Appendix B

Forecasting Information

Forecasting Information

Minn. R. 7849.0270 requires that an application for a Certificate of Need include information regarding the applicant's forecasting methodology and peak demand and consumption data. Minn. R. 7849.0280 requires that an application for a Certificate of Need include information regarding the applicant's system capacity. This information is presented below for Xcel Energy.

B.1 Forecast Methodology

B.1a Overall Methodological Framework

Xcel Energy prepares its forecast by major customer class and jurisdiction, using a variety of statistical and econometric techniques. The NSP System serves five jurisdictions. Minnesota, North Dakota and South Dakota are served by Northern States Power Company. Wisconsin and Michigan are served by Northern States Power Company, a Wisconsin corporation (NSPW). The overall methodological framework is "model oriented". The NSP and NSPW Systems operate as an integrated system. The forecast is referred to as the 2010 IRP Forecast (August 2010).

Xcel Energy uses a comprehensive long-term power planning process to select demand and supply side resources with the goal of maximizing customer benefits while meeting relevant constraints. Planning constraints are developed based on input from a variety of entities. MISO requires participants to maintain additional capacity to meet reliability targets. These levels are updated yearly based on MISO studies and used by Xcel Energy. Additional constraints result from legislative requirements such as Renewable Energy Standards, or environmental regulations. In addition Xcel Energy uses expert judgment to develop projections of future variables including load forecasts, natural gas prices, emerging technology and other important factors.

The constraints and projections are combined into a comprehensive model used to evaluate demand and supply resource alternatives. Currently Xcel Energy uses the Strategist software under license from Ventyx for modeling runs. Strategist runs model the Xcel Energy system as well as the MISO market over a 40 year time horizon. Using data to represent a typical week for each month, the software evaluates all viable alternatives and ranks the 2500 cheapest plans based on Present Value of Revenue Requirements.

B.1b Specific Analytical Techniques

1. Econometric Analysis. Xcel Energy uses econometric analysis to develop jurisdictional MWh sales forecasts at the customer meter for the following sectors:
    a. Residential without Space Heating;
    b. Residential with Space Heating;

c. Small Commercial and Industrial;

d. Large Commercial and Industrial.

Xcel Energy also uses econometric analysis to develop the total system MW demand forecast.

2. Trend analysis is used for the "Other" sectors, which includes Public Street and Highway Lighting, Other Sales to Public Authorities, Interdepartmental sales, and Municipals (firm Wholesale).
3. Loss Factor Methodology. Loss factors by jurisdiction are used to convert the sales forecasts into system energy requirements (at the generator).
4. Judgment. Judgment is inherent to the development of any forecast. Whenever possible, Xcel Energy uses quantitative models to structure its judgment in the forecasting process.

The sales forecasts are estimates of MWh levels measured at the customer meter. They do not include line or other losses. The various jurisdictional class forecasts are summed to yield the total system sales forecast. Native energy requirements are measured at the generator and include line and other losses. Xcel Energy creates native energy requirements based on the sales forecasts. A system loss factor for each jurisdiction, developed based on average historical losses, is applied to the jurisdictional sales forecast to calculate total losses. The sum of the jurisdictional MWh sales and losses equals native energy requirements. The native energy requirements, along with peak producing weather and binary variables, are then used as independent variables within an econometric model to forecast MW peak demand for the Xcel Energy North System.

B.1c Models Used

1. Residential Econometric Models. Sales to the residential sectors represent 28.2% of its total NSP System electric sales in 2009. Residential sales are divided into with space heating and without space heating customer classes for each jurisdiction. Ordinary Least Squares models using historical data are developed for each residential sector. A variety of independent variables are used in the models, including:
    - Number of customers;
    - Gross Metro Product for respective jurisdiction;
    - Actual heating and temperature humidity index (THI) degree days;
    - Number of monthly billing days.
2. Small Commercial and Industrial Econometric Models. The small commercial and industrial sector represents 42.2% of NSP System electric sales in 2009. The models are ordinary least squares regressions using historical data. The models include a combination of variables, including the following:
    - Number of small commercial and industrial customers;
    - Gross Metro Product for respective jurisdiction;

- Employment for respective jurisdiction;
- Actual heating and temperature humidity index (THI) degree days;

3. Large Commercial and Industrial Econometric Models. Sales to the large commercial and industrial sector represent 25.9 % of NSP System electric sales in 2009. The models are OLS regressions using historical data and a combination of variables, including the following:
    - Industrial Production for respective jurisdiction;
    - Employment for respective jurisdiction;
    - Number of monthly billing days;
    - Indicator variables such as CI reclassification.
4. Others. Sales to the "Others" sector represent 0.7 % of NSP System electric sales in 2009. This sector includes Public Street and Highway Lighting (PSHL), Sales to Public Authorities (OSPA) and Interdepartmental (IDS) sales. Because this class represents a very small portion of the total sales, trend analysis is used and very little growth is forecast.
5. Municipals. Sales to the Municipal utility sector represent 3.0 % of NSP System electric sales in 2009. The municipal class is forecast using separate trend analysis at the individual customer level for NSP and NSPW. The forecast of these municipal customers only includes firm wholesale customer usage.
6. Peak Demand Model. An econometric model is developed to forecast base peak demand for the entire planning period. The model includes a combination of variables, including the following:
    - Weather normalized native energy requirements
    - Peak producing weather by month
    - Binary variables

B.2 Methodology Strengths and Weaknesses

The strength of the process Xcel Energy uses for this forecast is the richness of the information obtained during the analysis. Xcel Energy's econometric forecasting models are based on sound economic and statistical theory. Historical modeling and forecast drivers are based on economic and demographic variables that are easily measured and analyzed. The use of models by class and jurisdiction gives greater insight into how the NSP System is growing, thereby providing better information for decisions to be made in the areas of generation, transmission, marketing, conservation, and load management.

With respect to accuracy, forecasts of this duration are inherently uncertain. Planners and decision makers must be keenly aware of the inherent risk that accompanies long-term forecasts. They must also develop plans that are robust over a wide range of future outcomes.

B.3 Data Definitions

The following is a list of definitions of the variables considered in Xcel Energy's econometric models.

Jurisdiction Abbreviations

M or MN State of Minnesota
N or ND State of North Dakota
S or SD State of South Dakota
W or WI State of Wisconsin
Mi or MI State of Michigan

Monthly MWh Sales Series

SLSReswo(Juris)	Residential without space heating for given jurisdiction
SLSResSH(Juris)	Residential with space heating for given jurisdiction
SLSSmCI(Juris)	Small commercial and industrial for given jurisdiction
SLSLgCI(Juris)	Large commercial and industrial for given jurisdiction

Monthly Customer Series

CustReswo(Juris)	Residential without space heating for given jurisdiction
CustResSH(Juris)	Residential with space heating for given jurisdiction
CustSmCI(Juris)	Small commercial and industrial for given jurisdiction
CustLgCI(Juris)	Large commercial and industrial for given jurisdiction

Monthly Economic and Demographic Series

(Juris)HH	Number of Households in given jurisdiction
GMP(MSA)	Gross Metro Product for given metropolitan statistical area
GSP(State)	Gross State Product for given state
EE_(Juris)	Total Employment in given jurisdiction
EEGOV_(Juris)	Total Government Employment in given jurisdiction
IPMFG_(Juris)	Industrial Production Index – manufacturing in given jurisdiction
IPSB0004_US	Industrial Production – United States
CYPNR_(Juris)	Real per capita Personal Income in given jurisdiction
(Juris)TotRes_ RAP	Real Average Price for electric sales to residential customers

Monthly Data Variables used in Demand Model

THI12(Month)Cust	Temperature Humidity Index @12:00 noon on the peak day multiplied by total retail customers
THI12_LAG1(Month)Cust	Temperature Humidity Index @12:00 noon on the day before the peak day multiplied by total retail customers.

THI15(Month)Cust	Temperature Humidity Index @15:00 (3:00 PM) on the peak day multiplied by total retail customers
HDD(Season)	Normal Heating Degree Days on the day of the Peak multiplied by a binary variable for the season (winter - Wtr, shoulder month - sh)
AvgTemp_Cust	Average Temperature on the peak day multiplied by total retail customers
DaysOver90(Month)	cumulative days over 90 for the calendar year as of the monthly peak day
WNActEnergy_LpYrAdj_12MoSum	12 month rolling sum of the weather normalized net energy requirements adjusted to remove the effect of leap years
MfgSlowdown	An index based on Industrial (Manufacturing) Production and Manufacturing Employment

Monthly Weather Variables

H65_bill (Juris)(Month)	HDD base 65 for given jurisdiction and month
T65_bill(Juris)(Month)	THI DD base 65 for given jurisdiction and month

Other Monthly Variables

BillDaysCellnet21	Billing Month Days

Monthly Binary Variables

Jan	Binary variable for the month of January
Feb	Binary variable for the month of February
Mar	Binary variable for the month of March
Apr	Binary variable for the month of April
May	Binary variable for the month of May
Jun	Binary variable for the month of June
Jul	Binary variable for the month of July
Aug	Binary variable for the month of August
Sep	Binary variable for the month of September
Oct	Binary variable for the month of October
Nov	Binary variable for the month of November
Dec	Binary variable for the month of December

Xcel Energy uses internal and external data to create its MWh sales and MW peak demand forecast.

Historical MWh sales are taken from Xcel Energy's internal company records, fed by its billing system. Historical coincident net peak demand data is obtained through company records. The load management estimate is added to the net peak demand to derive the base peak demand.

Through 2007 weather data (dry bulb temperature and dew points) were collected from a respected local meteorologist (Mr. Frank Watson) for the Minneapolis/St. Paul, Fargo, Sioux Falls, and Eau Claire areas. Beginning in 2008 weather data has been collected from weatherunderground.com for the same locations. The heating degree-days and THI degree-days are calculated internally based on this weather data.
Economic and demographic data is obtained from the Bureau of Labor Statistics, U.S. Department of Commerce, and the Bureau of Economic Analysis. Typically they are accessed from Global Insight, Inc. data banks, and reflect the most recent values of those series at the time of modeling.

B.4 Demand-Side Management Programs

The regression model results for the residential and commercial and industrial classes are reduced to account for the expected incremental impacts of demand-side management ("DSM") programs. A monthly forecast of the impact of new DSM programs (excluding Saver's Switch) is developed by Xcel Energy's DSM Regulatory Strategy and Planning Department. The impacts are converted by class from calendar month energy to billing month sales volumes. The resulting sales volumes are used to reduce the class level sales forecasts that result from the regression modeling process. Impacts from all program installations through 2009 are assumed to be imbedded in the historical data, so only new program installations are included in the DSM adjustment.

An additional adjustment was made to the current forecast to account for new federally mandated efficiency standards for business cooling. This new standard supplants DSM programs the Company previously had in place, which reduces the amount of Business DSM. However, the standards have not been in place long enough to be reflected in actual sales data used in the development of the forecast. The solution to this problem was to adjust forecasted Commercial/Industrial sales downward to incorporate the effect of the new standards.

The Company's Saver's Switch program results in short-term interruptions of service designed to reduce system capacity requirements rather than permanent reductions in energy use, so it is not considered here.

B.5 Overview of Probability Distributions

Xcel Energy uses a straightforward extension of the peak demand econometric model to assess risk around the expected value of the peak demand by conducting a Monte Carlo simulation on the main drivers of the peak model (weather and native energy requirements). For the Monte Carlo energy probability distribution model, the main drivers are weather and Minnesota Households (HH_MN).

The Monte Carlo stochastic simulation of peak demand (MW) or (energy (MWh)) involves taking 10,000 random draws from the weather probability distributions as well as 10,000 draws from the

12-month sum of energy probability distribution (or HH_MN probability distribution), which, in turn, produces 10,000 forecasts of peak demand (or energy), and thus generates a probability distribution around the mean peak demand (or mean energy).

For example, if the econometric model forecasts that the mean peak demand for 2022 is 10,586 MW, then using the same econometric model, the Monte Carlo simulation method forecasts that there is a 90% probability that the 2022 peak demand will be less than 11,911 MW, or alternatively, a 10% chance that the peak will be less than 9,240 MW.

In summary, the Monte Carlo stochastic simulation method adequately captures the effect of extreme weather on monthly peak demand and monthly energy usage, while preserving the expected value or mean forecast of peak demand and energy.

B.6 Data Adjustments and Assumptions[1]

1. Weather Adjustments. Xcel Energy adjusts the monthly weather data to reflect billing schedules. Therefore, the monthly weather data corresponds exactly with the billing month schedule.
2. Economic Adjustments. All price data and related economic series are deflated to 2000 constant dollars.

B.6.1 Assumptions and Special Information

The data used in Xcel Energy's forecasting process has already been discussed in a general way. Descriptions and citations of sources for the data sets have been mentioned within this documentation under different sections.

Xcel Energy believes that its process is a reasonable and workable one to use as a guide for its future energy and load requirements. The underlying assumptions used to prepare Xcel Energy's median forecast are as follows:

1. Demographic Assumption. Population or household projections are essential in the development of the long-range forecast. The forecasts of customers are derived from population and household projections provided by Global Insight, Inc., and reviewed by Xcel Energy staff. Xcel Energy customer growth mirrors demographic growth over the forecast period.

[1] Minn. R. 7849.0270, Subp. 5 (D) requires a discussion of "data requested in [Minn. R. 7849.0270, Subp. 2] that is not available historically or not generated by the applicant in preparing its own internal forecast." Xcel Energy is not aware of any data that fits this criteria. Minn. R. 7849.0270, Subp. 5(C) requires a discussion of "future prices for customers and their effect on demand." The effect of future prices on customer demand was taken into account in developing the forecasts.

2. Weather Assumption. Xcel Energy assumes "normal" weather in the forecast horizon. Normal weather is defined as the average weather pattern over the 20-year period from 1990-2009. The variability of weather is an important source of uncertainty. Xcel Energy's energy and peak demand forecasts are based on the assumption that the normal weather conditions will prevail in the forecast horizon. Weather-related demand uncertainties are not treated explicitly in this forecast.

3. Loss Factor Assumptions. The loss factors are important to convert the sales forecast to energy requirements. Xcel Energy uses a historical average loss factor for each jurisdiction, and assumes it will not change in the future.

B.7 Forecast Coordination

Xcel Energy reports its energy and peak demand forecasts to the Midwest ISO (MISO). MISO then combines the forecasts of all its member utilities. Xcel Energy also reports its forecast to the Public Service Commission of Wisconsin as part of its Strategic Energy Assessment (SEA) process. In this process, the Wisconsin portion of the total Xcel Energy system load is combined with other Wisconsin electric utilities to form a statewide Wisconsin forecast.

B.8 Strategist Modeling Assumptions

The assumptions used in Strategist are the most up to date available in July 2010 and are intended to provide accurate measure of Xcel Energy's generation fleet and associated costs.

