Direct Testimony and Schedules
Jannell Marks

Before the North Dakota Public Service Commission
State of North Dakota

In the Matter of the Application of
Northern States Power Company, a Minnesota Corporation

For Authority to Increase Rates for
Electric Service in North Dakota

Case No. PU-07-____
Exhibit___

Sales Forecast

December 7, 2007

Table of Contents

I. INTRODUCTION AND QUALIFICATIONS

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Jannell Marks. My business address is 1225 17th Street, Denver, Colorado 80202.

Q. BY WHOM ARE YOU EMPLOYED, AND WHAT IS YOUR POSITION?

A. I am the Director of the Energy and Demand Forecasting Department for Xcel Energy Services Inc., which is the service company subsidiary of Xcel Energy Inc.

Q. PLEASE SUMMARIZE YOUR QUALIFICATIONS AND EXPERIENCES.

A. I graduated from Colorado State University with a Bachelor of Science degree in statistics. I began my employment with Public Service Company of Colorado in 1982 in the Economics and Forecasting Department, and in August 2000, following the merger of New Centuries Energy Inc. and the former Northern States Power Company, I assumed the position of Manager, Economics and Energy Forecasting with Xcel Energy Services Inc. I was promoted to my current position in February 2007. My resume is included as Exhibit___(JM-1), Schedule 1.

Q. FOR WHOM ARE YOU PROVIDING TESTIMONY?

A. I am providing testimony on behalf of Northern States Power Company, a Minnesota corporation ("Xcel Energy" or the "Company") operating in North Dakota.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The purpose of my testimony is two-fold. First, I describe the historical customer and megawatt-hour ("MWh") sales trends for Xcel Energy's North Dakota service territory. Second, I support Xcel Energy's electric MWh sales and customer forecast used in developing the test year revenue requirement.

Q. ARE THERE INDUSTRY TERMS YOU PLAN TO USE IN YOUR TESTIMONY?

A. Yes. The definitions of terms that are included in my Direct Testimony are provided in Exhibit___(JM-1), Schedule 2.

II. HISTORICAL CUSTOMER AND MWH SALES TRENDS

Q. PLEASE DISCUSS THE RECENT TRENDS IN CUSTOMER GROWTH AND MWH SALES GROWTH.

A. Let me begin by saying that my analysis of customer and sales growth uses the January 1998 through December 2006 period because that is the same historical period used in the forecasting process.

The total number of electric customers in Xcel Energy's North Dakota service territory increased an average of 303 customers per year from 1998 through 2006, for an average annual growth rate of 0.4 percent per year. The largest class of customers is the Residential class, which represents 86 percent of total customers and has averaged a growth rate of 0.3 percent or 208 additions per year during the period from 1998 through 2006. My understanding is that in North Dakota the territorial integrity law governing the electric service areas severely limits Xcel Energy's ability to expand into new service territory, and this relatively low annual customer growth rate reflects that fact.

After normalizing for weather, Xcel Energy's total North Dakota electric retail sales have increased an average of 1.4 percent per year during the period of 1998 through 2006. Residential sales have averaged growth of 0.9 percent, while total Commercial and Industrial sales have increased at an average annual rate of 1.9 percent during the period of 1998 through 2006. The average annual percent change in MWh sales by customer class during the period of 1998 through 2006 is presented in Table JM-1.

Table JM-1

Customer Class	1998-2006 Average Percent Change Weather Normalized Sales	2006 % of Total Sales
Residential	0.9%	34.5%
Commercial & Industrial	1.9%	64.3%
Street Lighting	0.7%	0.7%
Other	-7.5%	0.5%
Total Retail	**1.4%**	**100.0%**

III. CUSTOMER AND SALES FORECAST

Q. WHAT GEOGRAPHICAL AREA DO THE TEST YEAR SALES REFLECT?

A. My testimony and exhibits reflect electric usage and customers in Xcel Energy's North Dakota service territory.

Q. PLEASE DESCRIBE THE CUSTOMER CATEGORIES INCLUDED IN XCEL ENERGY'S CUSTOMER AND SALES FORECASTS.

A. The following customer classifications are used in the Company's North Dakota customer and sales forecasts:

Residential without Space Heating – residential service for domestic purposes excluding space heating.

Residential with Space Heating – residential service for domestic purposes including space heating.

Small Commercial and Industrial – commercial and industrial service requiring less than 1,000 kilowatts ("kW") billing demand per month on average per year.

Large Commercial and Industrial – commercial and industrial service requiring 1,000 kWh or more billing demand per month on average per year.

Public Street and Highway Lighting – street lighting service available for year-round illumination of public streets, parkways, and highways.

Other Sales to Public Authorities – public authority service including municipal pumping service and fire and civil defense siren service.

Q. HOW ARE CUSTOMER AND SALES FORECASTS USED IN THIS PROCEEDING?

A. The customer and sales forecasts are used to calculate the following:

a) The monthly and annual electric supply requirements;

b) test year revenue under present rates; and

c) test year revenue under proposed rates.

IV. RESULTS

Q. WHAT IS XCEL ENERGY'S FORECAST OF ELECTRIC SALES AND CUSTOMERS FOR THE TEST YEAR ENDING DECEMBER 31, 2006?

A. Exhibit___(JM-1), Schedule 3 summarizes monthly test year MWh sales and number of customers for each customer class.

Q. HOW DOES THE TEST YEAR ELECTRIC CUSTOMER GROWTH COMPARE WITH HISTORICAL CUSTOMER GROWTH?

A. As I stated earlier, the total number of electric customers in the Xcel Energy North Dakota service territory increased at an average annual rate of 0.4 percent from 1998 through 2006, or 303 customers per year. During the 2008 test year, the total number of electric customers is expected to increase by 1.0 percent or 870 customers compared to 2006 customer levels (the most recent year with actual data), or a 0.5 percent average annual growth rate. I will explain the methodologies used to develop this forecast in the following section of my Direct Testimony.

Q. HOW DO THE 2008 TEST YEAR ELECTRIC SALES COMPARE WITH 2006 WEATHER NORMALIZED ELECTRIC SALES?

A. Total electric retail sales are expected to increase 2.5 percent during the 2008 test year compared to weather normalized 2006 electric sales (a 1.2 percent annual average rate of growth). Residential sales are predicted to increase 4.6 percent in the 2008 test year from 2006 sales (a 2.3 percent annual average rate). This seems strong relative to the historical average growth rate. However, the historical average growth rate was adversely affected by a weakening in 2005 and 2006 sales in the residential space heating class. Sales in this class have improved in 2007 and this improvement is expected to continue in 2008. Commercial and Industrial sales are projected to increase 1.4 percent in the 2008 test year from 2006 sales (a 0.7 percent annual average rate). This is lower than the historical average growth rate because the historical rate includes additions of several large new commercial and industrial loads, while new significant loads are not expected in the 2008 test

year. Street Lighting sales are expected to increase 1.1 percent in the 2008 test year from 2006 sales (a 0.6 percent annual average rate), while Other sales are predicted to decrease 0.1 percent (a -0.1 percent annual average rate). I will explain the methodologies used to develop this forecast in the following section of my testimony.

Table JM-2 provides Xcel Energy's weather normalized retail MWh sales by customer class for 2006 and 2008, contains the 2008 growth rate compared to 2006, and also provides the average annual growth rate for the 2007 through 2008 time period.

Table JM-2
Weather Normalized Sales by Class (MWh)

Customer Class	2006 Sales	2008 Sales	2008/2006 % Change	Average Annual % Change
Residential	746,126	780,386	4.6%	2.3%
Total Commercial & Industrial	1,391,603	1,410,913	1.4%	0.7%
Street Lighting	14,700	14,864	1.1%	0.6%
Other	11,774	11,761	-0.1%	-0.1%
Total Retail	**2,164,206**	**2,217,924**	**2.5%**	**1.2%**

V. OVERVIEW OF SALES AND CUSTOMER FORECASTING METHODOLOGY

Q. IS THE TEST YEAR FORECAST THE SAME FORECAST USED BY XCEL ENERGY FOR THE 2008 FINANCIAL BUDGET?

A. Yes, it is. The 2008 financial budget was developed in the spring of 2007, based on historical customers and sales for the time period January 1998 through December 2006.

