



**2014 RATE APPLICATION
SIECA INTERROGATORIES ROUND TWO**

Round2 – SIECAQ1:

1. Please provide any and all updates to the following compared to what was included in the 2013 rate application:
 - a. Energy and demand forecast by system and customer class
 - b. Revenues from sales
 - c. OMA costs
 - d. Fuel costs
 - e. Capital expenditures and related interest, finance charges and depreciation expense
 - f. Other revenues
 - g. Any other costs or revenues not reflected above

Response:

The 2013 rate application was based on a preliminary 2013 Business Plan dated March 31, 2012. The actual results are SaskPower's preliminary, unaudited actual results for 2013 as of January 12, 2014, and are subject to change. The actual results must remain confidential until they are publicly released, which will take place in April. A copy of 2013's unaudited results has been provided to the Saskatchewan Rate Review Panel.



**2014 RATE APPLICATION
SIECA INTERROGATORIES ROUND TWO**

Round2 – SIECAQ2:

Please provide a schedule that shows the revenue requirement by cost driver for 2014, 2015 and 2016.

Response:

This information is available in SaskPower’s “2014-2016 Test Embedded Cost of Service Study” which is included in the Minimum Filing Requirements SaskPower previously submitted. The tables containing this information are located on pages 37 (2014), 84 (2015) and 131 (2016) of the report.

The Saskatchewan Rate Review Panel has this report available online at the following address:

<http://www.saskratereview.ca/images/docs/SaskPower2013/minimum-filing-requirements.pdf>



**2014 RATE APPLICATION
SIECA INTERROGATORIES ROUND TWO**

Round2 – SIECAQ3:

Please provide the 2014 class cost of service study related schedules in Excel spreadsheet format with formulae intact (see minimum filing requirement – Section IV – Embedded Cost of Service study results.

Response:

SaskPower is unable to provide these schedules in Excel spreadsheet format with the formulae intact. The tables in question have a substantial number of links to other supporting documents that, when opened, would cause the links to fail, resulting in a series of errors occurring throughout the document. Please refer to the printed tables available in SaskPower's "[2014-2016 Test Embedded Cost of Service Study](#)" which is included in the Minimum Filing Requirements SaskPower previously submitted.

The Saskatchewan Rate Review Panel has this report available online at the following address:

<http://www.saskratereview.ca/images/docs/SaskPower2013/minimum-filing-requirements.pdf>



**2014 RATE APPLICATION
SIECA INTERROGATORIES ROUND TWO**

Round2 – SIECAQ4:

Please provide the tables A1,A2,A3 and A4 in the 2013 load forecast study in Excel spreadsheet format (see response to SIECA #2).

Response:

The tables have been provided in Excel.



TABLE A1

2013 DSM ADJUSTED TOTAL SYSTEM LOAD FORECAST
FIRST QUARTER
ENERGY SALES, NUMBER OF ACCOUNTS AND PEAK DEMAND

Year	POWER		OILFIELDS		COMMERCIAL		RESIDENTIAL		FARM		RESELLER		CORPORATE USE		TOTAL SALES		LOSSES	TOTAL ENERGY REQUIREMENTS GWh	CALENDAR PEAK DEMAND MW
	GWh	# of Accounts	GWh	# of Accounts	GWh	# of Accounts	GWh	# of Accounts	GWh	# of Accounts	GWh	# of Accounts	GWh	# of Accounts	GWh	GWh			
2002	5,852.7	81	1,970.2	10,951	3,080.9	51,963	2,456.9	300,763	1,366.9	67,355	1,262.8	2	125.6	209	16,116.0	431,324	1,789.3	17,905.4	2,800
2003	6,273.9	85	2,081.8	11,058	3,150.5	52,175	2,508.9	302,897	1,441.9	67,025	1,287.3	2	122.3	209	16,866.8	433,451	1,681.8	18,548.6	2,805
2004	6,504.3	84	2,164.8	11,259	3,132.2	52,508	2,483.8	305,472	1,349.8	66,424	1,260.7	2	111.3	212	17,007.0	435,961	1,790.7	18,797.7	2,954
2005	6,552.0	78	2,263.9	11,508	3,200.1	52,604	2,513.8	308,221	1,337.0	64,985	1,265.8	2	103.1	212	17,235.7	437,610	1,676.4	18,912.1	2,946
2006	6,662.4	78	2,399.3	12,045	3,238.8	52,869	2,530.5	309,551	1,271.7	64,601	1,293.5	2	108.8	212	17,505.0	439,358	1,803.5	19,308.5	2,960
2007	6,854.9	78	2,541.4	12,805	3,268.1	53,421	2,642.9	315,507	1,329.0	63,751	1,286.8	2	109.2	212	18,032.3	445,776	1,794.4	19,826.7	2,969
2008	6,552.0	78	2,705.0	13,453	3,287.0	53,911	2,721.2	322,408	1,305.8	62,553	1,274.2	2	109.4	212	17,954.7	452,617	1,882.7	19,837.3	3,194
2009	6,138.7	82	2,742.5	14,174	3,406.8	54,525	2,864.8	329,046	1,338.1	61,993	1,274.4	2	107.6	212	17,873.0	460,034	1,875.2	19,748.2	3,231
2010	6,926.7	91	2,871.3	14,756	3,390.9	54,945	2,882.4	334,780	1,291.6	61,404	1,254.3	2	107.2	212	18,724.3	466,190	1,899.1	20,623.4	3,162
2011	7,318.7	97	2,900.8	15,015	3,447.5	55,501	3,006.0	346,312	1,298.3	60,871	1,260.6	2	109.3	212	19,341.1	478,010	1,916.2	21,257.3	3,195
2012	7,447.7	100	3,177.2	16,446	3,532.0	56,605	2,937.6	350,499	1,148.8	62,063	1,253.8	2	114.2	212	19,611.1	485,927	2,137.3	21,748.4	3,314
2013	7,625.8	101	3,315.6	17,152	3,587.5	56,929	2,971.6	356,289	1,301.7	60,769	1,260.4	2	110.3	212	20,172.9	491,454	1,981.0	22,153.8	3,558
2014	8,233.6	100	3,685.7	17,992	3,609.2	57,534	3,013.5	362,882	1,305.3	60,630	1,264.1	2	110.5	212	21,221.9	499,352	1,931.3	23,153.2	3,686
2015	8,829.7	105	3,939.6	19,034	3,630.6	58,152	3,056.5	369,620	1,308.5	60,481	1,267.9	2	110.8	212	22,143.6	507,607	1,977.1	24,120.7	3,818
2016	9,796.2	107	4,016.9	19,608	3,673.7	58,779	3,102.1	376,449	1,298.3	60,341	1,271.6	2	111.2	212	23,270.0	515,499	1,934.9	25,204.8	3,945
2017	10,622.0	107	4,110.7	20,427	3,698.9	59,421	3,158.3	383,441	1,282.6	60,181	1,275.3	2	111.5	212	24,259.4	523,791	1,948.0	26,207.3	4,089
2018	11,115.3	109	4,132.3	20,752	3,721.2	60,078	3,200.6	390,594	1,269.4	60,005	1,278.5	2	111.8	212	24,829.2	531,752	1,950.0	26,779.3	4,162
2019	11,269.8	110	4,143.7	21,355	3,742.8	60,736	3,251.7	397,760	1,263.2	59,873	1,281.7	2	109.5	212	25,062.4	540,047	1,970.4	27,032.8	4,198
2020	11,600.1	110	4,149.7	21,543	3,763.8	61,402	3,307.2	405,019	1,257.5	59,752	1,284.9	2	109.9	212	25,473.2	548,040	1,968.2	27,441.4	4,241
2021	12,078.5	110	4,161.3	22,134	3,784.1	62,078	3,373.7	412,378	1,255.1	59,637	1,288.1	2	110.2	212	26,051.0	556,550	1,950.2	28,001.2	4,330
2022	12,469.0	110	4,181.1	22,725	3,803.5	62,771	3,459.0	419,927	1,249.1	59,460	1,291.4	2	110.5	212	26,563.5	565,206	1,963.0	28,526.5	4,402
2023	12,521.6	110	4,216.8	23,316	3,821.9	63,401	3,555.0	426,790	1,232.6	59,263	1,294.6	2	110.8	212	26,753.2	573,094	2,006.3	28,759.5	4,436

