

**AQUILA NETWORKS - MISSOURI
INTEGRATED RESOURCE PLAN**

February 2007

**Submitted to the
MISSOURI PUBLIC SERVICE COMMISSION**

**PART 1
ENERGY AND DEMAND FORECAST**

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1.1 SUMMARY

This energy and demand forecast for Aquila Networks - Missouri (ANM) is part of the February 2007 update for the Integrated Resource Plan. Aquila holds Integrated Resource Plan ("IRP") presentations semiannually to the Missouri Public Service Commission Staff, Public Counsel and other interested parties. Pursuant to a 2004 rate case decision, Aquila Networks - Missouri is required to file detailed resource plan updates for its Missouri operations every two years. The first resource plan required under the Missouri Electric Utility Resource Planning rules (4 CSR 240-Chapter 22) was filed in 1995 for the Missouri Public Service Division of UtiliCorp United, which changed its name to Aquila, Inc. in March 2002. The 2007 Integrated Resource Plan includes a load forecast for Missouri Public Service (MPS) division and St. Joseph Light & Power (SJLP) division which has been prepared in accordance with the filing requirements in 4CSR 240-22.030 Load Forecasting and Analysis.

See Appendix 1-A for a detailed listing of reporting requirements for Missouri rule 4 CSR 240-22.030 Load Analysis and Forecasting. See Appendices 1-B and 1-C for detailed description of MPS and SJLP class energy sales and peak demand forecast methods and models in compliance with section of (8)(H) of reporting requirements. See Appendices 1-D and 1-E for detailed plots and tables for MPS and SJLP class and system energy sales and peak demand forecasts, sensitivity analysis, and hourly load profiles in compliance with sections (8)(A) through (8)(G) of reporting requirements.

Energy forecasts for residential, commercial, industrial, other, and wholesale classes were developed for the Aquila Networks - Missouri resource plan update in May 2006 using Microsoft Excel econometric models for short-term 2006-2009 budget forecast period, and Itron MetrixND statistically adjusted end-use (SAE) models for the long-term 20-year forecast period to 2025. System hourly loads were weather normalized using Itron MetrixND models based on 1971-2000 normal average daily temperatures for Kansas City, MO International airport ("MCI"). Regional economic growth for Aquila's Missouri electric utility service areas (Missouri Public Service (MPS) and St. Joseph Light & Power (SJLP)) were used to forecast long-term growth in energy sales. Economy.com developed the regional Missouri county economic forecasts dated January 2006 for Base, High and Low growth scenarios. These economic growth scenarios were used to drive energy sales forecasts in the MetrixND SAE models for the MPS and SJLP service areas, which were, in turn, used to drive hourly load forecasts.

Sales declined in 2001 due to a US economic recession that also impacted MPS and SJLP service areas. Sales and peak demand growth for MPS service area slowed during 2001 and 2005 due to lower economic growth and the loss of large wholesale customers:

- City of El Dorado Springs, MO (11 MW, Jan-2001)
- City of Harrisonville, MO (24 MW, May-2003)
- City of Odessa, MO (9 MW, Apr-2004)

Actual summer peak demand for Aquila Networks - Missouri (MPS and SJLP combined) of 1,967 MW occurred at hour 18 on 8/9/06. MPS actual summer peak demand on 8/9/06 hour 18 was 1,521 MW. SJLP actual summer peak demand on 8/9/06 hour 18 was 446 MW.

Table 1-1 provides a load forecast summary of the Base-Case for Aquila Networks - Missouri utilities overall (MPS and SJLP) without the impacts of demand-side management which will be discussed in Parts 3 and 4 of the Integrated Resource Plan. Energy growth is forecast in the Base-Case to average 2.5% annually during 2006-2025. Coincident summer peak demand growth is forecast to average 2.0% annually during 2006-2025. Annual coincident system load factor in 2006 is forecast at 50.2% increasing to 55.4% by 2025.

Table 1-1
Load Forecast Summary (Base-Case)
(Annual Energy GWh and Summer Peak Demand MW)

Year	Base-MPS EnergyGWh	Base-SJLP EnergyGWh	Base-MO EnergyGWh	Base-MPS SPeakMW	Base-SJLP SPeakMW	Base-MO SPeakMW	Base-MPS LF%	Base-SJLP LF%	Base-MO LF%
1999	5,046.68	1,801.38	6,848.06	1,276	388	1,660	45.1%	53.0%	47.1%
2000	5,477.36	1,934.60	7,411.96	1,335	403	1,738	46.4%	54.3%	48.2%
2001	5,447.35	1,906.67	7,354.01	1,300	398	1,698	47.8%	54.7%	49.4%
2002	5,707.82	1,936.95	7,644.77	1,333	399	1,729	48.9%	55.4%	50.5%
2003	5,762.46	1,937.07	7,699.53	1,443	419	1,861	45.6%	52.8%	47.2%
2004	5,707.43	1,949.25	7,656.68	1,344	399	1,735	48.0%	55.3%	49.9%
2005	6,106.44	2,067.03	8,173.47	1,422	409	1,826	49.0%	57.7%	51.1%
2006	6,078.85	2,062.02	8,140.87	1,439	412	1,851	48.2%	57.1%	50.2%
2007	6,318.86	2,094.91	8,413.76	1,473	418	1,891	49.0%	57.2%	50.8%
2008	6,505.75	2,128.55	8,634.30	1,509	425	1,934	48.8%	56.7%	50.5%
2009	6,716.07	2,170.02	8,886.09	1,548	433	1,979	49.5%	57.2%	51.3%
2010	6,965.99	2,217.96	9,183.96	1,602	442	2,040	49.6%	57.3%	51.4%
2011	7,162.22	2,252.67	9,414.88	1,636	448	2,079	50.0%	57.4%	51.7%
2012	7,378.05	2,292.20	9,670.24	1,671	454	2,125	49.9%	57.1%	51.5%
2013	7,566.91	2,322.59	9,889.50	1,706	460	2,163	50.6%	57.6%	52.2%
2014	7,776.48	2,357.61	10,134.08	1,742	466	2,204	51.0%	57.8%	52.5%
2015	7,986.84	2,391.67	10,378.51	1,778	472	2,246	51.3%	57.8%	52.7%
2016	8,216.42	2,430.18	10,646.60	1,815	478	2,288	51.2%	57.5%	52.6%
2017	8,416.03	2,459.99	10,876.02	1,852	484	2,331	51.9%	58.0%	53.3%
2018	8,637.64	2,495.81	11,133.45	1,889	490	2,374	52.2%	58.1%	53.5%
2019	8,861.98	2,531.91	11,393.90	1,927	496	2,418	52.5%	58.3%	53.8%
2020	9,109.24	2,573.77	11,683.01	1,965	502	2,462	52.4%	58.0%	53.7%
2021	9,330.51	2,609.89	11,940.39	2,003	507	2,506	53.2%	58.8%	54.4%
2022	9,556.06	2,646.48	12,202.53	2,041	513	2,549	53.4%	58.9%	54.6%
2023	9,788.90	2,683.91	12,472.81	2,080	519	2,594	53.7%	59.0%	54.9%
2024	10,026.78	2,722.02	12,748.81	2,119	525	2,639	53.5%	58.7%	54.6%
2025	10,271.30	2,761.30	13,032.60	2,159	531	2,685	54.3%	59.4%	55.4%
1999-05	3.2%	2.3%	3.0%	1.8%	0.9%	1.6%	0.6%	0.8%	0.7%
2006-25	2.8%	1.5%	2.5%	2.2%	1.3%	2.0%	0.3%	0.1%	0.3%

Table 1-2 provides a load forecast summary of the High-Case and Low-Case economic growth scenarios for Aquila Networks - Missouri utilities overall (MPS and SJLP). Energy growth is forecast in the High-case to average 2.7% annually and 2.4% in the Low-Case during 2006-2025. Summer peak demand growth is forecast in the High-Case to average 2.1% annually and 1.9% in the Low-Case during 2006-2025. Annual coincident system load factor in the High-Case in 2006 is forecast at 50.2% increasing to 56.1% by 2025, and in the Low-Case increasing to 54.8%.

Table 1-2
Load Forecast Summary (High-Case and Low-Case)
 (Annual Energy GWH and Summer Peak Demand MW)