Q. PLEASE DESCRIBE IN GENERAL TERMS THE METHODS USED TO FORECAST SALES AND CUSTOMERS.

A. The electric sales and customer forecast preparation was coordinated by the Company's Energy and Demand Forecasting Department, which used a combination of econometric and statistical forecasting techniques and analyses to develop the sales and customer forecasts.

Q. HOW WERE THE SALES FORECASTS DEVELOPED FOR THE RESIDENTIAL AND COMMERCIAL AND INDUSTRIAL CUSTOMER CLASSES?

A. Ordinary Least Squares ("OLS") multiple regression models provided the foundation for the sales forecasts of the Residential without Space Heating, Residential with Space Heating, Small Commercial and Industrial, and Large Commercial and Industrial customer classes. OLS multiple regression techniques are very well known and proven methods of forecasting and are commonly accepted by forecasters throughout the utility industry. This method provides reliable, accurate projections, accommodates the use of predictor variables, such as economic or demographic indicators and weather, and allows clear interpretation of the model. The Company has been using these types of OLS regression models since 1991.

Monthly sales forecasts for these customer classes were developed based on OLS regression models designed to define a statistical relationship between

the historical sales and the independent predictor variables, including historical economic and demographic indicators, historical electricity prices, historical weather (expressed in heating degree days and temperature-humidity index ("THI")), and historical number of customers. The modeled relationships were then simulated over the forecast period by assuming normal weather (expressed in terms of twenty-year averaged heating degree days and THI) and the projected levels of the independent predictor variables.

Q. WHAT PROCESS WAS USED TO FORECAST SALES IN THE REMAINING CUSTOMER CLASSES?

A. Trend analysis was used for the remaining customer classes, which includes Public Street and Highway Lighting and Other Sales to Public Authorities. I will explain the reason for using a different methodology for these customer classes in the next section of my testimony.

Q WHAT PROCESS WAS USED FOR FORECASTING NUMBER OF CUSTOMERS?

A. The number of customers by customer class for the Residential without Space Heating, Residential with Space Heating, Small Commercial and Industrial, Large Commercial and Industrial, Public Street and Highway Lighting, and Other Sales to Public Authorities customer classes is forecasted using state-level demographic and economic data in OLS regression models and other statistical techniques. The historical number of customers by class is derived from the Company's billing system.

VI. STATISTICALLY MODELED FORECASTS

Q. PLEASE DESCRIBE THE REGRESSION MODELS AND ASSOCIATED ANALYSIS USED IN XCEL ENERGY'S STATISTICAL PROJECTIONS OF SALES AND CUSTOMERS.

A. The regression models and associated analysis used in Xcel Energy's statistical projection of sales are provided in Exhibit___(JM-1), Schedule 4, and the regression models and associated analysis used in the statistical projection of customers are provided in Exhibit___(JM-1), Schedule 5. These schedules include, by customer class, the models with their summary statistics and output, and descriptions for each variable included in the model.

Q. WHAT TECHNIQUES DID YOU EMPLOY TO EVALUATE THE PLAUSIBILITY OF ITS QUANTITATIVE FORECASTING MODELS AND SALES PROJECTIONS?

A. There are a number of quantitative and qualitative validity tests that are applicable to OLS multiple regression analysis.

The coefficient of determination ("R-squared") test statistic is a measure of the quality of the model's fit to the historical data. It represents the proportion of the variation of the historical sales around their mean value that can be attributed to the functional relationship between the historical sales and the explanatory variables included in the model. If the R-squared statistic is high, the model is explaining a high degree of the sales variability. The regression models used to develop the sales forecasts demonstrate very high R-squared statistics, ranging between 90.9 percent and 99.3 percent.

The t-statistics of the variables indicate the degree of correlation between that variable's data series and the sales data series being modeled. The t-statistic is a measure of the statistical significance of each variable's individual contribution to the prediction model. Generally, the absolute value of each

t-statistic should be greater than 2.0 to be considered statistically significant at the 95 percent confidence level. This criterion was applied in the development of the regression models used to develop the sales forecast. The final regression models used to develop the sales forecast tested satisfactorily under this standard. For some variables, the t-statistic was less than 2.0, but the variables were included in the model because they provide explanatory value to the model, but at an 80 percent or 90 percent level of confidence.

Each model was inspected for the presence of first-order autocorrelation, as measured by the Durbin-Watson ("DW") test statistic. Autocorrelation refers to the correlation of the model's error terms for different time periods. For example, an overestimate in one period is likely to lead to an overestimate in the succeeding period, and vice versa, under the presence of first-order autocorrelation. Thus, when forecasting with an OLS regression model, absence of autocorrelation between the residual errors is very important. The DW test statistic ranges between 0 and 4, and provides a measure to test for autocorrelation. In the absence of first-order autocorrelation, the DW test statistic equals 2.0. The final regression models used to develop the sales forecast tested satisfactorily for the absence of first-order autocorrelation, as measured by the DW test statistic.

Graphical inspection of each model's error terms (*i.e.* actual less predicted) was used to verify that the models were not misspecified and that statistical assumptions pertaining to constant variance among the residual terms and their random distribution with respect to the predictor variables were not violated. Analysis of each model's residuals indicated that the residuals were homoscedastic (constant variance) and randomly distributed, indicating that

the OLS linear regression modeling technique was an appropriate selection for each customer class' sales that were statistically modeled.

The statistically modeled sales forecasts for each customer class have been reviewed for reasonableness as compared to the respective monthly sales history for that class. Graphical inspection reveals that the patterns of the forecast fit well with the respective historical patterns for each customer class. The annual total forecast sales have been compared to their respective historical trends for consistency. Similar qualitative tests for reasonableness and consistency have been performed for the customer level projections.

Q. WHY WAS A DIFFERENT METHODOLOGY USED TO FORECAST SALES FOR THE *PUBLIC STREET AND HIGHWAY LIGHTING* AND *OTHER SALES TO PUBLIC AUTHORITIES* CUSTOMER CLASSES?

A. Sales in these customer classes make up 1.2 percent of total retail sales in North Dakota in the test year and typically exhibit little change from year to year. Usage in these smaller customer classes often is impacted by factors that are difficult to capture in an OLS multiple regression model. Therefore, forecasts for these customer classes were developed either by applying an historical average growth rate to the most recent actual data or by maintaining the same level of sales as the most recent actual data.

Q. HOW ACCURATE HAVE THE COMPANY'S SALES AND CUSTOMER FORECASTS BEEN HISTORICALLY?

A. The historical forecasts of retail sales have ranged from –1.6 percent lower than actual levels to 3.1 percent higher than actual levels, with an average variance of 0.8 percent over the last five years after adjusting for weather. The

historical forecasts of number of retail customers have averaged within 1.2 percent of actual levels over the past five years, with variances ranging from –3.6 percent to +0.2 percent.

VII. WEATHER NORMALIZATION OF TEST YEAR SALES

Q. HOW DID XCEL ENERGY ADJUST ITS TEST YEAR SALES FOR THE INFLUENCE OF WEATHER ON SALES?

A. The sales projections for those customer classes whose usage is weather affected (Residential without Space Heating, Residential with Space Heating, Small Commercial and Industrial, and Large Commercial and Industrial) were developed through the application of quantitative statistical models. For each of these classes, sales were not weather adjusted prior to developing the respective statistical models. The respective linear regression models used to forecast sales included weather, as measured in terms of heating degree days and THI, as an explanatory variable. In this way, the historical weather impact on historical consumption for each class was modeled through the respective coefficients for the heating degree day and THI variables included in each class' model. Test year sales were then projected by simulating the established statistical relationships over the forecast horizon. To accomplish this simulation, "normal" heating degree days and THI were applied based on the twenty-year moving average of historical heating degree days and THI. In this manner, the quantitatively derived test year budget sales assume normal weather.

