Information			48.56	Million		

CO2						
Preferred Plan	Endpoint	Plan	NPVRR	EP Prob	Cond. Prob	Expected Value
High CO2	13	FDHKA	22,902	6.25%	25.00%	20,827
Mid	14	FDHKA	20,721	12.50%	50.00%	
Low CO2	15	FDHKA	18,966	6.25%	25.00%	
Better Information	Endpoint	Plan	NPVRR	EP Prob	Cond. Prob	Expected Value
High CO2	13	FIGKA	22,735	6.25%	25.00%	20,786
Mid	14	FDHKA	20,721	12.50%	50.00%	
Low CO2	15	FDHKA	18,966	6.25%	25.00%	
Expected Value of Better Information			41.78	Million		

7.5 CONTINGENCY RESOURCE PLANS

KCP&L has identified contingency plans should the critical uncertain factors exceed the limits specified. These contingency plans are provided in Table 60 below:

Table 60: Contingency Resource Plans

Plan Name	DSM Level	Retirement Assumption	Retirement Year	Renewable Additions		Generation Addition (if needed)
FDBKA	MEEIA/RAP	Montrose-1 Montrose-2 Montrose-3	2016 2016 2016	Solar: 2018 - 11 MW 2021 - 6 MW	Wind: 2016 - 50 MW 2020- 150 MW 2024 - 200 MW	193 MW CT in 2026 193 MW CT in 2031
FDEKA	MEEIA/RAP	Montrose-1 Montrose-2 Montrose-3	2019 2023 2023	Solar: 2018 - 11 MW 2021 - 6 MW	Wind: 2016 - 50 MW 2020- 150 MW 2024 - 200 MW	193 MW CT in 2026 193 MW CT in 2031
FDHKW	MEEIA/RAP	Montrose-1 Montrose-2 Montrose-3	2016 2021 2021	Solar: 2018 - 22 MW 2021 - 12 MW	Wind: 2016 - 100 MW 2020- 300 MW 2024 - 400 MW	193 MW CT in 2027 193 MW CT in 2032

These contingency plans were identified through an evaluation of the relative cost performance of each alternative plan under different combinations of the critical uncertain factors. The combinations of critical uncertain factors under which these contingency plans are projected to be lower cost than the Preferred Plan are as follows:

Low Gas, All CO_2 Price Scenarios: FDBKA (earlier Montrose Station retirement than the Preferred Plan)

High Gas, Low CO_2 Price Scenario: FDEKA (delayed Montrose retirement compared to the Preferred Plan)

High Gas, High CO_2 Price Scenario: FDHKW (more than double the current Renewable Energy Standard required wind)

High CO_2, Mid Gas Price Scenario: FDBKA (earlier Montrose Station retirement than the Preferred Plan)

The Company will update and review the critical uncertainties, Preferred Plan and contingency plans as part of the 2014 IRP Update to be filed in March 2014.

7.6 IMPLEMENTATION PLAN

The Implementation Plan consists of a schedule for environmental retrofits, a wind resource addition, and a Demand-Side Management schedule

7.6.1 ENVIRONMENTAL RETROFITS

Based on the 2013 Annual Update Preferred Plan for KCP&L, limited environmental retrofits are anticipated to be required for Montrose Units 2 & 3. These minor retrofits are projected to be needed to operate these units through year 2020. A draft schedule of the major milestones for the retrofit projects are provided in Table 61 below.

Table 61: KCP&L Environmental Retrofit Schedule

Retrofit Project	Milestone Description	Date Range
Montrose 2 & 3 ACI	Studies/Specification/Bid/Award	09/2014 - 06/2015
Montrose 2 & 3 ACI	Engineering/Procurement/Construction	07/2015 - 12/2015
Montrose 2 & 3 ACI	Checkout/Startup/Tuning/Testing	01/2016 - 02/2016
Montrose 2 & 3 ESP Improvements	Studies/Specification/Bid/Award	01/2015 - 06/2015
Montrose 2 & 3 ESP Improvements	Engineering/Procurement/Construction	07/2015 - 12/2015
Montrose 2 & 3 ESP Improvements	Checkout/Startup/Tuning/Testing	01/2016 - 02/2016
ACI : Activated Carbon Injection ESP: Electrostatic Precipitator		

7.6.2 GENERATION ADDITION

Also, it is anticipated that in order to meet the Kansas RPS requirements, 50 MW of wind capacity is required to be operational by 2016. A draft schedule of the major milestones for the wind resource addition is provided in Table 62 below.

Table 62: Wind Resource Addition Schedule

Milestone Description	Milestone Dates
Issue RFP	November - 2014
Proposals Due	December - 2014
Preliminary Proposal Screening	January - 2015
Recommend Short List to Senior Leadership	January - 2015
Senior Management Direction for Proceeding	January - 2015
Notify Responders of Status	January - 2015
Begin Contract Negotiations with Short Listed Responders	February - 2015
Conclude Contract Negotiations	April - 2015
Sign Contract	May - 2015
Engineering and Procurement Begins	June - 2015
Construction Begins	August - 2015
Substation Energized	March - 2016
First Turbine Commissioned	April - 2016
Last Turbine Commissioned	June - 2016
Final Project Completion	August - 2016

7.6.3 DEMAND-SIDE MANAGEMENT SCHEDULE

The current schedule for ongoing and planned DSM programs is shown in Table 63 below:

Table 63: DSM Program Schedule

Program Name	Program Type	New or Existing	Segment	Planned Tariff Filing Date	Planned EM&V Plan Filing Date	MEEIA and DSM program approved	RFPs for new vendor selection issued	Vendor selected and contract awarded	Program Implemented	Annual Report	Evaluations Begun	EM&V Completed and report available
Low-Income Weatherization Program	Energy Efficiency	Existing	Residential	estimated by Dec 2013	estimated by Dec 2013	estimated by Dec 2013	N/A	N/A	6 months after MEEIA approval	12 months after MEEIA implementation	24 months after MEEIA implementation	42 months after MEEIA approval
Energy Star® New Homes Program	Energy Efficiency	Existing	Residential	estimated by Dec 2013	estimated by Dec 2013	estimated by Dec 2013	N/A	N/A	6 months after MEEIA approval	12 months after MEEIA implementation	24 months after MEEIA implementation	42 months after MEEIA approval
Cool Homes Program	Energy Efficiency	Existing	Residential	estimated by Dec 2013	estimated by Dec 2013	estimated by Dec 2013	N/A	N/A	6 months after MEEIA approval	12 months after MEEIA implementation	24 months after MEEIA implementation	42 months after MEEIA approval
Home Performance with Energy Star® Program	Energy Efficiency	Existing	Residential	estimated by Dec 2013	estimated by Dec 2013	estimated by Dec 2013	N/A	N/A	6 months after MEEIA approval	12 months after MEEIA implementation	24 months after MEEIA implementation	42 months after MEEIA approval
Commercial and Industrial Rebate Program Program	Energy Efficiency	Existing	C&I	estimated by Dec 2013	estimated by Dec 2013	estimated by Dec 2013	N/A	N/A	6 months after MEEIA approval	12 months after MEEIA implementation	24 months after MEEIA implementation	42 months after MEEIA approval
MPower Rider	Demand Response	Existing	C&I	estimated by Dec 2013	estimated by Dec 2013	estimated by Dec 2013	N/A	N/A	6 months after MEEIA approval	12 months after MEEIA implementation	24 months after MEEIA implementation	42 months after MEEIA approval
Energy Optimizer Program	Demand Response	Existing	Residential	estimated by Dec 2013	estimated by Dec 2013	estimated by Dec 2013	N/A	N/A	6 months after MEEIA approval	12 months after MEEIA implementation	24 months after MEEIA implementation	42 months after MEEIA approval
Building Operator Certification Program	Educational	Existing	C&I	estimated by Dec 2013	estimated by Dec 2013	estimated by Dec 2013	N/A	N/A	6 months after MEEIA approval	12 months after MEEIA implementation	24 months after MEEIA implementation	42 months after MEEIA approval
Home Energy Analyzer Program	Educational	Existing	Residential	estimated by Dec 2013	estimated by Dec 2013	estimated by Dec 2013	N/A	N/A	6 months after MEEIA approval	12 months after MEEIA implementation	24 months after MEEIA implementation	42 months after MEEIA approval
Business Energy Analyzer Program	Educational	Existing	C&I	estimated by Dec 2013	estimated by Dec 2013	estimated by Dec 2013	N/A	N/A	6 months after MEEIA approval	12 months after MEEIA implementation	24 months after MEEIA implementation	42 months after MEEIA approval
Appliance Turn-In Program	Energy Efficiency	New	Residential	estimated by Dec 2013	estimated by Dec 2013	estimated by Dec 2013	1 month after MEEIA approval	3 months after MEEIA approval	6 months after MEEIA approval	12 months after MEEIA implementation	24 months after MEEIA implementation	42 months after MEEIA approval
Commercial and Industrial Prescriptive Rebate Program	Energy Efficiency	New	C&I	estimated by Dec 2013	estimated by Dec 2013	estimated by Dec 2013	1 month after MEEIA approval	4 months after MEEIA approval	6 months after MEEIA approval	12 months after MEEIA implementation	24 months after MEEIA implementation	42 months after MEEIA approval
Multi-Family Rebate Progam	Energy Efficiency	New	Residential	estimated by Dec 2013	estimated by Dec 2013	estimated by Dec 2013	1 month after MEEIA approval	5 months after MEEIA approval	6 months after MEEIA approval	12 months after MEEIA implementation	24 months after MEEIA implementation	42 months after MEEIA approval
Residential Energy Reports Program	Energy Efficiency	New	Residential	estimated by Dec 2013	estimated by Dec 2013	estimated by Dec 2013	1 month after MEEIA approval	6 months after MEEIA approval	6 months after MEEIA approval	12 months after MEEIA implementation	24 months after MEEIA implementation	42 months after MEEIA approval
Residential Lighting and Appliance Program	Energy Efficiency	New	Residential	estimated by Dec 2013	estimated by Dec 2013	estimated by Dec 2013	1 month after MEEIA approval	7 months after MEEIA approval	6 months after MEEIA approval	12 months after MEEIA implementation	24 months after MEEIA implementation	42 months after MEEIA approval