Aquila Networks-Missouri (MPS and SJLP): High-Case and Low-Case Load Forecasts

Year	Base-Case GWH	High-Case GWH	Low-Case GWH	Base-Case PeakMW	High-Case PeakMW	Low-Case PeakMW	Base-Case LF%	High-Case LF%	Low-Case LF%
1999	6,848	6,848	6,848	1,660	1,660	1,660	47.1%	47.1%	47.1%
2000	7,412	7,412	7,412	1,738	1,738	1,738	48.7%	48.7%	48.7%
2001	7,354	7,354	7,354	1,698	1,698	1,698	49.4%	49.4%	49.4%
2002	7,645	7,645	7,645	1,729	1,729	1,729	50.5%	50.5%	50.5%
2003	7,700	7,700	7,700	1,861	1,861	1,861	47.2%	47.2%	47.2%
2004	7,657	7,657	7,657	1,735	1,735	1,735	50.4%	50.4%	50.4%
2005	8,173	8,173	8,173	1,826	1,826	1,826	51.1%	51.1%	51.1%
2006	8,141	8,141	8,141	1,851	1,851	1,851	50.2%	50.2%	50.2%
2007	8,414	8,414	8,414	1,891	1,891	1,891	50.8%	50.8%	50.8%
2008	8,634	8,634	8,634	1,934	1,934	1,934	51.0%	51.0%	51.0%
2009	8,886	8,886	8,886	1,979	1,979	1,979	51.3%	51.3%	51.3%
2010	9,184	9,228	9,140	2,040	2,045	2,035	51.4%	51.5%	51.3%
2011	9,415	9,474	9,360	2,079	2,085	2,073	51.7%	51.9%	51.5%
2012	9,670	9,746	9,602	2,125	2,133	2,118	51.9%	52.2%	51.8%
2013	9,890	9,982	9,807	2,163	2,173	2,155	52.2%	52.4%	52.0%
2014	10,134	10,244	10,037	2,204	2,216	2,194	52.5%	52.8%	52.2%
2015	10,379	10,506	10,267	2,246	2,260	2,234	52.7%	53.1%	52.5%
2016	10,647	10,793	10,520	2,288	2,304	2,274	53.1%	53.5%	52.8%
2017	10,876	11,042	10,733	2,331	2,349	2,315	53.3%	53.7%	52.9%
2018	11,133	11,321	10,974	2,374	2,394	2,358	53.5%	54.0%	53.1%
2019	11,394	11,603	11,218	2,418	2,441	2,399	53.8%	54.3%	53.4%
2020	11,683	11,914	11,490	2,462	2,486	2,441	54.2%	54.7%	53.7%
2021	11,940	12,195	11,731	2,506	2,533	2,483	54.4%	55.0%	53.9%
2022	12,203	12,481	11,975	2,549	2,578	2,524	54.6%	55.3%	54.2%
2023	12,473	12,776	12,227	2,594	2,626	2,568	54.9%	55.5%	54.4%
2024	12,749	13,078	12,484	2,639	2,674	2,611	55.1%	55.8%	54.6%
2025	13,033	13,390	12,747	2,685	2,723	2,655	55.4%	56.1%	54.8%
1999-05	3.0%	3.0%	3.0%	1.6%	1.6%	1.6%	0.7%	0.7%	0.7%
2006-25	2.5%	2.7%	2.4%	2.0%	2.1%	1.9%	0.3%	0.3%	0.2%

1.2 ECONOMIC AND DEMOGRAPHIC OUTLOOK

1.2.1 Economic Outlook

Economy.com January 2006 long-term US and regional economic forecast for Missouri counties was an input into the regional analysis which provided annual economic growth assumptions for residential households, personal income, population, commercial employment, industrial (manufacturing) employment, and real gross domestic product (GDP), as summarized in Table 1-3. The county forecasts for Base, High and Low economic growth scenarios were aggregated for the counties served by MPS and SJLP in Missouri.

**Table 1-3
Economic Outlook**

Economic Growth Outlook: 2006-2025 (Economy.com, Jan-2006)						
MPS Service Area:						
Scenario	Real GDP	Households	Per.Income	Population	Com.Emp	Mfg.Emp
Base	2.12%	0.51%	4.91%	0.54%	0.57%	-0.60%
High	3.31%	0.77%	5.69%	0.81%	1.52%	1.20%
Low	1.08%	0.26%	4.25%	0.27%	-0.26%	-2.21%
SJD Service Area:						
Scenario	Real GDP	Households	Per.Income	Population	Com.Emp	Mfg.Emp
Base	2.36%	0.59%	3.80%	0.42%	0.82%	-0.38%
High	3.30%	0.86%	4.40%	0.62%	1.57%	1.11%
Low	1.52%	0.32%	3.28%	0.22%	0.13%	-1.70%

Energy use per customer growth plus customer growth drives annual energy sales growth, as shown in Table 1-4.

**Table 1-4
Sales and Customer Growth Trends**

Division Class	MPS RES	MPS COM	MPS IND	MPS TOTAL	SJLP RES	SJLP COM	SJLP IND	SJLP TOTAL
Sales MWh								
1996-05	4.1%	4.5%	2.0%	3.2%	1.8%	2.9%	2.5%	2.3%
2006-09	3.6%	3.6%	1.2%	3.0%	0.8%	1.1%	2.0%	1.3%
2006-25	3.2%	3.0%	1.5%	2.7%	1.7%	1.8%	1.1%	1.6%
Customers								
1996-05	2.3%	3.0%	-0.1%	2.4%	0.7%	1.0%	-0.2%	0.7%
2006-09	2.6%	2.6%	0.1%	2.5%	0.6%	1.0%	0.0%	0.7%
2006-25	2.0%	2.1%	0.0%	2.0%	0.5%	1.0%	0.0%	0.5%
MWh/Customer								
1996-05	1.7%	1.5%	2.2%	0.8%	1.1%	1.9%	2.7%	1.6%
2006-09	1.0%	0.9%	1.1%	0.4%	0.2%	0.2%	2.0%	0.6%
2006-25	1.2%	0.9%	1.5%	0.8%	1.2%	0.7%	1.1%	1.0%

Electric utility energy sales typically grow in correlation to service area real GDP. Customers in residential, commercial, industrial classes typically grow in correlation to economic/demographic growth in population, households, commercial employment, and industrial (manufacturing) employment.

Annual growth in MPS and SJLP service areas depends on the underlying economic growth trends, as summarized in Table 1-5.

**Table 1-5
Economic Growth Trends**

Division Class	MPS RES	MPS COM	MPS IND	MPS TOTAL	SJLP RES	SJLP COM	SJLP IND	SJLP TOTAL
Sales MWh								
1996-05	4.1%	4.5%	2.0%	3.2%	1.8%	2.9%	2.5%	2.3%
2006-09	3.6%	3.6%	1.2%	3.0%	0.8%	1.1%	2.0%	1.3%
2006-25	3.2%	3.0%	1.5%	2.7%	1.7%	1.8%	1.1%	1.6%
Customers								
1996-05	2.3%	3.0%	-0.1%	2.4%	0.7%	1.0%	-0.2%	0.7%
2006-09	2.6%	2.6%	0.1%	2.5%	0.6%	1.0%	0.0%	0.7%
2006-25	2.0%	2.1%	0.0%	2.0%	0.5%	1.0%	0.0%	0.5%
Growth Ratio	3.8	3.6	-	1.3	0.8	1.2	-	0.7
Economic Growth	HH	Emp_C	Emp_I	GDP	HH	Emp_C	Emp_I	GDP
1996-05	0.9%	0.2%	-1.3%	1.9%	1.0%	2.1%	1.4%	4.6%
2006-09	0.9%	0.9%	-0.4%	2.4%	1.0%	1.7%	-0.6%	3.2%
2006-25	0.5%	0.6%	-0.6%	2.1%	0.6%	0.8%	-0.4%	2.4%

Note: Growth Ratio is 2006-25 Customer growth / Economic growth. GDP Ratio is Sales growth / GDP growth.

MPS sales growth has closely tracked real GDP growth, compared to SJLP sales growth which is slower than real GDP for counties in service areas.

1.2.2 Service Area Growth

MPS serves counties in Missouri as shown in Table 1-6. Although not all of the economic activity in these counties is within the MPS service area, the service area shares a major portion of the economic activity. Residential customer growth in MPS service area over 2006-2025 period is projected at 2.0% annually, compared to household growth of 0.5% annually.

Table 1-6
MPS Household Growth

FIP	County	Households 2005	HH %Total 2005	HH-CAGR% 1991-2000	HH-CAGR% 2001-2005	HH-CAGR% 2006-2025
29011	Barton	5.11	0.9%	0.8%	1.0%	1.1%
29013	Bates	6.64	1.2%	0.9%	0.4%	0.0%
29015	Benton	8.01	1.5%	2.6%	1.8%	1.8%
29033	Carroll	4.11	0.7%	-0.4%	-0.3%	-0.1%
29037	Cass	33.70	6.1%	2.8%	2.6%	1.5%
29039	Cedar	5.76	1.0%	1.4%	0.3%	1.0%
29047	Clay	78.02	14.2%	2.1%	1.7%	0.9%
29049	Clinton	7.80	1.4%	1.6%	2.1%	1.1%
29061	Daviess	3.24	0.6%	0.5%	0.5%	0.6%
29079	Grundy	4.28	0.8%	0.2%	-0.5%	-0.1%
29081	Harrison	3.65	0.7%	0.2%	-0.1%	0.5%
29083	Henry	9.44	1.7%	1.1%	0.7%	1.0%
29085	Hickory	4.02	0.7%	2.3%	0.6%	1.3%
29095	Jackson	268.77	48.9%	0.5%	0.2%	0.1%
29101	Johnson	18.30	3.3%	1.8%	1.2%	1.2%
29107	Lafayette	12.65	2.3%	0.7%	0.1%	-0.2%
29117	Livingston	5.63	1.0%	0.3%	-0.4%	0.0%
29129	Mercer	1.54	0.3%	0.1%	-1.0%	-0.2%
29159	Pettis	15.73	2.9%	1.0%	0.2%	0.8%
29165	Platte	32.17	5.9%	2.8%	2.2%	1.2%
29177	Ray	8.97	1.6%	0.9%	0.6%	-0.1%
29185	St. Clair	4.00	0.7%	1.4%	-0.4%	0.8%
29217	Vernon	7.95	1.4%	0.9%	0.0%	0.6%
	Total	549.50	100.0%	1.1%	0.7%	0.5%
	Total-Jackson	280.73	51.1%	1.7%	1.3%	0.9%
	Top 5	430.97	78.4%	1.2%	0.8%	0.5%

Jan06 Economy.com, Missouri Economic Forecast (Base Case)

SJLP serves counties in Missouri as shown in Table 1-7. Although not all of the economic activity in these counties is within the SJLP service area, the service area shares a major portion of the economic activity. Residential customer growth in SJLP service area over 2006-2025 period is projected at 0.5% annually, compared to household growth of 0.7% annually.