Existing and Generic Thermal Units

Xcel Energy has approximately 55 existing thermal units in South Dakota, Minnesota, and Wisconsin. In Strategist the maximum capacity input is the maximum energy which a unit can produce in one hour. The value used was selected to reflect the company's best estimate of each unit's maximum dependable capability. The retirement dates in the table are based on the Preferred Plan presented in Xcel Energy's most recent Integrated Resource Plan (Docket No. RP10-825), which assumes life extensions of our peaking facilities. For the generic units added to the Preferred Plan the maximum capacity and accredited capacity data is based on a proprietary study done for the company. The July accredited capacity is based on Uniform Rating of Generating Equipment (URGE) testing done by the Company.

Thermal Units

Unit		Maximum Capacity (MW)	July Accredited Capacity (MW)	Retirement Date	First Year Available
***COAL**	**0**				
AS King	1	510.0	510.0	2049	
BlackDog	3	89.0	89.0	2016	
BlackDog	4	164.0	164.0	2018	
Sherco	1	697.0	697.0	2049	
Sherco	2	682.0	682.0	2049	
Sherco	3	521.0	521.0	2049	
***NUCLEAR**	**0**				
Monti	1	587.0	564.0	2029	
P Island	1	546.0	521.0	2033	
P Island	2	546.0	518.7	2034	
***BIOMASS**	**0**				
Bayfront	4	22.0	22.0	2023	
Bayfront	5	22.0	22.0	2023	
Bayfront	6	28.0	28.0	2012	
Fch Isld	12	29.0	29.0	2023	
Redwing	12	21.0	21.0	2017	

Unit		Maximum Capacity (MW)	July Accredited Capacity (MW)	Retirement Date	First Year Available
Wilmarth	12	20.0	20.0	2017	
St. Paul1		25.0	25.0	2023	
VirgHibb	1	35.0	35.0	2026	
Fibromin	1	50.0	50.0	2028	
BFGSFR	6	20.0	20.0	2032	2012
***GAS CTs**	**0**				
Anson	2	120.0	94.0	2021	
Anson	3	120.0	94.0	2021	
Anson	4	181.0	158.0	2035	
Bluelake	7	180.0	155.0	2035	
Bluelake	8	180.0	155.0	2035	
Flambeau	1	18.0	14.0	2012	
Granite	1	16.0	13.0	2013	
Granite	2	16.0	13.0	2013	
Granite	3	16.0	13.0	2013	
Granite	4	16.0	13.0	2013	
Inverhil	1	62.0	47.0	2027	
Inverhil	2	62.0	47.0	2027	
Inverhil	3	62.0	47.0	2027	
Inverhil	4	62.0	47.0	2027	
Inverhil	5	62.0	47.0	2027	
Inverhil	6	62.0	47.	2027	
Key City	1	16.0	13.0	2013	
Key City	2	0.0	0.0	2013	
Key City	3	16.0	13.0	2013	
Key City	4	16.0	13.0	2013	
Wheaton	1	62.0	47.0	2035	
Wheaton	2	70.0	55.0	2035	
Wheaton	3	62.0	47.0	2035	
Wheaton	4	62.0	47.0	2035	
Invenerg	1	301.0	300.9	2025	
***GAS CCs**	**0**				
BlkDg CC	52	315.0	283.0	2032	
HB_CC	1	575.0	495.0	2049	
RS_CC1		511.0	484.0	2049	

Unit		Maximum Capacity (MW)	July Accredited Capacity (MW)	Retirement Date	First Year Available
LSCotGrv	1	245.0	244.2	2027	
CalpMnkt	1	315.9	315.9	2025	
BLKDG CC	67	643.4	643.4	2049	2016
***OIL**	**0**				
Bluelake	1	52.0	40.0	2030	
Bluelake	2	52.0	40.0	2030	
Bluelake	3	52.0	40.0	2030	
Bluelake	4	59.0	47.0	2030	
Fch Isld	3	81.0	61.0	2023	
Wheaton	5	70.0	52.0	2035	
Wheaton	6	70.0	52.0	2035	
InvrD78	78	4.0	4.0	2049	
Diesels	1	6.0	6.0	2049	
***PURCHAS**	**1**				
GRE Div	1	50.0	50.0	2010	
Cyprus	1	40.0	40.0	2011	
Coyote	1	100.0	100.0	2015	
***GENERIC**	**0**				
100_LMS	1	100.0	100.0	2049	2049
225_CT	1	223.0	223.0	2049	2012
812_CC	1	812.7	812.7	2049	2013
1000_Nuc	1	1000.0	1000.0	2049	2025
IGCCwSEQ	1	515.0	515.0	2049	2016
SCPCwSEQ	1	511.0	511.0	2049	2016

Transactions/PPA's

Unit	Maximum Capacity (MW)	July Accredited Capacity (MW)	Annual Energy (GWh)	Retirement Date	First Year Available
ShortTrm	0.00	0.00	0.00	2049	2049
Barron	0.27	0.00	0.13	2049	
FlyngCld	4.60	4.60	0.40	2019	
HERC	33.70	33.70	215.40	2017	
MNMethan	3.10	3.10	14.45	2014	
PineBend	12.00	12.00	49.24	2026	
RARH	12.00	12.00	89.35	2028	
***HYDRO**					
Byllesby	2.36	2.60	10.59	2028	
EauGalle	0.30	0.30	1.19	2026	
Hastings	3.30	3.30	23.15	2033	
LacCourt	3.10	3.10	3.95	2021	
Neshonoc	0.40	0.40	2.15	2019	
Rapidan	2.80	2.80	19.79	2017	
St. Cloud	7.90	6.70	43.30	2021	
***MANTOBA**					
MH500	500.00	500.00	2085.71	2049	
Div150In	150.00	169.04	132.48	2015	
Div200In	200.00	225.38	176.64	2016	
MH375500	0.00	0.00	0.00	2049	2049
DIV385IN	0.00	0.00	0.00	2049	2049
***WIND**					
WoodStck	10.20	0.82	25.08	2034	
Lakota	11.25	0.90	27.67	2034	
NAEShaok	11.88	0.95	37.07	2034	
Velva	11.88	0.95	31.21	2026	
CommWind	60.00	4.80	205.14	2030	2011

Unit	Maximum Capacity (MW)	July Accredited Capacity (MW)	Annual Energy (GWh)	Retirement Date	First Year Available
Ewington	19.95	1.60	60.02	2028	
GrantCo	20.00	1.60	56.51	2028	
WindPowr	25.00	2.00	61.48	2019	
Jeffers	50.00	4.00	150.43	2027	
Moraine	51.00	4.08	159.12	2018	
Chanaram	85.50	6.84	268.30	2023	
FPL Mowr	98.90	7.91	323.47	2026	
LkBnton1	107.25	8.58	263.74	2023	
LkBnton2	103.50	8.28	311.39	2030	
MNDakota	150.00	12.00	512.85	2022	
Fenton	205.50	16.44	702.61	2032	
GrandMed	100.50	8.04	335.47	2033	
09_RFP	198.25	15.86	596.75	2030	2011
ND_50	50.00	4.00	181.40	2031	2012
Nobles	201.00	16.08	720.68	2035	2011
Merricou	150.00	12.00	544.19	2036	2012
NthShaok	13.53	1.08	35.54	2033	
Ruthton	15.84	1.27	47.66	2031	
WVarious	16.34	1.31	55.87	2031	
WSJJN	1.50	0.12	5.13	2031	
Garmcn	27.50	2.20	67.58	2028	
WSGarmcn	9.25	0.74	22.73	2021	
Viking	12.00	0.96	39.25	2018	
Westridg	7.60	0.61	23.85	2028	
Stahl	8.25	0.66	25.74	2025	
WSWstrdg	9.50	0.76	29.81	2028	
Eastridg	10.00	0.80	24.59	2026	
MNWind	11.55	0.92	36.04	2025	
Tholen	13.20	1.06	45.13	2025	
Norgaard	8.75	0.70	22.98	2026	
WSMorrn	49.50	3.96	154.44	2019	
Cisco	8.00	0.64	21.01	2028	

Hydro Units

Unit	Annual Energy (GWh)	July Accredited Capacity (MW)
AppleRiv 1	14.611	1.29
BigFalls 1	36.146	3.44
CedarFls 1	33.596	3.01
Chippewa 1	65.600	10.32
Cornell 1	83.029	14.19
EauClare 1	41.693	3.44
Hayward 1	1.462	0.43
Hennlsld 1	69.175	4.73
Holcombe 1	94.324	15.48
JimFalls 1	109.941	24.51
Ladysmth 1	10.341	1.29
Menomoni 1	22.918	2.58
Riverdal 1	3.095	0.86
SaxonFls 1	10.323	0.86
St. Croix 1	114.365	10.32
Superior 1	11.721	0.86
Thornapl 1	8.245	0.86
Trego 1	7.326	0.86
WhiteRiv 1	4.688	0.86
Wissota 1	134.120	15.48

Generic Wind

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
WIND_PPA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100
WIND_PPA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100
WIND_PPA	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100	100
WIND_PPA	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100	100
WIND_PPA	0	0	0	0	0	0	0	0	0	0	100	100	100	100	100	100
WIND_PPA	0	0	0	0	0	0	0	0	0	0	100	100	100	100	100	100
WIND_PPA	0	0	0	0	0	0	0	0	0	100	100	100	100	100	100	100
WIND_PPA	0	0	0	0	0	0	0	0	100	100	100	100	100	100	100	100
WIND_PPA	0	0	0	0	0	0	0	100	100	100	100	100	100	100	100	100
WIND_PPA	0	0	0	0	0	0	100	100	100	100	100	100	100	100	100	100

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
WIND_PPA	0	0	0	0	0	100	100	100	100	100	100	100	100	100	100	100
WIND_PTC	0	0	0	0	100	100	100	100	100	100	100	100	100	100	100	100
WIND_PTC	0	0	0	100	100	100	100	100	100	100	100	100	100	100	100	100
WIND_PTC	0	0	100	100	100	100	100	100	100	100	100	100	100	100	100	100
WIND_PTC	0	0	100	100	100	100	100	100	100	100	100	100	100	100	100	100
TOTAL	**0**	**0**	**200**	**300**	**400**	**500**	**600**	**700**	**800**	**900**	**1100**	**1100**	**1100**	**1300**	**1500**	**1500**

*Accredited Capacity for wind is 8%

Fuel

	2010	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
Coal	$ 1.89	$ 1.99	$2.06	$ 2.14	$ 2.24	$ 2.34	$2.39	$ 2.44
Nuclear	$ 0.81	$ 0.83	$0.87	$ 0.89	$ 0.94	$ 1.00	$1.02	$ 1.04
Biomass	$ 2.36	$ 2.45	$2.47	$ 2.53	$ 2.59	$ 2.65	$2.71	$ 2.78
RDF	$ 0.20	$ 0.20	$0.20	$ 0.20	$ 0.21	$ 0.21	$0.22	$ 0.23
NatGas	$ 4.89	$ 5.52	$5.79	$ 5.96	$ 6.26	$ 6.85	$7.11	$ 7.26
Oil	$ 15.37	$ 16.47	$17.53	$ 19.48	$ 20.54	$ 21.42	$22.07	$ 22.79

	2018	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Coal	$ 2.48	$ 2.53	$2.59	$ 2.64	$ 2.69	$ 2.75	$2.78	$ 2.84
Nuclear	$ 1.06	$ 1.08	$1.10	$ 1.12	$ 1.14	$ 1.17	$1.19	$ 1.21
Biomass	$ 2.84	$ 2.92	$2.98	$ 3.06	$ 3.13	$ 3.21	$3.28	$ 3.37
RDF	$ 0.23	$ 0.24	$0.25	$ 0.26	$ 0.26	$ 0.27	$0.28	$ 0.29
NatGas	$ 7.46	$ 7.82	$8.17	$ 8.59	$ 9.04	$ 9.30	$9.29	$ 9.69
Oil	$ 23.52	$ 24.08	$24.39	$ 25.20	$ 25.81	$ 26.09	$26.76	$ 27.02

Financial

System Rates	
Composite Tax Rate	40.74%
Federal Income Tax Rate	35%
Inflation Rate	1.90%
Real Discount Rate	5.47%
Utility Discount Rate	7.47%
Weighted Cost of Capital	7.47%
Capital Project Rates	
AFUDC Rate	7.70%
Debt Structure Rate	46.17%
Desired Return on Rate Base	8.75%
Insurance Rate	0.04%
Long Term Debt Interest Rate	6.56%
Property Tax Rate	1.67%
Escalation Rates	
Labor	2.56%
NonLabor	1.60%
Weighted	1.90%
L25C75	1.84%
L50C50	2.08%
L75C25	2.32%
4 Prct	4.00%
3 Prct	3.00%
2 Prct	2.00%
5 Prct	5.00%
6 Prct	6.00%
7 Prct	7.00%
1 Prct	1.00%

B.9 FORECASTING BASE LOAD DATA SET

B.9.1 Annual Electric Consumption

NSP 2010 Budget

Xcel Energy
NSP Electric - Total System
Certificate of Need Filing
Median Forecast (50th Percentile)

Annual Electric Consumption (MWh)