7.7 RESOURCE ACQUISITION STRATEGY: AGREED UPON REMEDIES TO ALLEGED DEFICIENCIES AND CONCERNS

The following section addresses the Alleged Deficiencies and Concerns from the 2012 KCP&L IRP, Case No. EO-2012-0323. The Resolutions are either verbatim or a shortened version of the agreed-to resolution from the Joint Filing filed in that case.

7.7.1 Staff's Deficiency 9

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-two (22) KCP&L candidate resource plans.

Resolution: The Company agrees that the filing requirements and results per these rules for KCP&L will be provided in the 2013 Annual Update.

Comment: The filing requirements of Rule 4 CSR 240- 22.070(2) and Rule 4 CSR 240-22.070(3) results are provided in Sections 6.8, 7.3 and 7.4 above.

7.7.2 MDNR's Concern 5

KCP&L did not select the lowest-cost plan as its preferred plan. A more complete estimation of achievable savings is necessary to justify the selection of a higher-cost alternative resource plan.

Resolution: The Company will use the results of the DSM Potential Study to meet the requirements of Rule 4 CSR 240-22.060 in the 2013Annual Update. It is understood that the DSM Potential Study will provide DSM impacts and costs, such as MAP, RAP, and economic potential, etc. The Company will include the following in separate 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: (1) MAP, (2) RAP, (3) approximately the RAP plus one-third of the difference between RAP and MAP, and (4) approximately RAP plus two-thirds of the difference between RAP and MAP.

Comment: This issue has been addressed. KCP&L utilized the results of the Navigant DSM Potential Study which provided DSM impacts and costs used for the DSM Portfolios in the 2013 Annual Update.

7.7.3 MDNR's Deficiency 13

Questionable methodology for allocating combined plans. There does not appear to be any underlying methodology for allocating the resources in the combined company plans. Rather, the combined plans appear to be constructed from previously identified company-specific resources. In its annual update, KCP&L should provide a complete description of its approach to constructing combined plans and its allocation procedures. If the Company uses a combined planning approach in the future, the combined plan should include an articulated methodology for sharing demand side, supply side and renewable resources between companies.

Resolution: MDNR and the Company have resolved this deficiency.

7.7.4 MDNR'S Deficiency 14

Missing Analysis of Critical Uncertain Factors for KCP&L Preferred Plan. KCP&L did not analyze the impacts of critical uncertain factors on its preferred plan. Given that the Company has not provided a methodology for allocating the resources in the combined plan to each individual utility, it is not possible to allocate the impacts of the critical uncertain factors.

Resolution: This issue is resolved. The Company and MDNR agree that the Company did comply with 4 CSR 240-22.070(2) and 4 CSR 240-22.070(4). Documentation is in the 2012 KCP&L IRP Volume 7.

7.7.5 MDNR's Concern 6

Federal renewable/clean energy standard as a critical uncertain factor. A potential federal renewable energy standard (RES) or clean energy standard (CES) will have significant impacts on renewable electricity generation and/or acquisition as well as associated costs.

Resolution: This issue is resolved.

SECTION 8: SPECIAL CONTEMPORARY ISSUES

From the Commission Order, EO-2013-0106, the following Special Contemporary Resource Planning Issues are addressed as follows:

8.1 AGGREGATORS OF RETAIL CUSTOMERS

Investigate and document the impacts on the Company's preferred resource plan and contingency plans of aggressive regulations by the FERC, regional transmission organizations ("RTOs") or Missouri statutes or regulations to allow aggregators of retail customers ("ARCs") to operate and market demand response services in Missouri.

Comment: On January 6, 2010, the Missouri Public Service Commission ("MPSC") issued an order in Case No. EW-2010-0187 for the purpose of investigating the coordination of state and federal regulatory policies concerning demand-side programs. This investigation docket has proceeded through a series of information-gathering processes, including several workshops. All of Missouri's investor-owned electric utilities, as well as a number of other interested parties, have participated in this process. Issues in this docket have included the question of whether the MPSC should permit the participation of retail customers in wholesale demand response programs operated by a RTO, and if so, under what rules and pricing terms. KCP&L has submitted written comments in this docket and participated actively in the workshops, expressing its views regarding potential ARC activity in Missouri and the appropriate structure for such activity if permitted. KCP&L's comments touched on numerous elements including the method of retail billing for demand response load, the establishment of economically efficient pricing mechanisms, the impact of ARC participation on the utilities' internal demand response programs, and the potential for costs to shift among customer groups as a result of retail participation in wholesale markets. Before ARCs can operate in the MPSC's jurisdiction, these issues must be resolved. In addition to state regulatory activity, several dockets at FERC are dealing with demand response questions both in rulemaking and in compliance filings made by RTOs such as Southwest Power Pool and the Midwest Independent Transmission System Operator. Given the numerous unresolved questions at both the state and

federal levels, it will be speculative for KCP&L to posit the conditions, framework, and pricing necessary for an IRP analysis of the impact of ARC activity in Missouri. Therefore, the company proposes that this potential risk be analyzed in a similar manner as the Federal Energy Efficiency Standard risk was conducted in the KCP&L Updated IRP Filing On July 1, 2011. The Company will incorporate findings from the workshops being conducted in Case No. EW-2010-0187 to develop a method of analysis as the workshop and IRP filing schedules permit.

8.2 AGGRESSIVE RENEWABLE ENERGY STANDARD

Investigate and document the impacts on the Company's preferred resource plan and contingency plans of a new much more aggressive renewable energy standard (e.g., at least double the current standard for Missouri) with no rate cap.

Comment: KCP&L has included an Alternative Resource Plan FDHKZ in the 2013 Annual Update that consists of replacing capacity with only renewable capacity. See Appendix F for this plan's results.

8.3 VERY AGGRESSIVE ENERGY EFFICIENCY RESOURCE STANDARD

Investigate and document the impacts on the Company's preferred resource plan and contingency plans of a very aggressive energy efficiency resource standard (e.g., annual energy savings of 1.5% each year for 20 years and annual demand savings of 1.0% each year for 20 years from electric utility demand-side programs) with no rate cap in Missouri.

Comment: This issue was addressed by KCP&L evaluating Alternative Resource Plan BDFKA that included the Maximum Achievable Potential (MAP) results from the Navigant DSM Potential Study.