Table 1-7
SJLP Household Growth

FIP	County	Households 2005	HH %Total 2005	HH-CAGR% 1991-2000	HH-CAGR% 2001-2005	HH-CAGR% 2006-2025
29003	Andrew	6.41	6.4%	1.4%	0.5%	0.8%
29005	Atchison	2.67	2.7%	-0.7%	-0.4%	-0.7%
29021	Buchanan	33.14	33.2%	0.3%	-0.3%	0.2%
29049	Clinton	7.80	7.8%	1.6%	2.1%	1.1%
29063	DeKalb	3.80	3.8%	1.5%	-1.2%	0.7%
29075	Gentry	2.62	2.6%	-0.1%	-1.2%	-0.2%
29087	Holt	2.13	2.1%	-0.8%	-1.1%	-0.6%
29147	Nodaway	8.09	8.1%	0.7%	-0.1%	0.2%
29165	Platte	32.17	32.2%	2.8%	2.2%	1.2%
29227	Worth	0.97	1.0%	-0.3%	-0.9%	-0.3%
	Total	99.81	100.0%	1.2%	0.6%	0.6%
	Total-Buchanan	66.67	66.8%	1.7%	1.1%	0.8%
	Top 5	87.62	87.8%	1.3%	0.9%	0.7%

Jan06 Economy.com, Missouri Economic Forecast (Base Case)

1.3 ENERGY SALES FORECAST

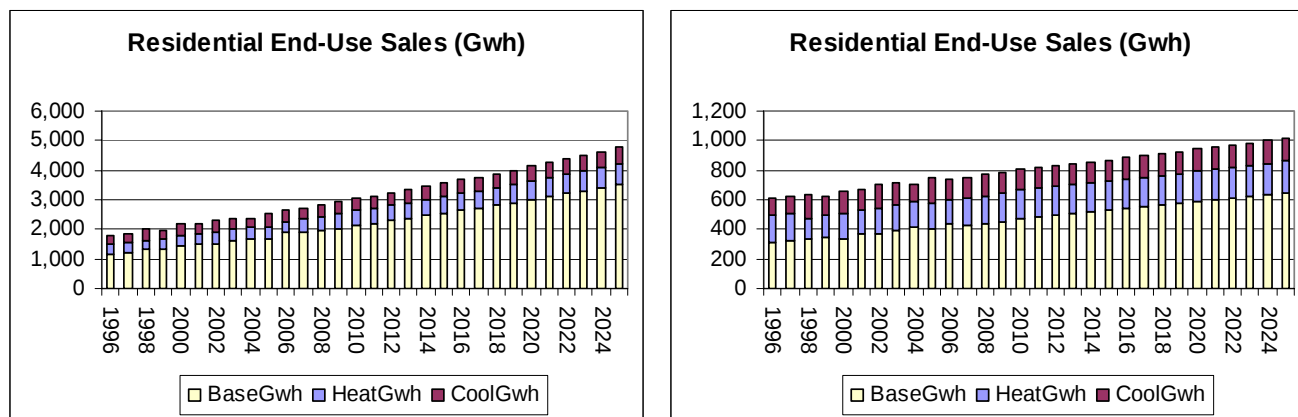
1.3.1 Methodology

Energy sales models by revenue class in Microsoft Excel were used for short-term budget forecast period of 2006-2009, based on historical monthly sales, customers, use per customer, weather (heating degree day (HDD) and cooling degree day (CDD)), and trends. Historical weather normalized use per customer by revenue class is multiplied by customer forecasts to produce energy sales forecasts. Use per customer and customer forecasts by class are based on historical trends. Energy sales are weather normalized based on NOAA 1971-2000 calendar month weather normal HDD and CDD for Kansas City International Airport (MCI). Adjustments for large customer loads were made for 2006-2009. Resulting short-term energy sales forecasts for 2006-2009 were calibrated with Itron MetrixND statistically-adjusted end-use (SAE) models through 2025 using economic forecast drivers and end-use market shares for MPS and SJLP service areas. Energy sales forecasts are before any future demand-side management (DSM) program impacts.

Itron MetrixND statistically-adjusted end-use models by class were utilized for the long-term 20-year energy forecast. The SAE methodology entails specifying energy use as a function of the primary end-use variables (heating, cooling, and base use) and the factors that affect these end-use energy requirements. For details of Itron MetrixND SAE class end-use forecast models, see Appendix 1-B for MPS, and Appendix 1-C for SJLP.

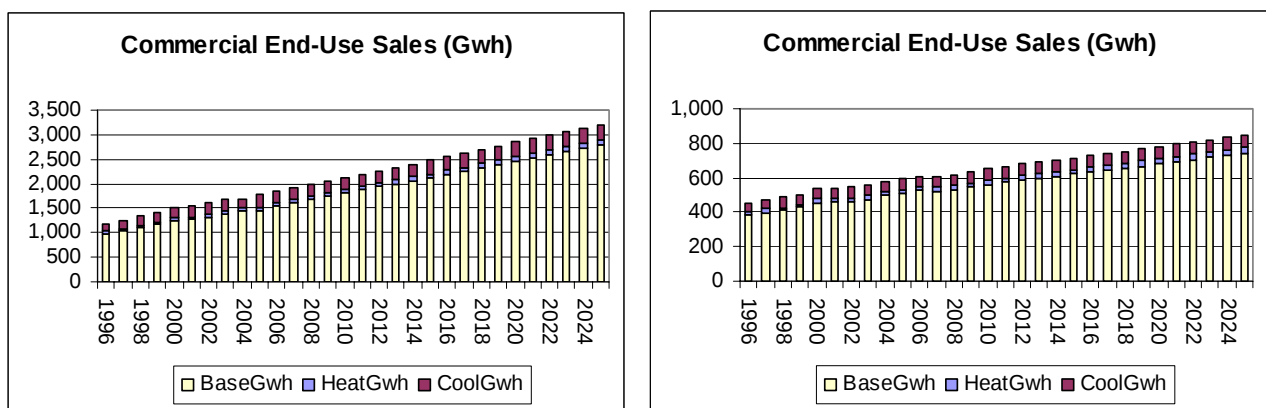
Residential sales SAE model consists of equations for average use per customer and number of customers. Regression models are estimated with calendar month historical data for customers, sales, weather (HDD, CDD), economics (personal income), real price elasticity (-0.10), household size, appliance saturation, and efficiency trends. The short-term budget forecast sales and customers are included in the model estimation period to calibrate the short-term and long-term forecasts. The residential sales forecast is then calculated as the product of average use per customer from the SAE model and customer forecast based on population growth trends, as shown in Table 1-8 for MPS and SJLP.

Table 1-8
MPS and SJLP Residential End-Use Sales Forecasts



Commercial sales SAE model consists of equations for average use per customer and number of customers. Regression models are estimated with calendar month historical data for customers, sales, weather (HDD, CDD), economics (GDP), real price elasticity (-0.10), equipment saturation, and efficiency trends. The short-term budget forecast sales and customers are included in the model estimation period to calibrate the short-term and long-term forecasts. The commercial sales forecast is then calculated as the product of average use per customer from the SAE model and customer forecast based on commercial employment growth trends, as shown in Table 1-9 for MPS and SJLP.

Table 1-9
MPS and SJLP Commercial End-Use Sales Forecasts



Industrial sales model is based on calendar month historical data for sales, weather (CDD), industrial output index (GDP), and seasonal (summer, winter) variables. Wholesale sales are based on historical data for sales and customers from the short-term three-year budget forecast, extended to 2025. Other sales model is based on historical data for sales, weather (CDD), and time trends. Street lighting sales are based on historical monthly data for sales and customers, extended to 2025.

1.3.2 Large Customer Load Changes

Large customer load changes for MPS and SJLP service areas are shown in Table 1-10.

Table 1-10
Large Customer Loads

Utility	Customer	Status	YearMo	PeakMW	MWH/Yr	LF%
MPS	City of Harrisonville, MO (wholesale)	Lost	200304	(24.00)	(105,120)	50%
MPS	City of Odessa, MO (wholesale)	Lost	200403	(9.00)	(51,246)	65%
MPS	St.Lukes-East Hospital (start-up)	Added	200512	0.70	3,679	60%
MPS	St.Lukes-East Hospital (expansion)	Added	200607	5.00	26,280	60%
SJLP	Albaugh Chemical (expansion)	Added	200506	2.00	13,140	75%
SJLP	Triumph Foods (start-up)	Added	200512	3.75	14,750	45%
SJLP	Triumph Foods (expansion)	Added	200607	8.00	35,040	50%
SJLP	Lifeline	Added	200611	0.50	1,800	41%
SJLP	Kawasaki	Added	100611	0.20	700	40%

1.3.3 Energy Sales Forecast

Table 1-11 shows historical and forecast annual energy sales by customer class for MPS to 2025. Over the 2006-2025 forecast period annual energy growth is projected at 2.7% for Base-Case, 3.0% for High-Case, and 2.6% for Low-Case.