	Farm	Irrigation	Residential	Commercial	Mining	Industrial	Street Lighting	Other	Total	Loss and Company Use	Total Native Requirements
1999	*NA*	*NA*	10,400,723	6,132,930	*NA*	20,290,272	170,527	791,416	37,785,868	3,430,442	41,216,310
2000	*NA*	*NA*	10,768,710	6,637,476	*NA*	20,684,275	172,961	823,692	39,087,114	3,154,430	42,241,544
2001	*NA*	*NA*	11,016,223	15,716,290	*NA*	11,735,057	176,470	859,435	39,503,475	3,326,283	42,829,758
2002	*NA*	*NA*	11,656,830	14,794,020	*NA*	12,870,013	177,553	945,011	40,443,427	3,336,657	43,780,084
2003	*NA*	*NA*	11,662,067	16,579,354	*NA*	11,443,959	177,054	954,164	40,816,598	2,916,803	43,733,401
2004	*NA*	*NA*	11,402,028	16,644,896	*NA*	11,708,988	188,087	1,098,171	41,042,169	3,013,279	44,055,448
2005	*NA*	*NA*	12,105,594	18,272,282	*NA*	11,110,675	184,643	1,303,511	42,976,705	3,031,438	46,008,144
2006	*NA*	*NA*	12,147,178	18,276,180	*NA*	11,354,870	192,808	1,651,632	43,622,668	3,158,653	46,781,321
2007	*NA*	*NA*	12,491,252	18,492,190	*NA*	11,724,807	185,376	1,666,145	44,559,771	3,391,488	47,951,259
2008	*NA*	*NA*	12,037,121	18,464,532	*NA*	11,772,762	185,966	1,616,608	44,076,989	3,067,945	47,144,934
2009	*NA*	*NA*	12,020,163	18,453,741	*NA*	10,708,486	188,176	1,466,046	42,836,610	3,176,946	46,013,556
2010	*NA*	*NA*	12,071,941	18,503,470	*NA*	10,809,347	191,757	996,035	42,572,550	3,179,592	45,752,142
2011	*NA*	*NA*	12,232,024	18,600,973	*NA*	11,278,541	193,687	969,535	43,274,760	3,232,026	46,506,786
2012	*NA*	*NA*	12,424,239	18,736,095	*NA*	11,592,522	195,568	973,420	43,921,844	3,282,425	47,204,270
2013	*NA*	*NA*	12,588,606	18,833,794	*NA*	11,858,637	197,402	977,427	44,455,865	3,322,266	47,778,130
2014	*NA*	*NA*	12,737,140	18,906,053	*NA*	12,075,094	199,152	981,226	44,898,665	3,357,681	48,256,346
2015	*NA*	*NA*	12,914,217	18,913,099	*NA*	12,147,390	200,991	985,849	45,161,545	3,380,623	48,542,168
2016	*NA*	*NA*	13,143,384	18,951,564	*NA*	12,227,308	203,121	990,312	45,515,690	3,409,998	48,925,688
2017	*NA*	*NA*	13,385,665	18,996,284	*NA*	12,330,883	205,116	994,892	45,912,840	3,439,245	49,352,085
2018	*NA*	*NA*	13,651,625	19,049,450	*NA*	12,483,460	207,103	999,261	46,390,898	3,475,599	49,866,498
2019	*NA*	*NA*	13,902,960	19,060,022	*NA*	12,559,695	209,001	1,004,452	46,736,129	3,502,789	50,238,918
2020	*NA*	*NA*	14,205,039	19,109,919	*NA*	12,670,082	210,901	1,009,478	47,205,420	3,540,456	50,745,877
2021	*NA*	*NA*	14,491,576	19,151,176	*NA*	12,780,170	212,494	1,014,621	47,650,036	3,572,977	51,223,013
2022	*NA*	*NA*	14,788,240	19,189,519	*NA*	12,920,790	214,074	1,019,550	48,132,173	3,610,020	51,742,193
2023	*NA*	*NA*	15,064,844	19,198,001	*NA*	12,983,479	215,758	1,025,300	48,487,383	3,637,587	52,124,970
2024	*NA*	*NA*	15,429,055	19,230,433	*NA*	13,081,152	217,465	1,030,886	48,988,992	3,676,817	52,665,809
2025	*NA*	*NA*	15,809,715	19,283,170	*NA*	13,207,907	218,977	1,036,588	49,556,357	3,717,264	53,273,621

B.9.1 Annual Electric Consumption – Continued
NSP 2010 Budget

Xcel Energy
State of Minnesota
Certificate of Need Filing
Median Forecast (50th Percentile)

Annual Electric Consumption (MWh)

	Farm	Irrigation	Residential	Commercial	Mining	Industrial	Street Lighting	Other	Total Retail
1999	*NA*	*NA*	7,501,113	4,470,016	*NA*	16,078,335	125,845	116,404	28,291,713
2000	*NA*	*NA*	7,785,498	4,843,242	*NA*	16,401,555	128,075	115,585	29,273,955
2001	*NA*	*NA*	8,031,583	13,039,381	*NA*	8,355,790	130,612	117,940	29,675,306
2002	*NA*	*NA*	8,487,490	12,080,326	*NA*	9,369,199	130,657	109,500	30,177,172
2003	*NA*	*NA*	8,482,571	12,300,171	*NA*	9,387,479	129,473	118,286	30,417,981
2004	*NA*	*NA*	8,289,361	12,375,215	*NA*	9,489,401	139,813	109,413	30,403,203
2005	*NA*	*NA*	8,841,947	13,640,412	*NA*	8,993,804	135,989	100,894	31,713,046
2006	*NA*	*NA*	8,876,545	13,677,161	*NA*	9,129,744	143,664	99,422	31,926,536
2007	*NA*	*NA*	9,123,085	13,722,963	*NA*	9,395,486	135,836	101,403	32,478,773
2008	*NA*	*NA*	8,696,644	13,683,725	*NA*	9,449,345	136,071	87,509	32,053,294
2009	*NA*	*NA*	8,641,231	13,722,852	*NA*	8,473,522	137,837	91,620	31,067,061
2010	*NA*	*NA*	8,676,421	13,742,450	*NA*	8,581,341	140,239	88,877	31,229,328
2011	*NA*	*NA*	8,785,370	13,789,656	*NA*	8,981,083	141,299	87,566	31,784,975
2012	*NA*	*NA*	8,911,033	13,850,538	*NA*	9,242,358	142,412	86,020	32,232,361
2013	*NA*	*NA*	9,016,553	13,872,466	*NA*	9,441,279	143,515	84,515	32,558,329
2014	*NA*	*NA*	9,101,368	13,881,976	*NA*	9,595,119	144,568	82,721	32,805,751
2015	*NA*	*NA*	9,228,860	13,843,379	*NA*	9,613,279	145,690	81,669	32,912,877
2016	*NA*	*NA*	9,408,042	13,829,681	*NA*	9,654,021	146,964	80,370	33,119,078
2017	*NA*	*NA*	9,594,890	13,814,475	*NA*	9,716,506	148,201	79,103	33,353,175
2018	*NA*	*NA*	9,796,776	13,810,823	*NA*	9,832,130	149,359	77,536	33,666,624
2019	*NA*	*NA*	9,993,861	13,772,188	*NA*	9,878,981	150,458	76,701	33,872,189
2020	*NA*	*NA*	10,228,705	13,762,309	*NA*	9,952,582	151,756	75,611	34,170,963
2021	*NA*	*NA*	10,449,539	13,743,024	*NA*	10,024,226	152,821	74,544	34,444,153
2022	*NA*	*NA*	10,673,233	13,725,927	*NA*	10,130,549	153,845	73,169	34,756,723
2023	*NA*	*NA*	10,894,478	13,689,143	*NA*	10,169,185	154,892	72,517	34,980,216
2024	*NA*	*NA*	11,197,486	13,665,130	*NA*	10,234,447	155,955	71,603	35,324,620
2025	*NA*	*NA*	11,505,800	13,651,501	*NA*	10,322,417	157,017	70,704	35,707,438

B.9.2 Number of Customers By Class

NSP 2010 Budget

Xcel Energy
NSP Electric - Total System
Certificate of Need Filing
Median Forecast (50th Percentile)

Number of Customers

	Farm	Irrigation	Residential	Commercial	Mining	Industrial	Street Lighting	Other	Total
1999	*NA*	*NA*	1,313,048	155,891	*NA*	10,423	2,330	2,895	1,484,587
2000	*NA*	*NA*	1,328,936	157,909	*NA*	9,382	3,623	2,832	1,502,682
2001	*NA*	*NA*	1,345,077	170,154	*NA*	740	3,836	2,833	1,522,640
2002	*NA*	*NA*	1,361,938	173,240	*NA*	763	4,009	2,838	1,542,788
2003	*NA*	*NA*	1,379,851	175,484	*NA*	753	3,784	2,810	1,562,682
2004	*NA*	*NA*	1,404,993	179,326	*NA*	769	4,299	2,813	1,592,200
2005	*NA*	*NA*	1,389,605	176,358	*NA*	616	4,290	2,716	1,573,585
2006	*NA*	*NA*	1,413,729	180,050	*NA*	599	4,430	2,709	1,601,517
2007	*NA*	*NA*	1,426,755	182,606	*NA*	635	4,518	2,698	1,617,212
2008	*NA*	*NA*	1,437,869	184,756	*NA*	619	4,533	2,688	1,630,465
2009	*NA*	*NA*	1,443,949	185,799	*NA*	583	4,596	2,622	1,637,549
2010	*NA*	*NA*	1,456,232	187,475	*NA*	576	4,680	2,603	1,651,566
2011	*NA*	*NA*	1,470,869	189,559	*NA*	584	4,776	2,586	1,668,374
2012	*NA*	*NA*	1,484,419	191,552	*NA*	593	4,865	2,570	1,683,999
2013	*NA*	*NA*	1,496,285	193,284	*NA*	595	4,945	2,552	1,697,661
2014	*NA*	*NA*	1,509,737	195,128	*NA*	596	5,028	2,536	1,713,025
2015	*NA*	*NA*	1,523,718	197,018	*NA*	597	5,113	2,521	1,728,967
2016	*NA*	*NA*	1,537,926	198,933	*NA*	599	5,194	2,506	1,745,158
2017	*NA*	*NA*	1,552,179	200,835	*NA*	601	5,276	2,492	1,761,383
2018	*NA*	*NA*	1,565,878	202,684	*NA*	603	5,353	2,480	1,776,998
2019	*NA*	*NA*	1,579,371	204,487	*NA*	603	5,426	2,467	1,792,354
2020	*NA*	*NA*	1,593,382	206,351	*NA*	604	5,501	2,454	1,808,292
2021	*NA*	*NA*	1,605,235	207,923	*NA*	603	5,566	2,442	1,821,769
2022	*NA*	*NA*	1,617,441	209,550	*NA*	603	5,630	2,430	1,835,654
2023	*NA*	*NA*	1,629,984	211,214	*NA*	603	5,695	2,419	1,849,915
2024	*NA*	*NA*	1,642,142	212,839	*NA*	603	5,758	2,409	1,863,751
2025	*NA*	*NA*	1,654,058	214,482	*NA*	603	5,818	2,398	1,877,359

B.9.2 Number of Customers By Class – Continued
NSP 2010 Budget

Xcel Energy
State of Minnesota Electric
Certificate of Need Filing
Median Forecast (50th Percentile)

Number of Customers

	Farm	Irrigation	Residential	Commercial	Mining	Industrial	Street Lighting	Other	Total
1999	*NA*	*NA*	993,337	107,118	*NA*	7,908	1,424	2,214	1,112,001
2000	*NA*	*NA*	1,006,613	107,679	*NA*	6,952	2,629	2,160	1,126,033
2001	*NA*	*NA*	1,017,202	116,720	*NA*	603	2,791	2,162	1,139,478
2002	*NA*	*NA*	1,029,634	118,687	*NA*	608	2,945	2,170	1,154,044
2003	*NA*	*NA*	1,043,231	120,223	*NA*	595	2,712	2,142	1,168,903
2004	*NA*	*NA*	1,062,137	122,902	*NA*	586	3,188	2,140	1,190,953
2005	*NA*	*NA*	1,047,452	119,935	*NA*	485	3,151	2,093	1,173,116
2006	*NA*	*NA*	1,065,337	122,406	*NA*	461	3,276	2,058	1,193,538
2007	*NA*	*NA*	1,074,894	124,145	*NA*	503	3,346	2,049	1,204,937
2008	*NA*	*NA*	1,082,161	125,393	*NA*	483	3,346	2,030	1,213,413
2009	*NA*	*NA*	1,086,793	125,982	*NA*	449	3,385	2,016	1,218,625
2010	*NA*	*NA*	1,095,880	126,996	*NA*	442	3,454	1,999	1,228,771
2011	*NA*	*NA*	1,106,898	128,266	*NA*	450	3,531	1,984	1,241,129
2012	*NA*	*NA*	1,117,057	129,438	*NA*	459	3,602	1,969	1,252,525
2013	*NA*	*NA*	1,125,695	130,434	*NA*	461	3,665	1,954	1,262,209
2014	*NA*	*NA*	1,135,869	131,608	*NA*	462	3,731	1,940	1,273,610
2015	*NA*	*NA*	1,146,455	132,829	*NA*	463	3,798	1,927	1,285,472
2016	*NA*	*NA*	1,157,351	134,085	*NA*	465	3,863	1,914	1,297,678
2017	*NA*	*NA*	1,168,126	135,328	*NA*	467	3,926	1,902	1,309,749
2018	*NA*	*NA*	1,178,407	136,514	*NA*	469	3,985	1,891	1,321,266
2019	*NA*	*NA*	1,188,657	137,696	*NA*	469	4,043	1,880	1,332,745
2020	*NA*	*NA*	1,199,725	138,973	*NA*	470	4,102	1,869	1,345,139
2021	*NA*	*NA*	1,208,655	140,003	*NA*	469	4,152	1,859	1,355,138
2022	*NA*	*NA*	1,217,820	141,060	*NA*	469	4,201	1,849	1,365,399
2023	*NA*	*NA*	1,227,241	142,146	*NA*	469	4,250	1,840	1,375,946
2024	*NA*	*NA*	1,236,504	143,215	*NA*	469	4,298	1,831	1,386,317
2025	*NA*	*NA*	1,246,121	144,324	*NA*	469	4,346	1,822	1,397,082

B.9.3 Annual Base Peak Demand By Customer Class
NSP 2010 Budget

Xcel Energy
NSP Electric - Total System
Certificate of Need Filing
Median Forecast (50th Percentile)

Annual Base Peak Demand (M) by Customer Class

		Farm	Irrigation	Residential	Commercial	Mining	Industrial	Street Lighting	Other	System Peak Demand MW
NET PEAK	1999	NA	NA	2,669	1,405	NA	3,756	NA	160	7,990
	2000	NA	NA	2,655	1,461	NA	3,674	NA	146	7,936
	2001	NA	NA	3,087	1,578	NA	3,581	NA	103	8,349
	2002	NA	NA	2,773	2,831	NA	2,383	NA	252	8,239
	2003	NA	NA	3,074	3,113	NA	1,933	NA	161	8,281
	2004	NA	NA	3,055	3,164	NA	2,173	NA	204	8,596
	2005	NA	NA	3,222	3,174	NA	1,884	NA	221	8,501
	2006	NA	NA	3,274	3,394	NA	2,059	NA	299	9,026
	2007	NA	NA	2,836	3,525	NA	2,182	NA	260	8,803
	2008	NA	NA	2,776	3,455	NA	2,143	NA	250	8,624
	2009	NA	NA	2,773	3,451	NA	2,141	NA	250	8,615
BASE PEAK	2010	NA	NA	2,987	3,717	NA	2,306	NA	269	9,280
	2011	NA	NA	3,023	3,762	NA	2,334	NA	272	9,391
	2012	NA	NA	3,059	3,807	NA	2,362	NA	275	9,504
	2013	NA	NA	3,074	3,826	NA	2,374	NA	277	9,550
	2014	NA	NA	3,088	3,842	NA	2,384	NA	278	9,592
	2015	NA	NA	3,100	3,858	NA	2,394	NA	279	9,630
	2016	NA	NA	3,114	3,875	NA	2,404	NA	280	9,674
	2017	NA	NA	3,126	3,890	NA	2,414	NA	281	9,711
	2018	NA	NA	3,137	3,903	NA	2,422	NA	282	9,744
	2019	NA	NA	3,143	3,911	NA	2,427	NA	283	9,764
	2020	NA	NA	3,150	3,919	NA	2,432	NA	283	9,784
	2021	NA	NA	3,151	3,921	NA	2,433	NA	284	9,788
	2022	NA	NA	3,151	3,921	NA	2,433	NA	284	9,788
	2023	NA	NA	3,151	3,921	NA	2,433	NA	284	9,788
	2024	NA	NA	3,151	3,921	NA	2,433	NA	284	9,788
	2025	NA	NA	3,153	3,923	NA	2,434	NA	284	9,793

The historical peaks by class in this table sum to the Net (interrupted) peak rather than Base (uninterrupted) peak. The forecasted peaks by class sum to the Base peak forecast.