8.4 LOSS OF SIGNIFICANT LOAD

Investigate and document the impacts on the Company's preferred resource plan and contingency plans of a loss of significant load for the short term and potentially for the

long term that may be the result of: 1) a prolonged double-dip recession, and/or 2) the largest customer or a group of customers no longer taking service from Company.

Comment: This issue was addressed by KCP&L evaluating Alternative Resource Plans EDBKA, EDEKA, and EDEKA. See Appendix F for evaluation results of these plans.

8.5 AGGRESSIVE ENVIRONMENTAL REGULATIONS

Investigate and document the impacts of aggressive environmental regulations on Company's preferred resource plan and contingency plans.

Table 64: Potential Environmental Regulations

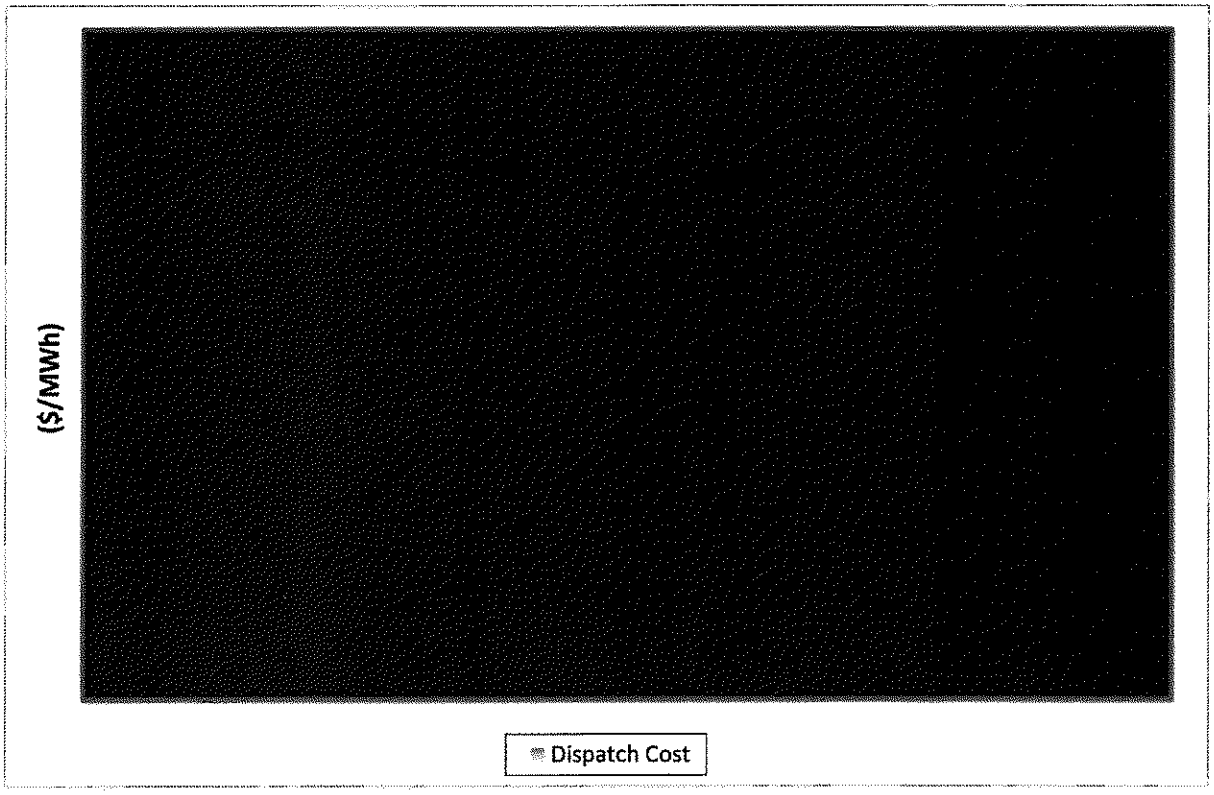
Environmental Driver	Emittant	Compliance Year (Expected)	Status	Retrofit
Mercury and Air Toxics Standards (MATS)	Mercury, PM, HCl	April, 2016	Petitions for judicial review have been filed.	ACI, ESP Improvements, Low Chlorine Coal
Ozone National Ambient Air Quality Standards (O_3 NAAQS)	NO_x	(2019)	Under revision by EPA, final rule July, 2014	SNCR (LR 4/6) LNB/OFA (M-1)
PM National Ambient Air Quality Standards (PM NAAQS)	PM, SO_2, NO_x	(2023)	Final Rule issued - KC area attainment/nonattainment currently undetermined	SCR (on all units)
SO_2 National Ambient Air Quality Standards (SO_2 NAAQS)	SO_2	(2023)	Final Rule issued - KC area attainment/nonattainment currently undetermined	Scrubber/BH (on all units)
Clean Water Act 316(b) (Fish Impingment and Entrainment)	-	(2018)	Under revision by EPA, final rule June, 2013	Fish Friendly Screens
Clean Water Act 316(b) (Fish Impingment and Entrainment)	-	(2019)	Under revision by EPA, final rule June, 2013	Cooling Towers (river units)
Clean Water Act 316(a) (Thermal Discharge)	-	(2019)	KCP&L in discussion with MDNR/EPA	Cooling Towers (lake units)
Effluent Guidelines	Wastewater Constituents	(2019)	Final Rule May, 2014	Cease Wet Sluicing
Coal Combustion Residual (CCR)	Ash/Water	(2019)	Final Rule 1Q, 2014	Cease Wet Sluicing/Increased Dust Controls

8.6 RANKING OF EXISTING COAL GENERATION

Analyze, rank, and document existing coal plant fleet as retirement candidates that includes documentation indicating the date the plant was put in service, the original design life in years and the results of any subsequent life extension studies or modifications to extend the design life, the cost in $/kw to produce energy, and any analysis, studies, inspections, calculations used to justify the continued operation of the plant beyond its original design life.

Comment: The results of the evaluation for the 2013 IRP Update support the justification for planned coal plant retirements and the continued operations for those plants not identified for retirement. Ranking of KCP&L's coal fleet with respect to dispatch cost is shown in Table 65 below.

Table 65: Ranking of Coal Plants in Order of Dispatch Cost **Highly Confidential**



HC

Annual Update integrated analysis shows that Montrose Unit 1 would be the first unit to be retired, followed by Montrose Units 2 and 3. After these units, integrated analysis show LaCygne Unit 1 and then Unit 2. It should be noted that integrated analysis of various retirement scenarios did not include Hawthorn Unit 5, or Iatan Units 1 or 2. However, ranking these units by efficiency show Iatan Unit 2 to be the most efficient, followed by Iatan Unit1, then Hawthorn Unit 5.

The commercial start dates for all of KCP&L's existing coal units are shown in Table 66 below.

Table 66: Coal Unit Commercial Operation Dates

KCP&L PLANT	Commercial Start Date
Montrose 1	July - 1958
Montrose 2	Apr - 1960
Montrose 3	May - 1964
LaCygne 1	Jun - 1973
LaCygne 2	May - 1977
Hawthorn 5	June - 2001
Iatan 1	May - 1980
Iatan 2	August - 2010

There is no official design life for the generation units, but economic analyses on a life-cycle basis was performed on some of the units from the time the unit was designed inferring a minimum operating life. These minimum operating life assumptions are provided in Table 67 below:

Table 67: Coal Unit Minimum Operating Life

KCP&L PLANT	Minimum Design Life (Years)
Montrose 1	30
Montrose 2	30
Montrose 3	30
LaCygne 1	30
LaCygne 2	30
Hawthorn 5	30
Iatan 1	30
Iatan 2	40

The Life Assessment and Management Program (LAMP) for generating units can be reviewed in Section 3.1.4 above.

8.7 DISTRIBUTED GENERATION, DSM PROGRAMS, AND COMBINED HEAT AND POWER PROJECTS

Analyze and document the impacts of opportunities to implement distributed generation, DSM programs, and combined heat and power (CHP) projects in collaboration with municipal water treatment plants and other local waste or agricultural/industrial processes with on-site electrical and thermal load requirements, especially in targeted areas where there may be transmission or distribution line constraints. In particular, develop a model or business case to identify the most cost effective CHP projects and a strategy to increase the deployment of identified cost effective CHP projects.