**Table 1-11
MPS Energy Sales Forecast**

MpsE Year	Sales (MWh) - Base Case						Total Sales (MWh)		
	RES	COM	IND	Pub.LT	WHO	OTH	Base	High	Low
1996	1,770,725	1,189,937	627,816	20,768	190,400	355,423	4,155,069		
1997	1,833,799	1,254,850	659,449	21,409	197,193	356,670	4,323,370		
1998	2,000,398	1,359,646	696,182	22,019	199,133	373,800	4,651,178		
1999	1,956,822	1,404,543	703,887	22,393	212,352	368,572	4,668,569	4,668,569	4,668,569
2000	2,178,223	1,522,123	768,570	20,537	218,771	410,552	5,118,776	5,118,776	5,118,776
2001	2,180,747	1,535,366	672,823	20,595	174,493	404,603	4,988,627	4,988,627	4,988,627
2002	2,335,135	1,627,295	755,229	20,813	179,054	406,532	5,324,058	5,324,058	5,324,058
2003	2,380,831	1,669,354	744,520	20,653	109,730	422,896	5,347,984	5,347,984	5,347,984
2004	2,365,422	1,695,348	775,655	21,346	43,752	406,674	5,308,198	5,308,198	5,308,198
2005	2,536,437	1,773,663	752,449	21,980	31,860	411,193	5,527,582	5,527,582	5,527,582
2006	2,644,630	1,842,261	757,558	21,836	31,647	408,734	5,706,667	5,706,667	5,706,667
2007	2,731,083	1,904,452	765,817	21,836	31,647	409,589	5,864,424	5,864,424	5,864,424
2008	2,828,310	1,972,036	774,515	21,836	31,647	409,625	6,037,969	6,037,969	6,037,969
2009	2,936,589	2,047,045	786,244	21,836	31,647	409,622	6,232,983	6,232,983	6,232,983
2010	3,049,796	2,116,455	817,608	21,836	31,647	427,561	6,464,903	6,498,194	6,430,428
2011	3,141,236	2,189,638	830,916	21,836	31,647	431,808	6,647,081	6,700,434	6,598,886
2012	3,245,356	2,267,060	845,592	21,836	31,647	436,055	6,847,547	6,922,792	6,788,637
2013	3,337,962	2,331,428	859,634	21,836	31,647	440,302	7,022,809	7,119,318	6,953,680
2014	3,441,914	2,404,608	872,869	21,836	31,647	444,549	7,217,423	7,334,755	7,137,210
2015	3,549,582	2,475,370	885,445	21,836	31,647	448,797	7,412,677	7,551,227	7,321,011
2016	3,667,723	2,554,722	896,851	21,836	31,647	453,044	7,625,823	7,786,286	7,521,635
2017	3,771,296	2,619,741	909,252	21,836	31,647	457,291	7,811,063	7,994,619	7,693,546
2018	3,885,345	2,694,699	921,764	21,836	31,647	461,538	8,016,830	8,225,442	7,885,432
2019	4,001,773	2,770,840	933,243	21,836	31,647	465,785	8,225,124	8,460,169	8,079,952
2020	4,129,740	2,855,990	945,576	21,836	31,647	470,032	8,454,821	8,718,742	8,295,096
2021	4,252,243	2,923,182	956,946	21,836	31,647	474,279	8,660,135	8,953,286	8,485,910
2022	4,377,344	2,991,517	968,618	21,836	31,647	478,527	8,869,489	9,192,706	8,679,910
2023	4,507,041	3,061,477	980,826	21,836	31,647	482,774	9,085,601	9,440,442	8,880,002
2024	4,640,445	3,132,267	993,305	21,836	31,647	487,021	9,306,521	9,694,121	9,084,108
2025	4,777,717	3,204,678	1,006,417	21,836	31,647	491,268	9,533,563	9,955,449	9,293,583
% Growth									
1996-05	4.1%	4.5%	2.0%	0.6%	-18.0%	1.6%	3.2%		
2006-09	3.6%	3.6%	1.2%	0.0%	0.0%	0.1%	3.0%	3.0%	3.0%
2006-25	3.2%	3.0%	1.5%	0.0%	0.0%	1.0%	2.7%	3.0%	2.6%

See Appendix 1-D for detailed results of MPS class energy sales forecasts, including a sensitivity analysis to real energy prices and economic growth.

Table 1-12 shows historical and forecast annual energy sales by customer class for SJLP to 2025. Over the 2006-2025 forecast period annual energy growth is projected at 1.6% for Base-Case, 1.7% for High-Case, and 1.4% for Low-Case.

Table 1-12
SJLP Energy Sales Forecast

SjdE	Sales (MWh) - Base Case						Total Sales (MWh)		
Year	RES	COM	IND	Pub.LT	WHO	OTH	Base	High	Low
1996	611,122	456,099	450,829	9,535	0	0	1,527,585		
1997	624,484	471,998	467,386	9,243	0	0	1,573,110		
1998	632,584	490,689	500,428	9,685	0	0	1,633,386		
1999	625,643	501,434	531,497	9,846	0	0	1,668,420	1,668,420	1,668,420
2000	662,251	542,106	540,450	9,875	0	0	1,754,682	1,754,682	1,754,682
2001	670,617	539,952	511,610	9,804	0	0	1,731,983	1,731,983	1,731,983
2002	706,637	552,496	534,116	9,849	0	0	1,803,098	1,803,098	1,803,098
2003	710,278	559,558	524,843	10,099	0	0	1,804,778	1,804,951	1,804,951
2004	702,435	574,444	547,174	9,977	0	0	1,834,029	1,834,177	1,834,177
2005	749,363	598,697	552,413	10,016	0	0	1,910,489	1,910,645	1,910,645
2006	735,158	609,323	563,820	10,172	0	0	1,918,472	1,918,489	1,918,489
2007	755,536	608,339	578,425	10,167	0	0	1,952,467	1,952,467	1,952,467
2008	768,024	619,347	586,360	10,058	0	0	1,983,788	1,983,788	1,983,788
2009	783,190	632,181	596,976	10,058	0	0	2,022,405	2,022,405	2,022,405
2010	804,657	650,220	602,215	10,058	0	0	2,067,150	2,075,074	2,053,190
2011	816,947	663,726	608,762	10,058	0	0	2,099,493	2,110,513	2,081,180
2012	832,094	678,629	615,595	10,058	0	0	2,136,375	2,150,220	2,113,890
2013	842,975	689,510	622,181	10,058	0	0	2,164,725	2,181,796	2,137,862
2014	856,025	702,754	628,548	10,058	0	0	2,197,385	2,218,113	2,166,170
2015	869,333	715,060	634,662	10,058	0	0	2,229,113	2,254,041	2,193,425
2016	884,920	729,546	640,455	10,058	0	0	2,264,980	2,294,627	2,224,688
2017	896,060	739,931	646,702	10,058	0	0	2,292,752	2,327,531	2,247,775
2018	909,888	753,070	653,133	10,058	0	0	2,326,149	2,366,028	2,276,521
2019	923,961	766,401	659,388	10,058	0	0	2,359,807	2,404,933	2,305,420
2020	940,562	782,254	665,918	10,058	0	0	2,398,792	2,449,322	2,339,651
2021	955,024	795,292	672,119	10,058	0	0	2,432,492	2,489,013	2,368,449
2022	969,537	808,481	678,455	10,058	0	0	2,466,531	2,529,504	2,397,492
2023	984,598	821,831	684,978	10,058	0	0	2,501,466	2,571,327	2,427,289
2024	999,965	835,352	691,631	10,058	0	0	2,537,007	2,614,210	2,457,544
2025	1,015,800	849,136	698,604	10,058	0	0	2,573,597	2,658,504	2,488,643
% Growth									
1996-04	1.8%	2.9%	2.5%	0.6%			2.3%		
2005-08	0.8%	1.1%	2.0%	0.1%			1.3%	1.3%	1.3%
2006-25	1.7%	1.8%	1.1%	-0.1%			1.6%	1.7%	1.4%

See Appendix 1-E for detailed results of SJLP class energy sales forecasts, including a sensitivity analysis to real energy prices and economic growth.

1.3.4 Sensitivity Analysis

A sensitivity analysis of the base-case annual energy sales and summer peak demand forecasts for variations in key driver variables was performed for MPS and SJLP. To analyze sensitivity of annual energy sales and summer peak demand to the real price of electricity, a 10% rate increase every 3 years from 2010 was simulated, based on real price elasticity of negative 0.1 and CPI growth averaging 2.3% annually during 2006-2025. Relative to the price case, the sensitivity to real GDP growth of 3.0% annually was also simulated, compared to the base-case of 1.7% annual real GDP growth for MPS and 2.3% annual real GDP growth for SJLP service area counties. The results of the sensitivity analysis cases are compared on a consistent basis for MPS in Table 1-13, and SJLP in Table 1-14.

Table 1-13
MPS Load Forecast Sensitivity Analysis

Year	MPS (10%3y Price - Base Case)			MPS (3%y GDP - Price Case)		
	SalesGwh	PeakMw	%Chg.Mw	SalesGwh	PeakMw	%Chg.Mw
2010	(58.83)	(18)	-0.8%	35.11	8	0.5%
2011	(82.41)	(18)	-1.2%	50.71	11	0.7%
2012	(81.27)	(17)	-1.1%	65.11	13	0.9%
2013	(119.81)	(31)	-1.6%	82.06	17	1.1%
2014	(147.11)	(31)	-1.9%	102.23	20	1.3%
2015	(147.58)	(31)	-1.8%	125.37	25	1.6%
2016	(191.11)	(45)	-2.3%	152.29	30	1.9%
2017	(221.96)	(46)	-2.6%	178.41	35	2.2%
2018	(224.30)	(46)	-2.6%	206.72	40	2.5%
2019	(272.60)	(61)	-3.1%	237.97	45	2.8%
2020	(308.38)	(62)	-3.4%	269.78	51	3.1%
2021	(312.18)	(63)	-3.3%	305.34	58	3.4%
2022	(365.10)	(79)	-3.8%	340.56	64	3.7%
2023	(404.30)	(80)	-4.1%	376.86	70	4.0%
2024	(410.28)	(81)	-4.1%	415.73	77	4.3%
2025	(468.74)	(99)	-4.6%	453.08	83	4.6%

Table 1-14
SJLP Load Forecast Sensitivity Analysis

Year	SJLP (10%3y Price - Base Case)			SJLP (3%y GDP - Price Case)		
	SalesGwh	PeakMw	%Chg.Mw	SalesGwh	PeakMw	%Chg.Mw
2010	(18.92)	(5)	-1.0%	6.42	1	0.3%
2011	(26.19)	(5)	-1.3%	9.27	2	0.3%
2012	(25.71)	(5)	-1.3%	11.97	2	0.4%
2013	(37.08)	(9)	-1.8%	15.78	3	0.4%
2014	(45.06)	(9)	-2.2%	20.35	4	0.5%
2015	(45.04)	(9)	-2.1%	25.83	5	0.5%
2016	(57.10)	(13)	-2.6%	32.34	6	0.6%
2017	(65.85)	(13)	-3.0%	38.56	7	0.6%
2018	(66.16)	(13)	-2.9%	44.95	8	0.7%
2019	(79.11)	(17)	-3.4%	52.08	10	0.7%
2020	(88.52)	(17)	-3.8%	59.26	11	0.8%
2021	(89.18)	(17)	-3.7%	67.64	12	0.8%
2022	(103.00)	(22)	-4.2%	76.13	14	0.9%
2023	(113.19)	(22)	-4.6%	84.88	15	0.9%
2024	(114.23)	(22)	-4.6%	94.18	17	1.0%
2025	(128.99)	(26)	-5.1%	103.17	18	1.0%

1.4 SYSTEM ENERGY AND PEAK DEMAND FORECAST

Net energy for load at the system level is comprised of energy sales by class plus transmission and distribution losses averaging about 7.2% annually for MPS and about 6.8% annually for SJLP. Annual net energy for load at the system level equals the sum of the calendar year hourly loads.