Growth Rates (%)

2007 - 2012	1.7%	5.1%	4.6%	5.1%	1.6%	1.2%	2.1%	2.1%	-2.9%	-0.5%	-0.5%	0.0%	0.9%	0.0%	1.7%	1.7%	3.6%	1.9%	2.2%
2002 - 2012	2.4%	2.1%	4.9%	4.2%	1.4%	0.9%	1.8%	1.5%	-1.7%	-0.8%	-0.1%	0.0%	-0.9%	0.1%	2.0%	1.2%	1.8%	2.0%	1.7%
2013 - 2018	7.8%	1.5%	4.5%	3.9%	0.7%	1.1%	1.5%	1.9%	-0.5%	-0.3%	0.3%	0.0%	0.3%	0.0%	4.2%	1.6%	-0.3%	3.9%	3.2%
2013 - 2023	5.1%	0.9%	2.4%	3.1%	0.6%	1.1%	1.8%	1.8%	-0.5%	-0.3%	0.3%	0.0%	0.0%	0.0%	2.9%	1.5%	0.1%	2.6%	2.2%

- 1.) All forecasted energy values are normalized to reflect 30-year average weather patterns.
- 2.) All forecasted Calendar Peak values are potential; peak shavings are not included. All historical peaks are actuals with peak shavings and interruptibles included.
- 3.) The demand side management (DSM) energy and peak demand saving as identified by SaskPower's DSM department are reflected in the forecast above.
- 4.) The number of accounts is the average for the year as required for rate design and revenue forecasting.



TABLE A2

2013 DSM ADJUSTED GRID ONLY LOAD FORECAST

FIRST QUARTER

ENERGY SALES AND NUMBER OF ACCOUNTS

Year	POWER		OILFIELDS		COMMERCIAL		RESIDENTIAL		FARM		RESELLER		CORPORATE USE		TOTAL SALES		LOSSES	TOTAL ENERGY REQUIREMENTS GWh
	GWh	# of Accounts	GWh	# of Accounts	GWh	# of Accounts	GWh	# of Accounts	GWh	# of Accounts	GWh	# of Accounts	GWh	# of Accounts	GWh	# of Accounts	GWh	
2002	5,852.7	81	1,970.2	10,951	3,064.6	51,768	2,439.1	299,774	1,366.9	67,355	1,262.8	2	125.4	207	16,081.7	430,138	1,785.6	17,867.3
2003	6,273.9	85	2,081.8	11,058	3,132.8	51,977	2,491.4	301,905	1,441.9	67,025	1,287.3	2	122.1	207	16,831.2	432,259	1,677.4	18,508.6
2004	6,504.3	84	2,164.8	11,259	3,114.4	52,314	2,465.8	304,476	1,349.8	66,424	1,260.7	2	111.0	210	16,970.9	434,769	1,786.6	18,757.4
2005	6,552.0	78	2,263.9	11,508	3,182.4	52,410	2,495.6	307,212	1,337.0	64,985	1,265.8	2	102.8	210	17,199.5	436,405	1,674.6	18,874.1
2006	6,662.4	78	2,399.3	12,045	3,231.7	52,668	2,513.4	308,519	1,271.7	64,601	1,293.5	2	108.4	210	17,480.5	438,123	1,801.1	19,281.6
2007	6,854.9	78	2,541.4	12,805	3,261.1	53,235	2,624.4	314,480	1,329.0	63,751	1,286.8	2	108.8	210	18,006.4	444,561	1,791.4	19,797.8
2008	6,895.0	78	2,705.0	13,453	3,280.0	53,723	2,701.5	321,367	1,305.8	62,553	1,274.2	2	109.1	210	18,270.7	451,386	1,879.0	20,149.7
2009	6,138.7	82	2,742.5	14,174	3,399.3	54,331	2,844.8	328,003	1,338.1	61,993	1,274.4	2	107.2	210	17,845.0	458,795	1,872.3	19,717.4
2010	6,926.7	91	2,871.3	14,756	3,383.7	54,745	2,863.8	333,727	1,291.6	61,404	1,254.3	2	106.8	210	18,698.1	464,935	1,896.7	20,594.8
2011	7,318.7	97	2,900.8	15,015	3,440.0	55,295	2,986.4	345,207	1,298.3	60,871	1,260.6	2	108.9	210	19,313.7	476,697	1,914.2	21,227.9
2012	7,447.7	100	3,177.2	16,446	3,524.5	56,392	2,918.4	349,336	1,148.8	62,063	1,253.8	2	113.6	210	19,583.9	484,549	2,134.8	21,718.7
2013	7,625.8	101	3,315.6	17,152	3,580.1	56,716	2,952.4	355,126	1,301.7	60,769	1,260.4	2	109.7	210	20,145.7	490,076	1,979.3	22,125.0
2014	8,233.6	100	3,685.7	17,992	3,601.8	57,321	2,994.3	361,719	1,305.3	60,630	1,264.1	2	110.0	210	21,194.7	497,974	1,929.7	23,124.4
2015	8,829.7	105	3,939.6	19,034	3,623.2	57,939	3,037.3	368,457	1,308.5	60,481	1,267.9	2	110.3	210	22,116.4	506,229	1,975.4	24,091.8
2016	9,796.2	107	4,016.9	19,608	3,666.3	58,566	3,082.9	375,286	1,298.3	60,341	1,271.6	2	110.6	210	23,242.8	514,121	1,933.2	25,176.0
2017	10,622.0	107	4,110.7	20,427	3,691.5	59,208	3,139.1	382,278	1,282.6	60,181	1,275.3	2	110.9	210	24,232.2	522,413	1,946.3	26,178.5
2018	11,115.3	109	4,132.3	20,752	3,713.8	59,865	3,181.4	389,431	1,269.4	60,005	1,278.5	2	111.2	210	24,802.1	530,374	1,948.4	26,750.4
2019	11,269.8	110	4,143.7	21,355	3,735.4	60,523	3,232.5	396,597	1,263.2	59,873	1,281.7	2	108.9	210	25,035.2	538,669	1,968.8	27,004.0
2020	11,600.1	110	4,149.7	21,543	3,756.4	61,189	3,288.0	403,856	1,257.5	59,752	1,284.9	2	109.3	210	25,446.0	546,662	1,966.6	27,412.6
2021	12,078.5	110	4,161.3	22,134	3,776.7	61,865	3,354.5	411,215	1,255.1	59,637	1,288.1	2	109.6	210	26,023.8	555,172	1,948.5	27,972.4
2022	12,469.0	110	4,181.1	22,725	3,796.0	62,558	3,439.9	418,764	1,249.1	59,460	1,291.4	2	109.9	210	26,536.4	563,828	1,961.3	28,497.7
2023	12,521.6	110	4,216.8	23,316	3,814.5	63,188	3,535.8	425,627	1,232.6	59,263	1,294.6	2	110.2	210	26,726.1	571,716	2,004.6	28,730.7

Growth Rates (%)

2007 - 2012	1.7%	5.1%	4.6%	5.1%	1.6%	1.2%	2.1%	2.1%	-2.9%	-0.5%	-0.5%	0.0%	0.9%	0.0%	1.7%	1.7%	3.6%	1.9%
2002 - 2012	2.4%	2.1%	4.9%	4.2%	1.4%	0.9%	1.8%	1.5%	-1.7%	-0.8%	-0.1%	0.0%	-1.0%	0.1%	2.0%	1.2%	1.8%	2.0%
2013 - 2018	7.8%	1.5%	4.5%	3.9%	0.7%	1.1%	1.5%	1.9%	-0.5%	-0.3%	0.3%	0.0%	0.3%	0.0%	4.2%	1.6%	-0.3%	3.9%
2013 - 2023	5.1%	0.9%	2.4%	3.1%	0.6%	1.1%	1.8%	1.8%	-0.5%	-0.3%	0.3%	0.0%	0.0%	0.0%	2.9%	1.6%	0.1%	2.6%

- 1.) All forecasted energy values are normalized to reflect 30-year average weather patterns.
- 2.) The demand side management (DSM) energy and peak demand saving as identified by SaskPower's DSM department are reflected in the forecast above.
- 3.) The number of accounts is the average for the year as required for rate design and revenue forecasting.