For the Public Street and Highway Lighting and Other Sales to Public Authorities classes, forecast volumes have not been weather normalized. These customers' use of electricity is influenced by factors other than weather

(for example, hours of daylight). As a result, the weather impact due to deviation from normal weather is indistinguishable from other variables.

Q. WHAT WAS XCEL ENERGY'S MEASURE OF WEATHER AND WHAT WAS THE SOURCE?

A. The measure of weather used was heating degree days and THI, using a sixty-five degree temperature base. This information was measured at the National Oceanic and Atmospheric Administration's ("NOAA") weather station in Fargo, North Dakota.

Q. IS IT APPROPRIATE TO USE THE FARGO WEATHER STATION TO REPRESENT XCEL ENERGY'S NORTH DAKOTA SERVICE TERRITORY?

A. Yes, it is reasonable to use Fargo weather to approximate weather for our North Dakota service area. The majority of Xcel Energy's North Dakota electric customers reside within the Fargo metropolitan area. The coefficients for the heating degree day and THI variables included in each class' model were determined based on the historical relationship between sales throughout Xcel Energy's North Dakota service territory and Fargo weather. Therefore, the coefficients accurately reflect the distribution of customers geographically within the North Dakota service territory. Since this geographic distribution is not expected to change during the test year, it is appropriate to use this historical relationship and Fargo weather.

Q. DID THE WEATHER REFLECT THE SAME BILLING DAYS AS THE SALES DATA?

A. Yes. The heating degree days and THI were weighted by the number of times a particular day was included in a particular billing month. These weighted

heating degree days and THI were divided by the total billing cycle days to arrive at average daily heating degree days and THI for a billing month.

Q. HOW WAS NORMAL WEATHER DETERMINED?

A. Normal daily weather was calculated based on the average of twenty years of historical heating degree days and THI. These normal heating degree days and THI were related to the forecasted billing month in the same manner as were the actual heating degree days and THI.

VIII. DATA PREPARATION

Q. PLEASE DESCRIBE THE DATA AND DATA SOURCES XCEL ENERGY RELIED ON TO DEVELOP THE SALES AND CUSTOMER FORECASTS.

A. Historical billing month sales and number of customers were obtained from reports from Xcel Energy's billing system. The forecasting process relied on historical sales and customers from January 1998 through December 2006.

Q. WHAT IS THE SOURCE OF WEATHER DATA?

A. As I explained previously in my testimony, the measure of weather used was heating degree days and THI. Eight temperature readings per day were obtained, and the average daily temperature was determined by averaging the eight temperature readings. Heating degree days were calculated for each day by subtracting the average daily temperature from 65 degrees Fahrenheit. For example, if the average daily temperature was 45 degrees Fahrenheit, then 65 minus 45 or 20 heating degree days were calculated for that day. If the average daily temperature was greater than 65 degrees Fahrenheit, then that day recorded zero heating degree days. Normal daily heating degree days were

calculated by averaging twenty years of daily heating degree days using data from 1987 to 2006.

THI were calculated for each day using the formula:

$$THI = 17.5 + (0.55 * \text{Dry Bulb}) + (0.2 * \text{Dew Point})$$

This formula is commonly used by NOAA and the dew point data was based on the same eight readings of temperature discussed above.

Q. WHAT WAS YOUR SOURCE OF ECONOMIC AND DEMOGRAPHIC DATA?

A. Historical and forecasted economic and demographic variables for the state and Fargo were obtained from Global Insight, Inc., a respected economic forecasting firm frequently relied on by forecasting professionals. These variables include population, households, employment, and manufacturing employment. This information is used to determine the historical relationship between customers and sales, and economic and demographic measures.

IX. UNBILLED SALES

Q. CAN YOU EXPLAIN THE TERM "UNBILLED SALES"?

A. Yes. Xcel Energy reads electric meters each working day according to a meter reading schedule based on twenty-one billing cycles per billing month. Meters read early in the month reflect about 30 days of consumption that occurred mostly during the previous month. Meters read late in the month reflect about 30 days of consumption that occurred mostly during the current month. The "billing month" sales for the current month reflect consumption that occurred in both the previous month and the current month. Thus, billing month sales lag calendar month sales. Unbilled sales reflect electricity

consumed in the current calendar month that will not be billed to the customer until the following month.

Q. WHAT IS THE PURPOSE OF THE UNBILLED SALES ADJUSTMENT?

A. The purpose is to develop a revenue forecast for the calendar year, thereby aligning test year revenues with the relevant projected test year expenses, which are also estimated on a calendar month (and year) basis.

Q. IS XCEL ENERGY REFLECTING UNBILLED REVENUE ON ITS BOOKS FOR ACCOUNTING AND FINANCIAL PURPOSES?

A. Yes. The Company adopted this practice during fiscal year 1992.

Q. HOW WERE THE ESTIMATED MONTHLY NET UNBILLED SALES VOLUMES DETERMINED?

A. Xcel Energy determined its test year monthly net unbilled sales as the difference between the estimated monthly calendar month sales, and the estimated monthly billing month sales. The projected billing month sales were created using the statistical models and other forecasting methods previously described.

X. CALENDAR MONTH SALES DERIVATION

Q. HOW WERE THE ESTIMATED MONTHLY CALENDAR MONTH SALES DETERMINED?

A. For the weather sensitive classes (Residential without Space Heating, Residential with Space Heating, Small Commercial and Industrial, and Large Commercial and Industrial classes), Xcel Energy calculated the test year calendar month sales based on the projected billing month sales. The test year

calendar month sales were calculated in two parts: (a) the sales load component that is not associated with weather ("Base Load"); and (b) the sales load component that is influenced by weather ("Total Weather Load"). The weather was measured in terms of normal heating degree days and THI, as described above. The Base Load sales and the Total Weather Load sales components were calculated for each class. The two components were then combined to provide the total calendar month volumes.

The calendar month base load component was calculated as follows:

Step 1 - The billing month Total Weather Load was calculated. This was accomplished by multiplying the billing month sales weather normalization regression coefficients (defined in terms of billing month heating degree days, THI and number of customers), times billing month normal heating degree days and THI, times the projected customers.

Step 2 - The billing month Base Load was calculated by taking the difference between the projected total billing month sales and the billing month Total Weather Load (as calculated in Step 1).

Step 3 - The billing month Base Load sales per billing day was determined by dividing the billing month Base Load sales (from Step 2) by the average number of billing days per billing month.

Step 4 - The calendar month Base Load sales were then calculated by multiplying the billing month Base Load sales per billing day (from Step 3) times the number of days in the calendar month.

The calendar month total weather load component was calculated the same way the billing month Total Weather Load was calculated (as described in Step

1). However, the calculation was performed by substituting the calendar month sales weather normalization regression coefficient (defined in terms of calendar month heating degree days, THI and number of customers) and the calendar month normal heating degree days and THI.

The calendar month total sales were calculated by combining the calendar month base load and calendar month Total Weather Load components.

For the Other Sales to Public Authorities class, Xcel Energy calculated the test year calendar month sales simply based on the projected billing month sales in the same manner as detailed for the other classes that are weather affected (Residential with Space Heating, Residential without Space Heating, and Small Commercial and Industrial and Large Commercial and Industrial classes). However, for the Other Sales to Public Authorities class there are no Total Weather Load sales. The test year calendar month total sales for this class were calculated only in terms of their Base Load, where the billing month Base Load equaled the projected billing month sales.