1.4.1 Methodology

Itron MetrixND models were used to weather normalize historical hourly loads through 2005, which were then driven by the overall energy sales forecasts for Base, High, and Low economic growth scenarios to produce hourly load forecasts. The MetrixND models are based on daily loads with explanatory variables for Average Daily temperature (ADT), ADT-squared, ADT-cubed, days of the week, holidays, months of the year, and time trends. For a detailed description of methods and Itron MetrixND class energy sales forecast models, and peak demand forecast models, see Appendix 1-B for MPS and Appendix 1-C for SJLP.

Weather normal ADTs for Kansas City, MO International Airport (MCI) for the 1971-2000 period were used to weather normalize system hourly loads. Historical ADTs were sorted by month in descending order, averaged over 1971-2000 by rank, and then normal values were resorted by actual historical patterns of ADTs. Weather normal ADTs were simulated in the MetrixND model to estimate weather normalized load shapes, and the results scaled in MetrixLT to the monthly energy and peak demand forecast.

1.4.2 Energy and Peak Demand Forecast

Table 1-15 shows MPS actual and forecast system-level annual energy, and summer (July) and winter (January) peak demand for the Base-Case. See Appendix 1-D for detailed MPS class and system energy and peak demand for summer and winter.

Table 1-15
MPS Energy and Peak Demand Forecast (Base-Case)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	Actual NEL MWH	Actual Peak MW	Normal NEL MWH	NEL Growth	Summer Peak MW	Peak Growth	T&D Loss	Normal Sales MWH	Sales Growth	Winter Peak MW	Load Factor	Summer Peak		
												-1.96	WN	1.96
1999	5,046,680	1,276	5,151,827		1,229		7.5%	4,763,826		833	47.9%	1,057	1,229	1,401
2000	5,477,363	1,335	5,376,865	4.4%	1,292	5.1%	6.5%	5,025,266	5.5%	855	47.4%	1,111	1,292	1,473
2001	5,447,346	1,300	5,461,170	1.6%	1,265	-2.1%	8.4%	5,001,977	-0.5%	892	49.3%	1,088	1,265	1,442
2002	5,707,824	1,333	5,547,350	1.6%	1,266	0.1%	6.7%	5,175,869	3.5%	913	50.0%	1,089	1,266	1,443
2003	5,762,456	1,443	5,726,791	3.2%	1,349	6.6%	7.2%	5,316,171	2.7%	944	48.5%	1,160	1,349	1,538
2004	5,707,432	1,344	5,891,548	2.9%	1,377	2.1%	7.0%	5,478,002	3.0%	962	48.7%	1,184	1,377	1,570
2005	6,106,435	1,422	5,972,397	1.4%	1,410	2.4%	7.1%	5,550,032	1.3%	1,004	48.4%	1,213	1,410	1,607
2006			6,148,876	3.0%	1,439	2.1%	7.2%	5,706,667	2.8%	1,042	48.8%	1,237	1,439	1,641
2007			6,318,856	2.8%	1,473	2.4%	7.2%	5,864,424	2.8%	1,073	49.0%	1,267	1,473	1,679
2008			6,505,750	3.0%	1,509	2.4%	7.2%	6,037,969	3.0%	1,105	49.1%	1,298	1,509	1,720
2009			6,716,073	3.2%	1,548	2.6%	7.2%	6,232,983	3.2%	1,140	49.5%	1,331	1,548	1,765
2010			6,965,994	3.7%	1,602	3.5%	7.2%	6,464,903	3.7%	1,173	49.6%	1,378	1,602	1,826
2011			7,162,216	2.8%	1,636	2.1%	7.2%	6,647,081	2.8%	1,206	50.0%	1,407	1,636	1,865
2012			7,378,045	3.0%	1,671	2.1%	7.2%	6,847,547	3.0%	1,239	50.3%	1,437	1,671	1,905
2013			7,566,910	2.6%	1,706	2.1%	7.2%	7,022,809	2.6%	1,273	50.6%	1,467	1,706	1,945
2014			7,776,475	2.8%	1,742	2.1%	7.2%	7,217,423	2.8%	1,308	51.0%	1,498	1,742	1,986
2015			7,986,839	2.7%	1,778	2.1%	7.2%	7,412,677	2.7%	1,342	51.3%	1,529	1,778	2,027
2016			8,216,421	2.9%	1,815	2.1%	7.2%	7,625,823	2.9%	1,376	51.5%	1,561	1,815	2,069
2017			8,416,029	2.4%	1,852	2.0%	7.2%	7,811,063	2.4%	1,412	51.9%	1,593	1,852	2,111
2018			8,637,639	2.6%	1,889	2.0%	7.2%	8,016,830	2.6%	1,447	52.2%	1,624	1,889	2,154
2019			8,861,982	2.6%	1,927	2.0%	7.2%	8,225,124	2.6%	1,483	52.5%	1,657	1,927	2,197
2020			9,109,242	2.8%	1,965	2.0%	7.2%	8,454,821	2.8%	1,519	52.8%	1,690	1,965	2,240
2021			9,330,506	2.4%	2,003	1.9%	7.2%	8,660,135	2.4%	1,554	53.2%	1,723	2,003	2,283
2022			9,556,055	2.4%	2,041	1.9%	7.2%	8,869,489	2.4%	1,590	53.4%	1,755	2,041	2,327
2023			9,788,902	2.4%	2,080	1.9%	7.2%	9,085,601	2.4%	1,627	53.7%	1,789	2,080	2,371
2024			10,026,783	2.4%	2,119	1.9%	7.2%	9,306,521	2.4%	1,664	53.9%	1,822	2,119	2,416
2025			10,271,303	2.4%	2,159	1.9%	7.2%	9,533,563	2.4%	1,702	54.3%	1,857	2,159	2,461
Growth:														
1999-2005	3.2%	1.8%	2.5%		2.3%			2.6%		3.2%			2.3%	
2006-2009			3.0%		2.5%			3.0%		3.0%			2.5%	
2009-2015			2.9%		2.3%			2.9%		2.8%			2.3%	
2006-2025			2.7%		2.2%			2.7%		2.6%			2.2%	

MPS actual summer peak demand on 8/9/06 hour 18 was 1,521 MW due to hotter than normal weather. Weather normalized energy sales growth was lower in 2001 and 2005 due to economic slowdowns.

MPS class loads for summer and winter peak demand on weekdays, weekends, and system peak day, are shown in Table 1-16 for the Base Case, based on 2005 actual load research hourly load profiles. See Appendix 1-D for detailed MPS class and system hourly load profiles on summer and winter peak days for years 2005, 2010, 2015 and 2025.

Table 1-16
MPS Class Load Profiles on Summer and Winter Peak Days

MPS Summer Hourly Load Profiles: July 2005

AVERAGE WEEKDAY		Hour																									
YearMoDT	Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	DayMWh	PeakMW
200507WD	21 RES	334	296	268	250	239	252	275	288	291	329	379	409	448	484	519	560	592	623	630	591	559	526	475	388	10005	630
200507WD	21 COM	183	178	175	170	173	184	204	229	275	299	315	326	332	342	347	345	330	296	273	256	246	237	217	198	6131	347
200507WD	21 IND	91	90	89	89	89	91	94	97	100	102	104	105	106	107	108	107	105	104	103	101	99	98	95	93	2369	108
200507WD	21 WHO	4	4	3	3	3	3	3	4	4	4	5	5	6	6	6	6	6	6	6	6	6	5	5	4	114	6
200507WD	21 OTH	45	43	43	42	42	45	50	56	67	73	77	80	81	83	85	84	80	72	67	63	60	58	53	48	1495	85
200507WD	21 System	736	676	638	610	603	620	647	701	766	840	916	980	1030	1077	1110	1134	1149	1147	1131	1089	1041	1012	931	821	21405	1149
AVERAGE WEEKEND		Hour																									
YearMoDT	Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	DayMWh	PeakMW
200507WE	10 RES	371	326	298	269	254	244	255	293	334	389	446	507	578	613	647	665	698	702	681	640	598	583	526	442	11360	702
200507WE	10 COM	187	179	175	168	167	169	169	177	199	218	234	245	251	257	261	258	258	251	243	234	227	220	207	195	5148	261
200507WE	10 IND	81	80	79	78	78	79	79	80	81	83	85	87	88	88	88	88	88	88	87	86	85	84	83	82	2008	88
200507WE	10 WHO	4	4	3	3	3	3	3	3	4	5	5	6	6	6	6	7	7	7	7	6	6	5	5	118	7	
200507WE	10 OTH	46	44	43	41	41	41	41	43	49	53	57	60	61	63	64	63	63	61	59	57	55	54	50	48	1256	64
200507WE	10 System	764	703	647	618	591	583	570	615	702	804	894	977	1040	1086	1121	1147	1175	1179	1149	1110	1065	1032	955	857	21384	1179
SYSTEM PEAKDAY		Hour																									
Mo/Da/Year	Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	DayMWh	PeakMW
7/22/2005	6 RES	439	401	379	330	323	334	345	368	403	436	508	602	660	687	711	723	746	804	796	784	745	721	666	588	13501	804
7/22/2005	6 COM	209	200	202	193	196	206	228	259	313	340	363	378	389	395	400	400	375	336	308	296	295	282	260	237	7059	400
7/22/2005	6 IND	103	102	101	101	101	103	105	108	111	114	116	117	118	119	119	118	116	114	111	110	108	107	102	97	2622	119
7/22/2005	6 WHO	5	4	4	4	4	4	4	4	4	5	6	6	7	7	8	8	8	8	8	8	7	7	7	6	146	8
7/22/2005	6 OTH	51	49	49	47	48	50	56	63	76	83	89	92	95	96	97	97	92	82	75	72	72	69	63	58	1722	97
7/22/2005	6 System	897	832	790	748	733	749	769	836	938	1070	1166	1245	1310	1365	1394	1419	1422	1404	1376	1328	1296	1230	1142	1058	26517	1422