TABLE A3

2013 NON - GRID LOAD FORECAST
FIRST QUARTER
ENERGY SALES AND NUMBER OF ACCOUNTS

Year	COMMERCIAL		RESIDENTIAL		CORPORATE USE		TOTAL SALES		LOSSES ¹⁾	TOTAL ENERGY REQUIREMENTS GWh
	GWh	# of Accounts	GWh	# of Accounts	GWh	# of Accounts	GWh	# of Accounts	GWh	
2002	16.3	195	17.8	989	0.2	2	34.3	1,186	3.8	38.1
2003	17.7	198	17.5	992	0.2	2	35.5	1,192	4.4	39.9
2004	17.8	194	18.1	996	0.3	2	36.2	1,192	4.1	40.3
2005	17.7	194	18.2	1009	0.3	2	36.2	1,205	1.8	38.0
2006	7.1	201	17.1	1,032	0.4	2	24.5	1,235	2.4	26.8
2007	7.0	186	18.5	1,027	0.4	2	25.9	1,215	3.0	28.9
2008	7.0	188	19.6	1,041	0.3	2	26.9	1,231	3.7	30.6
2009	7.5	194	20.0	1,043	0.4	2	27.9	1,239	2.9	30.8
2010	7.3	200	18.6	1,053	0.4	2	26.2	1,255	2.4	28.6
2011	7.5	206	19.5	1,105	0.4	2	27.4	1,313	2.0	29.4
2012	7.4	213	19.2	1,163	0.6	2	27.2	1,378	2.5	29.7
2013	7.4	213	19.2	1,163	0.6	2	27.2	1,378	1.6	28.8
2014	7.4	213	19.2	1,163	0.6	2	27.2	1,378	1.6	28.8
2015	7.4	213	19.2	1,163	0.6	2	27.2	1,378	1.6	28.8
2016	7.4	213	19.2	1,163	0.6	2	27.2	1,378	1.6	28.8
2017	7.4	213	19.2	1,163	0.6	2	27.2	1,378	1.6	28.8
2018	7.4	213	19.2	1,163	0.6	2	27.2	1,378	1.6	28.8
2019	7.4	213	19.2	1,163	0.6	2	27.2	1,378	1.6	28.8
2020	7.4	213	19.2	1,163	0.6	2	27.2	1,378	1.6	28.8
2021	7.4	213	19.2	1,163	0.6	2	27.2	1,378	1.6	28.8
2022	7.4	213	19.2	1,163	0.6	2	27.2	1,378	1.6	28.8
2023	7.4	213	19.2	1,163	0.6	2	27.2	1,378	1.6	28.8

Growth Rates (%)

2007 - 2012	1.1%	2.7%	0.7%	2.5%	9.9%	0.0%	1.0%	2.5%	-3.7%	0.5%
2002 - 2012	-7.6%	0.9%	0.8%	1.6%	9.4%	0.0%	-2.3%	1.5%	-4.1%	-2.5%
2013 - 2018	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2013 - 2023	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

1) Losses are calculated by taking the difference between Total Energy Requirements and Total Sales. The Total Sales and Total Energy Requirements are forecasted numbers.



TABLE A4

2013 GRID ONLY LOAD FORECAST

FIRST QUARTER

Summary of Base and DSM Adjusted Forecasts

Year	Grid Only Energy Requirements (GWh)					Interval Calendar Peak (MW)					Instantaneous Calendar Peak (MW)	Demand Response Available (MW)
	Base Forecast	Add To-date DSM Savings	Base Forecast Plus To-date	DSM Savings	DSM Adjusted	Base Forecast	Add To-date DSM Savings	Base Forecast Plus To-date	DSM Savings	DSM Adjusted		
2013	22,154.0	111.5	22,265.5	140.5	22,125.0	3,486.6	50.0	3,536.6	58.8	3,477.9	3,558.3	85.0
2014	23,182.3	111.5	23,293.9	169.5	23,124.4	3,619.8	50.0	3,669.8	67.5	3,602.3	3,685.6	85.0
2015	24,178.8	111.5	24,290.3	198.4	24,091.8	3,757.8	50.0	3,807.8	76.2	3,731.6	3,817.9	85.0
2016	25,292.9	111.5	25,404.4	228.4	25,176.0	3,891.6	50.0	3,941.6	85.4	3,856.2	3,945.4	85.0
2017	26,324.4	111.5	26,435.9	257.4	26,178.5	4,040.4	50.0	4,090.4	93.9	3,996.5	4,088.9	85.0
2018	26,929.8	111.5	27,041.3	290.9	26,750.4	4,121.5	50.0	4,171.5	103.3	4,068.1	4,162.2	85.0
2019	27,215.3	111.5	27,326.8	322.8	27,004.0	4,165.5	50.0	4,215.5	112.8	4,102.7	4,197.6	85.0
2020	27,656.2	111.5	27,767.8	355.1	27,412.6	4,217.3	50.0	4,267.3	122.2	4,145.1	4,241.0	85.0
2021	28,248.6	111.5	28,360.1	387.8	27,972.4	4,313.7	50.0	4,363.7	131.6	4,232.1	4,330.0	85.0
2022	28,806.6	111.5	28,918.1	420.5	28,497.7	4,393.6	50.0	4,443.6	141.0	4,302.6	4,402.1	85.0
2023	29,072.3	111.5	29,183.9	453.2	28,730.7	4,436.2	50.0	4,486.2	150.4	4,335.8	4,436.1	85.0

Notes:

- DSM savings includes distribution loss savings.
- DSM savings do not include savings associated with the Internal Line Program.



**2014 RATE APPLICATION
SIECA INTERROGATORIES ROUND TWO**

Round2 – SIECAQ5:

Please explain how SaskPower utilizes the low and high cases from its load forecast for planning and building infrastructure.

Response:

The high and low load forecasts are utilized to develop contingency plans around the need for new generation.



**2014 RATE APPLICATION
SIECA INTERROGATORIES ROUND TWO**

Round2 – SIECAQ6:

Regarding response to SIECA’s #9, what percentage of probability is assigned to probable loads?

Response:

Please refer to the table below which provides the number of probable load customers, the energy sales to those customers and the (energy sales) weighted average probability for 2014, 2015, 2016 and 2020. The year 2020 is provided for comparison purposes.

	2014	2015	2016	2020
Number of Probable Load Customers	1	5	8	15
Energy Sales (GWh)	150	472	669	1,763
Weighted Average Probability	80.0%	77.2%	75.0%	71.6%



**2014 RATE APPLICATION
SIECA INTERROGATORIES ROUND TWO**

Round2 – SIECAQ7:

In the most likely forecast, please provide the percentage of probable versus firm loads by MW and MWh and by customer class.

Response:

Please refer to the following table of energy sales and the contribution to SaskPower’s winter peak for firm and probable load customers in the Power class. Only the Power class has probable loads.

	2014 Energy Sales		2015 Energy Sales		2016 Energy Sales		2020 Energy Sales	
	GWh	% of Total	GWh	% of Total	GWh	% of Total	GWh	% of Total
Firm Load	8,083	98.2%	8,358	94.7%	9,127	93.2%	9,837	84.8%
Probable Load	150	1.8%	472	5.3%	669	6.8%	1,763	15.2%
Total	8,234	100.0%	8,830	100.0%	9,796	100.0%	11,600	100.0%
	Contribution to 2014 Peak		Contribution to 2015 Peak		Contribution to 2016 Peak		Contribution to 2020 Peak	
	MW	% of Total	MW	% of Total	MW	% of Total	MW	% of Total
Firm Load	1,039.20	98.2%	1,074.31	94.7%	1,169.79	93.2%	1,263.28	84.9%
Probable Load	19.2	1.8%	60.4	5.3%	85.3	6.8%	224.8	15.1%
Total	1,058.4	100.0%	1,134.7	100.0%	1,255.0	100.0%	1,488.1	100.0%



**2014 RATE APPLICATION
SIECA INTERROGATORIES ROUND TWO**

Round2 – SIECAQ8:

Please provide the number of curtailments due to wind generation by year (from 2010-2013) and also provide the MWhs curtailed by event.