The Public Street and Highway Lighting class is billed on a calendar month basis. Therefore, for this class, the calendar month sales equal the billing month sales.

XI. DEMAND SIDE MANAGEMENT PROGRAMS

Q. DOES XCEL ENERGY'S SALES FORECAST REFLECT REDUCED VOLUMES TO ACCOUNT FOR "LOST" SALES DUE TO THE IMPACT OF DEMAND SIDE MANAGEMENT PROGRAMS?

A. No. The Company did not offer Demand Side Management ("DSM") programs between 1998 and 2006, the period used for my sales forecast.

While the Company intends on renewing DSM in North Dakota by filing a separate DSM program application in early 2008, its impact on sales will be considered in the recovery mechanism that will be proposed in that application.

XII. CONCLUSION

Q. IN YOUR OPINION, DO THE XCEL ENERGY SALES AND CUSTOMER FORECASTS PROVIDE A REASONABLE BASIS FOR ESTABLISHING RATES IN THIS CASE?

A. Yes. The forecast data is reasonable based on the economic conditions that were foreseeable when the budget was developed and supports the test year revenue projections.

Q. DOES THIS CONCLUDE YOUR TESTIMONY ON SALES FORECASTING?

A. Yes, it does.

STATE OF NORTH DAKOTA
BEFORE THE
PUBLIC SERVICE COMMISSION

In the Matter of the Application of Northern States Power Company, a Minnesota Corporation For Authority to Increase Rates for Electric Service in North Dakota	))))	Case No. PU-07-___

AFFIDAVIT OF
Jannell Marks

I, the undersigned, being duly sworn, depose and say that the foregoing is the Direct Testimony of the undersigned, and that such Direct Testimony and the exhibits or schedules sponsored by me to the best of my knowledge, information and belief, are true, correct, accurate and complete, and I hereby adopt said testimony as if given by me in formal hearing, under oath.

Jannell Marks

Subscribed and sworn to before me, this 4th day of December, 2007.

Notary Public

GILLIE S WATSON
Notary Public
State of Colorado
My Commission Expires May 26, 2009

Jannell Marks
Director, Energy and Demand Forecasting
550 15th Street, Denver, Colorado 80202

February 2007 – Present

Director, Energy and Demand Forecasting, Xcel Energy

Responsible for developing energy sales forecasting policies, proposals, and strategies to meet corporate financial planning, budgeting, and internal earnings forecasting requirements as well as to support the company's regulatory objectives and comply with regulatory requirements. Also responsible for the development and presentation of forecasted data for Xcel Energy's operating companies and reporting historical and statistical information to various regulatory agencies and others. Testified on forecasting issues before the Public Utility Commission of Texas, the Colorado Public Utilities Commission, and the Minnesota Public Utilities Commission.

August 2000 – February 2007

Manager, Energy Forecasting, Xcel Energy

Responsible for the development and presentation of forecasted data for Xcel Energy's operating companies. Also responsible for reporting historical and statistical information to various regulatory agencies and others. Testified on forecasting issues before the Public Utility Commission of Texas, the Colorado Public Utilities Commission, and the Minnesota Public Utilities Commission.

May 1997 – August 2000

Manager, Demand, Energy and Customer Forecasts, New Century Energies, Inc.

Responsible for developing demand, energy, and customer forecasts for New Century Energies, Inc.'s operating companies. Also directed the preparation of statistical reporting for regulatory agencies and others regarding historical and forecasted reports. Testified on forecasting issues before the Public Utility Commission of Texas and the Colorado Public Utilities Commission.

1991-1997

Senior Research Analyst, Public Service Company of Colorado

Responsible for developing the customer and sales forecasts for Public Service Company of Colorado and the economic, customer, sales and demand forecasts for Cheyenne Light, Fuel and Power Company.

1982-1991

Research Analyst, Public Service Company of Colorado

Education

Colorado State University – Bachelor of Science: Statistics 1982

Training and Professional Associations

I have attended the Institute for Professional Education's Economic Modeling and Forecasting Class; Itron's Forecasting Workshops; and the Electric Power Research Institute's REEPS (Residential End-Use Energy Planning System), COMMEND (Commercial End-Use Planning System), and INFORM (Industrial End-Use Forecasting Model) Training Classes and User Group Meetings.

I am a member of Itron's Energy Forecasting Group and EEI's Load Forecasting Group.

Definitions of Terms

Base Load - Component of sales not associated with weather.

Billing Cycle Days - Based on the meter reading schedule for the 21 billing cycles. For example, there are approximately 651 (21 cycles * 31 days) billing cycle days during a typical billing month period.

Billing Month Sales - Billed sales based on the meter reading schedule for the 21 billing cycles.

Calendar Month Sales - Estimated sales, equal to the billing month sales, adjusted for the estimated unbilled sales of the current calendar month, less the estimated unbilled sales from the previous calendar month.

Company – Northern States Power Company, a Minnesota corporation

DSM – Demand Side Management.

DW Test Statistic - Durbin-Watson test statistic; tests for the presence of first-order autocorrelation. In the absence of first-order autocorrelation, the statistic equals 2.0.

Error Terms - The difference between the actual values of the data series being modeled (customers or sales) and the regression model's predicted, or "fitted" values for that series. Also called Residual Terms.

Heating Degree Days - Measure of weather. Calculated by subtracting the average daily temperature from a base of 65 degrees Fahrenheit.

kW – Kilowatt; measure of electricity demand.

MWh – Megawatt-hour; measure of electricity sales.

NOAA – National Oceanic and Atmospheric Administration.

Normal Weather – the average of twenty years of historical weather.

Definitions of Terms (continued)

OLS Multiple Regression - Ordinary Least Squares Linear Regression employing multiple independent variables to model the variation of the dependent variable about its mean value.

R-squared - Coefficient of determination; measures the quality of the model's fit to the historical data. The higher the R-squared statistic, the better the model is explaining the historical data.

Residual Terms - The difference between the actual values of the data series being modeled (customers or sales) and the regression model's predicted, or "fitted" values for that series. Also called Error Terms.

t-Statistic - Measures the importance of the independent variable to the regression. The higher the absolute value of the t-statistic, the more likely it is that the variable has a relationship to the dependent variable and is making an important contribution to the equation.

Test Year – January 1, 2008-December 31, 2008.

THI – Temperature-humidity index.

Total Weather Load - Component of sales influenced by weather.

Unbilled Sales – Electricity consumed in the current month but not billed to customers until the succeeding month.

Monthly Test Year MWh Sales and Number of Customers Per Customer Class

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Xcel Energy - North Dakota State													
2	Test Year Sales and Customers by Customer Class													
3														
4	Weather Normalized Calendar Month Sales (MWh)													
5														
6		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
7														
8	Residential without Space Heat	47,720	43,825	42,681	36,776	38,445	42,590	50,769	50,174	36,796	39,731	43,904	48,860	522,271
9	Residential with Space Heat	37,482	32,167	27,096	17,934	13,063	13,330	14,359	14,235	11,245	16,734	26,021	34,446	258,112
10	Small Commercial & Industrial	91,590	87,709	89,641	83,135	86,703	87,431	90,544	95,880	79,642	87,714	87,741	87,081	1,054,811
11	Large Commercial & Industrial	28,388	28,864	29,656	28,371	30,210	29,636	32,085	32,466	26,976	30,656	30,277	28,516	356,101
12	Public Street & Highway Lighting	1,607	1,374	1,352	1,069	993	887	912	1,009	1,167	1,361	1,488	1,643	14,862
13	Other Sales to Public Authority	995	948	1,021	950	1,103	966	1,039	1,141	902	928	868	899	11,760
14														
15	Total Retail Sales	207,782	194,887	191,447	168,235	170,517	174,840	189,708	194,905	156,728	177,124	190,299	201,445	2,217,917
16														
18														
19	Number of Customers													
21		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average
22														
23	Residential without Space Heat	55,070	55,158	55,182	55,064	54,949	54,964	55,009	55,016	55,174	55,260	55,281	55,268	55,116
24	Residential with Space Heat	18,414	18,441	18,447	18,406	18,365	18,369	18,382	18,382	18,433	18,460	18,466	18,460	18,419
25	Small Commercial & Industrial	11,834	11,836	11,838	11,872	11,874	11,875	11,911	11,912	11,914	11,947	11,948	11,949	11,893
26	Large Commercial & Industrial	23	23	23	23	23	23	23	23	23	23	23	23	23
27	Public Street & Highway Lighting	89	89	89	89	89	89	89	89	89	89	89	89	89
28	Other Sales to Public Authority	182	182	182	182	182	182	182	182	182	182	182	182	182
29														
30	Total Retail Customers	85,612	85,729	85,761	85,636	85,482	85,502	85,596	85,604	85,815	85,961	85,989	85,971	85,722