Comment: This issue was addressed by KCP&L incorporating the results of the Navigant DSM Potential Study in the 2013 Annual Update. The potential for combined heat and power was identified and included in the update. Also included in all scenarios is a projection of Residential Solar PV installations. KCP&L also collaborated with, committed resources and entered into a PPA with Hampton Alternative Energy Products, LLC in early 2012 for the net generation output from the Confined Animal Feedlot Operation (CAFO) facility in Triplett, Missouri, in which an anaerobic digester will capture methane from manure and utilize gen-sets to convert the captured methane into electricity. The expected power output from the facility is 300 kW.

8.8 ENERGY EFFICIENCY IN THE AGRICULTURAL SECTOR

Analyze and document analysis of DSM programs targeted to achieve energy efficiency savings in the agricultural sector.

Comment: The agricultural sector was analyzed as part of the Navigant DSM Potential Study. The sector was found to be less than one half of one percent of KCP&L's retail load. Therefore, agriculture is included as part of the sector "C&I Other".

8.9 CUSTOMER INFORMATION/BEHAVIOR MODIFICATION PROGRAM OPTIONS

Analyze and document alternative customer information/behavior modification program options utilizing either in-house or outside industry experts or a combination of both to increase customer awareness and encourage more efficient use of energy.

Comment: This issue was addressed by KCP&L utilizing the results of the Navigant DSM Potential Study in the 2013 Annual Update. The behavioral modification programs identified were included in the update.

8.10 POTENTIAL CHANGES IN ENVIRONMENTAL AND/OR RENEWABLE ENERGY STANDARDS

Analyze potential or proposed changes in state and/or federal environmental and/or renewable energy standards and report how those changes would affect company's plans for compliance with those standards.

Comment: See Section 8.5 for a description of the proposed and projected environmental regulations that have been considered in the alternative resource plans analyzed for the 2013 Annual Update.

8.11 COST OF ENERGY COMPARISON

Analyze the levelized cost of energy needed to comply with the current Renewable Energy Standards law compared to the cost of energy resulting from a portfolio comprised solely of existing resources with no additional renewable resources.

Comment: Given that the current Renewable Energy Standards (RES) law includes a 1% retail rate impact limit and KCP&L expects to hit that limit starting in 2013, the additional revenue needed to meet the RES requirements is expected to be on average 1% greater than would have occurred without the RES. The 1% limit is based on a projected 10-year rolling average revenue requirement of a non-RES compliant resource plan.

8.12 FUEL SOURCE SUBSIDIES

Disclose and discuss the amount and impact of every state or federal subsidy the Company expects to receive with regard to any or all fuel sources it intends to use during the IRP study period.

Comment: The Company does not expect to receive any state or federal subsidy for any fuel (biofuel, coal, natural gas, oil, or uranium) it expects to consume during the IRP study period.

8.13 SMALL MODULAR REACTOR ANALYSIS

Analyze and document nuclear powered small modular reactor (SMR) as a potential supply-side resource option.

Comment: The small modular nuclear reactors (SMRs) are included in this annual update filing as a supply-side resource option. Based on market information from EPRI TAG©, SMRs are generally classified as nuclear reactors of 700 MW or smaller, but often focus on reactors 335 MW or less. With SMRs still being in the research and development stages, cost data is limited and is primarily based upon large-scale nuclear plants with adjusted scaling factors to account for economy of scale. Lacking the benefits of economy of scale, the specific capital costs of SMRs are generally higher than large-scale nuclear plants. However, SMRs have the advantage of a shorter estimated construction period of about 3-4 years and an ability to allow for multiple units to be built in increments over several years. These features result in lower interest accumulation during construction and less capital-at-risk, which can result in SMRs being cost competitive with larger-scale nuclear plants. Overnight cost estimates for multi-unit SMR plants range from $4,610/kW to $7,292/kW. SMRs also have the advantage of being a carbon-free energy alternative. For the 2013 Annual Update filing, SMRs have been included with an overnight capital cost of $5,255/kW, based upon the lower end of the capital cost estimate range.

8.14 RECALIBRATE LOAD FORECAST

In its annual update, KCP&L should recalibrate its forecast of the number of households to reflect the existing economic situation. The analysis should describe and document any changes in the components of the load forecast made to account for changes in the economic situation.

Comment:

- The economic forecast for the KC metro area was updated. In the 2012 IRP filing, KCP&L used forecasts produced by Moody's Analytics in June 2011. In this filing the forecasts were produced in September 2012.
- Billing statistics were updated through August 2012 for this filing. In the 2012 IRP filing, the statistics were current through June 2011. These statistics include the number of customers, kWh sales and dollars per kWh.
- Both the sales and customer models were recalibrated using updated billing statistics and economic data.

8.15 MARKET STATUS OF DISTRIBUTIVE TECHNOLOGIES

In its annual update, KCP&L should provide a more detailed analysis of the market status of a number of distribution technologies as well as their potential impacts. KCP&L should also explore more opportunities with customer-side CHP.

Comment: This issue was be addressed by KCP&L incorporating the results of the Navigant DSM Potential Study in the 2013 Annual Update. The potential for combined heat and power was identified and included in the update. Also included in ALL scenarios is a projection of Residential Solar PV installations. KCP&L also collaborated with, committed resources and entered into a PPA with Hampton Alternative Energy Products, LLC in early 2012 for the net generation output from the Confined Animal Feedlot Operation (CAFO) facility in Triplett, Missouri, in which an anaerobic digester will capture methane from manure and utilize gen-sets to convert the captured methane into electricity. The expected power output from the facility is 300 kW.

8.16 COMBINED COMPANY IRP PLANNING

KCP&L should describe and document the legal and administrative steps necessary to allow for IRP planning on a combined company basis.

Comment: The IRP rules (4 CSR 240-22. 080(1)) require that each electric utility selling over 1 million megawatt hours in Missouri must make a triennial compliance filing. The Company will be making separate IRP update filings for each Company that will reference joint planning information in certain sections of the IRP update filing. KCP&L, pursuant to the Joint Operating Agreement, will continue to operate and plan for GMO as a separate control area.

8.17 COMBINED COMPANY IRP PLAN DEVELOPMENT

In its annual update, KCP&L should describe and document its approach to constructing combined plans and its allocation procedures. If the Company uses a combined planning approach in the future, the combined plan should include an articulated methodology for sharing demand side, supply side and renewable resources between companies.

Comment: Please see Section 6.7 for a description of the approach to developing combined company plans. Since the Preferred Plans for each utility are based on stand-alone company plans, no allocation of resources between companies is needed.

8.18 DEFICIENCIES FROM FILE NO. EO-2012-0041

Address deficiencies raised by MDNR in the analysis of Special Contemporary Issues B, C, H, I, J, K and L from File No. EO-2012-0041.

Comment: All of those issues were addressed in Section 8: above.

8.19 NATURAL GAS PRICE OUTLOOK

The prospects for continued stability of natural gas prices, especially in light of unconventional gas supplies.

Comment: Unconventional natural gas production is expected to continue to grow through about 2025 and decline thereafter. Recent low natural gas prices have led to resurgence in natural gas demand. Environmental regulations, limited nuclear capacity additions, and uncertainty of renewable resources are also expected to increase demand for natural gas. The net result is the current pricing paradigm for natural gas may not be sustainable for the long-term.

8.20 EXISTING, PENDING, OR POTENTIAL ENVIRONMENTAL STANDARDS WITH RESPECT TO CAPITAL AND OPERATING COSTS

Analyzing and documenting the future capital and operating costs faced by each KCP&L coal-fired generating unit in order to comply with all existing, pending, or potential environmental standards, including:

- Clean Air Act New Source Review provisions
- 1-hour Sulfur Dioxide National Ambient Air Quality Standard
- Cross State Air Pollution Rule in the event the Rule is reinstated
- Clean Air Interstate Rule
- Mercury and Air Toxics Standard
- Clean Water Act 316(b) Cooling Water Intake Standards
- Clean Water Act Steam Electric Effluent Limitation Guidelines
- Clean Air Act Section 111 Greenhouse Gas New Source
- Performance Standards
- Clean Air Act Regional Haze requirements
- Coal Combustion Waste rules.

Comment:

Clean Air Act New Source Review provisions: The Company has no plans to modify an existing unit or construct a new unit that would be significantly impacted by these provisions.