Response:

Year	Wind Curtailments
2010	10
2011	7
2012	6
2013	7

Due to the variability of wind generation no accurate estimate of wind energy (MWh) curtailed is possible.



**2014 RATE APPLICATION
SIECA INTERROGATORIES ROUND TWO**

Round2 – SIECAQ9:

Regarding response to question #12, SaskPower states the following:

“From a system perspective, wind generation costs are very competitive with other sources of generation.”

We would appreciate a numerical justification for this response.

Response:

The analysis for the 177 MW wind farm was completed in 2009 and was based on the best available cost and operating assumptions at the time. The analysis was based on adding the wind generation to the system and determining the net present value effect of comparing the additional wind to a base case with new natural gas generation. Natural gas costs, capital and construction costs, CO₂ emission costs as well as financial parameters can have an effect on the outcome of the analysis. The analysis determined that there was a modest savings for the addition of 200 MW of new wind generation procured through a competitive solicitation.

The Decision Item has been included for the Rate Review Panel and is considered to be confidential.

SaskPower is unable to provide the details regarding the financial analysis completed on the most recently added wind operation obtained through a competitive process with external IPPs, but has provided the SRRP with two documents that discuss the levelized cost of new operation sources. They are:

1. US Energy Information Administration Report on Levelized Cost of New Generation Resources in the Annual Energy Outlook 2013
2. SaskPower Estimated Generation Costs within a Saskatchewan Context

Both of these documents are available on the SRRP website.



**2014 RATE APPLICATION
SIECA INTERROGATORIES ROUND TWO**

Round2 – SIECAQ10:

Regarding response to question #13, please provide the cost benefit analysis. Please also provide the \$/KW costs associated with the capital costs for wind, O&M cost assumptions, costs for integrating wind as well as \$/MWh levelized costs.

Response:

The analysis for the 177 MW wind farm was completed in 2009 and was based on the best available cost and operating assumptions at the time. The analysis was based on adding the wind generation to the system and determining the net present value effect of comparing the additional wind to a base case with new natural gas generation. Natural gas costs, capital and construction costs, CO₂ emission costs as well as financial parameters can have an effect on the outcome of the analysis. The analysis determined that there was a modest savings for the addition of 200 MW of new wind generation procured through a competitive solicitation.

The costs for wind power are market driven. The 177 MW was solicited through a competitive request for proposals. A tariff price was proposed by the proponent for capital and O&M but the overall capital cost for the projects was not given to SaskPower. The tariff pricing is confidential based on the signed Power Purchase Agreement with the proponent.

The Decision Item has been included for the Rate Review Panel and is considered to be confidential.

SaskPower is unable to provide the details regarding the financial analysis completed on the most recently added wind operation obtained through a competitive process with external IPPs but has provided the SRRP with two documents that discuss the levelized cost of new operation sources. They are:

1. US Energy Information Administration Report on Levelized Cost of New Generation Resources in the Annual Energy Outlook 2013
2. SaskPower Estimated Generation Costs within a Saskatchewan Context

Both of these documents are available on the SRRP website.



**2014 RATE APPLICATION
SIECA INTERROGATORIES ROUND TWO**

Round2 – SIECAQ11:

Regarding response to SIECA’s #15, please provide a comparison for what was forecast for 2012 and 2013 to actual in 2012 and 2013 for customer expenditures by class.

Response:

Customer Connects - Capital Expenditures			
	Actual	Budget	
<i>(in \$ millions)</i>	2012	2012	Variance
Residential	\$ 32.8		
Farm	8.3		
Commercial	34.7		
Oilfield	47.0		
Other *	8.8		
Total Distribution	131.6	98.4	33.2
Transmission	93.9	138.8	(44.9)
Total Customer Connects - Capital Expenditures	\$ 225.5	\$ 237.2	\$ (11.7)
<i>*Other includes customer connects shared by multiple customer classes</i>			

Customer Connects - Capital Expenditures			
	Forecast	Budget	
<i>(in \$ millions)</i>	2013	2013	Variance
Residential	\$ 39.7		
Farm	8.2		
Commercial	41.8		
Oilfield	37.8		
Other *	12.5		
Total Distribution	140.0	115.0	25.0
Transmission	31.8	71.9	(40.1)
Total Customer Connects - Capital Expenditures	\$ 171.8	\$ 186.9	\$ (15.1)
<i>*Other includes customer connects shared by multiple customer classes</i>			



**2014 RATE APPLICATION
SIECA INTERROGATORIES ROUND TWO**

Round2 – SIECAQ12:

Please provide the responses for SIECA's #23, #29, #30 in Excel spreadsheet format as requested in the first round.

Response:

The responses have been provided in spreadsheet format.



**2014 RATE APPLICATION
SIECA INTERROGATORIES ROUND TWO**

Round2 – SIECAQ13:

Regarding the ICCS plant, how are the costs being booked for accounting purposes at the present time?

Response:

The ICCS plant is being capitalized as per SaskPower's Capitalization Policy, including interest costs. Currently, the costs are in work-in-progress and will remain there until the plant is in-service. Once in-service, the ICCS plant will start to depreciate, which is expected in 2014.



**2014 RATE APPLICATION
SIECA INTERROGATORIES ROUND TWO**

Round2 – SIECAQ14:

Please also provide a schedule that indicates when the plant will be moved to rate base and by what amounts it impacts the revenue requirements for 2014, 2015 and 2016

Response:

The 2014 Business Plan assumed that the new clean coal unit would be completed by December 31, 2013. As a result, depreciation expense was forecast to increase by approximately \$35 million per year for the next 30 years. In addition to depreciation costs, the interest expense that was capitalized while the project was under construction is now assumed to be expensed. While SaskPower does not borrow to fund individual projects, if we assume that of the approximately \$1 billion capital cost of the project, 70% or \$700 million was paid for via long-term debt, interest expense will also increase by approximately \$25 million per annum.



**2014 RATE APPLICATION
SIECA INTERROGATORIES ROUND TWO**

Round2 – SIECAQ15:

Regarding response to SIECA’s #24, how are the ICCS plant costs classified in the cost of service for 2014, 2015 and 2016? Please provide the quantitative numbers related to the classification. Please also provide the allocation of these costs by class.

Response:

The classification to demand and energy of all future generating plants, including the ICCS plant, is based on the classification of the existing generating units in SaskPower’s fleet. The table below shows how ICCS is classified to demand/energy within cost of service by customer class:

Customer Class	Allocation		% Allocated
	Demand	Energy	
Urban Residential	8.6%	5.6%	14.2%
Rural Residential	2.3%	1.5%	3.8%
Total Residential	10.9%	7.1%	18.0%
Farms	3.9%	3.0%	7.0%
Urban Commercial	7.5%	6.2%	13.7%
Rural Commercial	2.6%	2.1%	4.7%
Total Commercial	10.0%	8.3%	18.3%
Total Power	17.9%	19.3%	37.3%
Oilfields	6.2%	6.9%	13.1%
Streetlights	0.1%	0.1%	0.3%
Reseller	3.4%	2.7%	6.1%
Total	52.6%	47.4%	100.0%



2014 RATE APPLICATION
SIECA INTERROGATORIES ROUND TWO

Round2 – SIECAQ16:

Regarding response to SIECA's #25, how are the credit classified in the cost of service? Please also provide the allocation of these credits by class.

Response:

CO2 sales from BD3 are reported as other income, which is used to offset (and uses the same classification as) the ICCS plant costs. The contract details are commercially confidential, but the table below shows how these credits are classified within cost of service by customer class:

Customer Class	Allocation		% Allocated
	Demand	Energy	
Urban Residential	8.6%	5.6%	14.2%
Rural Residential	2.3%	1.5%	3.8%
Total Residential	10.9%	7.1%	18.0%
Farms	3.9%	3.0%	7.0%
Urban Commercial	7.5%	6.2%	13.7%
Rural Commercial	2.6%	2.1%	4.7%
Total Commercial	10.0%	8.3%	18.3%
Total Power	17.9%	19.3%	37.3%
Oilfields	6.2%	6.9%	13.1%
Streetlights	0.1%	0.1%	0.3%
Reseller	3.4%	2.7%	6.1%
Total	52.6%	47.4%	100.0%



**2014 RATE APPLICATION
SIECA INTERROGATORIES ROUND TWO**

Round2 – SIECAQ17:

Please provide an annual system wide heat rate for coal fired generation for the period 2004-2016.