Xcel Energy North Dakota Residential without Space Heat
2008 Test Year Sales Forecast

Variable	Coefficient	StdErr	T-Stat	P-Value	Definition
Fgo.HH_FGO	472.145	19.720	23.942	0.00%	Fargo Households
NDWTHRRX.RFH65JanNRXND	0.000185215	0.000	28.505	0.00%	Weather for given month weighted by number of customers
NDWTHRRX.RFH65FebNRXND	0.000109455	0.000	14.813	0.00%	Weather for given month weighted by number of customers
NDWTHRRX.RFH65MarNRXND	0.000105634	0.000	12.756	0.00%	Weather for given month weighted by number of customers
NDWTHRRX.RFH65AprNRXND	0.000068568	0.000	5.266	0.00%	Weather for given month weighted by number of customers
ND_ResXSpcHtg_Sales.HDDOctNov	0.000039730	0.000	2.850	0.54%	Weather for given month weighted by number of customers
NDWTHRRX.RFH65DecNRXND	0.000163120	0.000	19.428	0.00%	Weather for given month weighted by number of customers
NDWTHRRX.RFT65JunNRXND	0.002093797	0.000	5.999	0.00%	Weather for given month weighted by number of customers
NDWTHRRX.RFT65JulNRXND	0.001959572	0.000	20.322	0.00%	Weather for given month weighted by number of customers
NDWTHRRX.RFT65AugNRXND	0.002168241	0.000	26.686	0.00%	Weather for given month weighted by number of customers
ND_ResXSpcHtg_Sales.CDDSepOct	0.002427981	0.000	15.155	0.00%	Weather for given month weighted by number of customers
RealPriceperMwhfcst.NDTotRes_RAP	-77.191	38.071	-2.028	4.54%	Real Revenue per MWh

Xcel Energy North Dakota Residential without Space Heat
2008 Test Year Sales Forecast

Regression Statistics	
Iterations	1
Adjusted Observations	108
Deg. of Freedom for Error	96
R-Squared	0.955
Adjusted R-Squared	0.949
Durbin-Watson Statistic	1.790
Durbin-H Statistic	#NA
AIC	14.492
BIC	14.790
F-Statistic	168.134
Prob (F-Statistic)	0.0000
Log-Likelihood	-923.82
Model Sum of Squares	3575644735
Sum of Squared Errors	170133009
Mean Squared Error	1772218.84
Std. Error of Regression	1331.25
Mean Abs. Dev. (MAD)	1019.65
Mean Abs. % Err. (MAPE)	2.67%
Ljung-Box Statistic	43.50
Prob (Ljung-Box)	0.0087

Xcel Energy North Dakota Residential without Space Heat
2008 Test Year Sales Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
1998	1	44,316.000	44,620.418	-304.418	-0.69%	-0.229
1998	2	35,791.000	36,831.611	-1,040.611	-2.91%	-0.782
1998	3	33,866.000	35,424.078	-1,558.078	-4.60%	-1.170
1998	4	31,951.000	32,065.062	-114.062	-0.36%	-0.086
1998	5	30,344.000	29,174.764	1,169.236	3.85%	0.878
1998	6	30,986.000	30,762.663	223.337	0.72%	0.168
1998	7	40,762.000	40,501.767	260.233	0.64%	0.195
1998	8	41,049.000	42,089.498	-1,040.498	-2.53%	-0.782
1998	9	39,020.000	40,212.943	-1,192.943	-3.06%	-0.896
1998	10	31,487.000	32,280.235	-793.235	-2.52%	-0.596
1998	11	32,946.000	31,055.082	1,890.918	5.74%	1.420
1998	12	39,639.000	39,949.417	-310.417	-0.78%	-0.233
1999	1	48,745.000	48,627.061	117.939	0.24%	0.089
1999	2	37,868.000	37,712.870	155.130	0.41%	0.117
1999	3	34,164.000	36,087.404	-1,923.404	-5.63%	-1.445
1999	4	31,853.000	33,345.015	-1,492.015	-4.68%	-1.121
1999	5	31,350.000	29,771.446	1,578.554	5.04%	1.186
1999	6	33,274.000	34,010.624	-736.624	-2.21%	-0.553
1999	7	38,692.000	39,435.256	-743.256	-1.92%	-0.558
1999	8	40,871.000	42,075.083	-1,204.083	-2.95%	-0.904
1999	9	36,018.000	34,727.829	1,290.171	3.58%	0.969
1999	10	30,337.000	30,738.892	-401.892	-1.32%	-0.302
1999	11	30,579.000	31,212.402	-633.402	-2.07%	-0.476
1999	12	40,622.000	39,769.418	852.582	2.10%	0.640
2000	1	46,612.000	46,217.081	394.919	0.85%	0.297
2000	2	37,936.000	38,830.504	-894.504	-2.36%	-0.672
2000	3	34,945.000	35,928.197	-983.197	-2.81%	-0.739
2000	4	33,726.000	33,275.412	450.588	1.34%	0.338
2000	5	31,280.000	30,172.086	1,107.914	3.54%	0.832
2000	6	32,672.000	31,813.697	858.303	2.63%	0.645

Xcel Energy North Dakota Residential without Space Heat
2008 Test Year Sales Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2000	7	40,384.000	38,445.314	1,938.686	4.80%	1.456
2000	8	44,633.000	44,027.063	605.937	1.36%	0.455
2000	9	38,638.000	37,167.561	1,470.439	3.81%	1.105
2000	10	31,370.000	31,499.026	-129.026	-0.41%	-0.097
2000	11	33,812.000	31,820.878	1,991.122	5.89%	1.496
2000	12	45,198.000	44,596.375	601.625	1.33%	0.452
2001	1	47,764.000	49,917.935	-2,153.935	-4.51%	-1.618
2001	2	40,203.225	40,211.951	-8.726	-0.02%	-0.007
2001	3	39,141.759	39,282.091	-140.332	-0.36%	-0.105
2001	4	33,923.787	34,323.644	-399.857	-1.18%	-0.300
2001	5	33,988.927	30,612.392	3,376.535	9.93%	2.536
2001	6	32,624.886	31,967.620	657.266	2.01%	0.494
2001	7	41,705.293	42,240.531	-535.238	-1.28%	-0.402
2001	8	47,993.200	50,966.019	-2,972.819	-6.19%	-2.233
2001	9	40,949.400	39,350.823	1,598.577	3.90%	1.201
2001	10	31,850.586	31,992.837	-142.251	-0.45%	-0.107
2001	11	33,199.296	32,337.065	862.231	2.60%	0.648
2001	12	41,246.746	40,297.585	949.161	2.30%	0.713
2002	1	47,005.856	46,715.490	290.366	0.62%	0.218
2002	2	39,857.773	39,676.973	180.800	0.45%	0.136
2002	3	38,894.726	39,092.314	-197.588	-0.51%	-0.148
2002	4	37,611.056	35,738.335	1,872.721	4.98%	1.407
2002	5	32,806.907	31,770.320	1,036.587	3.16%	0.779
2002	6	35,030.527	35,260.267	-229.740	-0.66%	-0.173
2002	7	49,494.447	48,948.370	546.077	1.10%	0.410
2002	8	45,100.215	43,763.100	1,337.115	2.96%	1.004
2002	9	42,276.235	42,829.150	-552.915	-1.31%	-0.415
2002	10	34,655.576	34,725.715	-70.139	-0.20%	-0.053
2002	11	35,856.897	33,970.731	1,886.166	5.26%	1.417
2002	12	44,158.574	43,633.003	525.571	1.19%	0.395