In the Monthly Native Demand and Energy Table B.10.4, the historical monthly peaks are Base peaks. Therefore, the historical system values do not tie between Table B.10.3 and Table B.10.4.

B.9.4 Monthly Native Energy and Demand Requirements
NSP 2010 Budget

Xcel Energy
NSP Electric - Total System
Certificate of Need Filing
Median Forecast (50th Percentile)

Monthly Native Energy Requirements,
Base Peak Demand and Load Factors

	Native Energy Requirements (MWh)	Base Peak Demand (MW)	Days	Load Factor
Jan-99	3,585,110	6,138	31	78.5%
Feb-99	3,061,339	5,670	28	80.3%
Mar-99	3,255,083	5,470	31	80.0%
Apr-99	3,025,556	5,169	30	81.3%
May-99	3,218,400	5,806	31	74.5%
Jun-99	3,581,246	7,495	30	66.4%
Jul-99	4,250,059	8,735	31	65.4%
Aug-99	3,850,480	7,814	31	66.2%
Sep-99	3,363,251	7,675	30	60.9%
Oct-99	3,291,632	5,501	31	80.4%
Nov-99	3,182,850	5,885	30	75.1%
Dec-99	3,551,303	6,422	31	74.3%
Jan-00	3,586,329	5,985	31	80.5%
Feb-00	3,042,834	5,818	29	75.1%
Mar-00	3,306,723	5,409	31	82.2%
Apr-00	3,147,526	5,422	30	80.6%
May-00	3,439,965	6,563	31	70.4%
Jun-00	3,550,819	7,545	30	65.4%
Jul-00	4,060,805	7,816	31	69.8%
Aug-00	4,151,284	8,189	31	68.1%
Sep-00	3,407,477	6,720	30	70.4%
Oct-00	3,362,896	5,675	31	79.6%
Nov-00	3,391,085	6,053	30	77.8%
Dec-00	3,793,801	6,557	31	77.8%
Jan-01	3,639,735	6,144	31	79.6%
Feb-01	3,327,152	6,112	28	81.0%

Mar-01	3,414,582	5,624	31	81.6%
Apr-01	3,150,897	5,594	30	78.2%
May-01	3,412,524	7,200	31	63.7%
Jun-01	3,728,184	8,061	30	64.2%

B.9.4 Monthly Native Energy and Demand Requirements – Continued
NSP 2010 Budget

Xcel Energy
NSP Electric - Total System
Certificate of Need Filing
Median Forecast (50th Percentile)

Monthly Native Energy Requirements,
Base Peak Demand and Load Factors

	Native Energy Requirements (MWh)	Base Peak Demand (MW)	Days	Load Factor
Jul-01	4,347,736	9,001	31	64.9%
Aug-01	4,271,909	9,236	31	62.2%
Sep-01	3,382,565	6,924	30	67.9%
Oct-01	3,361,640	5,740	31	78.7%
Nov-01	3,266,364	6,005	30	75.5%
Dec-01	3,526,470	6,012	31	78.8%
Jan-02	3,622,279	6,187	31	78.7%
Feb-02	3,163,001	5,872	28	80.2%
Mar-02	3,548,998	5,946	31	80.2%
Apr-02	3,272,927	6,221	30	73.1%
May-02	3,348,877	7,013	31	64.2%
Jun-02	3,937,321	8,281	30	66.0%
Jul-02	4,564,178	8,924	31	68.7%
Aug-02	4,024,109	7,465	31	72.5%
Sep-02	3,707,000	8,192	30	62.8%
Oct-02	3,529,247	5,929	31	80.0%
Nov-02	3,411,544	6,070	30	78.1%
Dec-02	3,650,602	6,386	31	76.8%
Jan-03	3,803,608	6,371	31	80.2%
Feb-03	3,384,792	6,236	28	80.8%
Mar-03	3,527,760	5,954	31	79.6%
Apr-03	3,287,588	5,755	30	79.3%
May-03	3,310,402	5,892	31	75.5%
Jun-03	3,649,429	7,760	30	65.3%
Jul-03	4,218,642	8,066	31	70.3%
Aug-03	4,354,499	8,868	31	66.0%

Sep-03	3,561,053	7,819	30	63.3%
Oct-03	3,486,682	6,128	31	76.5%
Nov-03	3,425,474	6,136	30	77.5%
Dec-03	3,723,471	6,497	31	77.0%

B.9.4 Monthly Native Energy and Demand Requirements – Continued
NSP 2010 Budget

Xcel Energy
NSP Electric - Total System
Certificate of Need Filing
Median Forecast (50th Percentile)

Monthly Native Energy Requirements,
Base Peak Demand and Load Factors

	Native Energy Requirements (MWh)	Base Peak Demand (MW)	Days	Load Factor
Jan-04	3,905,061	6,653	31	78.9%
Feb-04	3,487,426	6,320	29	79.3%
Mar-04	3,559,448	5,941	31	80.5%
Apr-04	3,259,891	5,749	30	78.8%
May-04	3,399,231	6,240	31	73.2%
Jun-04	3,661,488	8,106	30	62.7%
Jul-04	4,177,268	8,665	31	64.8%
Aug-04	3,864,519	7,920	31	65.6%
Sep-04	3,776,737	8,029	30	65.3%
Oct-04	3,546,840	5,937	31	80.3%
Nov-04	3,511,756	6,224	30	78.4%
Dec-04	3,905,782	6,873	31	76.4%
Jan-05	3,916,456	6,636	31	79.3%
Feb-05	3,398,237	6,222	28	81.3%
Mar-05	3,667,801	5,996	31	82.2%
Apr-05	3,342,840	6,017	30	77.2%
May-05	3,525,768	6,055	31	78.3%
Jun-05	4,163,552	9,072	30	63.7%
Jul-05	4,605,640	8,945	31	69.2%
Aug-05	4,350,713	9,104	31	64.2%
Sep-05	3,853,840	7,512	30	71.3%
Oct-05	3,649,397	7,253	31	67.6%
Nov-05	3,574,084	6,466	30	76.8%
Dec-05	3,959,815	6,833	31	77.9%
Jan-06	3,852,014	6,332	31	81.8%
Feb-06	3,580,961	6,451	28	82.6%

Mar-06	3,757,537	6,058	31	83.4%
Apr-06	3,423,351	5,753	30	82.6%
May-06	3,778,659	7,273	31	69.8%
Jun-06	4,119,203	8,203	30	69.7%

B.9.4 Monthly Native Energy and Demand Requirements – Continued
NSP 2010 Budget

Xcel Energy
NSP Electric - Total System
Certificate of Need Filing
Median Forecast (50th Percentile)

Monthly Native Energy Requirements,
Base Peak Demand and Load Factors

	Native Energy Requirements (MWh)	Base Peak Demand (MW)	Days	Load Factor
Jul-06	4,895,295	9,859	31	66.7%
Aug-06	4,439,661	8,007	31	74.5%
Sep-06	3,629,557	7,132	30	70.7%
Oct-06	3,717,020	6,439	31	77.6%
Nov-06	3,647,831	6,599	30	76.8%
Dec-06	3,940,232	6,887	31	76.9%
Jan-07	4,036,501	6,597	31	82.2%
Feb-07	3,748,020	6,740	28	82.8%
Mar-07	3,752,072	6,297	31	80.1%
Apr-07	3,528,276	5,985	30	81.9%
May-07	3,793,551	7,273	31	70.1%
Jun-07	4,261,258	9,210	30	64.3%
Jul-07	4,703,782	9,473	31	66.7%
Aug-07	4,546,156	9,051	31	67.5%
Sep-07	3,917,770	8,919	30	61.0%
Oct-07	3,823,393	6,710	31	76.6%
Nov-07	3,715,683	6,798	30	75.9%
Dec-07	4,124,795	6,968	31	79.6%
Jan-08	4,208,150	6,953	31	81.3%
Feb-08	3,900,939	6,900	29	81.2%
Mar-08	3,831,023	6,369	31	80.8%
Apr-08	3,580,870	5,917	30	84.1%
May-08	3,568,644	5,917	31	81.1%
Jun-08	3,860,078	8,001	30	67.0%
Jul-08	4,528,627	8,694	31	70.0%
Aug-08	4,416,662	8,432	31	70.4%

Sep-08	3,773,757	7,486	30	70.0%
Oct-08	3,694,984	6,048	31	82.1%
Nov-08	3,651,191	6,494	30	78.1%
Dec-08	4,130,010	7,226	31	76.8%

B.9.4 Monthly Native Energy and Demand Requirements – Continued
NSP 2010 Budget

Xcel Energy
NSP Electric - Total System
Certificate of Need Filing
Median Forecast (50th Percentile)

Monthly Native Energy Requirements,
Base Peak Demand and Load Factors

	Native Energy Requirements (MWh)	Base Peak Demand (MW)	Days	Load Factor
Jan-09	3,990,470	6,889	31	77.9%
Feb-09	3,663,385	6,597	28	82.6%
Mar-09	3,830,249	6,247	31	82.4%
Apr-09	3,379,247	5,757	30	81.5%
May-09	3,588,707	6,994	31	69.0%
Jun-09	3,879,592	8,615	30	62.5%
Jul-09	4,485,116	7,448	31	80.9%
Aug-09	4,316,588	8,240	31	70.4%
Sep-09	3,693,902	8,108	30	63.3%
Oct-09	3,613,670	6,240	31	77.8%
Nov-09	3,669,390	6,621	30	77.0%
Dec-09	3,903,241	7,042	31	74.5%
Jan-10	3,949,344	6,870	31	77.3%
Feb-10	3,618,951	6,705	29	77.5%
Mar-10	3,776,999	6,313	31	80.4%
Apr-10	3,357,521	6,112	30	76.3%
May-10	3,577,931	7,042	31	68.3%
Jun-10	3,848,877	8,733	30	61.2%
Jul-10	4,454,797	9,280	31	64.5%
Aug-10	4,287,532	8,935	31	64.5%
Sep-10	3,675,625	8,198	30	62.3%
Oct-10	3,614,020	6,273	31	77.4%
Nov-10	3,677,135	6,673	30	76.5%
Dec-10	3,913,410	7,102	31	74.1%
Jan-11	3,992,867	6,936	31	77.4%
Feb-11	3,673,209	6,771	28	80.7%

Mar-11	3,851,541	6,375	31	81.2%
Apr-11	3,419,415	6,175	30	76.9%
May-11	3,654,336	7,135	31	68.8%
Jun-11	3,925,746	8,838	30	61.7%

B.9.4 Monthly Native Energy and Demand Requirements – Continued
NSP 2010 Budget

Xcel Energy
NSP Electric - Total System
Certificate of Need Filing
Median Forecast (50th Percentile)

Monthly Native Energy Requirements,
Base Peak Demand and Load Factors

	Native Energy Requirements (MWh)	Base Peak Demand (MW)	Days	Load Factor
Jul-11	4,513,652	9,391	31	64.6%
Aug-11	4,345,888	9,043	31	64.6%
Sep-11	3,726,274	8,329	30	62.1%
Oct-11	3,687,990	6,337	31	78.2%
Nov-11	3,736,698	6,750	30	76.9%
Dec-11	3,979,172	7,185	31	74.4%
Jan-12	4,038,617	7,016	31	77.4%
Feb-12	3,715,006	6,850	29	77.9%
Mar-12	3,886,724	6,450	31	81.0%
Apr-12	3,523,517	6,248	30	78.3%
May-12	3,753,103	7,242	31	69.7%
Jun-12	4,006,557	8,950	30	62.2%
Jul-12	4,531,695	9,504	31	64.1%
Aug-12	4,391,322	9,150	31	64.5%
Sep-12	3,838,267	8,456	30	63.0%
Oct-12	3,681,012	6,396	31	77.4%
Nov-12	3,763,336	6,823	30	76.6%
Dec-12	4,075,112	7,264	31	75.4%
Jan-13	4,093,741	7,045	31	78.1%
Feb-13	3,767,475	6,878	28	81.5%
Mar-13	3,948,725	6,478	31	81.9%
Apr-13	3,558,185	6,270	30	78.8%
May-13	3,824,249	7,296	31	70.4%
Jun-13	4,018,137	8,999	30	62.0%
Jul-13	4,558,523	9,550	31	64.2%
Aug-13	4,459,251	9,195	31	65.2%

Sep-13	3,859,312	8,519	30	62.9%
Oct-13	3,734,682	6,398	31	78.5%
Nov-13	3,864,760	6,847	30	78.4%
Dec-13	4,091,089	7,285	31	75.5%

B.9.4 Monthly Native Energy and Demand Requirements – Continued
NSP 2010 Budget

Xcel Energy
NSP Electric - Total System
Certificate of Need Filing
Median Forecast (50th Percentile)

Monthly Native Energy Requirements,
Base Peak Demand and Load Factors

	Native Energy Requirements (MWh)	Base Peak Demand (MW)	Days	Load Factor
Jan-14	4,160,869	7,072	31	79.1%
Feb-14	3,809,265	6,903	28	82.1%
Mar-14	3,959,215	6,501	31	81.9%
Apr-14	3,594,265	6,289	30	79.4%
May-14	3,859,052	7,335	31	70.7%
Jun-14	4,037,810	9,037	30	62.1%
Jul-14	4,637,336	9,592	31	65.0%
Aug-14	4,465,481	9,238	31	65.0%
Sep-14	3,862,179	8,587	30	62.5%
Oct-14	3,815,588	6,403	31	80.1%
Nov-14	3,886,261	6,865	30	78.6%
Dec-14	4,169,024	7,307	31	76.7%
Jan-15	4,144,439	7,094	31	78.5%
Feb-15	3,832,008	6,924	28	82.4%
Mar-15	4,006,906	6,523	31	82.6%
Apr-15	3,619,629	6,305	30	79.7%
May-15	3,857,785	7,377	31	70.3%
Jun-15	4,083,558	9,078	30	62.5%
Jul-15	4,706,331	9,630	31	65.7%
Aug-15	4,457,406	9,275	31	64.6%
Sep-15	3,873,571	8,651	30	62.2%
Oct-15	3,850,097	6,405	31	80.8%
Nov-15	3,903,601	6,882	30	78.8%
Dec-15	4,206,838	7,323	31	77.2%
Jan-16	4,171,158	7,107	31	78.9%
Feb-16	3,837,419	6,935	29	79.5%

Mar-16	4,027,392	6,533	31	82.9%
Apr-16	3,685,403	6,312	30	81.1%
May-16	3,844,580	7,423	31	69.6%
Jun-16	4,166,815	9,125	30	63.4%

B.9.4 Monthly Native Energy and Demand Requirements – Continued
NSP 2010 Budget

Xcel Energy
NSP Electric - Total System
Certificate of Need Filing
Median Forecast (50th Percentile)