Response:

Average net heat rate for SaskPower coal facilities from 2014 – 2016 is approximately 11,650 MJ/MWh.



**2014 RATE APPLICATION
SIECA INTERROGATORIES ROUND TWO**

Round2 – SIECAQ18:

Please provide the operating reserve requirements by type of reserve (eg., spinning, non spinning, regulation etc) for the period 2012-2017.

Response:

SaskPower's operating reserve is 292 MW, of which 40%, or 117 MW, must be spinning.



**2014 RATE APPLICATION
SIECA INTERROGATORIES ROUND TWO**

Round2 – SIECAQ19:

Please provide the chart, supporting documentation and data and a narrative explanation for capacity and availability versus demand presented by the SaskPower at the Public Forum in Regina on December 3, 2013.

Response:

The chart presented by SaskPower at the Public Forum in Regina on December 3, 2013, was based on information available through September 30, 2013, with forecasts for the remainder of the calendar year. The attached chart has been updated with actual information through to the end of 2013.

The following is a summary of what each line in the graph represents.

1. **Installed capacity (red line)** – This represents all SaskPower & IPP-installed generation. The changes in the installed capacity line during 2013 reflect the BD #1 retirement and the North Battleford Energy Centre commercial operation date.
2. **Available capacity (blue line)** - This represents SaskPower's installed capacity less planned maintenance, less seasonal derates (weather impacts on thermal generators and reservoir elevation impacts on hydraulic generators), less non-firm generation (wind), plus any contracted imports.
3. **Weekly peak load plus reserves (green line)** – This represents the weekly peak load or the amount of electricity being consumed within Saskatchewan (including transmission and distribution losses) plus SaskPower's calculated reserve requirements. The reserve requirement was increased from 281 MW to 292 MW on December 13, 2013.

The difference between the available capacity (blue line) and the weekly peak load plus reserves (green line) is the excess capacity or shortfall SaskPower has under those conditions. It should be noted that unplanned derates and unplanned outages will reduce this excess or increase the shortfall. Wind generation and real time imports will increase the excess capacity.



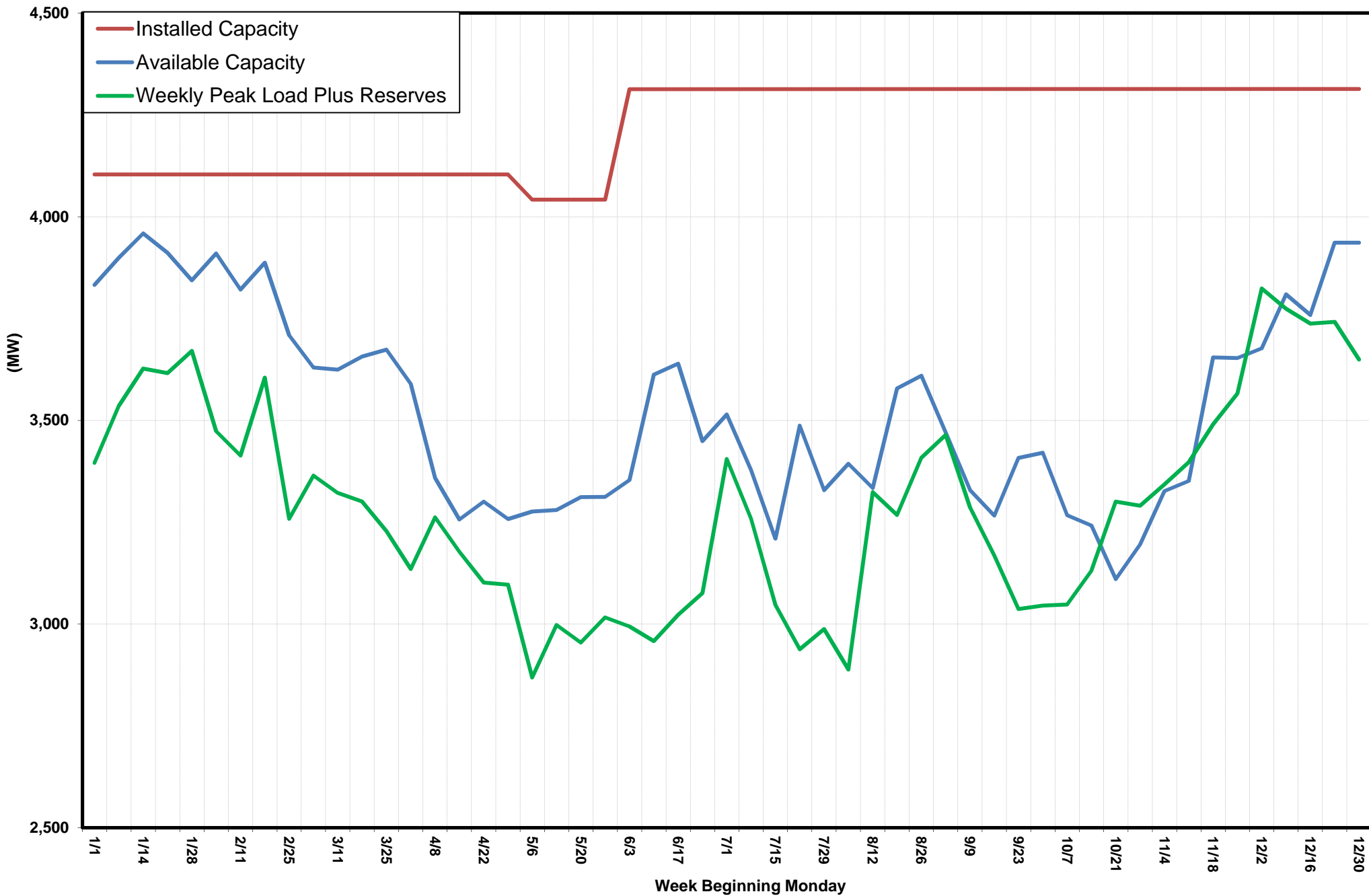
**2014 RATE APPLICATION
SIECA INTERROGATORIES ROUND TWO**

In the periods where SaskPower's weekly peak load plus reserves exceeded SaskPower's available capacity, SaskPower relied upon short-term imports and/or wind generation to cover off the shortfall. There are also rare occasions where the electrical system ran reserve deficient for a short period of time and SaskPower was required to rely upon its demand response customers to reduce the load on the electrical system and NorthPoint to attain incremental imports to restore reserve for the start of the next hour.

The graph and the spreadsheet with the supporting data follows.

2013 Weekly Sask Power Capacity Position

December 31, 2013





**2014 RATE APPLICATION
SIECA INTERROGATORIES ROUND TWO**

Round2 – SIECAQ20A, 20B & 20C:

Please provide the following in Excel spreadsheet format by month from 2009 to 2013:

- a. System demand
- b. Demand response
- c. Adjusted Peak Demand
- d. Existing supply by fuel type
- e. Actual minimum, maximum and average reserve margin

Response:

The table below provides the monthly system peak demand, demand response and adjusted system peak demand. Please note that demand response is not used to reduce peak demands but rather to reduce load during contingencies.