1-hour Sulfur Dioxide National Ambient Air Quality Standard: Because the Montrose Station units are currently expected to be retired before the expected compliance year of 2023 for NAAQS SO_2, no listing is shown in Table 68, Table 69, or Table 70 below. Iatan Station, LaCygne Station and Hawthorn Unit 5 are currently complaint with, or will be by 2015, NAAQS SO_2.

Cross State Air Pollution Rule in the event the Rule is reinstated: The Company was ready to comply with this rule when it was stayed through generation

planning and allowance trading Adjustments were made to this rule prior to the stay that significantly reduced the impacts on KCP&L. In addition, the compliance dates have now past and new compliance dates are unknown. It is anticipated control additions or generation planning associated with compliance with other rules (MATS, SO2 NAAQS, etc.) will also assist in compliance if the CSAPR is reinstated.

Clean Air Interstate Rule: The Company complies with this rule by utilizing existing SO_2 allowances.

Mercury and Air Toxics Standard: See Table 68, Table 69, and Table 70 below.

Clean Water Act 316(b) Cooling Water Intake Standards: See Table 68, Table 69, and Table 70 below.

Clean Water Act Steam Electric Effluent Limitation Guidelines: See Table 68, Table 69, and Table 70 below.

Clean Air Act Section 111 Greenhouse Gas New Source: No final rule for GHG NSPS standards for new or existing has been finalized. The new source GHG NSPS was proposed but never finalized. The proposal does not provide sufficient clarity to model the impacts of the rule.

Performance Standards: See Table 68, Table 69, and Table 70 below.

Clean Air Act Regional Haze requirements: See Table 68, Table 69, and Table 70 below.

Coal Combustion Waste rules: See Table 68, Table 69, and Table 70 below.

Table 68: Retrofit Capital Cost Estimates ** Highly Confidential **

Potential Environmental Rule/Technology (2012 $ x Millions)	Montrose 2	Montrose 3	LaCygne 1 and 2 [1]	Hawthorn	Iatan 1 [1]
MATS/Activated Carbon Injection	[redacted]				
MATS/ESP Rebuild					
CWA 316(b)/Fish-Friendly Screens					
CWA 316(a)/Cooling Towers					
CCR/Wet-to-Dry Bottom Ash Conversion					

Notes
NA = Not Applicable
✓ Equipment Installed
R=Retired before Rule is promulgated
MATS = Mercury and Air Toxics Standard
CCR = Coal Combustion Residual Rules
CWA = Clean Water Act
[1] KCP&L's Share

Table 69: Retrofit Fixed O&M Estimates ** Highly Confidential **

Potential Environmental Rule/Technology ($/kW - 2012 $)	Montrose 2	Montrose 3	LaCygne 1 and 2	Hawthorn	Iatan 1
MATS/Activated Carbon Injection	[redacted]				
MATS/ESP Rebuild					
CWA 316(b)/Fish-Friendly Screens					
CWA 316(a)/Cooling Towers					
CCR/Wet-to-Dry Bottom Ash Conversion					

Notes
NA = Not Applicable
✓ Equipment Installed
R=Retired before Rule is promulgated
MATS = Mercury and Air Toxics Standard
CCR = Coal Combustion Residual Rules
CWA = Clean Water Act

HC

Table 70: Retrofit Variable O&M Estimates ** Highly Confidential **

Potential Environmental Rule/Technology ($/MWh - 2012 $)	Montrose 2	Montrose 3	LaCygne 1 and 2	Hawthorn	Iatan 1
MATS/Activated Carbon Injection	[redacted]				
MATS/ESP Rebuild					
CWA 316(b)/Fish-Friendly Screens					
CWA 316(a)/Cooling Towers					
CCR/Wet-to-Dry Bottom Ash Conversion					

Notes
NA = Not Applicable
✓ Equipment Installed
R=Retired before Rule is promulgated
MATS = Mercury and Air Toxics Standard
CCR = Coal Combustion Residual Rules
CWA = Clean Water Act

8.21 ANALYSIS OF DSM

Analyzing and documenting the technical, maximum achievable, and realistic achievable energy and demand savings from demand side management, and incorporating each level of savings into KCP&L resource planning process.

Comment: This issue was addressed by KCP&L incorporating the results of the Navigant DSM Potential Study in the 2013 Annual Update.

8.22 ACHIEVABLE COMBINED HEAT AND POWER

Analyzing and documenting the levels of achievable combined heat and power (CHP) and incorporating such achievable CHP into KCP&L's evaluation of demand side management.

Comment: This issue was addressed by KCP&L incorporating the results of the Navigant DSM Potential Study in the 2013 Annual Update. The potential for combined heat and power was identified and included in all Alternative Resource Plans developed for the Annual Update.

HC

8.23 SPECIAL CONTEMPORARY ISSUES: AGREED UPON RESOLUTIONS TO ALLEGED DEFICIENCIES AND CONCERNS

The following section addresses the Alleged Deficiencies and Concerns from the 2012 KCP&L IRP, Case No. EO-2012-0323. The Resolutions are either verbatim or a shortened version of the agreed-to resolution from the Joint Filing filed in that case.

8.23.1 Sierra Club

The Sierra Club asserts that KCP&L has hindered public review of its IRP through a failure to describe its resource plans or to produce workpapers with formulas intact. Missouri's IRP rules set forth an open and transparent planning process that is supposed to provide interveners with the information that is needed to allow for a thorough review of the contents of the IRP and the analyses and assumptions upon which the IRP relies.

First, the IRP provides virtually no explanation for how the Combined Company resource plans were developed. Second, contrary to the requirement that "all spreadsheets shall have all formulas intact," many of the workpapers and other supporting documentation provided by KCP&L consisted of spreadsheets that were populated with hardcoded numbers.

KCP&L should revise its IRP filing to describe and document how the Combined Company resource plans were developed and how those plans interact with the resource plans identified for KCP&L and GMO individually. In addition, KCP&L should produce all workpapers and other supporting documentation involving spreadsheets in documents that have all formulas intact.

Resolution: This issue has been resolved. The Company provided additional explanation to Sierra Club regarding the manner in which the Company conducted its MIDAS modeling of alternative resource plans and the separate naming conventions used in the single company and Combined Company alternative resource plan modeling (which were not fully set forth in the IRP documents).

8.23.2 Staff's Deficiency 11

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.

Resolution: Company will include an analysis and description of demand-side investment mechanism necessary to implement the DSM portfolios referenced in the resolution to Staff Deficiency 7 of this Joint Filing.

Comment: In the 2013 Annual Update, aggressive DSM portfolios were evaluated. The Maximum Achievable Potential level of DSM from the DSM Potential Study was evaluated with the development of Alternative Resource Plan BDFKA.

. The demand side investment mechanism for all DSM portfolios would follow the same frame work as the KCP&L GMO MEEIA filing, Case No.: EO-2012-2009. This would include cost recovery, a shared benefit and a performance incentive.

8.23.3 Staff's Concern F

KCP&L 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 comprehensive plan to merge KCP&L and GMO, and no such plan to merge the two companies exists at this time.

Resolution: The Company will research what agreements and/or contracts must be in place to analyze joint company plans and include a discussion of the issue in its 2013 Annual Update.

Comment: KCP&L has researched what agreements and/or contracts must be in place to analyze joint company plans and has included a discussion of the issue in Section 6.11 above.

8.23.4 MDNR's Deficiency 17

Special Contemporary Issue B: Energy savings requirements for Special Contemporary Issue B have not been met, citing Special Contemporary Issue B File No. EO-2012-0041.

Resolution: The Company will include an alternative resource plan in the 2013 Annual Update that consists of only renewable resource additions to meet future capacity requirements.

Comment: KCP&L has included an Alternative Resource Plan FDHKZ in the 2013 Annual Update that consists of replacing capacity with only renewable capacity. See Appendix F for this plan's results.

8.23.5 MDNR's Deficiency 18

Special Contemporary Issue C: Energy savings requirements for Special Contemporary Issue C have not been met, citing Special Contemporary Issue C File No. EO-2012-0041.

Resolution: The Company will continue to use the simulation of H.R. 888 to estimate the effects of an efficiency standard.

Comment: In the 2013 Annual Update, KCP&L evaluated an alternative resource plan that included the Maximum Achievable Potential (MAP) results from the Navigant DSM Potential Study. The plan developed and evaluated was Alternative Resource Plan BDFKA..