Xcel Energy North Dakota Residential without Space Heat
2008 Test Year Sales Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2003	1	48,689.120	48,101.973	587.147	1.21%	0.441
2003	2	43,829.897	42,263.697	1,566.200	3.57%	1.176
2003	3	42,764.704	41,039.836	1,724.868	4.03%	1.296
2003	4	35,994.629	35,167.556	827.073	2.30%	0.621
2003	5	32,856.133	32,016.371	839.762	2.56%	0.631
2003	6	34,494.593	33,538.662	955.931	2.77%	0.718
2003	7	43,081.177	40,744.389	2,336.788	5.42%	1.755
2003	8	47,732.371	47,006.842	725.529	1.52%	0.545
2003	9	46,308.886	45,046.899	1,261.987	2.73%	0.948
2003	10	33,262.167	34,990.899	-1,728.732	-5.20%	-1.299
2003	11	35,411.604	34,560.212	851.392	2.40%	0.640
2003	12	45,782.351	44,931.088	851.263	1.86%	0.639
2004	1	50,627.425	50,330.437	296.988	0.59%	0.223
2004	2	46,067.241	44,120.757	1,946.484	4.23%	1.462
2004	3	39,789.184	40,016.007	-226.823	-0.57%	-0.170
2004	4	36,535.000	36,794.629	-259.629	-0.71%	-0.195
2004	5	32,909.000	33,659.157	-750.157	-2.28%	-0.563
2004	6	34,211.000	34,693.854	-482.854	-1.41%	-0.363
2004	7	38,876.000	40,129.240	-1,253.240	-3.22%	-0.941
2004	8	40,383.000	40,422.510	-39.510	-0.10%	-0.030
2004	9	36,352.000	37,822.771	-1,470.771	-4.05%	-1.105
2004	10	34,746.000	36,780.196	-2,034.196	-5.85%	-1.528
2004	11	35,383.000	35,364.310	18.690	0.05%	0.014
2004	12	44,790.000	45,086.866	-296.866	-0.66%	-0.223
2005	1	54,161.205	53,439.348	721.857	1.33%	0.542
2005	2	42,065.877	43,108.022	-1,042.145	-2.48%	-0.783
2005	3	41,515.863	41,948.413	-432.550	-1.04%	-0.325
2005	4	38,625.350	37,467.368	1,157.982	3.00%	0.870
2005	5	33,290.698	34,592.155	-1,301.457	-3.91%	-0.978
2005	6	38,083.726	36,853.302	1,230.424	3.23%	0.924

Xcel Energy North Dakota Residential without Space Heat
2008 Test Year Sales Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2005	7	46,497.632	47,305.117	-807.485	-1.74%	-0.607
2005	8	51,643.000	50,468.563	1,174.437	2.27%	0.882
2005	9	39,018.387	40,079.822	-1,061.435	-2.72%	-0.797
2005	10	34,120.576	36,658.748	-2,538.172	-7.44%	-1.907
2005	11	33,295.276	36,162.900	-2,867.624	-8.61%	-2.154
2005	12	45,629.000	46,657.640	-1,028.640	-2.25%	-0.773
2006	1	49,264.760	48,916.779	347.981	0.71%	0.261
2006	2	40,845.697	42,707.658	-1,861.961	-4.56%	-1.399
2006	3	45,796.967	43,510.362	2,286.605	4.99%	1.718
2006	4	34,981.493	37,705.598	-2,724.105	-7.79%	-2.046
2006	5	34,158.121	35,027.896	-869.775	-2.55%	-0.653
2006	6	40,662.503	41,177.007	-514.504	-1.27%	-0.386
2006	7	45,082.334	46,560.152	-1,477.818	-3.28%	-1.110
2006	8	56,302.661	54,457.623	1,845.038	3.28%	1.386
2006	9	38,605.426	39,365.427	-760.001	-1.97%	-0.571
2006	10	36,385.095	36,195.995	189.100	0.52%	0.142
2006	11	35,715.605	36,944.822	-1,229.217	-3.44%	-0.923
2006	12	42,769.632	45,112.710	-2,343.078	-5.48%	-1.760
2007	1		53,711.103			
2007	2		44,142.180			
2007	3		43,189.346			
2007	4		38,576.628			
2007	5		35,389.353			
2007	6		39,353.297			
2007	7		46,302.690			
2007	8		50,040.401			
2007	9		42,878.218			
2007	10		37,607.327			
2007	11		37,401.247			
2007	12		46,635.659			

Xcel Energy North Dakota Residential without Space Heat
2008 Test Year Sales Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2008	1		54,250.591			
2008	2		45,088.281			
2008	3		43,083.859			
2008	4		39,398.297			
2008	5		35,883.294			
2008	6		39,745.606			
2008	7		47,282.230			
2008	8		48,929.571			
2008	9		44,871.884			
2008	10		37,997.369			
2008	11		37,636.309			
2008	12		48,436.389			

Xcel Energy North Dakota Residential with Space Heat
2008 Test Year Sales Forecast

Variable	Coefficient	StdErr	T-Stat	P-Value	Definition
ActCustfcst.NRHND	0.761	0.094	8.068	0.00%	Number of customers
NDWTHRRH.RFH65JanNRHND	0.000884527	0.000	48.570	0.00%	Weather for given month weighted by number of customers
NDWTHRRH.RFH65FebNRHND	0.000844149	0.000	41.233	0.00%	Weather for given month weighted by number of customers
NDWTHRRH.RFH65MarNRHND	0.000776289	0.000	34.818	0.00%	Weather for given month weighted by number of customers
NDWTHRRH.RFH65AprNRHND	0.000685877	0.000	19.700	0.00%	Weather for given month weighted by number of customers
NDWTHRRH.RFH65MayNRHND	0.000536439	0.000	9.138	0.00%	Weather for given month weighted by number of customers
NDWTHRRH.RFH65OctNRHND	0.000324004	0.000	5.404	0.00%	Weather for given month weighted by number of customers
NDWTHRRH.RFH65NovNRHND	0.000581839	0.000	17.395	0.00%	Weather for given month weighted by number of customers
NDWTHRRH.RFH65DecNRHND	0.000831296	0.000	38.572	0.00%	Weather for given month weighted by number of customers
NDWTHRRH.RFT65JunNRHND	0.002856128	0.001	3.830	0.02%	Weather for given month weighted by number of customers
NDWTHRRH.RFT65JulNRHND	0.001428176	0.000	6.887	0.00%	Weather for given month weighted by number of customers
NDWTHRRH.RFT65AugNRHND	0.001362161	0.000	7.810	0.00%	Weather for given month weighted by number of customers
NDWTHRRH.RFT65SepNRHND	0.001651363	0.000	5.011	0.00%	Weather for given month weighted by number of customers
RealPriceperMwhfcst.NDTotRes_RAP	-88.677	40.928	-2.167	3.29%	Real Revenue per MWh
AR(1)	0.242	0.099	2.440	1.66%	AR term

Xcel Energy North Dakota Residential with Space Heat
2008 Test Year Sales Forecast