MPS Winter Hourly Load Profiles: January 2005

AVERAGE WEEKDAY		Hour																										
YearMoDT	Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	DayMWh	PeakMW	
200501WD	21 RES	276	271	274	277	285	330	382	393	347	337	325	329	318	315	309	321	358	416	444	441	426	410	350	300	8234	444	
200501WD	21 COM	181	178	179	179	184	194	223	253	274	282	282	278	275	274	272	267	255	240	231	223	216	209	198	189	5538	282	
200501WD	21 IND	81	81	80	80	81	82	85	88	89	90	91	91	91	91	91	90	89	88	88	87	87	85	84	83	2074	91	
200501WD	21 WHO	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	94	4	
200501WD	21 OTH	44	43	44	44	45	47	54	62	67	69	69	68	67	67	66	65	62	59	56	54	53	51	48	46	1351	69	
200501WD	21 System	622	609	606	610	624	663	740	783	777	769	769	758	748	739	732	733	750	801	829	815	798	770	721	660	17426	829	
AVERAGE WEEKEND		Hour																										
YearMoDT	Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	DayMWh	PeakMW	
200501WE	10 RES	299	286	286	284	289	306	330	365	410	408	395	398	400	402	381	386	404	458	454	448	438	407	359	318	8911	458	
200501WE	10 COM	182	178	176	177	178	182	190	193	190	194	199	194	192	187	184	184	186	198	201	198	193	190	186	182	4515	201	
200501WE	10 IND	68	68	68	67	67	68	69	70	70	70	70	70	70	70	70	69	69	70	70	70	70	70	71	1664	71		
200501WE	10 WHO	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	91	4	
200501WE	10 OTH	44	43	43	43	43	44	46	47	46	47	48	47	47	46	45	45	45	48	49	48	47	46	45	44	1101	49	
200501WE	10 System	615	601	589	588	591	610	636	669	696	717	719	718	713	702	691	690	707	754	787	775	760	735	693	644	16398	787	
SYSTEM PEAKDAY		Hour																										
Mo/Da/Year	Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	DayMWh	PeakMW	
1/6/2005	5 RES	346	336	344	350	356	380	454	469	418	444	418	467	404	413	425	437	465	500	551	556	530	473	419	340	10296	556	
1/6/2005	5 COM	198	195	195	199	202	214	242	271	290	296	296	295	287	286	288	283	271	260	249	236	228	220	213	203	5916	296	
1/6/2005	5 IND	81	80	81	81	82	83	85	87	88	89	90	90	91	90	91	91	90	90	90	89	89	87	86	86	2085	91	
1/6/2005	5 WHO	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	4	4	110	5	
1/6/2005	5 OTH	48	48	48	49	49	52	59	66	71	72	72	72	70	70	70	69	66	63	61	58	56	54	52	49	1443	72	
1/6/2005	5 System	701	672	694	696	721	756	813	857	858	854	857	842	838	834	834	835	852	914	937	922	898	856	814	752	19607	937	

Table 1-17 shows weather normal MPS summer peak (July) and annual load factors by class for 1996-2005 historical period, and 2006-2025 forecast period.

Table 1-17
MPS Summer Peak MW and Annual Load Factors by Class

MPS	Summer Peak MW (July) by Class - Base Case							Annual CP Load Factors by Class - Base Case						
Year	Res	Com	Ind	Who	Other	StLt	System	Res	Com	Ind	Who	Other	StLt	System
1996	719	231	70	50.5	64	0.0	1,134	0.306	0.632	0.765	0.466	0.677	0.372	0.452
1997	744	233	76	53.5	57	0.0	1,164	0.307	0.665	0.765	0.459	0.769	0.388	0.461
1998	661	314	104	55.5	86	0.0	1,221	0.369	0.525	0.815	0.439	0.529	0.376	0.464
1999	680	315	127	43.0	63	1.2	1,229	0.362	0.561	0.704	0.626	0.735	0.379	0.478
2000	684	351	104	57.0	95	0.0	1,292	0.382	0.518	0.889	0.462	0.517	0.390	0.475
2001	704	298	103	38.5	62	0.8	1,205	0.388	0.642	0.822	0.569	0.817	0.359	0.517
2002	711	313	123	43.4	74	1.2	1,266	0.391	0.616	0.733	0.492	0.655	0.388	0.500
2003	830	315	117	19.1	67	1.2	1,349	0.350	0.648	0.787	0.702	0.766	0.389	0.485
2004	779	373	125	7.2	92	1.4	1,377	0.387	0.574	0.787	0.760	0.554	0.376	0.488
2005	863	343	122	7.7	73	1.3	1,410	0.363	0.636	0.765	0.509	0.689	0.366	0.483
2006	942	319	103	8.1	67	0.0	1,439	0.347	0.708	0.900	0.483	0.749	0.395	0.488
2007	935	351	108	8.0	71	0.0	1,473	0.361	0.664	0.872	0.489	0.704	0.398	0.490
2008	886	413	122	7.9	81	0.0	1,509	0.394	0.586	0.782	0.493	0.621	0.400	0.492
2009	963	384	119	7.5	73	1.2	1,548	0.376	0.653	0.810	0.518	0.692	0.384	0.495
2010	973	416	123	7.5	82	1.2	1,602	0.387	0.624	0.817	0.522	0.643	0.384	0.496
2011	983	433	128	7.5	83	1.3	1,636	0.394	0.620	0.798	0.522	0.638	0.390	0.500
2012	1,082	397	110	7.8	74	0.0	1,671	0.370	0.700	0.947	0.501	0.718	0.383	0.504
2013	1,030	455	129	7.5	84	1.3	1,706	0.400	0.629	0.819	0.521	0.646	0.385	0.506
2014	1,052	467	130	7.4	84	1.3	1,742	0.403	0.631	0.826	0.531	0.648	0.383	0.510
2015	1,086	472	128	7.3	83	1.2	1,778	0.403	0.643	0.851	0.535	0.659	0.372	0.513
2016	1,108	483	131	7.3	84	1.2	1,815	0.408	0.649	0.842	0.534	0.663	0.375	0.517
2017	1,230	427	113	7.4	73	1.3	1,852	0.378	0.752	0.992	0.527	0.771	0.364	0.519
2018	1,226	459	119	7.4	77	1.3	1,889	0.390	0.720	0.955	0.528	0.738	0.362	0.522
2019	1,178	520	135	7.3	85	1.3	1,927	0.418	0.654	0.852	0.535	0.669	0.369	0.525
2020	1,201	533	136	7.2	86	1.2	1,965	0.423	0.657	0.857	0.545	0.671	0.371	0.529
2021	1,241	534	135	7.1	85	1.2	2,003	0.422	0.672	0.876	0.548	0.686	0.345	0.532
2022	1,255	551	140	7.1	86	1.2	2,041	0.429	0.667	0.855	0.548	0.680	0.344	0.535
2023	1,402	478	117	7.2	74	1.3	2,080	0.395	0.786	0.855	0.542	0.802	0.348	0.537
2024	1,396	513	124	7.2	78	1.3	2,119	0.409	0.750	0.991	0.543	0.765	0.348	0.540
2025	1,342	581	141	7.0	87	1.2	2,159	0.438	0.677	0.885	0.558	0.692	0.363	0.543
1996-05	2.0%	4.5%	6.4%	-18.8%	1.5%		2.5%	0.6%	0.0%	0.0%	0.5%	0.1%	-0.1%	0.4%
2006-25	1.9%	3.2%	1.6%	-0.7%	1.4%		2.2%	0.5%	0.2%	-0.1%	0.4%	-0.3%	-0.2%	0.3%

Annual system load factors are forecast over 2006-2025 to slightly increase, due primarily to slightly increasing load factors coincident with summer peak in the residential class.

Table 1-18 shows SJLP actual and forecast system-level annual energy, and summer (July) and winter (January) peak demand for the Base-Case. See Appendix 1-E for detailed SJLP class and system energy and peak demand for summer and winter.