2009 to 2013 Demand Response Effects on Monthly Peaks*

	2009			2010			2011			2012			2013		
	Peak	DR	Adj. Peak	Peak	DR	Adj. Peak	Peak	DR	Adj. Peak	Peak	DR	Adj. Peak	Peak	DR	Adj. Peak
January	3096	0	3096	3051	0	3051	3195	0	3195	3265	0	3265	3379	0	3379
February	2873	0	2873	3021	0	3021	3170	0	3170	3089	0	3089	3326	0	3326
March	2877	0	2877	2754	0	2754	3090	0	3090	2935	0	2935	3080	0	3080
April	2549	0	2549	2591	0	2591	2628	0	2628	2704	0	2704	2975	0	2975
May	2426	0	2426	2703	0	2703	2548	0	2548	2724	0	2724	2741	0	2741
June	2677	0	2677	2727	0	2727	2879	0	2879	2963	0	2963	2791	0	2791
July	2643	0	2643	2750	0	2750	3070	0	3070	3053	0	3053	3140	0	3140
August	2630	0	2630	2746	60	2806	2986	0	2986	3016	0	3016	3134	0	3134
September	2773	0	2773	2527	0	2527	2962	0	2962	2856	0	2856	3187	0	3187
October	2637	0	2637	2803	0	2803	2659	0	2659	2970	0	2970	3027	0	3027
November	2819	0	2819	3128	0	3128	3071	0	3071	3188	0	3188	3280	0	3280
December	3231	0	3231	3162	0	3162	3177	0	3177	3314	0	3314	3543	0	3543

* Only includes DR events that occurred on monthly peak days



**2014 RATE APPLICATION
SIECA INTERROGATORIES ROUND TWO**

Round2 – SIECAQ20D:

Please provide the following in Excel spreadsheet format by month from 2009 to 2013:

- a. System demand
- b. Demand response
- c. Adjusted Peak Demand
- d. Existing supply by fuel type
- e. Actual minimum, maximum and average reserve margin

Response:

The response follows and has also been provided in Excel format.

FUEL AND PURCHASED POWER - BY MONTH

For the Twelve Month Period Ending December 2013 (Draft)

FUEL AND PURCHASE POWER EXPENSE (\$ 000's)													
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Gas	18,754	15,621	22,287	22,070	16,487	15,567	19,086	19,058	16,808	23,180	23,281	28,304	240,503
Coal	22,082	20,363	19,780	17,030	17,081	16,215	15,509	17,682	17,521	18,024	19,851	21,896	223,034
Wind	1,047	700	822	804	904	708	593	534	1,236	771	1,096	964	10,227
Imports	3,455	2,231	4,745	2,611	1,962	871	951	3,195	3,223	2,712	1,975	3,286	31,217
Hydro	1,585	1,478	1,479	1,504	2,272	2,428	2,470	1,807	1,447	1,597	1,331	1,584	20,982
Other	2,171	2,000	2,039	2,019	1,874	1,918	2,008	2,007	1,577	2,179	1,820	1,905	23,517
Net Fuel & Purchased Power	\$ 49,094	\$ 42,393	\$ 51,152	\$ 46,038	\$ 40,580	\$ 37,707	\$ 40,617	\$ 44,283	\$ 41,812	\$ 48,463	\$ 49,354	\$ 57,939	\$ 549,480

GENERATION (GWh's)													
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Gas	466.9	406.0	587.7	558.7	424.3	420.9	462.4	509.1	476.9	684.9	686.5	776.0	6,460.3
Coal	1,171.0	1,047.5	1,060.1	875.9	828.2	758.1	767.1	867.7	882.9	738.2	878.2	971.0	10,845.9
Wind	75.3	62.1	55.9	53.1	51.1	40.9	32.4	27.9	55.9	53.4	66.4	71.4	646.2
Imports	68.4	42.4	83.0	42.8	18.1	1.7	10.5	55.2	56.9	60.6	46.4	62.2	548.2
Hydro	352.2	328.4	280.7	318.7	482.4	516.0	525.0	384.0	307.0	338.8	281.4	335.1	4,449.7
Other	19.5	17.7	17.8	17.4	15.8	16.9	17.1	17.4	13.5	19.2	17.1	16.8	206.2
Net Generation & Purchased Power	2,153.3	1,904.1	2,085.2	1,866.6	1,819.9	1,754.5	1,814.5	1,861.3	1,793.1	1,895.1	1,976.0	2,232.5	23,156.5

FUEL AND PURCHASED POWER - BY MONTH

For the Twelve Month Period Ending December 2012

FUEL AND PURCHASE POWER EXPENSE (\$ 000's)													
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Gas	20,905	17,446	19,871	15,128	13,950	15,619	15,469	15,466	16,633	17,998	21,758	23,577	213,820
Coal	17,815	18,389	17,690	17,446	17,603	16,049	18,400	18,170	17,766	19,246	19,816	23,434	221,824
Wind	1,166	702	987	904	815	681	552	657	756	935	908	561	9,624
Imports	4,556	3,282	2,443	1,782	1,781	1,422	1,422	1,613	1,979	2,996	3,669	4,191	31,136
Hydro	1,775	969	1,226	1,336	1,805	1,962	2,567	2,088	1,330	1,395	1,229	1,380	19,062
Other	1,416	1,462	1,405	1,371	1,219	1,102	1,253	1,256	1,694	1,520	1,955	2,153	17,806
Net Fuel & Purchased Power	\$ 47,633	\$ 42,250	\$ 43,622	\$ 37,967	\$ 37,173	\$ 36,835	\$ 39,663	\$ 39,250	\$ 40,158	\$ 44,090	\$ 49,335	\$ 55,296	\$ 513,272

GENERATION (GWh's)													
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Gas	499.6	395.5	503.9	344.7	270.0	360.0	340.0	334.3	378.7	421.9	541.7	576.4	4,966.7
Coal	957.3	1,016.8	951.4	937.1	970.0	821.6	841.4	927.9	933.9	971.8	1,007.5	1,109.6	11,446.3
Wind	89.1	47.9	70.1	58.6	49.2	45.7	30.8	37.4	49.8	64.2	62.8	49.8	655.4
Imports	104.5	75.5	53.4	36.1	43.2	31.4	22.9	31.5	39.1	57.9	75.8	84.7	656.0
Hydro	326.6	282.8	272.2	296.7	395.6	442.8	573.1	466.0	296.4	310.3	271.9	306.0	4,240.4
Other	13.5	12.7	14.1	11.9	11.3	10.4	11.3	13.9	14.1	13.6	17.2	19.8	163.8
Net Generation & Purchased Power	1,990.6	1,831.2	1,865.1	1,685.1	1,739.3	1,711.9	1,819.5	1,811.0	1,712.0	1,839.7	1,976.9	2,146.3	22,128.6

FUEL AND PURCHASED POWER - BY MONTH

For the Twelve Month Period Ending December 2011

FUEL AND PURCHASE POWER EXPENSE (\$ 000's)													
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Gas	20,551	18,361	16,673	11,662	13,177	18,416	13,786	13,451	14,006	16,815	21,206	17,541	195,645
Coal	19,423	17,360	18,763	15,395	13,662	14,150	18,565	22,613	22,034	18,534	20,983	17,956	219,438
Wind	251	547	990	738	718	636	710	709	792	802	1,156	1,224	9,273
Imports	1,578	1,577	1,320	916	723	5,562	1,746	928	1,636	2,510	3,212	2,658	24,366
Hydro	1,201	1,216	1,581	1,938	2,423	2,172	2,593	1,766	1,408	1,216	1,165	1,300	19,979
Other	1,044	1,587	1,436	1,144	1,316	1,987	1,757	1,248	1,079	1,216	1,411	1,483	16,708
Net Fuel & Purchased Power	\$ 44,048	\$ 40,648	\$ 40,763	\$ 31,793	\$ 32,019	\$ 42,923	\$ 39,157	\$ 40,715	\$ 40,955	\$ 41,093	\$ 49,133	\$ 42,162	\$ 485,409

GENERATION (GWh's)													
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Gas	450.9	399.3	348.7	220.4	254.0	374.1	264.7	248.5	232.9	344.4	471.0	422.8	4,031.7
Coal	1,199.7	1,042.7	1,125.6	909.0	762.8	541.2	883.1	1,047.8	1,075.7	944.1	958.3	1,124.0	11,614.0
Wind	61.6	70.4	65.4	49.4	39.5	41.1	41.3	36.0	53.6	58.9	73.7	91.4	682.3
Imports	33.6	27.6	36.2	27.3	20.3	100.7	20.4	7.1	27.4	66.7	66.3	68.2	501.8
Hydro	278.1	283.4	366.1	451.2	565.0	551.8	604.9	357.3	328.0	282.3	269.6	303.5	4,641.2
Other	14.1	11.1	13.7	11.6	11.5	9.6	9.1	11.3	9.8	11.2	12.7	14.0	139.7
Net Generation & Purchased Power	2,038.0	1,834.5	1,955.7	1,668.9	1,653.1	1,618.5	1,823.5	1,708.0	1,727.4	1,707.6	1,851.6	2,023.9	21,610.7