Regression Statistics	
Iterations	10
Adjusted Observations	107
Deg. of Freedom for Error	92
R-Squared	0.994
Adjusted R-Squared	0.993
Durbin-Watson Statistic	1.920
Durbin-H Statistic	#NA
AIC	13.406
BIC	13.780
F-Statistic	1015.300
Prob (F-Statistic)	0.0000
Log-Likelihood	-846.05
Model Sum of Squares	8881899514
Sum of Squared Errors	53654753
Mean Squared Error	583203.83
Std. Error of Regression	763.68
Mean Abs. Dev. (MAD)	540.37
Mean Abs. % Err. (MAPE)	2.82%
Ljung-Box Statistic	18.22
Prob (Ljung-Box)	0.7923

Xcel Energy North Dakota Residential with Space Heat
2008 Test Year Sales Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
1998	1	38,108.000				
1998	2	30,444.000	31,283.839	-839.839	-2.76%	-1.100
1998	3	26,540.000	26,188.224	351.776	1.33%	0.461
1998	4	20,953.000	20,010.385	942.615	4.50%	1.234
1998	5	12,817.000	13,007.250	-190.250	-1.48%	-0.249
1998	6	11,011.000	10,692.846	318.154	2.89%	0.417
1998	7	13,182.000	12,850.941	331.059	2.51%	0.434
1998	8	12,448.000	12,825.463	-377.463	-3.03%	-0.494
1998	9	11,887.000	12,386.257	-499.257	-4.20%	-0.654
1998	10	12,309.000	11,976.364	332.636	2.70%	0.436
1998	11	18,704.000	18,222.125	481.875	2.58%	0.631
1998	12	27,888.000	28,669.182	-781.182	-2.80%	-1.023
1999	1	43,481.000	41,195.120	2,285.880	5.26%	2.993
1999	2	32,726.000	31,825.389	900.611	2.75%	1.179
1999	3	25,757.000	26,808.224	-1,051.224	-4.08%	-1.377
1999	4	19,586.000	20,744.116	-1,158.116	-5.91%	-1.516
1999	5	14,689.000	13,230.464	1,458.536	9.93%	1.910
1999	6	11,487.000	12,346.655	-859.655	-7.48%	-1.126
1999	7	12,271.000	12,275.975	-4.975	-0.04%	-0.007
1999	8	12,322.000	12,543.080	-221.080	-1.79%	-0.289
1999	9	11,229.000	10,820.649	408.351	3.64%	0.535
1999	10	12,582.000	12,890.884	-308.884	-2.45%	-0.404
1999	11	15,811.000	17,028.246	-1,217.246	-7.70%	-1.594
1999	12	27,027.000	27,103.333	-76.333	-0.28%	-0.100
2000	1	37,239.000	36,376.555	862.445	2.32%	1.129
2000	2	33,383.000	33,030.082	352.918	1.06%	0.462
2000	3	23,939.000	25,047.072	-1,108.072	-4.63%	-1.451
2000	4	20,962.000	20,395.105	566.895	2.70%	0.742
2000	5	13,988.000	14,272.202	-284.202	-2.03%	-0.372
2000	6	11,659.000	10,744.291	914.709	7.85%	1.198

Xcel Energy North Dakota Residential with Space Heat
2008 Test Year Sales Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2000	7	12,585.000	12,330.503	254.497	2.02%	0.333
2000	8	13,005.000	13,193.283	-188.283	-1.45%	-0.247
2000	9	11,820.000	11,642.885	177.115	1.50%	0.232
2000	10	12,631.000	12,703.422	-72.422	-0.57%	-0.095
2000	11	17,652.000	17,291.909	360.091	2.04%	0.472
2000	12	35,981.000	34,886.188	1,094.812	3.04%	1.434
2001	1	41,130.000	41,936.594	-806.594	-1.96%	-1.056
2001	2	35,016.134	35,080.820	-64.686	-0.18%	-0.085
2001	3	31,535.984	31,868.205	-332.221	-1.05%	-0.435
2001	4	22,479.986	22,700.445	-220.459	-0.98%	-0.289
2001	5	16,015.795	14,046.260	1,969.535	12.30%	2.579
2001	6	11,101.266	11,268.309	-167.043	-1.50%	-0.219
2001	7	12,854.687	13,099.951	-245.264	-1.91%	-0.321
2001	8	14,089.900	14,407.912	-318.012	-2.26%	-0.416
2001	9	12,259.532	12,009.515	250.017	2.04%	0.327
2001	10	11,804.914	12,291.117	-486.203	-4.12%	-0.637
2001	11	16,959.893	17,265.752	-305.859	-1.80%	-0.401
2001	12	26,081.860	26,286.224	-204.364	-0.78%	-0.268
2002	1	34,417.792	35,266.534	-848.742	-2.47%	-1.111
2002	2	31,851.359	31,539.463	311.896	0.98%	0.408
2002	3	30,211.282	29,507.139	704.143	2.33%	0.922
2002	4	24,935.422	23,980.196	955.226	3.83%	1.251
2002	5	17,253.683	16,884.468	369.215	2.14%	0.483
2002	6	12,723.733	12,280.927	442.806	3.48%	0.580
2002	7	14,665.038	15,013.886	-348.848	-2.38%	-0.457
2002	8	13,132.431	13,000.911	131.520	1.00%	0.172
2002	9	13,006.387	13,108.574	-102.187	-0.79%	-0.134
2002	10	13,529.753	13,342.678	187.075	1.38%	0.245
2002	11	21,925.063	20,741.937	1,183.126	5.40%	1.549
2002	12	30,884.817	31,050.118	-165.301	-0.54%	-0.216

Xcel Energy North Dakota Residential with Space Heat
2008 Test Year Sales Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2003	1	35,862.488	36,450.197	-587.709	-1.64%	-0.770
2003	2	37,503.114	36,698.063	805.051	2.15%	1.054
2003	3	34,802.005	32,833.792	1,968.213	5.66%	2.577
2003	4	21,412.183	21,277.863	134.320	0.63%	0.176
2003	5	14,410.910	14,759.847	-348.937	-2.42%	-0.457
2003	6	11,595.108	11,103.139	491.969	4.24%	0.644
2003	7	12,921.598	12,673.521	248.077	1.92%	0.325
2003	8	13,855.685	13,714.508	141.177	1.02%	0.185
2003	9	13,307.722	13,342.279	-34.557	-0.26%	-0.045
2003	10	12,052.122	12,564.911	-512.789	-4.25%	-0.671
2003	11	19,586.769	19,241.219	345.550	1.76%	0.452
2003	12	31,907.062	31,367.446	539.616	1.69%	0.707
2004	1	37,779.443	37,997.251	-217.808	-0.58%	-0.285
2004	2	38,686.256	38,262.611	423.645	1.10%	0.555
2004	3	27,595.598	27,276.814	318.784	1.16%	0.417
2004	4	21,022.000	21,067.800	-45.800	-0.22%	-0.060
2004	5	14,835.000	15,570.754	-735.754	-4.96%	-0.963
2004	6	12,238.000	10,882.921	1,355.079	11.07%	1.774
2004	7	12,023.000	12,345.213	-322.213	-2.68%	-0.422
2004	8	11,613.000	11,939.337	-326.337	-2.81%	-0.427
2004	9	11,143.000	11,214.143	-71.143	-0.64%	-0.093
2004	10	12,120.000	12,342.038	-222.038	-1.83%	-0.291
2004	11	17,347.000	17,427.301	-80.301	-0.46%	-0.105
2004	12	28,549.000	29,278.405	-729.405	-2.55%	-0.955
2005	1	41,380.813	40,815.386	565.427	1.37%	0.740
2005	2	32,239.592	33,310.864	-1,071.272	-3.32%	-1.403
2005	3	28,615.014	29,043.901	-428.887	-1.50%	-0.562
2005	4	19,476.964	19,959.450	-482.486	-2.48%	-0.632
2005	5	15,057.378	15,263.122	-205.744	-1.37%	-0.269
2005	6	11,836.661	11,429.696	406.965	3.44%	0.533