Monthly Native Energy Requirements,
Base Peak Demand and Load Factors

	Native Energy Requirements (MWh)	Base Peak Demand (MW)	Days	Load Factor
Jul-16	4,691,991	9,674	31	65.2%
Aug-16	4,488,260	9,320	31	64.7%
Sep-16	4,030,862	8,726	30	64.2%
Oct-16	3,786,381	6,403	31	79.5%
Nov-16	3,906,406	6,893	30	78.7%
Dec-16	4,289,019	7,336	31	78.6%
Jan-17	4,210,319	7,119	31	79.5%
Feb-17	3,898,308	6,947	28	83.5%
Mar-17	4,071,469	6,546	31	83.6%
Apr-17	3,676,570	6,317	30	80.8%
May-17	3,955,783	7,467	31	71.2%
Jun-17	4,151,876	9,162	30	62.9%
Jul-17	4,696,715	9,711	31	65.0%
Aug-17	4,603,480	9,361	31	66.1%
Sep-17	3,986,128	8,789	30	63.0%
Oct-17	3,858,440	6,401	31	81.0%
Nov-17	4,019,974	6,907	30	80.8%
Dec-17	4,223,022	7,346	31	77.3%
Jan-18	4,292,677	7,130	31	80.9%
Feb-18	3,942,461	6,956	28	84.3%
Mar-18	4,090,037	6,554	31	83.9%
Apr-18	3,714,051	6,323	30	81.6%
May-18	3,994,899	7,500	31	71.6%
Jun-18	4,162,450	9,194	30	62.9%
Jul-18	4,783,748	9,744	31	66.0%
Aug-18	4,607,905	9,392	31	65.9%

Sep-18	3,990,886	8,848	30	62.6%
Oct-18	3,948,027	6,395	31	83.0%
Nov-18	4,028,985	6,911	30	81.0%
Dec-18	4,310,371	7,357	31	78.8%

B.9.4 Monthly Native Energy and Demand Requirements – Continued
NSP 2010 Budget

Xcel Energy
NSP Electric - Total System
Certificate of Need Filing
Median Forecast (50th Percentile)

Monthly Native Energy Requirements,
Base Peak Demand and Load Factors

	Native Energy Requirements (MWh)	Base Peak Demand (MW)	Days	Load Factor
Jan-19	4,279,333	7,137	31	80.6%
Feb-19	3,973,874	6,962	28	84.9%
Mar-19	4,150,120	6,561	31	85.0%
Apr-19	3,747,561	6,325	30	82.3%
May-19	3,996,612	7,526	31	71.4%
Jun-19	4,216,381	9,216	30	63.5%
Jul-19	4,865,153	9,764	31	67.0%
Aug-19	4,601,325	9,413	31	65.7%
Sep-19	4,008,243	8,898	30	62.6%
Oct-19	3,990,107	6,382	31	84.0%
Nov-19	4,053,159	6,916	30	81.4%
Dec-19	4,357,050	7,360	31	79.6%
Jan-20	4,314,126	7,133	31	81.3%
Feb-20	3,983,754	6,955	29	82.3%
Mar-20	4,181,057	6,555	31	85.7%
Apr-20	3,828,865	6,315	30	84.2%
May-20	3,987,718	7,552	31	71.0%
Jun-20	4,316,257	9,241	30	64.9%
Jul-20	4,855,557	9,784	31	66.7%
Aug-20	4,643,995	9,439	31	66.1%
Sep-20	4,190,211	8,958	30	65.0%
Oct-20	3,925,265	6,364	31	82.9%
Nov-20	4,064,083	6,910	30	81.7%
Dec-20	4,454,988	7,355	31	81.4%
Jan-21	4,361,463	7,132	31	82.2%
Feb-21	4,056,753	6,954	28	86.8%

Mar-21	4,232,162	6,556	31	86.8%
Apr-21	3,820,637	6,308	30	84.1%
May-21	4,116,396	7,571	31	73.1%
Jun-21	4,299,200	9,249	30	64.6%

B.9.4 Monthly Native Energy and Demand Requirements – Continued
NSP 2010 Budget

Xcel Energy
NSP Electric - Total System
Certificate of Need Filing
Median Forecast (50th Percentile)

Monthly Native Energy Requirements,
Base Peak Demand and Load Factors

	Native Energy Requirements (MWh)	Base Peak Demand (MW)	Days	Load Factor
Jul-21	4,857,723	9,788	31	66.7%
Aug-21	4,772,317	9,448	31	67.9%
Sep-21	4,136,256	8,986	30	63.9%
Oct-21	4,004,968	6,341	31	84.9%
Nov-21	4,189,389	6,910	30	84.2%
Dec-21	4,375,748	7,349	31	80.0%
Jan-22	4,450,401	7,127	31	83.9%
Feb-22	4,102,311	6,947	28	87.9%
Mar-22	4,246,568	6,549	31	87.2%
Apr-22	3,857,355	6,298	30	85.1%
May-22	4,157,684	7,577	31	73.8%
Jun-22	4,307,270	9,250	30	64.7%
Jul-22	4,950,002	9,788	31	68.0%
Aug-22	4,769,973	9,449	31	67.9%
Sep-22	4,139,281	9,016	30	63.8%
Oct-22	4,100,984	6,313	31	87.3%
Nov-22	4,191,336	6,898	30	84.4%
Dec-22	4,469,029	7,342	31	81.8%
Jan-23	4,431,587	7,119	31	83.7%
Feb-23	4,134,711	6,937	28	88.7%
Mar-23	4,312,568	6,543	31	88.6%
Apr-23	3,893,653	6,287	30	86.0%
May-23	4,155,244	7,586	31	73.6%
Jun-23	4,364,684	9,255	30	65.5%
Jul-23	5,039,949	9,788	31	69.2%
Aug-23	4,759,371	9,452	31	67.7%

Sep-23	4,157,110	9,049	30	63.8%
Oct-23	4,144,292	6,284	31	88.6%
Nov-23	4,214,976	6,888	30	85.0%
Dec-23	4,516,826	7,330	31	82.8%

B.9.4 Monthly Native Energy and Demand Requirements – Continued
NSP 2010 Budget

Xcel Energy
NSP Electric - Total System
Certificate of Need Filing
Median Forecast (50th Percentile)

Monthly Native Energy Requirements,
Base Peak Demand and Load Factors

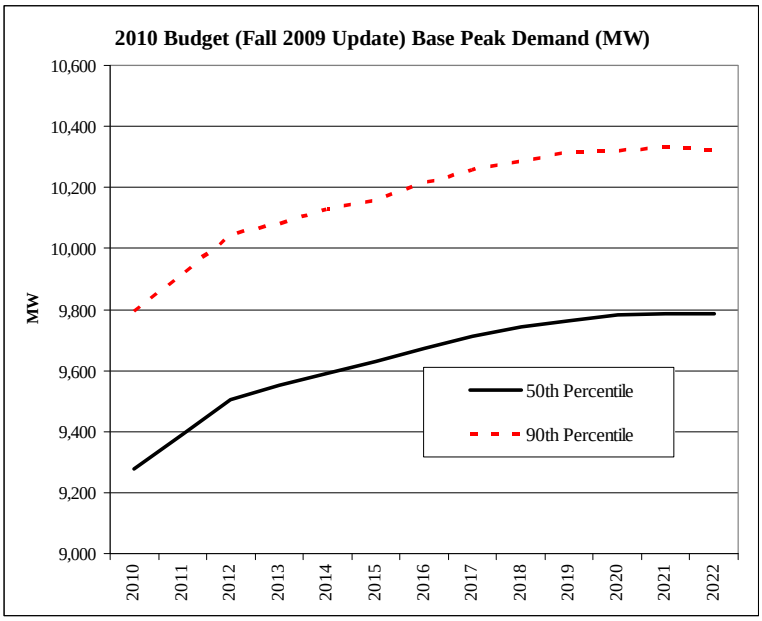
	Native Energy Requirements (MWh)	Base Peak Demand (MW)	Days	Load Factor
Jan-24	4,470,215	7,114	31	84.5%
Feb-24	4,142,046	6,930	29	85.9%
Mar-24	4,346,280	6,535	31	89.4%
Apr-24	3,983,240	6,276	30	88.1%
May-24	4,140,729	7,598	31	73.3%
Jun-24	4,473,175	9,262	30	67.1%
Jul-24	5,024,609	9,788	31	69.0%
Aug-24	4,804,180	9,458	31	68.3%
Sep-24	4,355,897	9,087	30	66.6%
Oct-24	4,070,614	6,258	31	87.4%
Nov-24	4,227,717	6,880	30	85.3%
Dec-24	4,627,107	7,323	31	84.9%
Jan-25	4,525,268	7,111	31	85.5%
Feb-25	4,228,511	6,928	28	90.8%
Mar-25	4,406,640	6,536	31	90.6%
Apr-25	3,978,688	6,269	30	88.1%
May-25	4,292,156	7,616	31	75.8%
Jun-25	4,461,313	9,270	30	66.8%
Jul-25	5,034,688	9,793	31	69.1%
Aug-25	4,957,452	9,470	31	70.4%
Sep-25	4,301,595	9,118	30	65.5%
Oct-25	4,167,688	6,237	31	89.8%
Nov-25	4,375,015	6,883	30	88.3%
Dec-25	4,544,606	7,319	31	83.5%

B.10 FORECAST COMPARISONS

NSP Total System Base Peak Demand (MW) and Net Energy Requirements (MWh)

NSP 2010 Budget (Fall 2009 Update)

	50th percentile Annual Base Peak Demand (MW)	90th percentile Annual Base Peak Demand (MW)	50th percentile Annual Net Energy Requirements (MWh)
2009	8,615	8,615	46,013,556
2010	9,280	9,795	45,752,142
2011	9,391	9,915	46,506,786
2012	9,504	10,046	47,204,270
2013	9,550	10,080	47,778,130
2014	9,592	10,127	48,256,346
2015	9,630	10,157	48,542,168
2016	9,674	10,213	48,925,688
2017	9,711	10,258	49,352,085
2018	9,744	10,285	49,866,498
2019	9,764	10,314	50,238,918
2020	9,784	10,320	50,745,877
2021	9,788	10,331	51,223,013
2022	9,788	10,323	51,742,193
2023	9,788	10,330	52,124,970
2024	9,788	10,327	52,665,809
2025	9,793	10,346	53,273,621
Compound Growth Rate 2009-2025	**0.8%**	**1.2%**	**0.9%**

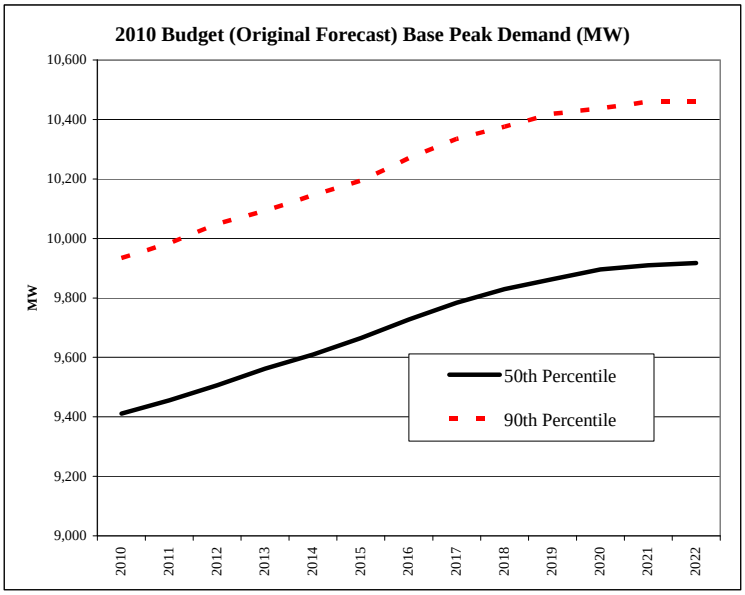

2010 Budget (Fall 2009 Update) Base Peak Demand (MW)
MW
10,600
10,400
10,200
10,000
9,800
9,600
9,400
9,200
9,000
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
50th Percentile
90th Percentile

B.10 FORECAST COMPARISONS - Continued

NSP Total System Base Peak Demand (MW) and Net Energy Requirements (MWh)

NSP 2010 Budget (Original Forecast)

	50th percentile Annual Base Peak Demand (MW)	90th percentile Annual Base Peak Demand (MW)	50th percentile Annual Net Energy Requirements (MWh)
2009	9,399	9,399	47,062,364
2010	9,411	9,934	46,882,206
2011	9,456	9,984	47,305,074
2012	9,506	10,049	47,761,764
2013	9,562	10,093	48,193,231
2014	9,610	10,145	48,656,633
2015	9,665	10,194	49,065,607
2016	9,727	10,270	49,507,567
2017	9,784	10,335	49,923,258
2018	9,830	10,376	50,408,449
2019	9,863	10,419	50,762,484
2020	9,896	10,438	51,194,208
2021	9,909	10,459	51,587,072
2022	9,917	10,459	52,020,663
2023	9,925	10,475	52,361,778
2024	9,991	10,542	52,843,700
2025	10,068	10,636	53,342,317
Compound Growth Rate 2009-2025	**0.4%**	**0.8%**	**0.8%**


2010 Budget (Original Forecast) Base Peak Demand (MW)
MW
10,600
10,400
10,200
10,000
9,800
9,600
9,400
9,200
9,000
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
50th Percentile
90th Percentile

Appendix B.11: Seasonal Firm Purchases-Summer

Seasonal Firm Purchases - Summer

		Nebraska Public Power District	Mid America Energy	Minnesota Power	Dairyland	Iowa Illinois Gas and Elec.	Union Elec.	Enron Power Marketing, Inc.	Omaha Public Power District	MidAmerican Energy Corp.	Trans Alta	Central MN Municipal Power Coop	Basin Electric Power Compnay	Great River Energy	Western Area Power Administration	Manitoba 150	Manitoba 200	Total
1996	SUMMER			150	4					100						150	200	604
1997	SUMMER			150	4											150	200	504
1998	SUMMER	60		225	4			65	44	50						150	200	798
1999	SUMMER		50	175	4			30	56							150	200	665
2000	SUMMER			250				150			25					150	200	775
2001	SUMMER			85								15	50	75	2	150	200	577
2002	SUMMER												50	75	2	150	200	477
2003	SUMMER								35				50	75	2	150	200	512
2004	SUMMER												50	75	2	150	200	477
2005	SUMMER												50	75	2	150	200	477
2006	SUMMER												54	81	2	150	200	487
2007	SUMMER														2	150	200	352
2008	SUMMER														2	150	200	352
2009	SUMMER														2	150	200	352
2010	SUMMER														2	150	200	352
2011	SUMMER														2	150	200	352
2012	SUMMER														2	150	200	352
2013	SUMMER														2	150	200	352
2014	SUMMER														2	150	200	352
2015	SUMMER														2	150	200	352
2016	SUMMER														2	150	200	352
2017	SUMMER														2	150	200	352
2018	SUMMER														2	150	200	352
2019	SUMMER														2	150	200	352
2020	SUMMER														2	150	200	352
2021	SUMMER														0	150	200	350
2022	SUMMER														0	150	200	350
2023	SUMMER														0	150	200	350
2024	SUMMER														0	150	200	350
2025	SUMMER														0			0