FUEL AND PURCHASED POWER - BY MONTH

For the Twelve Month Period Ending December 2010

FUEL AND PURCHASE POWER EXPENSE (\$ 000's)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Gas	16,398	16,845	16,684	16,743	15,422	11,077	10,492	14,218	13,568	14,482	17,284	20,293	183,506
Coal	18,680	17,131	17,770	16,116	17,342	16,423	16,936	17,725	15,986	17,519	19,227	21,358	212,213
Imports	1,884	2,774	1,803	1,322	2,686	552	355	1,124	1,827	1,553	2,171	2,239	20,290
Hydro	1,338	1,135	944	1,024	858	1,911	2,131	1,356	1,262	1,502	1,109	1,276	15,846
Other*	1,570	1,268	1,470	1,529	1,304	1,154	1,329	1,228	859	1,253	1,443	1,467	15,874
Net Fuel & Purchased Power	\$ 39,619	\$ 39,038	\$ 38,396	\$ 36,422	\$ 37,395	\$ 30,967	\$ 31,098	\$ 35,499	\$ 33,487	\$ 36,138	\$ 41,033	\$ 46,428	\$ 445,520

GENERATION (GWh's)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Gas	349.2	353.7	346.6	353.7	319.0	210.2	199.4	244.2	225.6	260.1	382.4	438.4	3,682.5
Coal	1,117.6	997.1	1,078.5	910.0	1,026.9	928.1	916.4	1,003.0	914.3	965.2	1,021.9	1,158.9	12,037.9
Imports	32.8	55.6	54.8	37.8	63.8	8.1	1.7	24.5	68.1	49.2	73.0	48.3	517.7
Hydro	327.1	275.2	229.6	249.6	208.9	467.8	521.9	331.7	305.9	367.0	273.7	307.6	3,866.0
Other*	73.0	43.9	61.1	65.5	56.7	39.9	35.7	42.2	53.0	59.4	60.8	64.1	655.3
Net Generation & Purchased Power	1,899.7	1,725.5	1,770.6	1,616.6	1,675.3	1,654.1	1,675.1	1,645.6	1,566.9	1,700.9	1,811.8	2,017.3	20,759.4

* In 2010 SaskPower merged Wind into Other to protect confidential information related to PPAs

FUEL AND PURCHASED POWER - BY MONTH

For the Twelve Month Period Ending December 2009

FUEL AND PURCHASE POWER EXPENSE (\$ 000's)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Gas	29,005	22,480	26,272	22,246	22,277	19,169	18,428	18,420	21,471	22,706	20,786	23,135	266,395
Coal	18,171	15,559	16,181	13,280	13,591	16,039	15,483	16,538	16,205	15,035	17,834	19,644	193,560
Imports	2,318	1,904	3,129	2,175	925	1,334	662	306	1,410	1,661	1,157	1,949	18,930
Hydro	1,217	1,318	932	1,021	940	841	864	774	718	830	907	1,103	11,465
Other*	486	989	5,705	1,185	1,129	1,343	518	1,041	1,038	1,124	1,323	2,889	18,770
Net Fuel & Purchased Power	\$ 51,197	\$ 42,250	\$ 52,219	\$ 39,907	\$ 38,862	\$ 38,726	\$ 35,955	\$ 37,079	\$ 40,842	\$ 41,356	\$ 42,007	\$ 48,720	\$ 509,120

GENERATION (GWh's)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Gas	360.3	264.8	336.0	271.9	281.8	232.5	211.8	202.5	278.8	343.0	276.8	372.1	3,432.3
Coal	1,123.9	987.9	1,040.3	870.4	905.6	975.4	1,069.9	1,120.9	1,030.5	970.0	1,049.4	1,172.7	12,316.9
Imports	40.6	30.4	81.0	66.3	26.9	27.3	9.0	2.8	27.9	58.3	33.7	35.7	439.9
Hydro	340.4	314.7	240.3	263.4	242.7	217.6	223.4	200.4	185.8	214.5	234.0	284.7	2,961.9
Other*	85.0	54.2	66.7	54.6	56.8	46.8	34.6	42.6	63.8	60.4	88.5	59.2	713.2
Net Generation & Purchased Power	1,950.2	1,652.0	1,764.3	1,526.6	1,513.8	1,499.6	1,548.7	1,569.2	1,586.8	1,646.2	1,682.4	1,924.4	19,864.2

* In 2009 SaskPower merged Wind into Other to protect confidential information related to PPAs



**2014 RATE APPLICATION
SIECA INTERROGATORIES ROUND TWO**

Round2 – SIECAQ20E:

Please provide the following in Excel spreadsheet format by month from 2009 to 2013:

- a. System demand
- b. Demand response
- c. Adjusted Peak Demand
- d. Existing supply by fuel type
- e. Actual minimum, maximum and average reserve margin

Response:

Operating Reserve is a dynamic quantity that can vary significantly over each day.

* Minimum Operating Reserves typically occur during the evening hours (16:00 - 20:00).

** Maximum Operating Reserves typically occur during the morning hours (00:00 - 6:00).

Year	Month	Minimum* Operating Reserve [MW]	Maximum** Operating Reserve [MW]	Average Operating Reserve [MW]
2009	Jan	236	1119	657
	Feb	244	1096	585
	Mar	241	1141	653
	Apr	221	1419	644
	May	171	1280	650
	Jun	170	1267	702
	Jul	227	1280	702
	Aug	79	1362	728
	Sep	174	1395	798
	Oct	226	1488	721
	Nov	230	1189	706
	Dec	206	1153	667
2010	Jan	28	1103	566
	Feb	219	1190	560
	Mar	103	1151	607
	Apr	230	1230	651
	May	166	1412	683
	Jun	0	1114	528
	Jul	80	1110	578
	Aug	53	1176	558
	Sep	65	1254	518
	Oct	89	1063	467
	Nov	123	1134	576
	Dec	114	1136	572
2011	Jan	183	1233	617
	Feb	73	1206	624
	Mar	167	1057	527
	Apr	145	1163	506
	May	214	985	543
	Jun	214	1216	512
	Jul	164	1291	612
	Aug	182	1116	575
	Sep	114	1188	631
	Oct	278	1586	691
	Nov	131	1522	651
	Dec	221	1537	675
2012	Jan	239	1734	626
	Feb	188	1653	715

	Mar	257	1473	729
	Apr	248	1641	672
	May	234	1166	690
	Jun	167	1246	672
	Jul	214	1082	676
	Aug	231	1365	746
	Sep	245	1304	757
	Oct	191	1373	785
	Nov	221	1416	753
	Dec	222	1344	777
2013	Jan	268	1387	803
	Feb	285	1318	770
	Mar	301	1419	737
	Apr	182	1514	684
	May	207	1644	647
	Jun	220	1594	726
	Jul	158	1405	660
	Aug	168	1294	729
	Sep	167	1403	725
	Oct	179	1252	610
	Nov	281	1265	721
	Dec	94	1553	762



**2014 RATE APPLICATION
SIECA INTERROGATORIES ROUND TWO**

Round2 – SIECAQ21:

Please provide a listing of unplanned outages by unit and duration of outage since 2009.

Response:

Provided is the list of all unplanned outages by type by plant and unit for 2009 to 2013.