8.23.6 MDNR'S CONCERN 7

Special Contemporary Issue H: Response to Special Contemporary Issue H does not address the "demand-side investment mechanisms necessary to implement" an aggressive DSM portfolio. The response to Special Contemporary Issue H does not analyze or document the demand-side investment mechanisms necessary to implement an aggressive DSM portfolio, citing Special Contemporary Issue H File No. EO-2012-0041.

Resolution: The Company will utilize the results of the Navigant Demand-Side-Management Potential Study in its 2013 Annual Update. With this update, the Company will include an analysis and description of demand-side investment mechanisms to implement a DSM portfolio.

Comment: In the 2013 Annual Update, aggressive DSM portfolios were evaluated. The Maximum Achievable Potential level of DSM from the DSM Potential Study was modeled. The demand side investment mechanism for all DSM portfolios would follow the same frame work as the KCP&L GMO MEEIA filing, Case No.: EO-2012-2009. This would include cost recovery, a shared benefit and a performance incentive.

8.23.7 MDNR's Deficiency 19

Special Contemporary Issues I and J: KCP&L has not analyzed distributed generation, DSM programs, and combined heat and power projects in collaboration with municipalities and in the agricultural sector, citing Special Contemporary Issues I and J, File No. EO-2012-0041.

Resolution: The Company will incorporate the results of the Navigant DSM Market Potential Study in its 2013 Annual Update.

Comment: This issue was addressed by KCP&L incorporating the results of the Navigant DSM Potential Study in the 2013 Annual Update. The potential for combined heat and power was identified and included in the update. Also included in ALL scenarios is a projection of Residential Solar PV installations. KCP&L also collaborated with, committed resources and entered into a PPA with Hampton Alternative Energy Products, LLC in early 2012 for the net generation output from the Confined Animal Feedlot Operation (CAFO) facility in Triplett, Missouri, in which an anaerobic digester will capture methane from manure and utilize gen-sets to convert the captured methane into electricity. The expected power output from the facility is 300 kW.

8.23.8 MDNR's Deficiency 20

Special Contemporary Issue K: Customer Information and Behavioral Modification programs not considered. Customer information and behavior modification mentioned in Special Contemporary Issue K, citing Special Contemporary Issue K, File No. EO-2012-0041.

Resolution: The Company will utilize the results of the Navigant Demand-Side-Management Potential Study in its 2013 Annual Update. If additional behavioral modification programs are identified, they will be included in its 2013 Annual Update.

Comment: This issue was addressed by KCP&L utilizing the results of the Navigant DSM Potential Study in the 2013 Annual Update. The behavioral modification programs identified were included in the update.

8.23.9 MDNR's Deficiency 21

Special Contemporary Issue L: The Environmental Impact of Plan ABEK6 has not been analyzed; the requirements of Special Contemporary Issue L have not been met, citing Special Contemporary Issue L, File No. EO-2012-0041.

Resolution: This issue is resolved.

8.24 UNRESOLVED DEFICIENCIES AND CONCERNS

The following section addresses the Unresolved Deficiencies and Concerns listed in the Joint Filing from the 2012 KCP&L IRP, Case No. EO-2012-0323.

8.24.1 Sierra Club – Natural Gas Prices

The Sierra Club asserts that KCP&L's use of unreasonably high natural gas price projections skewed its analysis in favor of retrofitting versus retiring LaCygne Units 1 and 2, Montrose Units 2 and 3, and Sibley Unit 3, and against natural gas-fired supply-side options such as conversion of coal units to natural gas combined cycle ("NGCC") facilities or purchase of existing underutilized NGCC capacity. KCP&L should rerun its economic modeling with up-to-date natural gas price projections, such as those from the EIA AEO 2012. At a minimum, KCP&L should exclude the PIRA natural gas price extrapolation from its natural gas price projections.

Comment: For the 2013 Annual Update, new natural gas price forecast were developed. The 2012 forecasts were no longer used.

8.24.2 Sierra Club – Aging Coal Units

The Sierra Club asserts that KCP&L failed to evaluate the reasonableness of continued investment in its aging coal units. The IRP assumes that KCP&L will incur expenditures in the next three to eight years installing pollution controls needed to keep a number of aging coal-fired generating units operating for twenty or more years into the future. KCP&L purports to have evaluated as part of this planning process whether to retrofit or retire the LaCygne, Montrose, and Sibley coal units. The available evidence, however, strongly suggests that retirement would be the lower NPVRR option for most or all of LaCygne Units 1and 2, Montrose Units 2 and 3, and Sibley Unit 3.

The Sierra Club asserts that past analyses and changed market conditions demonstrate that retirement is likely the lowest NPVRR option for LaCygne Units 1 and 2, Montrose Units 2 and 3, and Sibley Unit 3. Declines in natural gas and market energy prices, among other factors, are leading to a growing number of decisions by utilities to retire decades old coal units that would need significant pollution control

investments to continue long term operations. The Sierra Club cites analyses and a study by Black & Veatch indicating that retrofitting the LaCygne and Montrose units may not result in the lowest NPVRR.

KCP&L should evaluate the NPVRR impacts of retrofitting versus retiring each of the LaCygne Units 1 and 2, Montrose Units 2 and 3, and Sibley Unit 3 plants based on up-to-date information and data that fully reflects changed market conditions, and that explains any differences between the modeling in this proceeding and that used in the Kansas predetermination proceeding.

Comment: The 2013 Annual Update includes current fuel pricing and energy costs. Future potential environmental retrofits have been studied by Burns and McDonnell and are incorporated in the 2013 Annual Update. In addition, the Company developed the resulting net present value revenue requirement (NPVRR) for all Alternative Resource Plans developed which include retirement scenarios of LaCygne 1, LaCygne 2 and Montrose units.

8.24.3 Sierra Club – Non-environmental Capital Costs

The Sierra Club asserts that KCP&L has likely underestimated the non-environmental capital costs needed to keep the Montrose Units operating. KCP&L should ensure that its economic modeling factored in assumptions regarding capital investments that will need to be made to keep the Montrose units operating that are reasonable in light of the assumed retirement dates for such units.

Comment: Burns and McDonnell evaluated the 20-year capital budget for Montrose Station and the results of that evaluation are incorporated in the 2013 Annual Update. The 20-year capital budgets are provided in Table 16 through Table 27 above.

8.24.4 Sierra Club – DSM Evaluation

The Sierra Club asserts that KCP&L failed to thoroughly evaluate demand side management as required by Missouri's IRP rules. Missouri's IRP rules make clear that DSM is an important resource that should be evaluated in the resource planning process on an equal footing with supply-side resources. Despite clear evidence that significantly higher levels of cost-effective DSM would reduce NPVRR, KCP&L

punted the issue of additional DSM down the road and cursorily dismissed, without the required analyses, the idea that anything above a minimal increase in DSM energy savings is cost-effectively achievable.

The Sierra Club asserts that the Company put together a DSM portfolio that would purportedly achieve 0.5% energy savings per year, and then went through the motions of assessing a 1% energy savings and 1.5% energy savings DSM program. Rather than assess its maximum achievable and technical potentials for energy savings, KCP&L notes that it has hired a consultant, Navigant Consulting, to carry out a DSM potential study that is expected to be finished early next year.

KCP&L's contention that a 1% per year energy savings is not realistically achievable is inaccurate. KCP&L has provided no support for that contention, and the reality is that there are many states across the country that have established long-term aggressive energy efficiency goals that go beyond the 1% level to as much as 2 or 2.5% per year.

KCP&L has also erroneously failed to evaluate combined heat and power ("CHP") as part of a DSM portfolio. Missouri has substantial amounts of untapped CHP potential, as the state's technical potential is approximately 16 times as much as the current 227 MW of total installed CHP capacity. KCP&L states that it considers CHP to be "a demand-side resource" but the Company inexplicably failed to analyze it in developing its proposed DSM portfolio.

KCP&L should complete an evaluation of its technical, maximum achievable, and realistic achievable energy savings potential from DSM, including CHP, and incorporate the results of such evaluation into its resource planning as part of the current IRP process.

Comment: This issue was addressed by KCP&L incorporating the results of the Navigant DSM Potential Study in the 2013 Annual Update.

8.24.5 Staff's Deficiency 8

The only requirements of Rule 4 CSR 240-22.060 Integrated Resource Plan and Risk Analysis that are satisfied and described and documented 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.