Appendix B.12: Seasonal Firm Purchases-WinteB

Seasonal Firm Purchases - Winter

		Dairyland	MidAmerican Energy Corp	Minnesota Power	Manitoba Hydro	Central MN Municipal Power Agency	Basin Elec. Power Corp	Great River Energy	Western Area Power Administration	Total
1996	WINTER	4								4
1997	WINTER	4								4
1998	WINTER	4								4
1999	WINTER	4								4
2000	WINTER		200	25	50					275
2001	WINTER					11	50	75		136
2002	WINTER					12	50	75	2	139
2003	WINTER								2	2
2004	WINTER						50	75	2	127
2005	WINTER						50	75	2	127
2006	WINTER						54	75	2	131
2007	WINTER								2	2
2008	WINTER								2	2
2009	WINTER								2	2
2010	WINTER								2	2
2011	WINTER								2	2
2012	WINTER								2	2
2013	WINTER								2	2
2014	WINTER								2	2
2015	WINTER								2	2
2016	WINTER								2	2
2017	WINTER								2	2
2018	WINTER								2	2
2019	WINTER								2	2
2020	WINTER								2	2
2021	WINTER									0
2022	WINTER									0
2023	WINTER									0
2024	WINTER									0
2025	WINTER									0

Appendix B.13: Seasonal Firm Sales-Summer

Sesonal Firm Sales - SUMMER

		Wisconsin Public Service	Enron	Municipals	United Power	Wisconsin Rapids	Power Co.	Barron	Enron Power Marketing, Inc.	New Ulm	Total
1996	SUMMER	100	45	19		15	100				279
1997	SUMMER			13		15	150				178
1998	SUMMER			14		15		7			36
1999	SUMMER			16	100	15		6			137
2000	SUMMER			13		15		8	150	15	201
2001	SUMMER			15							15
2002	SUMMER			15							15
2003	SUMMER			15							15
2004	SUMMER			16							16
2005	SUMMER										0
2006	SUMMER										0
2007	SUMMER										0
2008	SUMMER										0
2009	SUMMER										0
2010	SUMMER										0
2011	SUMMER										0
2012	SUMMER										0
2013	SUMMER										0
2014	SUMMER										0
2015	SUMMER										0
2016	SUMMER										0
2017	SUMMER										0
2018	SUMMER										0
2019	SUMMER										0
2020	SUMMER										0
2021	SUMMER										0
2022	SUMMER										0
2023	SUMMER										0
2024	SUMMER										0
2025	SUMMER										0

Appendix B.14: Seasonal Firm Sales-Winter

Seasonal Firm Sales - WINTER

		Municipals	United Power	Wisconsin Rapids	Power Co.	Central MN Municipal Power Agency	Barron	Willmar	Manitoba 150	Manitoba 200	Total
1996	WINTER	20	100						150		270
1997	WINTER	18		15	100				150	200	483
1998	WINTER	16	75	15		7		10	150	200	473
1999	WINTER	18		15			6		150	200	389
2000	WINTER	18		15			6		150	200	389
2001	WINTER	11		15			8		150	200	384
2002	WINTER	12							150	200	362
2003	WINTER	15							150	200	365
2004	WINTER	15							150	200	365
2005	WINTER	16							150	200	366
2006	WINTER	15							150	200	365
2007	WINTER								150	200	350
2008	WINTER								150	200	350
2009	WINTER								150	200	350
2010	WINTER								150	200	350
2011	WINTER								150	200	350
2012	WINTER								150	200	350
2013	WINTER								150	200	350
2014	WINTER								150	200	350
2015	WINTER								150	200	350
2016	WINTER								150	200	350
2017	WINTER								150	200	350
2018	WINTER								150	200	350
2019	WINTER								150	200	350
2020	WINTER								150	200	350
2021	WINTER								150	200	350
2022	WINTER								150	200	350
2023	WINTER								150	200	350
2024	WINTER								150	200	350
2025	WINTER								150	200	350

Appendix B.15: Seasonal Participation Purchase-Summer

Seasonal Participation Purchase -- SUMMER

		Ameren Energy Marketing Corp	Barron	Basin Electric Power Coop	Black Hills Power and Light	Calpine	Calpine Mankato	Central Iowa Power Coop	Central MN Municipal Power Agency	Constellation Commodities Group	Coyote	Cyprus	Detroit Edison	Dynegy Power Marketing	Dynegy Power Marketing	Enron Power Marketing	Exelon	Fibro Minn	Gen Sys Energy	Generic PPA	Great River Energy	Hutchinson Utilities Commission	Invenergy	Kansas City Power and Light	Laurentian	LS Power	Madelia	Manitoba Hydro	Manitoba Hydro Baseload
1996	SUMMER	0	4								150																	750	
1997	SUMMER	0	4								150													50				500	
1998	SUMMER	0	4								150													50			8	500	
1999	SUMMER	150	4	50					5		150																8	725	
2000	SUMMER	218	4						2		150					100											8	675	
2001	SUMMER	148						25			150				100	100											8	700	
2002	SUMMER	235			40						100				150				20			6		25				600	
2003	SUMMER	255							25		100				100													760	
2004	SUMMER	235							25		100				100				50									960	
2005	SUMMER	0							25	100	100				158				70									700	
2006	SUMMER	0				20	320			62	100	40	69	108	300		125	0		0			0		0	245		713	
2007	SUMMER	100					312			285	100	40		108	550			50		0	160	20	0		35	245		500	
2008	SUMMER						312			90	100	40		108	150			50		0			301		35	245		713	
2009	SUMMER						312			95	100	40						50		0			301		35	245		713	
2010	SUMMER						312			100	100	40						50		0			301		35	245		500	
2011	SUMMER						312				100	40						50		0			301		35	245		500	
2012	SUMMER						312				100							50		0			301		35	245		500	
2013	SUMMER						312				100							50		0			301		35	245		500	
2014	SUMMER						312				100							50		136			301		35	245		500	
2015	SUMMER						312				100							50		136			301		35	245			375
2016	SUMMER						312				0							50		136			301		35	245			375
2017	SUMMER						312				0							50		136			301		35	245			375
2018	SUMMER						312				0							50		700			301		35	245			375
2019	SUMMER						312				0							50		700			301		35	245			375
2020	SUMMER						312				0							50		700			301		35	245			375
2021	SUMMER						312				0							50		700			301		35	245			500
2022	SUMMER						312				0							50		700			301		35	245			500
2023	SUMMER						312				0							50		700			301		35	245			500
2024	SUMMER						312				0							50		700			301		35	245			500
2025	SUMMER						312				0							50		700			301		35	245			

Seasonal Participation Purchase -- SUMMER

		MidAmerican Energy Corp	Minnesota Power	Minnkota Power Coop	Missouri Basin Municipal Power	MN Municipal Power Agency	Montana Dakota Utilties	MPEX (a division of MP)	Non-Utility Group	Northern Indiana Public Service Co	Omaha Public Power District	Otter Tail Power	Reliant Energy Services	Short Term	Split Rock Energy	St. Paul	The Energy Authority	United Power Assoc	Utilicorp United	Utilicorp United	Western Resources Inc.	Wind	Wisconsin Electric Power	Wisconsin Public Service	Total
1996	SUMMER			150					110			75						50						50	1339
1997	SUMMER	50		50					328			75						50							1257
1998	SUMMER			50	10				356			75						50					120		1373
1999	SUMMER			50			10		360		40	75						50		35	100			73	1885
2000	SUMMER			50					360			75						50			50				1742
2001	SUMMER			20				15	365	50		75	50					50	100		83				2039
2002	SUMMER	150	50	20					364			75			50		30	50	50	10					2025
2003	SUMMER	150	100	0					381		10	75					20	50			61				2087
2004	SUMMER	150	100	0					381			75			100			50							2326
2005	SUMMER		100	0		130			381			50						50						200	2064
2006	SUMMER		100	100					85					0	200	25		50				61		50	2773
2007	SUMMER		100	100		10			85					0		25		50				76			2951
2008	SUMMER			100		10			85					642		25		50				76			3132
2009	SUMMER			100		10			85					165		25		50				96			2422
2010	SUMMER			100		10			85					265		25		50				158			2376
2011	SUMMER			100					85					259		25						190			2241
2012	SUMMER			100					85					307		25						190			2250
2013	SUMMER			100					85					366		25						190			2308
2014	SUMMER			100					82					360		25						190			2435
2015	SUMMER			100					82					103		25						190			2053
2016	SUMMER								82					276		25						190			2026
2017	SUMMER								79					343		25						190			2091
2018	SUMMER								45					0		25						188			2276
2019	SUMMER								45					0		25						179			2267
2020	SUMMER								40					14		25						179			2276
2021	SUMMER								40					0		25						177			2385
2022	SUMMER								30					156		25						177			2532
2023	SUMMER								30					0		25						177			2376
2024	SUMMER								30					0								177			2351
2025	SUMMER								30					0								177			1851

Appendix B.16: Seasonal Participation Purchase-Winter

Seasonal Participation Purchase -- WINTER

		American Energy Marketing Corp	Barron	Calpine Mankato	Central MN Municipal Power Agency	Coyote	Cyprus	Dynegy Power Marketing	Fibro Minn	Generic PPA	Gen Sys Energy	Invenergy	Laurentian	LS Power	Madelia	Manitoba Hydro	Manitoba Hydro Baseload	MidAmerican Energy Corp	Minnesota Power	Minnkota Power Coop	Non-Utility Group	St. Paul	Western Resources Inc.	Wind	Wisconsin Public Service	Total
1996	WINTER					0										500					98				150	748
1997	WINTER					0										500					111				150	761
1998	WINTER					0										500					374				150	1,024
1999	WINTER		4			0										500					375					879
2000	WINTER		4			0									8	500					377					889
2001	WINTER	100	4		2	0		100							8	500					377					1,091
2002	WINTER		4			0		100								500			50		373		61			1,088
2003	WINTER		4		25	0		100								500		50		20	377					1,076
2004	WINTER				25	0										500			100		398					1,023
2005	WINTER				25	0					50					500			100		398					1,073
2006	WINTER			362	31	0	40				50	0	0	275		500			100		85	25		145	87	1,700
2007	WINTER			362		0	40	108	50			0	35	275		713			100		85	25		148		1,941
2008	WINTER			362		0	40		50			357	35	275		713					85	25		152		2,094
2009	WINTER			362		0	40		50			357	35	275		500					85	25		152		1,881
2010	WINTER			362		0	40		50	0		357	35	275		500					85	25		317		2,045
2011	WINTER			362		0	40		50	0		357	35	275		500					85	25		379		2,108
2012	WINTER			362		0			50	0		357	35	275		500					85	25		379		2,068
2013	WINTER			362		0			50	0		357	35	275		500					85	25		379		2,068
2014	WINTER			362		0			50	160		357	35	275		500					82	25		379		2,225
2015	WINTER			362		0			50	160		357	35	275			375				82	25		379		2,100
2016	WINTER			362		0			50	160		357	35	275			375				82	25		379		2,100
2017	WINTER			362		0			50	160		357	35	275			375				79	25		379		2,097
2018	WINTER			362		0			50	815		357	35	275			375				45	25		377		2,716
2019	WINTER			362		0			50	815		357	35	275			375				45	25		357		2,696
2020	WINTER			362		0			50	815		357	35	275			375				40	25		357		2,691
2021	WINTER			362		0			50	815		357	35	275			375				40	25		355		2,689
2022	WINTER			362		0			50	815		357	35	275			500				30	25		355		2,804
2023	WINTER			362		0			50	815		357	35	275			500				30	25		355		2,804
2024	WINTER			362		0			50	815		357	35	275			500				30			355		2,779
2025	WINTER			362		0			50	815		357	35	275			500				30			355		2,779

Appendix B.17: Seasonal Participation Sales-Summer

Seasonal Participation Sales - SUMMER

		Constellation Comm. Group	Gensys Energy	Great River Energy	Melrose	Montana Dakota Util	Montana Dakota Util	Omaha Public Power District	Otter Tail Power	Wisc Power Assoc	Wisconsin Electric Power Corp	Wisconsin Public Service	Total
1996	SUMMER									150			150
1997	SUMMER												0
1998	SUMMER				3					126	250		379
1999	SUMMER				3			50			250	176	479
2000	SUMMER				3				50			186	239
2001	SUMMER				3							200	203
2002	SUMMER											200	200
2003	SUMMER												0
2004	SUMMER												0
2005	SUMMER											200	200
2006	SUMMER			50					32				82
2007	SUMMER	100	50	100		85	10						345
2008	SUMMER			150		90	10						250
2009	SUMMER					95	10						105
2010	SUMMER					100	10						110
2011	SUMMER												0
2012	SUMMER												0
2013	SUMMER												0
2014	SUMMER												0
2015	SUMMER												0
2016	SUMMER												0
2017	SUMMER												0
2018	SUMMER												0
2019	SUMMER												0
2020	SUMMER												0
2021	SUMMER												0
2022	SUMMER												0
2023	SUMMER												0
2024	SUMMER												0
2025	SUMMER												0

Appendix B.18: Seasonal Participation Sales-Winter

Seasonal Participation Sales - WINTER

		Melrose	Minnkota Power	Municipals	Otter Tail Power	United Power Assoc	Wisc Power Assoc	Wisconsin Electric Power Corp	Total
1996	WINTER		50		75	50	150		325
1997	WINTER		50		75	50	150		325
1998	WINTER	3	50		75	50	150		328
1999	WINTER	3	50		75	50	150		328
2000	WINTER	3	50		75	50		150	328
2001	WINTER	3	50		75	50			178
2002	WINTER			10	75	50			135
2003	WINTER				75	50			125
2004	WINTER	3			75	50			128
2005	WINTER	3				50			53
2006	WINTER					50			50
2007	WINTER					50			50
2008	WINTER					50			50
2009	WINTER					50			50
2010	WINTER					50			50
2011	WINTER								0
2012	WINTER								0
2013	WINTER								0
2014	WINTER								0
2015	WINTER								0
2016	WINTER								0
2017	WINTER								0
2018	WINTER								0
2019	WINTER								0
2020	WINTER								0
2021	WINTER								0
2022	WINTER								0
2023	WINTER								0
2024	WINTER								0
2025	WINTER								0