Table 1-18
SJLP Energy and Peak Demand Forecast (Base-Case)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	Actual NEL MWH	Actual Peak MW	Normal NEL MWH	NEL Growth	Summer Peak MW	Peak Growth	T&D Loss	Normal Sales MWH	Sales Growth	Winter Peak MW	Load Factor	Summer Peak		6.05%
												-1.96	WN	1.96
1999	1,801,378	388	1,834,248		376		6.8%	1,709,626		330	55.7%	331	376	421
2000	1,934,601	403	1,856,461	1.2%	379	0.8%	6.8%	1,730,247	1.2%	333	55.8%	334	379	424
2001	1,906,500	398	1,873,880	0.9%	365	-3.7%	6.8%	1,746,522	0.9%	348	58.6%	322	365	408
2002	1,936,950	399	1,897,684	1.3%	391	7.1%	6.8%	1,768,680	1.3%	343	55.4%	345	391	437
2003	1,936,907	419	1,931,444	1.8%	389	-0.5%	6.8%	1,800,180	1.8%	349	56.7%	343	389	435
2004	1,949,246	399	2,026,805	4.9%	399	2.6%	6.8%	1,888,966	4.9%	347	57.8%	352	399	446
2005	2,067,033	409	2,025,473	-0.1%	400	0.3%	6.8%	1,887,814	-0.1%	371	57.8%	353	400	447
2006			2,059,291	1.7%	412	3.0%	6.8%	1,918,489	1.6%	368	57.1%	363	412	461
2007			2,094,905	1.7%	418	1.5%	6.8%	1,952,467	1.8%	379	57.2%	368	418	468
2008			2,128,553	1.6%	425	1.7%	6.8%	1,983,788	1.6%	386	57.0%	375	425	475
2009			2,170,015	1.9%	433	1.9%	6.8%	2,022,405	1.9%	394	57.2%	382	433	484
2010			2,217,961	2.2%	442	2.1%	6.8%	2,067,150	2.2%	395	57.3%	390	442	494
2011			2,252,665	1.6%	448	1.4%	6.8%	2,099,493	1.6%	402	57.4%	395	448	501
2012			2,292,196	1.8%	454	1.3%	6.8%	2,136,375	1.8%	408	57.5%	400	454	508
2013			2,322,590	1.3%	460	1.3%	6.8%	2,164,725	1.3%	415	57.6%	405	460	515
2014			2,357,605	1.5%	466	1.3%	6.8%	2,197,385	1.5%	422	57.8%	411	466	521
2015			2,391,666	1.4%	472	1.3%	6.8%	2,229,113	1.4%	428	57.8%	416	472	528
2016			2,430,182	1.6%	478	1.3%	6.8%	2,264,980	1.6%	434	57.9%	421	478	535
2017			2,459,988	1.2%	484	1.3%	6.8%	2,292,752	1.2%	440	58.0%	427	484	541
2018			2,495,806	1.5%	490	1.2%	6.8%	2,326,149	1.5%	446	58.1%	432	490	548
2019			2,531,913	1.4%	496	1.2%	6.8%	2,359,807	1.4%	452	58.3%	437	496	555
2020			2,573,768	1.7%	502	1.2%	6.8%	2,398,792	1.7%	458	58.4%	442	502	562
2021			2,609,886	1.4%	507	1.0%	6.8%	2,432,492	1.4%	464	58.8%	447	507	567
2022			2,646,479	1.4%	513	1.2%	6.8%	2,466,531	1.4%	470	58.9%	452	513	574
2023			2,683,912	1.4%	519	1.2%	6.8%	2,501,466	1.4%	475	59.0%	457	519	581
2024			2,722,022	1.4%	525	1.2%	6.8%	2,537,007	1.4%	481	59.0%	463	525	587
2025			2,761,296	1.4%	531	1.1%	6.8%	2,573,597	1.4%	487	59.4%	468	531	594
Growth:														
1999-2005	2.3%	0.9%	1.7%		1.0%			1.7%		2.0%			1.0%	
2006-2009			1.8%		1.7%			1.8%		2.3%			1.7%	
2009-2015			1.6%		1.4%			1.6%		1.4%			1.4%	
2006-2025			1.6%		1.3%			1.6%		1.5%			1.3%	

SJLP actual summer peak demand on 8/9/06 hour 18 was 446 MW due to hotter than normal weather. Weather normalized energy sales growth was lower in 2001 and 2005 due to economic slowdowns.

SJLP class loads for summer and winter peak demand on weekdays, weekends, and system peak days, are shown in Table 1-19 for the Base Case, based on 2005 load research profiles. See Appendix 1-E for detailed SJLP class and system hourly load profiles on summer and winter peak days for years 2005, 2010, 2015 and 2025.

Table 1-19
SJLP Class Load Profiles on Summer and Winter Peak Days

SJLP Summer Hourly Load Profiles: July 2005

AVERAGE WEEKDAY		Hour																									
YearMoDT	Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	DayMWh	PeakMW
200507WD	21 RES	77	70	66	63	64	70	72	76	82	90	99	108	115	120	127	137	146	148	142	136	132	121	103	88	2450	148
200507WD	21 COM	55	53	52	53	58	64	76	89	100	106	109	109	111	111	107	103	93	85	79	77	73	68	63	59	1954	111
200507WD	21 IND	67	67	67	66	67	69	70	74	76	77	78	78	79	79	78	76	75	74	73	72	72	71	69	67	1740	79
200507WD	21 WHO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
200507WD	21 OTH	2	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	2	2	23	2
200507WD	21 System	237	224	215	209	209	212	222	240	259	278	297	309	320	330	335	340	343	340	335	323	311	304	283	247	6722	343
AVERAGE WEEKEND		Hour																									
YearMoDT	Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	DayMWh	PeakMW
200507WE	10 RES	83	76	72	67	65	66	73	86	97	108	117	128	136	140	150	157	161	158	154	146	138	127	111	96	2715	161
200507WE	10 COM	56	53	52	51	52	53	55	61	68	74	77	77	77	78	79	79	78	76	73	71	69	66	62	58	1597	79
200507WE	10 IND	58	58	57	57	56	56	56	56	57	58	59	59	60	60	60	60	60	59	58	58	58	58	59	59	1395	60
200507WE	10 WHO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
200507WE	10 OTH	2	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	2	2	23	2
200507WE	10 System	235	221	211	204	198	197	192	204	223	248	267	284	298	307	315	321	327	328	324	313	300	296	277	247	6338	328
SYSTEM PEAKDAY		Hour																									
Mo/Da/Year	Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	DayMWh	PeakMW
7/20/2005	4 RES	83	76	75	73	77	85	87	89	102	114	128	135	149	156	158	168	177	182	177	171	162	151	130	114	3021	182
7/20/2005	4 COM	59	57	57	57	65	71	87	100	112	117	121	122	123	123	121	116	105	96	89	87	82	76	72	67	2181	123
7/20/2005	4 IND	72	72	71	71	73	75	77	79	82	82	83	82	83	82	82	81	82	81	79	78	78	78	76	74	1872	83
7/20/2005	4 WHO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/20/2005	4 OTH	2	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	2	2	23	2
7/20/2005	4 System	250	238	230	227	232	237	259	284	304	327	349	363	378	389	391	398	409	402	395	384	369	366	339	298	7818	409

SJLP Winter Hourly Load Profiles: January 2005

AVERAGE WEEKDAY		Hour																									
YearMoDT	Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	DayMWh	PeakMW
200501WD	21 RES	102	102	102	103	106	113	128	130	122	119	115	113	111	107	104	108	119	133	140	137	133	128	117	107	2797	140
200501WD	21 COM	62	62	61	62	64	69	79	95	103	107	108	107	104	104	101	95	89	82	78	76	73	69	66	64	1979	108
200501WD	21 IND	59	59	59	59	61	62	63	66	68	68	69	68	68	67	67	65	65	64	64	63	63	62	61	59	1528	69
200501WD	21 WHO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
200501WD	21 OTH	2	2	2	2	2	2	1	0	0	0	0	0	0	0	0	0	0	1	2	2	2	2	2	2	32	2
200501WD	21 System	238	235	235	235	242	257	282	300	300	298	297	292	286	284	281	276	282	296	300	295	288	278	262	237	6576	300
AVERAGE WEEKEND		Hour																									
YearMoDT	Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	DayMWh	PeakMW
200501WE	10 RES	105	105	106	106	110	111	121	131	136	140	137	135	132	129	123	125	127	137	141	139	133	128	119	109	2985	141
200501WE	10 COM	60	60	60	60	61	63	66	69	69	72	72	71	69	67	66	65	65	67	68	67	66	65	63	62	1573	72
200501WE	10 IND	48	47	47	47	47	47	47	48	47	47	47	47	47	47	47	46	46	47	47	47	47	47	48	49	1132	49
200501WE	10 WHO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
200501WE	10 OTH	2	2	2	2	2	2	1	0	0	0	0	0	0	0	0	0	0	1	2	2	2	2	2	2	32	2
200501WE	10 System	225	222	222	223	225	231	242	253	258	261	261	257	254	249	243	243	248	264	267	267	262	254	242	221	5892	267
SYSTEM PEAKDAY		Hour																									
Mo/Da/Year	Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	DayMWh	PeakMW
1/14/2005	6 RES	148	149	148	151	146	153	171	172	161	169	167	163	149	135	131	137	156	163	167	167	164	162	157	145	3731	172
1/14/2005	6 COM	76	74	76	77	77	83	93	109	118	121	122	118	115	113	112	105	98	89	87	84	82	78	76	73	2254	122
1/14/2005	6 IND	63	63	62	62	62	63	66	69	70	70	71	69	69	68	68	67	67	67	66	65	65	63	61	57	1574	71
1/14/2005	6 WHO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/14/2005	6 OTH	2	2	2	2	2	2	1	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2	2	2	32	2
1/14/2005	6 System	296	294	295	294	300	314	342	357	356	356	356	343	331	324	318	317	333	334	347	343	339	328	308	278	7803	357

Table 1-20 shows weather normal SJLP summer peak (July) and annual load factors by class for 1996-2005 historical period, and 2006-2025 forecast period.