Comment: The Combined Company resource plans were developed to determine if either of the stand-alone company preferred plans should be adjusted to take into account the resources held by KCP&L and GMO. The results indicate that no adjustments were needed to either stand-alone company plan. The combined company plans analyzed and the NPVRR are documented Section 6.7. Combined-Company plan performance measures are provided in Sections 6.8 through 6.10 as well.

8.24.6 NRDC – Renewable Energy

NRDC asserts that KCP&L's IRP is deficient because KCP&L has not evaluated renewable energy and supply side resources on an equivalent basis, nor have they complied with the rules requiring a maximum RE scenario. KCP&L appears to have only modeled renewable energy to meet new capacity needs and not as a potential replacement for existing nonrenewable plant capacity.

Comment: In the 2012 IRP filing, alternative resource plan (ARP) ABEK6 includes 800 MW of wind resource additions over the 20-year planning period which is twice the amount of non-solar additions currently expected to be required per Missouri Renewable Energy Standards (RES). In the 2013 Annual Update, more than double the wind expected to be required to meet current Missouri RPS was modeled in an Alternative Resource Plan FDHKW.

8.24.7 Sierra Club – DSM Delay

The Sierra Club asserts that KCP&L's two-year delay of additional DSM programs increases NPVRR. Following withdrawal of its MEEIA filing, KCP&L assumes in the IRP that it will not start additional DSM programs until at least 2014. KCP&L should pursue a resource plan that begins implementation of all cost effective DSM as expeditiously as possible, rather than waiting until at least 2014 to do so.

Comment: The Preferred Resource Plan resulting from this 2013 Annual Update, includes additional DSM in the KCP&L Missouri service territory starting in

2014. KCP&L plans to use the Market Potential Study, results of this update including customer rate impacts, and the experience gained through the GMO MEEIA DSM initiatives to develop a strategy to implement the DSM levels in the Preferred Resource Plan.

8.24.8 Sierra Club – Resource Plan Modeling

The Sierra Club asserts that KCP&L's other resource plans that KCP&L apparently did not model would likely have lower NPVRRs. The inflated NPVRR of KCP&L's preferred resource plan is masked by the fact that the Company did not model a number of plans that would likely have even lower NPVRRs. While the IRP reports the NPVRR for 16 different resource plans that include DSM A, it includes only two resource plans with DSM D. Presumably many of the plans with DSM A would end up with a lower NPVRR if DSM D had been assumed. KCP&L should model the impact of DSM D on NPVRR for each of its resource plans, including each of the Combined Company plans.

Comment: In the 2013 Annual Update, five different levels of DSM are evaluated in the Alternative Resource Plans.

8.24.9 Sierra Club – Critical Uncertain Factors

The Sierra Club asserts that KCP&L failed to meaningfully assess the impact of critical uncertain factors on its evaluation of alternative resource plans. KCP&L's evaluation of CO2 prices, natural gas prices, and load growth as critical uncertain factors fails to satisfy the requirements of the IRP rules, as follows.

First, KCP&L never evaluated the critical uncertain factors on a meaningful range of alternative resource plans. Instead, the Company evaluated two Combined Company resource plans – AJDC2 and AGDC2 – that are identical with the exception of the retirement of a single 170 MW coal unit.

Second, KCP&L erred by not evaluating the impacts of critical uncertain factors on any of the KCP&L or GMO specific resource plans. Instead, KCP&L merged a single plan for each company into a Combined Company plan, and then carried out a limited analysis of critical uncertain factors with regards to the Combined Company plan. As

a result, there was never an evaluation of how changed values for critical uncertain factors would impact the comparative NPVRR of resource plans involving DSM D versus DSM A, or of resource plans involving the retirement of one or both LaCygne units.

Third, KCP&L's critical uncertain factors analysis was improperly skewed against coal plant retirements and in favor of retrofitting and continued operation of the LaCygne Units 1 and 2, Montrose Units 2 and 3, and Sibley Unit 3 plants. A lower natural gas price would improve the comparative economic performance of natural gas combined cycle options versus coal plant retrofits. Similarly, a higher CO2 price would favor DSM, renewable energy, natural gas combined cycle, and other lower-carbon alternatives to coal plants. A lower load forecast would help cushion any impact from the loss of generation that would result from a coal plant retirement. KCP&L only considered the impacts of higher natural gas prices, lower CO2 prices, and higher load, each of which would favor keeping the plants stated above operating.

KCP&L should fully evaluate the robustness of each of the potential resource plans under a broad range of circumstances by modeling the impacts of both higher and lower natural gas prices, CO2 prices, and load forecasts on each of the KCP&L and GMO specific resource plans, and on each of the Combined Company resource plans.

Comment: In the 2013 Annual Update, KCP&L evaluated the impact of a range of gas prices, CO_2 prices, and load forecast on each of the alternative resource plans analyzed. Results can be found in Section 7.3 above. Forecasts for each of these uncertainties were updated of the 2013 Annual Update.

8.24.10 Staff's Deficiency 10

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, and 2) the expected value of better information related to the critical uncertain factors (CO2, load forecast and natural gas prices).

Comment: The combined company resource plans were developed to determine if either of the stand-alone company preferred plans should be adjusted to take into account the resources held by KCP&L and GMO. The results indicate that no adjustments were needed to either stand-alone company plan. The combined company plans analyzed and the NPVRR results are documented in Section 6.7. Combined-Company plan performance measures are provided in Sections 6.8 through 6.10 as well.

8.24.11 NRDC – Plan NPVRR and DSM

NRDC asserts that KCP&L's IRP is deficient because KCP&L's preferred plan does not result in the lowest NPVRR and is not justified by the Company. The Company has not explicitly identified or quantitatively analyzed any other considerations that may constrain or limit the NPVRR minimization criterion, as required by the rules. The Company simply asserts that achieving 1.0% in annual incremental savings is unrealistic, even though there is abundant evidence that DSM program administrators across the nation are achieving the same or greater savings.

Comment: In the Company's Integrated Analysis, the system impact of DSM is evaluated over the 20-year study period for every alternative resource plan. The amount of DSM savings and costs are part of the set of options [both DSM and Supply] that make up each resource plan. That process assures DSM will be evaluated in the same manner as other supply options. DSM levels based on meeting arbitrary targets could not be selected as a preferred plan as they were necessarily constructed using DSM programs that are not in existence. Utilizing the results of the Navigant DSM Potential Study, KCP&L has incorporated the Maximum Achievable Potential (MAP), Realistic Achievable Potential (RAP), RAP plus one-third of the difference between RAP and MAP, and RAP plus two-thirds of the difference between RAP and MAP into the alternative resource plans developed in the 2013 Annual Update.

8.24.12 Sierra Club – Lowest Resource Plan NPVRR

The Sierra Club asserts that KCP&L's IRP is deficient because KCP&L failed to select the lowest NPVRR Resource Plan, or justify selecting a more costly Plan.

KCP&L should select the resource plan with the lowest NPVRR as its preferred resource plan, and select a Combined Company preferred resource plan that is based on the lowest NPVRR resource plans in both the KCP&L and GMO IRP proceedings.

Comment: For the 2013 Annual Update, KCP&L has described the reason for selecting other than the lowest NPVRR resource plan. See Section 6: for a description of KCP&L's plan selection process.

8.24.13 Sierra Club – DSM D

The Sierra Club asserts that KCP&L has not attempted to justify its rejection of the lowest-NPVRR resource plan. KCP&L rejected the lowest-NPVRR plan on the ground that DSM D is purportedly "not considered to be realistically achievable." KCP&L should develop a plan for achieving DSM D and include it in its preferred resource plan or, at a minimum, describe and document any conclusion that such level of savings is not achievable.

Comment: For the 2013 Annual Update, KCP&L has described the reason for selecting other than the lowest NPVRR resource plan. Please see Section 6: for a description of KCP&L's plan selection process

8.24.14 Sierra Club – Off-System Sales

The Sierra Club asserts that KCP&L has apparently unreasonably assumed that all excess power from the LaCygne Units 1 and 2, Montrose Units 2 and 3, and Sibley Unit 3 plants would generate significant off-system sales revenue. The Company is assuming that it can generate revenue by selling all or most of the excess energy it generates into the wholesale market at a profit. A likely explanation for such modeling results is that KCP&L is assuming that higher natural gas prices will drive up market prices and, therefore, increase the price at which the Company can sell the excess energy it generates. Conversely, a lower natural gas price would reduce the price at which KCP&L could sell excess energy and the resulting reduction in sales revenue would largely offset the NPVRR benefit that we would otherwise expect to see from declining natural gas prices.