**2014 RATE APPLICATION
SIECA INTERROGATORIES ROUND TWO**

Unplanned Outages - Number of Incidents and Duration												
	2009		2010		2011		2012		2013		Total Amt	Total Hours
	Amt	Hours	Amt	Hours	Amt	Hours	Amt	Hours	Amt	Hours		
Boundary Dam Power Station	65	1,264.70	43	1,517.07	76	4,514.74	62	3,156.99	68	2,817.93	314	13,271.43
1	7	125.11	10	467.16	13	999.56	7	201.95	3	95.03	40	1,888.81
2	13	369.40	8	156.78	20	1,298.94	13	568.73	20	876.88	74	3,270.73
3	10	128.59	5	168.63	9	287.35	9	365.80	2	47.72	35	998.09
4	10	317.26	4	96.31	15	524.89	13	494.19	16	903.23	58	2,335.88
5	15	114.23	4	180.51	8	96.92	8	415.95	15	644.07	50	1,451.68
6	10	210.11	12	447.68	11	1,307.08	12	1,110.37	12	251.00	57	3,326.24
Poplar River Power Station	10	193.51	21	366.06	12	214.10	12	152.37	24	999.51	79	1,925.55
1	5	138.56	6	149.40	5	133.96	4	35.99	16	868.92	36	1,326.83
2	5	54.95	15	216.66	7	80.14	8	116.38	8	130.59	43	598.72
Shand Power Station	14	367.16	18	481.63	14	154.27	23	994.87	20	441.98	89	2,439.91



**2014 RATE APPLICATION
SIECA INTERROGATORIES ROUND TWO**

	1	14	367.16	18	481.63	14	154.27	23	994.87	20	441.98	89	2,439.91
Queen Elizabeth Power Station		107	7,142.18	163	7,371.54	136	17,555.08	81	16,644.74	70	10,983.56	557	59,697.10
	1	17	608.97	10	251.35	9	375.98	15	586.57	7	290.94	58	2,113.81
	2			7	1,553.40	5	7,475.13	2	8,775.55	6	7,838.20	20	25,642.28
	3	14	859.18	8	628.98	10	749.09	17	1,146.62	10	1,040.50	59	4,424.37
	4	11	996.35	17	570.77	9	2,163.77	8	937.26	5	248.97	50	4,917.12
	5	10	500.35	15	726.11	15	1,378.17	2	331.50	5	192.75	47	3,128.88
	6	15	765.40	16	270.57	9	632.59	2	159.00	3	81.65	45	1,909.21
	7	9	1,061.37	13	315.63	8	399.95	6	324.88	2	138.17	38	2,240.00
	8	16	1,115.30	16	267.40	8	695.88	3	84.30	3	143.80	46	2,306.68
	9	15	1,235.26	13	210.32	11	511.18	7	147.42	3	234.57	49	2,338.75
	10			13	1,123.41	17	1,095.78	8	1,637.76	8	121.30	46	3,978.25
	11			9	403.72	23	1,279.98	5	916.78	10	597.11	47	3,197.59
	12			26	1,049.88	12	797.58	6	1,597.10	8	55.60	52	3,500.16
Ermine Generating Plant				52		35		62		62		211	



**2014 RATE APPLICATION
SIECA INTERROGATORIES ROUND TWO**

				3,296.55		377.89		1,251.15		3,782.30		8,707.89	
	1			30	1,127.49	20	179.12	23	838.91	30	3,165.60	103	5,311.12
	2			22	2,169.06	15	198.77	39	412.24	32	616.70	108	3,396.77
Landis Generating Plant		1	145.00			17	1,655.93	3	1,914.82	7	184.79	28	3,900.54
	1	1	145.00			17	1,655.93	3	1,914.82	7	184.79	28	3,900.54
Meadow Lake Generating Plant		11	258.85	25	583.49	13	3,924.15	15	274.26	15	280.39	79	5,321.14
	1	11	258.85	25	583.49	13	3,924.15	15	274.26	15	280.39	79	5,321.14
Success Generating Plant		25	1,226.52	4	1,965.65	2	17,520.00	9	6,625.35	14	8,537.53	54	35,875.05
	1	7	804.50	1	20.00			2	219.50	6	2,848.46	16	3,892.46
	2	9	129.00	2	1,925.65	1	8,760.00	4	3,645.99	4	2,846.01	20	17,306.65
	3	9	293.02	1	20.00	1	8,760.00	3	2,759.86	4	2,843.06	18	14,675.94
Yellowhead Generating Plant				7	659.68	98	8,188.84	99	3,420.62	94	334.12	298	12,603.26
	1			1	0.32	37	2,073.41	25	2,102.68	33	73.93	96	4,250.34
	2			5	83.61	34	2,026.94	42	781.89	43	102.32	124	2,994.76
	3			1	575.75	27	4,088.49	32	536.05	18	157.87	78	5,358.16



**2014 RATE APPLICATION
SIECA INTERROGATORIES ROUND TWO**

Coteau Creek Hydroelectric Station	12	126.80	9	273.63	7	546.07	19	580.41	8	37.73	55	1,564.64
1	3	21.50	3	18.13	3	501.00	5	110.72	4	21.75	18	673.10
2	4	44.00	5	246.23	2	10.00	11	314.16			22	614.39
3	5	61.30	1	9.27	2	35.07	3	155.53	4	15.98	15	277.15
E. B. Campbell Hydroelectric Station	40	1,415.48	46	302.06	26	594.90	17	231.09	15	313.51	144	2,857.04
1	8	188.74	11	85.46	6	67.91	2	23.60	1	59.72	28	425.43
2	6	659.18	4	18.67	1	32.12	2	39.12	2	56.60	15	805.69
3	13	203.17	5	16.14	3	13.75			2	76.78	23	309.84
4	3	88.82	4	25.75	3	5.60	6	96.97	2	14.77	18	231.91
5	3	29.90	5	27.60	3	18.25	1	9.23	1	7.42	13	92.40
6	4	38.50	8	28.53	1	2.30			2	12.57	15	81.90
7	2	199.25	4	14.59	6	264.72	2	5.37	1	2.30	15	486.23
8	1	7.92	5	85.32	3	190.25	4	56.80	4	83.35	17	423.64
Island Falls Hydroelectric Station	64	273.42	54	4,048.35	59	461.32	66	457.58	51	2,391.74	294	7,632.41
1	12		9		8		12		6		47	



**2014 RATE APPLICATION
SIECA INTERROGATORIES ROUND TWO**

			23.95			137.66				17.06			65.92			92.19			336.78	
	2	10	19.70		10	291.96		6	196.40		7	16.78		7	42.00		40		566.84	
	3	8	20.25		7	210.06		16	69.43		7	27.87		6	215.27		44		542.88	
	4	6	108.64		6	3,064.37					12	76.34		14	495.27		38		3,744.62	
	5	10	24.17		11	62.56		9	19.72		6	40.09		9	14.48		45		161.02	
	6	10	23.92		6	102.32		7	55.45		11	152.66		2	1,354.29		36		1,688.64	
	7	7	7.57		2	1.50		5	4.97		7	28.17		6	143.87		27		186.08	
	A	1	45.22		3	177.92		6	96.37		3	32.95		1	34.37		14		386.83	
	B							2	1.92		1	16.80					3		18.72	
Nipawin Hydroelectric Station																				
	17		69.69		24	90.16		10	21.39		9	89.72		10	205.78		70		476.74	
	1	3	10.00		10	55.70		2	6.95		3	14.60		1	0.57		19		87.82	
	2	7	36.81		7	24.14		2	4.45		3	16.94		3	199.90		22		282.24	
	3	7	22.88		7	10.32		6	9.99		3	58.18		6	5.31		29		106.68	
Charlot River Hydroelectric Station																				
	6		1,484.77		20	577.90		13	889.39		14	20.80		8	235.81		61		3,208.67	
	1	3	737.28		9	561.01		6	32.31		9	11.62			223.60		27		1,565.82	



**2014 RATE APPLICATION
SIECA INTERROGATORIES ROUND TWO**

	2	3	747.49	11	16.89	7	857.08	5	9.18	8	12.21	34	1,642.85
Waterloo Hydroelectric Station		7	747.35	2	3,699.37	4	22.34	7	9.37	4	1,948.27	24	6,426.70
	1	7	747.35	2	3,699.37	4	22.34	7	9.37	4	1,948.27	24	6,426.70
Wellington Hydroelectric Station		9	1,485.07	6	5,147.38	12	9,087.77	6	8,790.03	3	8,764.81	36	33,275.06
	1	4	739.46	2	4,974.63	1	8,760.00	1	8,784.00	1	8,760.00	9	32,018.09
	2	5	745.61	4	172.75	11	327.77	5	6.03	2	4.81	27	1,256.97
Grand Total		388	16,200.50	494	30,380.52	534	65,728.18	504	44,614.17	473	42,259.76	2393	199,183.13