Table 1-20
SJLP Summer Peak MW and Annual Load Factors by Class

SJLP	Summer Peak MW (July) by Class - Base Case							Annual CP Load Factors by Class - Base Case						
Year	Res	Com	Ind	Who	Other	StLt	SysMW	Res	Com	Ind	Who	Other	StLt	System
1996	206	85	63	-	-	1.3	356	0.365	0.648	0.863	-	-	0.400	0.524
1997	202	82	55	-	-	0.1	339	0.384	0.704	0.863	-	-	0.400	0.571
1998	182	100	71	-	-	0.1	353	0.432	0.597	0.861	-	-	0.410	0.568
1999	189	83	62	-	-	0.1	334	0.419	0.749	0.861	-	-	0.404	0.628
2000	188	109	81	-	-	0.1	379	0.428	0.597	0.801	-	-	0.408	0.560
2001	191	100	73	-	-	0.5	365	0.437	0.663	0.859	-	-	0.409	0.587
2002	206	83	63	-	-	0.6	352	0.417	0.792	0.859	-	-	0.397	0.615
2003	216	102	70	-	-	0.7	389	0.404	0.666	0.916	-	-	0.409	0.567
2004	184	125	91	-	-	0.1	399	0.486	0.575	0.761	-	-	0.414	0.579
2005	208	109	74	-	-	0.1	392	0.438	0.659	0.901	-	-	0.413	0.590
2006	244	99	68	-	-	0.1	412	0.373	0.748	0.901	-	-	0.410	0.571
2007	242	104	72	-	-	0.1	418	0.387	0.711	0.972	-	-	0.412	0.572
2008	223	118	84	-	-	0.1	425	0.425	0.639	0.854	-	-	0.411	0.572
2009	227	121	84	-	-	0.1	433	0.426	0.635	0.861	-	-	0.412	0.572
2010	229	126	87	-	-	0.1	442	0.435	0.628	0.843	-	-	0.418	0.573
2011	228	130	90	-	-	0.1	448	0.444	0.623	0.822	-	-	0.408	0.574
2012	265	113	75	-	-	0.1	454	0.388	0.728	0.996	-	-	0.411	0.576
2013	237	133	91	-	-	0.1	460	0.441	0.631	0.836	-	-	0.412	0.576
2014	237	137	92	-	-	0.1	466	0.446	0.624	0.830	-	-	0.413	0.577
2015	243	138	91	-	-	0.1	472	0.443	0.630	0.847	-	-	0.412	0.578
2016	245	140	93	-	-	0.1	478	0.447	0.633	0.839	-	-	0.417	0.580
2017	282	123	79	-	-	0.1	484	0.394	0.731	0.998	-	-	0.411	0.581
2018	278	129	83	-	-	0.1	490	0.405	0.710	0.960	-	-	0.412	0.582
2019	254	146	95	-	-	0.1	496	0.449	0.639	0.843	-	-	0.412	0.583
2020	254	150	97	-	-	0.1	502	0.457	0.633	0.837	-	-	0.414	0.586
2021	261	150	96	-	-	0.1	507	0.453	0.643	0.852	-	-	0.413	0.587
2022	260	154	99	-	-	0.1	513	0.462	0.639	0.832	-	-	0.409	0.589
2023	303	134	82	-	-	0.1	519	0.402	0.748	0.832	-	-	0.412	0.590
2024	298	140	87	-	-	0.1	525	0.415	0.724	0.972	-	-	0.412	0.592
2025	270	160	100	-	-	0.1	531	0.465	0.645	0.849	-	-	0.416	0.594
1996-05	0.1%	2.7%	1.8%				1.1%	0.8%	0.1%	0.4%	0.0%	0.0%	0.1%	0.7%
2006-25	1.3%	1.9%	1.5%				1.5%	0.1%	0.3%	-0.3%	0.0%	0.0%	0.0%	0.1%

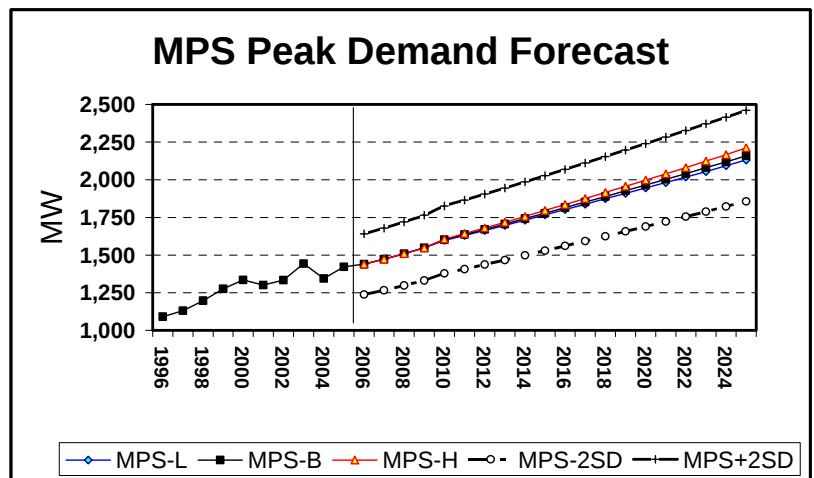
Annual system load factor is forecast over 2006-2025 to slightly increase, due primarily to slightly increasing load factors coincident with summer peak in the residential class.

1.5 HIGH-CASE AND LOW-CASE LOAD FORECASTS

Tables 1-21 and 1-22 show the MPS and SJLP High-Case and Low-Case Peak Demand Forecasts based on economic forecast scenarios (High and Low economic growth) and weather scenarios (Cool -1.96 standard deviations, and Hot +1.96 standard deviations) for the summer peak demand.

Table 1-21
MPS High-Case and Low-Case
Summer Peak Demand Forecast Scenarios

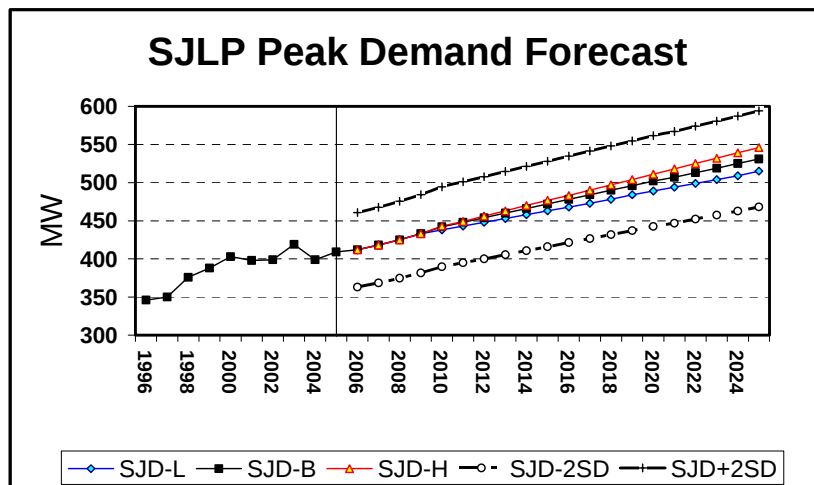
Peak	LOW	BASE	HIGH	COOL	HOT	BASE
MW	MPS-L	MPS-B	MPS-H	MPS-2SD	MPS+2SD	CAGR%
1996		1,091				
1997		1,131				3.7%
1998		1,197				5.8%
1999		1,276				6.6%
2000		1,335				4.6%
2001		1,300				-2.6%
2002		1,333				2.5%
2003		1,443				8.3%
2004		1,344				-6.9%
2005		1,422				5.8%
2006	1,439	1,439	1,439	1,237	1,641	1.2%
2007	1,473	1,473	1,473	1,267	1,679	2.4%
2008	1,509	1,509	1,509	1,298	1,720	2.4%
2009	1,548	1,548	1,548	1,331	1,765	2.6%
2010	1,597	1,602	1,606	1,378	1,826	3.5%
2011	1,630	1,636	1,643	1,407	1,865	2.1%
2012	1,663	1,671	1,680	1,437	1,905	2.1%
2013	1,698	1,706	1,718	1,467	1,945	2.1%
2014	1,732	1,742	1,757	1,498	1,986	2.1%
2015	1,767	1,778	1,796	1,529	2,027	2.1%
2016	1,802	1,815	1,835	1,561	2,069	2.1%
2017	1,838	1,852	1,875	1,593	2,111	2.0%
2018	1,874	1,889	1,916	1,624	2,154	2.0%
2019	1,910	1,927	1,957	1,657	2,197	2.0%
2020	1,946	1,965	1,998	1,690	2,240	2.0%
2021	1,982	2,003	2,039	1,723	2,283	1.9%
2022	2,018	2,041	2,081	1,755	2,327	1.9%
2023	2,055	2,080	2,124	1,789	2,371	1.9%
2024	2,093	2,119	2,167	1,822	2,416	1.9%
2025	2,131	2,159	2,212	1,857	2,461	1.9%
1996-05		3.0%				
2006-09	2.5%	2.5%	2.5%	2.5%	2.5%	
2006-25	2.1%	2.2%	2.3%	2.2%	2.2%	



Hot or cool weather scenarios are based on +/- 1.96 standard deviations (7.1% Stdev. July peak) and 95% confidence interval compared to MPS Base case forecast. MPS summer peak demand can vary +/- 200 MW from normal due to hot/cool weather at +/- 1.96 standard deviations.

Table 1-22
SJLP High-Case and Low-Case
Summer Peak Demand Forecast Scenarios

Peak	LOW	BASE	HIGH	COOL	HOT	BASE
MW	SJD-L	SJD-B	SJD-H	SJD-2SD	SJD+2SD	CAGR%
1996		346				
1997		350				1.2%
1998		376				7.4%
1999		388				3.2%
2000		403				3.9%
2001		398				-1.2%
2002		399				0.3%
2003		419				5.0%
2004		399				-4.8%
2005		409				2.5%
2006	412	412	412	363	461	0.7%
2007	418	418	418	368	468	1.5%
2008	425	425	425	375	475	1.7%
2009	433	433	433	382	484	1.9%
2010	438	442	443	390	494	2.1%
2011	443	448	449	395	501	1.4%
2012	448	454	456	400	508	1.3%
2013	453	460	463	405	515	1.3%
2014	458	466	470	411	521	1.3%
2015	463	472	477	416	528	1.3%
2016	468	478	483	421	535	1.3%
2017	473	484	490	427	541	1.3%
2018	478	490	497	432	548	1.2%
2019	484	496	504	437	555	1.2%
2020	489	502	511	442	562	1.2%
2021	494	507	518	447	567	1.0%
2022	499	513	525	452	574	1.2%
2023	504	519	532	457	581	1.2%
2024	509	525	539	463	587	1.2%
2025	515	531	546	468	594	1.1%
1996-05		1.9%				
2006-09	1.7%	1.7%	1.7%	1.7%	1.7%	
2006-25	1.2%	1.3%	1.5%	1.3%	1.3%	



Hot or cool weather scenarios are based on +/- 1.96 standard deviations (6.0% Stdev. July peak) and 95% confidence interval compared to SJLP Base case forecast. SJLP summer peak demand can vary +/- 50 MW from normal due to hot/cool weather at +/- 1.96 standard deviations.