KCP&L should clarify the extent to which it relies on off-system sales revenue in its resource plans, should explain its bases for its assumptions regarding off-system sales, and perform modeling that evaluates the impact of likely declines in off-system sales revenue on the comparative NPVRR of the resource plans evaluated in the IRP.

Comment: For the 2013 Annual Update, KCP&L has updated the natural gas price forecasts and wholesale electric market forecasts. To the extent that KCP&L resources are available to make wholesale sales after all retail obligations are met, plan results include such sales.

8.24.15 Sierra Club – CO_2 Costs

The Sierra Club asserts that KCP&L underestimated likely future CO2 costs. Given that coal-fired units are the most carbon intensive form of power generation, failing to fully account for likely future CO2 costs skews the analysis in favor of continued operation of coal plants and against pursuit of lower-carbon alternatives KCP&L should rerun its resource plan models with an assumed CO2 price that is more in line with that used by other utilities throughout the country.

Comment: The 2013 Annual Update includes updated CO_2 price forecasts.

8.24.16 MDNR's Deficiency 16

KCP&L requests acknowledgement of the combined company methodology rather than a preferred plan or resource acquisition strategy. In making its acknowledgement request, KCP&L is asking the Commission to acknowledge its use of combined company planning approach in this plan and in the allocation methods used to create a KCP&L-specific preferred plan from its combined planning effort.

Comment: The 2013 Annual Update contains stand-alone plans for each utility. However, KCP&L and GMO did perform analyses based on a combined-company view as described in Section 6.7 above. KCP&L and GMO continue to request acknowledgement of this element of their planning process. That specific request for acknowledgement can be found in Section 6.11 above.

8.24.17 MDNR'S Concern 1

KCP&L did not request waivers to address omissions in its DSM analysis or to address the use of a combined company planning process. MDNR is concerned that important analyses have not been conducted by the Company and these omissions limit the ability to fairly assess KCP&L's planning process.

Comment: The 2013 Annual Update includes extensive DSM analysis and as such no waiver for the DSM analysis in required. Since the Company's analysis of combined company resource plans is not in conflict with the IRP requirements, the Company does not believe that a waiver is required.

8.24.18 OPC'S Deficiency 1

KCP&L failed to request a variance from, or waiver of, the requirement in 4 CSR 240-22.080 (1) for utilities to make separate utility specific triennial compliance filing and KCP&L has instead chosen to "perform its resource planning on a joint company basis" with GMO. Even though no such waiver was requested, KCP&L makes a request on page 25 of Volume 8 for "Commission acknowledgement that it is reasonable for KCP&L and GMO to perform resource planning on a joint company basis." KCP&L has not requested the variance or waiver from Chapter 22 rules that would be necessary for the Commission to make the requested acknowledgement. Furthermore, in addition to not requesting such a variance 12 months prior to its triennial filing date, the Company has not shown good cause for such a waiver or variance. KCP&L's attempt to show financial benefits from performing resource planning on a joint company basis is premised upon the assumption that neither GMO nor KCP&L would make investments in a new gas-fired combined cycle plant unless the combined capacity need of GMO and KCP&L would be sufficient to allow GMO and KCP&L combined to have majority ownership of the plant. KCP&L has not presented any type of financial or risk analysis to support this planning assumption.

Comment: KCP&L has performed its resource planning on a stand-alone company basis. The Company does not believe that the additional analysis completed on a combined company basis required a waiver from the Commission.

8.24.19 OPC'S Deficiency 2

Public Counsel recommends that the Commission find, pursuant to 4 CSR 240-22.080 (16)(A) that the electric utility's filing pursuant to this rule does NOT demonstrate compliance with the requirements of Chapter 22, and that the utility's resource acquisition strategy either does not meet the requirements stated in 4 CSR 240-22. KCP&L's request that the Commission find that its preferred resource plan is reasonable should be denied because the utility's preferred resource plan is premised upon the lawfulness and reasonableness of KCP&L and GMO performing resource planning on a joint company basis. As shown in deficiency number one above, KCP&L did not request the variance or waiver from Chapter 22 rules that would be necessary for the Commission to make the requested reasonableness finding regarding the preferred plan resulting from joint planning that has not been authorized by the Commission. In addition, the performance of resource planning on a joint company basis that was done for this triennial filing: (1) failed to show any substantial financial benefits of joint filing that are not premised upon the assumption that neither GMO nor KCP&L would make investments in a new gas-fired combined cycle plant unless the combined capacity need of GMO and KCP&L would be sufficient to allow GMO and KCP&L combined to have majority ownership of the plant 4 and (2) did not comply with all the requirements of Chapter 22 such as the requirement in 4 CSR 240-22.080 (2)(C)3 for special contemporary issues to be addressed.

Comment: KCP&L has performed its resource planning on a stand-alone company basis. The Company does not believe that the additional analysis completed on a combined company basis required a waiver from the Commission. Combined cycle additions were not based on majority ownership in the 2013 Annual Update.

8.24.20 OPC'S Deficiency 3

Failure to provide required statement of commitment in the letter of transmittal. The letter of transmittal provided by Roger Steiner does not contain the required commitment to the approved preferred resource plan and resource acquisition strategy and does not appear to be signed by an officer of the utility having the authority to bind and commit the utility to the resource acquisition strategy.

Comment: The 2013 Annual Update Letter of Transmittal contains a reference to the Corporate Approval statement.

8.24.21 NRDC – DSM Information

NRDC asserts that KCP&L's IRP is deficient because KCP&L's DSM research activities, which support the Company's preferred plan, includes outdated research and information, and does not tie directly to KCP&L's program savings goals and budgets, nor reflect current best practices and an accurate estimate of what is realistically achievable. KCP&L cites a number of studies that have no clear direct bearing on estimating cost-effective achievable DSM resources within its territory, do not explain how these studies are relied on (if at all), and admit that the main study they are required to do has not been done.

Comment: The 2013 Annual Update contains updated research on the potential for DSM that includes realistic achievable potential estimates.

8.24.22 NRDC – DSM Program Design

NRDC asserts that KCP&L's IRP is deficient because KCP&L has not designed highly effective DSM programs that broadly cover the full spectrum of cost effective end use measures. KCP&L's program descriptions do not reflect industry best practices, nor do they adequately suggest that a full spectrum of cost effective measures are actually included in the programs.

Comment: The 2013 Annual Update contains updated research on the potential for DSM that includes realistic achievable potential estimates.

8.24.23 NRDC – Demand Side Rates

NRDC asserts that KCP&L's IRP is deficient because KCP&L has not completed a full review of the demand side rates designed to reduce net consumption or modify the timing of its use. The IRP is deficient for several reasons; the most significant being that the Company refers to research that will be completed at some time in the future but does not indicate they have performed the required analyses to assess the potential for new rate designs to induce demand-side reductions or shifts in usage.

Comment: This issue was addressed by KCP&L incorporating the results of the Navigant DSM Potential Study in the 2013 Annual Update. The DSM potential from Demand Side Rates was identified and included in the analysis.

8.24.24 NRDC – Energy Efficiency vs. Supply Side Resources

NRDC asserts that KCP&L's IRP is deficient because KCP&L has not evaluated energy efficiency and supply side resources on an equivalent basis. KCP&L has not completed a recent DSM potential study and, therefore, has not assessed the full potential of energy efficiency or its levelized costs. Due to the lack of good data, the Company is not in a position to compare energy efficiency resources to supply side resources on an equivalent basis.

Comment: The 2013 Annual Update is based on the recently completed DSM Potential Study. DSM and supply side resources are both considered as options for meeting retail customer demand and energy needs.

8.24.25 MDNR'S DEFICIENCY 15

Inadequate analysis of combined plan. KCP&L and GMO conducted a combined planning exercise that estimated 14 combined company plans, selected a combined preferred plan, identified contingency plans, and allocated the preferred plan back to each individual company. In completing the combined analysis, the Company neglected to meet the analysis and filing requirements described in the Chapter 22 rules.

Comment: In the 2013 Annual Update, the KCP&L and GMO preferred plans are based on a stand-alone analysis performed per the IRP requirements.