Appendix B.19: Load and Generating Capacity Data

Load and Generating Capacity Data Excluding Plants Needing a CON - SUMMER

	Seasonal System Demand	Annual System Demand	Total Seasonal Firm Purchases	Total Seasonal Firm Sales	Seasonal Adjusted Net Demand	Annual Adjusted Net Demand	Net Generating Capacity	Total Participation Purchases	Total Participation Sales	Adjusted Net Capability	Net Reserve Capacity Obligation	Total Firm Capactiy Obligation	Surplus or Deficit Capacity
1996	7488	7488	604	279	7163	7163	7110	1339	150	8299	1074	8237	62
1997	7353	7353	504	178	7027	7027	7118	1257	0	8375	1054	8081	294
1998	7659	7659	798	36	6897	6897	7150	1373	379	8144	1035	7932	212
1999	7990	7990	665	137	7462	7462	7187	1885	479	8593	1119	8581	12
2000	7936	7936	775	201	7362	7362	7243	1742	239	8746	1104	8466	280
2001	8349	8349	577	15	7787	7787	7153	2039	203	8988	1168	8955	34
2002	8239	8239	477	15	7777	7777	7275	2025	200	9100	1167	8943	157
2003	8281	8281	512	15	7784	7784	7226	2087	0	9313	1168	8951	362
2004	8596	8596	477	16	8135	8135	7229	2326	0	9555	1220	9355	200
2005	8501	8501	477	0	8024	8024	7732	2064	200	9596	1204	9227	369
2006	9034	9034	487	0	8547	8547	7627	2773	82	10318	1282	9829	489
2007	9427	9427	352	0	9075	9075	7577	2951	345	10183	1361	10436	-254
2008	10302	10302	352	0	9950	9950	7432	3132	250	10314	1493	11443	-1129
2009	8749	8749	352	0	8397	8397	7561	2422	105	9878	1260	9656	222
2010	8826	8826	352	0	8474	8474	7582	2376	110	9848	1017	9491	357
2011	8878	8878	352	0	8526	8526	7615	2241	0	9857	1023	9549	308
2012	8960	8960	352	0	8608	8608	7701	2250	0	9950	1033	9641	310
2013	9039	9039	352	0	8687	8687	7720	2308	0	10028	1042	9729	299
2014	9113	9113	352	0	8761	8761	7694	2299	0	9993	1051	9813	180
2015	9199	9199	2	0	9197	9197	7552	1542	0	9094	1104	10301	-1207
2016	9276	9276	2	0	9274	9274	7553	1515	0	9069	1113	10387	-1318
2017	9344	9344	2	0	9342	9342	7553	1580	0	9133	1121	10463	-1330
2018	9410	9410	2	0	9408	9408	7553	1201	0	8755	1129	10536	-1782
2019	9473	9473	2	0	9471	9471	7504	1192	0	8696	1137	10608	-1912
2020	9519	9519	2	0	9517	9517	7504	1201	0	8705	1142	10659	-1955
2021	9561	9561	0	0	9561	9561	7504	1185	0	8689	1147	10708	-2019
2022	9592	9592	0	0	9592	9592	7287	1332	0	8619	1151	10743	-2124
2023	9623	9623	0	0	9623	9623	7287	1176	0	8463	1155	10777	-2314
2024	9654	9654	0	0	9654	9654	7287	1151	0	8438	1158	10812	-2374
2025	9685	9685	0	0	9685	9685	7287	1151	0	8438	1162	10847	-2409

NOTES :

1. Forecasted demand values based on a 50% forecast level with a DSM Adjustment.
2. Summer and winter seasons as defined by MAPP : Summer is May - October, Winter is the following November - April
3. Wind resources are included in net generating capacity. New wind resources are projected to be accredited at 13.5% nameplate c
Actual winter accreditation is likely to be higher.

Load and Generating Capacity Data Excluding Plants Needing a CON - WINTER

	Seasonal System Demand	Annual System Demand	Total Seasonal Firm Purchases	Total Seasonal Firm Sales	Seasonal Adjusted Net Demand	Annual Adjusted Net Demand	Net Generating Capacity	Total Participation Purchases	Total Participation Sales	Adjusted Net Capability	Net Reserve Capacity Obligation	Total Firm Capactiy Obligation	Surplus or Deficit Capacity
1996	6081	7488	4	270	6347	7754	7253	748	325	7676	1163	7510	166
1997	5869	7353	4	483	6348	7832	7367	761	325	7803	1175	7523	280
1998	5877	7659	4	473	6346	8128	7406	1024	328	8102	1219	7565	537
1999	6187	7990	4	389	6572	8375	7482	879	328	8033	1256	7828	205
2000	6422	7936	275	389	6536	8050	7537	889	328	8098	1208	7744	354
2001	6557	8349	136	384	6805	8597	7534	1091	178	8446	1290	8095	352
2002	6221	8239	139	362	6444	8462	7491	1088	135	8444	1269	7713	731
2003	6386	8281	2	365	6749	8644	7738	1076	125	8689	1297	8045	643
2004	6653	8596	127	365	6891	8834	7718	1023	128	8613	1325	8216	397
2005	6873	8501	127	366	7112	8740	7718	1073	53	8738	1311	8423	315
2006	6833	9034	131	365	7067	9268	7936	1700	50	9586	1390	8457	1129
2007	7413	9427	2	350	7760	9775	7616	1941	50	9507	1466	9227	280
2008	7509	10302	2	350	7856	10650	7895	2094	50	9938	1598	9454	484
2009	6915	8749	2	350	7263	9096	7773	1881	50	9604	1364	8627	976
2010	6893	8826	2	350	7241	9174	8368	2045	50	10363	1101	8342	2021
2011	6876	8878	2	350	7223	9225	8375	2108	0	10483	1107	8330	2153
2012	6869	8960	2	350	7217	9307	8508	2068	0	10576	1117	8334	2242
2013	6877	9039	2	350	7224	9387	8571	2068	0	10639	1126	8351	2288
2014	6862	9113	2	0	6860	9111	8501	2065	0	10566	1093	7953	2613
2015	6857	9199	2	0	6855	9197	8245	1565	0	9810	1104	7958	1851
2016	6832	9276	2	0	6830	9274	8321	1565	0	9886	1113	7942	1944
2017	6831	9344	2	0	6828	9342	8321	1562	0	9883	1121	7949	1934
2018	6802	9410	2	0	6799	9407	8321	1526	0	9847	1129	7928	1919
2019	6777	9473	2	0	6775	9471	8255	1506	0	9761	1137	7911	1850
2020	6728	9519	2	0	6726	9517	8255	1501	0	9757	1142	7868	1888
2021	6709	9561	0	0	6709	9561	8227	1499	0	9726	1147	7856	1870
2022	6757	9592	0	0	6757	9592	7990	1489	0	9479	1151	7908	1571
2023	6780	9623	0	0	6780	9623	7990	1489	0	9479	1155	7934	1545
2024	6833	9654	0	0	6833	9654	7990	1464	0	9454	1158	7992	1462
2025	6848	9685	0	0	6848	9685	7990	1464	0	9454	1162	8010	1445

NOTES :

1. Forecasted demand values based on a 50% forecast level with a DSM Adjustment.
2. Summer and winter seasons as defined by MAPP : Summer is May - October, Winter is the following November - April
3. Wind resources are included in net generating capacity. New wind resources are projected to be accredited at 13.5% nameplate capacity. Actual winter accreditation is likely to be higher.

Load and Generating Capacity Data Including Plants Needing a CON - SUMMER

	Seasonal System Demand	Annual System Demand	Total Seasonal Firm Purchases	Total Seasonal Firm Sales	Seasonal Adjusted Net Demand	Annual Adjusted Net Demand	Net Generating Capacity	Total Participation Purchases	Total Participation Sales	Adjusted Net Capability	Net Reserve Capacity Obligation	Total Firm Capacity Obligation	Surplus or Deficit Capacity
1996	7488	7488	604	279	7163	7163	7110	1339	150	8299	1074	8237	62
1997	7353	7353	504	178	7027	7027	7118	1257	0	8375	1054	8081	294
1998	7659	7659	798	36	6897	6897	7150	1373	379	8144	1035	7932	212
1999	7990	7990	665	137	7462	7462	7187	1885	479	8593	1119	8581	12
2000	7936	7936	775	201	7362	7362	7243	1742	239	8746	1104	8466	280
2001	8349	8349	577	15	7787	7787	7153	2039	203	8988	1168	8955	34
2002	8239	8239	477	15	7777	7777	7275	2025	200	9100	1167	8943	157
2003	8281	8281	512	15	7784	7784	7226	2087	0	9313	1168	8951	362
2004	8596	8596	477	16	8135	8135	7229	2326	0	9555	1220	9355	200
2005	8501	8501	477	0	8024	8024	7732	2064	200	9596	1204	9227	369
2006	9034	9034	487	0	8547	8547	7627	2773	82	10318	1282	9829	489
2007	9427	9427	352	0	9075	9075	7577	2951	345	10183	1361	10436	-254
2008	10302	10302	352	0	9950	9950	7432	3132	250	10314	1493	11443	-1129
2009	8749	8749	352	0	8397	8397	7561	2422	105	9878	1260	9656	222
2010	8826	8826	352	0	8474	8474	7582	2376	110	9848	1017	9491	357
2011	8878	8878	352	0	8526	8526	7615	2241	0	9857	1023	9549	308
2012	8960	8960	352	0	8608	8608	7701	2250	0	9950	1033	9641	310
2013	9039	9039	352	0	8687	8687	7733	2308	0	10041	1042	9729	312
2014	9113	9113	352	0	8761	8761	7720	2435	0	10155	1051	9813	342
2015	9199	9199	352	0	8847	8847	8242	2053	0	10295	1062	9909	387
2016	9276	9276	352	0	8924	8924	8257	2026	0	10283	1071	9995	288
2017	9344	9344	352	0	8992	8992	8270	2091	0	10361	1079	10071	290
2018	9410	9410	352	0	9058	9058	8283	2276	0	10559	1087	10144	415
2019	9473	9473	352	0	9121	9121	8259	2267	0	10526	1095	10216	310
2020	9519	9519	352	0	9167	9167	8285	2276	0	10561	1100	10267	293
2021	9561	9561	350	0	9211	9211	8298	2385	0	10683	1105	10316	367
2022	9592	9592	350	0	9242	9242	8094	2532	0	10626	1109	10351	275
2023	9623	9623	350	0	9273	9273	8094	2376	0	10470	1113	10385	85
2024	9654	9654	350	0	9304	9304	8094	2351	0	10445	1116	10420	25
2025	9685	9685	0	0	9685	9685	8094	1851	0	9945	1162	10847	-902

NOTES :

1. Forecasted demand values based on a 50% forecast level with a DSM Adjustment.
2. Summer and winter seasons as defined by MAPP : Summer is May - October, Winter is the following November - April
3. Wind resources are included in net generating capacity. New wind resources are projected to be accredited at 13.5% nameplate capacity.

Load and Generating Capacity Data Including Plants Needing a CON - WINTER

	Seasonal System Demand	Annual System Demand	Total Seasonal Firm Purchases	Total Seasonal Firm Sales	Seasonal Adjusted Net Demand	Annual Adjusted Net Demand	Net Generating Capacity	Total Participation Purchases	Total Participation Sales	Adjusted Net Capability	Net Reserve Capacity Obligation	Total Firm Capacity Obligation	Surplus or Deficit Capacity
1996	6081	7488	4	270	6347	7754	7253	748	325	7676	1163	7510	166
1997	5869	7353	4	483	6348	7832	7367	761	325	7803	1175	7523	280
1998	5877	7659	4	473	6346	8128	7406	1024	328	8102	1219	7565	537
1999	6187	7990	4	389	6572	8375	7482	879	328	8033	1256	7828	205
2000	6422	7936	275	389	6536	8050	7537	889	328	8098	1208	7744	354
2001	6557	8349	136	384	6805	8597	7534	1091	178	8446	1290	8095	352
2002	6221	8239	139	362	6444	8462	7491	1088	135	8444	1269	7713	731
2003	6386	8281	2	365	6749	8644	7738	1076	125	8689	1297	8045	643
2004	6653	8596	127	365	6891	8834	7718	1023	128	8613	1325	8216	397
2005	6873	8501	127	366	7112	8740	7718	1073	53	8738	1311	8423	315
2006	6833	9034	131	365	7067	9268	7936	1700	50	9586	1390	8457	1129
2007	7413	9427	2	350	7760	9775	7616	1941	50	9507	1466	9227	280
2008	7509	10302	2	350	7856	10650	7895	2094	50	9938	1598	9454	484
2009	6915	8749	2	350	7263	9096	7773	1881	50	9604	1364	8627	976
2010	6893	8826	2	350	7241	9174	8368	2045	50	10363	1101	8342	2021
2011	6876	8878	2	350	7223	9225	8375	2108	0	10483	1107	8330	2153
2012	6869	8960	2	350	7217	9307	8508	2068	0	10576	1117	8334	2242
2013	6877	9039	2	350	7224	9387	8571	2068	0	10639	1126	8351	2288
2014	6862	9113	2	350	7210	9461	8501	2225	0	10726	1135	8345	2381
2015	6857	9199	2	350	7205	9547	8245	2100	0	10345	1146	8350	1994
2016	6832	9276	2	350	7180	9624	9088	2100	0	11188	1155	8334	2854
2017	6831	9344	2	350	7178	9692	9088	2097	0	11185	1163	8341	2844
2018	6802	9410	2	350	7149	9757	9088	2716	0	11804	1171	8320	3484
2019	6777	9473	2	350	7125	9821	9023	2696	0	11719	1179	8303	3415
2020	6728	9519	2	350	7076	9867	9023	2691	0	11714	1184	8260	3454
2021	6709	9561	0	350	7059	9911	8994	2689	0	11683	1189	8248	3435
2022	6757	9592	0	350	7107	9942	8757	2804	0	11561	1193	8300	3261
2023	6780	9623	0	350	7130	9973	8757	2804	0	11561	1197	8326	3235
2024	6833	9654	0	350	7183	10004	8757	2779	0	11536	1200	8384	3153
2025	6848	9685	0	350	7198	10035	8757	2779	0	11536	1204	8402	3135

NOTES :

1. Forecasted demand values based on a 50% forecast level with a DSM Adjustment.
2. Summer and winter seasons as defined by MAPP : Summer is May - October, Winter is the following November - April
3. Wind resources are included in net generating capacity. New wind resources are projected to be accredited at 13.5% nameplate capacity. Actual winter accreditation is likely to be higher.

Load and Generating Capacity Data Including Future Plants Needing a CON - SUMMER

	Seasonal System Demand	Annual System Demand	Total Seasonal Firm Purchases	Total Seasonal Firm Sales	Seasonal Adjusted Net Demand	Annual Adjusted Net Demand	Net Generating Capacity	Total Participation Purchases	Total Participation Sales	Adjusted Net Capability	Net Reserve Capacity Obligation	Total Firm Capacity Obligation	Surplus or Deficit Capacity
1996	7488	7488	604	279	7163	7163	7110	1339	150	8299	1074	8237	62
1997	7353	7353	504	178	7027	7027	7118	1257	0	8375	1054	8081	294
1998	7659	7659	798	36	6897	6897	7150	1373	379	8144	1035	7932	212
1999	7990	7990	665	137	7462	7462	7187	1885	479	8593	1119	8581	12
2000	7936	7936	775	201	7362	7362	7243	1742	239	8746	1104	8466	280
2001	8349	8349	577	15	7787	7787	7153	2039	203	8988	1168	8955	34
2002	8239	8239	477	15	7777	7777	7275	2025	200	9100	1167	8943	157
2003	8281	8281	512	15	7784	7784	7226	2087	0	9313	1168	8951	362
2004	8596	8596	477	16	8135	8135	7229	2326	0	9555	1220	9355	200
2005	8501	8501	477	0	8024	8024	7732	2064	200	9596	1204	9227	369
2006	9034	9034	487	0	8547	8547	7627	2773	82	10318	1282	9829	489
2007	9427	9427	352	0	9075	9075	7577	2951	345	10183	1361	10436	-254
2008	10302	10302	352	0	9950	9950	7432	3132	250	10314	1493	11443	-1129
2009	8749	8749	352	0	8397	8397	7561	2422	105	9878	1260	9656	222
2010	8826	8826	352	0	8474	8474	7582	2376	110	9848	1017	9491	357
2011	8878	8878	352	0	8526	8526	7615	2241	0	9857	1023	9549	308
2012	8960	8960	352	0	8608	8608	7701	2250	0	9950	1033	9641	310
2013	9039	9039	352	0	8687	8687	7733	2308	0	10041	1042	9729	312
2014	9113	9113	352	0	8761	8761	7720	2435	0	10155	1051	9813	342
2015	9199	9199	352	0	8847	8847	8242	2053	0	10295	1062	9909	387
2016	9276	9276	352	0	8924	8924	8257	2026	0	10283	1071	9995	288
2017	9344	9344	352	0	8992	8992	8270	2091	0	10361	1079	10071	290
2018	9410	9410	352	0	9058	9058	8283	2276	0	10559	1087	10144	415
2019	9473	9473	352	0	9121	9121	8259	2267	0	10526	1095	10216	310
2020	9519	9519	352	0	9167	9167	8285	2276	0	10561	1100	10267	293
2021	9561	9561	350	0	9211	9211	8298	2385	0	10683	1105	10316	367
2022	9592	9592	350	0	9242	9242	8094	2532	0	10626	1109	10351	275
2023	9623	9623	350	0	9273	9273	8094	2376	0	10470	1113	10385	85
2024	9654	9654	350	0	9304	9304	8094	2351	0	10445	1116	10420	25
2025	9685	9685	0	0	9685	9685	8094	1851	0	9945	1162	10847	-902

NOTES :

1. Forecasted demand values based on a 50% forecast level with a DSM Adjustment.
2. Summer and winter seasons as defined by MAPP : Summer is May - October, Winter is the following November - April.
3. Wind resources are included in net generating capacity. The only new wind resource is our 100 MW Grand Meadow facility which is included at nameplate as it is not accredited yet. Future wind resources were not included because at this point we have not determined the ownership versus PPA split. Xcel continues to project accredited wind resources at 13.5% nameplate capacity.

4. The future Manitoba Hydro purchase that begins in 2015 is included here. This resource does not technically need a CON, however, as part of the Track Two process it wil be subjected to the "CON-like" review process. Xcel Energy has issued an RFP for a 160 MW of Summer peaking to be available by 2011. We are still in the selection process and no term sheet has been signed to date. Since this will result in a Summer only PPA a CON is not required.
5. Xcel Energy will need additional resources in future years, the specific details will be addressed in future resource plans.

Load and Generating Capacity Data Including Future Plants Needing a CON - WINTER

	Seasonal System Demand	Annual System Demand	Total Seasonal Firm Purchases	Total Seasonal Firm Sales	Seasonal Adjusted Net Demand	Annual Adjusted Net Demand	Net Generating Capacity	Total Participation Purchases	Total Participation Sales	Adjusted Net Capability	Net Reserve Capacity Obligation	Total Firm Capactiy Obligation	Surplus or Deficit Capacity
1996	6081	7488	4	270	6347	7754	7253	748	325	7676	1163	7510	166
1997	5869	7353	4	483	6348	7832	7367	761	325	7803	1175	7523	280
1998	5877	7659	4	473	6346	8128	7406	1024	328	8102	1219	7565	537
1999	6187	7990	4	389	6572	8375	7482	879	328	8033	1256	7828	205
2000	6422	7936	275	389	6536	8050	7537	889	328	8098	1208	7744	354
2001	6557	8349	136	384	6805	8597	7534	1091	178	8446	1290	8095	352
2002	6221	8239	139	362	6444	8462	7491	1088	135	8444	1269	7713	731
2003	6386	8281	2	365	6749	8644	7738	1076	125	8689	1297	8045	643
2004	6653	8596	127	365	6891	8834	7718	1023	128	8613	1325	8216	397
2005	6873	8501	127	366	7112	8740	7718	1073	53	8738	1311	8423	315
2006	6833	9034	131	365	7067	9268	7936	1700	50	9586	1390	8457	1129
2007	7413	9427	2	350	7760	9775	7616	1941	50	9507	1466	9227	280
2008	7509	10302	2	350	7856	10650	7895	2094	50	9938	1598	9454	484
2009	6915	8749	2	350	7263	9096	7773	1881	50	9604	1364	8627	976
2010	6893	8826	2	350	7241	9174	8368	2045	50	10363	1101	8342	2021
2011	6876	8878	2	350	7223	9225	8375	2108	0	10483	1107	8330	2153
2012	6869	8960	2	350	7217	9307	8508	2068	0	10576	1117	8334	2242
2013	6877	9039	2	350	7224	9387	8571	2068	0	10639	1126	8351	2288
2014	6862	9113	2	350	7210	9461	8501	2225	0	10726	1135	8345	2381
2015	6857	9199	2	350	7205	9547	8245	2100	0	10345	1146	8350	1994
2016	6832	9276	2	350	7180	9624	9088	2100	0	11188	1155	8334	2854
2017	6831	9344	2	350	7178	9692	9088	2097	0	11185	1163	8341	2844
2018	6802	9410	2	350	7149	9757	9088	2716	0	11804	1171	8320	3484
2019	6777	9473	2	350	7125	9821	9023	2696	0	11719	1179	8303	3415
2020	6728	9519	2	350	7076	9867	9023	2691	0	11714	1184	8260	3454
2021	6709	9561	0	350	7059	9911	8994	2689	0	11683	1189	8248	3435
2022	6757	9592	0	350	7107	9942	8757	2804	0	11561	1193	8300	3261
2023	6780	9623	0	350	7130	9973	8757	2804	0	11561	1197	8326	3235
2024	6833	9654	0	350	7183	10004	8757	2779	0	11536	1200	8384	3153
2025	6848	9685	0	350	7198	10035	8757	2779	0	11536	1204	8402	3135

NOTES :

1. Forecasted demand values based on a 50% forecast level with a DSM Adjustment.
2. Summer and winter seasons as defined by MAPP : Summer is May - October, Winter is the following November - April
3. Wind resources are included in net generating capacity. The only new wind resource is our 100 MW Grand Meadow facility which is included at nameplate as it is not accredited yet. Future wind resources were not included because at this point we have not determined the ownership versus PPA split. Xcel continues to project accredited wind resources at 13.5% nameplate capacity.
4. The future Manitoba Hydro purchase that begins in 2015 is included here. This resource does not technically need a CON, however, as part of the Track Two process it wil be subjected to the "CON-like" review process.
5. Xcel Energy will need additional resources in future years, the specific details will be addressed in future resource plans.

Appendix B.20: Proposed Additions and Retirements

Projected

Proposed Additions and Retirements

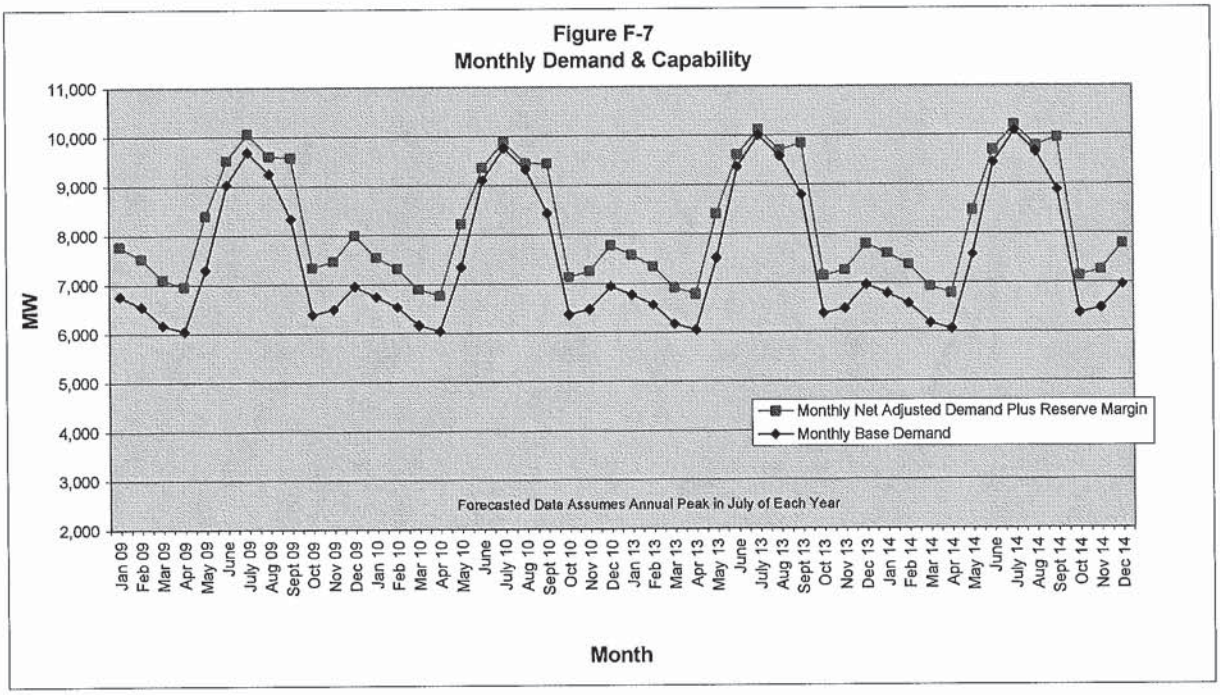
Year	Proposed Additions (MW)	Probable Date of CON Application	Proposed Retirements (MW)	Comments
2007			274	274 MW High Bridge Coal Retirement
2008	615	GM Granted 12/07	387	515 MW High Bridge CC Addition; Grand Meadow 100 MW Wind Addition: 387 MW Riverside Coal Retirement
2009	454	Not required for Riverside; 2008 for Monticello		Riverside CC 439 MW; Monticello Uprate 15 MW
2010				
2011	56	2008		Monticello Uprate 56 MW
2012	40	not required		Sherco Upgrades 40 MW
2013	127	Not required for Sherco; 2008 for PI		Sherco Upgrades 44 MW: Prairie Island Uprate 83 MW
2014				
2015	87	2008		Prairie Island Uprate 87 MW
2016				
2017				
2018				
2019				
2020				
2021				
2022				
Total	1,379		661	

Appendix B.21: Annual System Demand

	Base/ 50%	Forecast Total Load Relief	Net	Net Plus 15%/12% Reserve Margin
Jan 09	6,757	0	6,757	7,771
Feb 09	6,548	0	6,548	7,530
Mar 09	6,175	0	6,175	7,101
Apr 09	6,047	0	6,047	6,954
May 09	7,300	0	7,300	8,395
June 09	9,034	751	8,283	9,525
July 09	9,688	939	8,749	10,061
Aug 09	9,254	892	8,362	9,616
Sept 09	8,334	0	8,334	9,584
Oct 09	6,386	0	6,386	7,344
Nov 09	6,491	0	6,491	7,465
Dec 09	6,955	0	6,955	7,998
Jan 10	6,739	0	6,739	7,548
Feb 10	6,535	0	6,535	7,319
Mar 10	6,159	0	6,159	6,898
Apr 10	6,035	0	6,035	6,759
May 10	7,345	0	7,345	8,226
June 10	9,104	745	8,359	9,363
July 10	9,757	931	8,826	9,885
Aug 10	9,328	884	8,443	9,456
Sept 10	8,433	0	8,433	9,445
Oct 10	6,371	0	6,371	7,136
Nov 10	6,475	0	6,475	7,252
Dec 10	6,940	0	6,940	7,773
Jan 13	6,766	0	6,766	7,578
Feb 13	6,562	0	6,562	7,350
Mar 13	6,173	0	6,173	6,914
Apr 13	6,051	0	6,051	6,777
May 13	7,511	0	7,511	8,412
June 13	9,361	775	8,586	9,617
July 13	10,008	969	9,039	10,124
Aug 13	9,580	921	8,659	9,698
Sept 13	8,792	0	8,792	9,847
Oct 13	6,381	0	6,381	7,147
Nov 13	6,480	0	6,480	7,258
Dec 13	6,957	0	6,957	7,791
Jan 14	6,780	0	6,780	7,594
Feb 14	6,577	0	6,577	7,367
Mar 14	6,179	0	6,179	6,920
Apr 14	6,058	0	6,058	6,785
May 14	7,567	0	7,567	8,475
June 14	9,442	780	8,663	9,702
July 14	10,088	975	9,113	10,207
Aug 14	9,661	926	8,735	9,784
Sept 14	8,889	0	8,889	9,955
Oct 14	6,378	0	6,378	7,143
Nov 14	6,478	0	6,478	7,255
Dec 14	6,956	0	6,956	7,790

	2009	2010	2013	2014
	Demand Forecast			
	9688	9757	10008	10088
	Seasonal Demand Profile			
JANUARY	0.6975	0.6907	0.6761	0.6721
FEBRUARY	0.6759	0.6698	0.6557	0.652
MARCH	0.6374	0.6312	0.6168	0.6125
APRIL	0.6242	0.6185	0.6046	0.6005
MAY	0.7535	0.7528	0.7505	0.7501
JUNE	0.9325	0.9331	0.9354	0.936
JULY	1	1	1	1
AUGUST	0.9552	0.956	0.9572	0.9577
SEPTEMBR	0.8602	0.8643	0.8785	0.8811
OCTOBER	0.6592	0.653	0.6376	0.6322
NOVEMBER	0.67	0.6636	0.6475	0.6421
DECEMBER	0.7179	0.7113	0.6951	0.6895
	Load Management Forecast			
	939	931	969	975
	Seasonal Demand Profile			
JANUARY	0	0	0	0
FEBRUARY	0	0	0	0
MARCH	0	0	0	0
APRIL	0	0	0	0
MAY	0	0	0	0
JUNE	0.8	0.8	0.8	0.8
JULY	1	1	1	1
AUGUST	0.95	0.95	0.95	0.95
SEPTEMBR	0	0	0	0
OCTOBER	0	0	0	0
NOVEMBER	0	0	0	0
DECEMBER	0	0	0	0

Appendix B.22: Monthly Demand and Capability



The Monthly Net Adjusted Demand includes a 1.1% DSM Adjustment, a Load Relief Adjustement, and a 15% Reserve Margin Adjustment.

For the forecasted years Load Relief is forecasated for June, July and August only.

The Monthly Base Demand includes a 1.1% DSM Adjustment, but no Load Reflief and no Reserve Margin.