Xcel Energy North Dakota Residential with Space Heat
2008 Test Year Sales Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2005	7	13,402.365	13,246.073	156.292	1.17%	0.205
2005	8	14,008.000	13,366.447	641.553	4.58%	0.840
2005	9	11,237.375	11,172.567	64.808	0.58%	0.085
2005	10	11,889.611	11,694.217	195.394	1.64%	0.256
2005	11	15,612.944	16,821.560	-1,208.616	-7.74%	-1.583
2005	12	29,777.000	29,749.707	27.293	0.09%	0.036
2006	1	30,307.750	32,328.204	-2,020.454	-6.67%	-2.646
2006	2	28,477.696	29,650.155	-1,172.459	-4.12%	-1.535
2006	3	29,964.242	30,897.725	-933.483	-3.12%	-1.222
2006	4	18,369.168	19,008.877	-639.709	-3.48%	-0.838
2006	5	12,479.930	13,635.966	-1,156.036	-9.26%	-1.514
2006	6	12,327.042	12,898.968	-571.926	-4.64%	-0.749
2006	7	13,158.551	13,038.437	120.114	0.91%	0.157
2006	8	15,013.123	14,637.336	375.787	2.50%	0.492
2006	9	11,519.801	11,426.031	93.770	0.81%	0.123
2006	10	13,408.234	12,773.777	634.457	4.73%	0.831
2006	11	18,895.167	19,311.048	-415.881	-2.20%	-0.545
2006	12	26,997.138	27,468.173	-471.035	-1.74%	-0.617
2007	1		40,041.169			
2007	2		33,550.111			
2007	3		30,153.976			
2007	4		21,277.976			
2007	5		15,054.230			
2007	6		12,381.959			
2007	7		13,243.869			
2007	8		13,665.138			
2007	9		12,323.395			
2007	10		13,213.912			
2007	11		19,207.764			
2007	12		29,370.033			

Xcel Energy North Dakota Residential with Space Heat
2008 Test Year Sales Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2008	1		40,161.069			
2008	2		34,699.612			
2008	3		28,644.821			
2008	4		22,378.403			
2008	5		14,794.850			
2008	6		12,358.180			
2008	7		13,342.884			
2008	8		13,309.782			
2008	9		12,650.467			
2008	10		13,250.908			
2008	11		18,013.432			
2008	12		31,592.906			

Xcel Energy North Dakota Small Commercial and Industrial
2008 Test Year Sales Forecast

Variable	Coefficient	StdErr	T-Stat	P-Value	Definition
Fgo.EE_FGO	779.163	37.034	21.039	0.00%	Fargo Total Employment
NDWTHRRH.RFH65JanNRHND	0.000557824	0.000	5.740	0.00%	Weather for given month weighted by number of customers
NDWTHRRH.RFH65FebNRHND	0.000292997	0.000	2.663	0.91%	Weather for given month weighted by number of customers
Model1.HDDMarApr	0.000235623	0.000	1.997	4.87%	Weather for given month weighted by number of customers
Model1.HDDNovDec	0.000219948	0.000	1.800	7.50%	Weather for given month weighted by number of customers
NDWTHRSCI.RFT65JunNSCIND	0.014218430	0.009	1.643	10.38%	Weather for given month weighted by number of customers
NDWTHRSCI.RFT65JulNSCIND	0.005337113	0.002	2.258	2.63%	Weather for given month weighted by number of customers
NDWTHRRH.RFT65AugNRHND	0.004642527	0.001	3.752	0.03%	Weather for given month weighted by number of customers
NDWTHRRH.RFT65SepNRHND	0.006136477	0.002	2.589	1.12%	Weather for given month weighted by number of customers
RealPriceperMwhfcst.NDSCI_RAP	-307.611	129.172	-2.381	1.92%	Real Revenue per MWh
Binary.CIReclass01Pre	-38735.662	2107.564	-18.379	0.00%	Binary for C&I reclassification

Xcel Energy North Dakota Small Commercial and Industrial 2008 Test Year Sales Forecast

Regression Statistics	
Iterations	1
Adjusted Observations	108
Deg. of Freedom for Error	97
R-Squared	0.917
Adjusted R-Squared	0.909
Durbin-Watson Statistic	2.137
Durbin-H Statistic	#NA
AIC	17.916
BIC	18.190
F-Statistic	97.523
Prob (F-Statistic)	0.0000
Log-Likelihood	-1109.73
Model Sum of Squares	58840193436
Sum of Squared Errors	5320433164
Mean Squared Error	54849826.43
Std. Error of Regression	7406.07
Mean Abs. Dev. (MAD)	4184.95
Mean Abs. % Err. (MAPE)	6.34%
Ljung-Box Statistic	31.83
Prob (Ljung-Box)	0.1313

Xcel Energy North Dakota Small Commercial and Industrial
2008 Test Year Sales Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
1998	1	40,748.000	44,036.365	-3,288.365	-8.07%	-0.444
1998	2	34,487.000	34,687.232	-200.232	-0.58%	-0.027
1998	3	33,307.000	32,407.150	899.850	2.70%	0.122
1998	4	30,940.000	31,064.360	-124.360	-0.40%	-0.017
1998	5	30,735.000	27,580.154	3,154.846	10.26%	0.426
1998	6	29,120.000	28,388.507	731.493	2.51%	0.099
1998	7	34,827.000	32,670.608	2,156.392	6.19%	0.291
1998	8	37,092.000	36,068.108	1,023.892	2.76%	0.138
1998	9	29,910.000	35,835.730	-5,925.730	-19.81%	-0.800
1998	10	29,997.000	27,704.895	2,292.105	7.64%	0.309
1998	11	31,145.000	30,863.210	281.790	0.90%	0.038
1998	12	35,768.000	33,325.753	2,442.247	6.83%	0.330
1999	1	42,672.000	48,544.809	-5,872.809	-13.76%	-0.793
1999	2	36,137.000	36,052.749	84.251	0.23%	0.011
1999	3	31,842.000	33,413.749	-1,571.749	-4.94%	-0.212
1999	4	31,355.000	32,706.341	-1,351.341	-4.31%	-0.182
1999	5	30,315.000	29,224.647	1,090.353	3.60%	0.147
1999	6	31,605.000	33,883.804	-2,278.804	-7.21%	-0.308
1999	7	34,981.000	33,179.453	1,801.547	5.15%	0.243
1999	8	34,945.000	36,839.325	-1,894.325	-5.42%	-0.256
1999	9	32,188.000	30,878.637	1,309.363	4.07%	0.177
1999	10	30,028.000	29,088.709	939.291	3.13%	0.127
1999	11	29,372.000	31,824.117	-2,452.117	-8.35%	-0.331
1999	12	38,132.000	34,738.579	3,393.421	8.90%	0.458
2000	1	41,828.000	47,778.248	-5,950.248	-14.23%	-0.803
2000	2	38,766.000	39,231.516	-465.516	-1.20%	-0.063
2000	3	35,282.000	35,115.715	166.285	0.47%	0.022
2000	4	33,580.000	33,903.648	-323.648	-0.96%	-0.044
2000	5	32,459.000	30,099.319	2,359.681	7.27%	0.319
2000	6	33,398.000	31,534.341	1,863.659	5.58%	0.252

Xcel Energy North Dakota Small Commercial and Industrial
2008 Test Year Sales Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2000	7	35,917.000	34,515.146	1,401.854	3.90%	0.189
2000	8	37,622.000	40,234.322	-2,612.322	-6.94%	-0.353
2000	9	35,677.000	35,701.710	-24.710	-0.07%	-0.003
2000	10	31,829.000	30,856.376	972.624	3.06%	0.131
2000	11	34,308.000	34,017.604	290.396	0.85%	0.039
2000	12	44,215.000	38,534.066	5,680.934	12.85%	0.767
2001	1	102,996.000	97,139.426	5,856.574	5.69%	0.791
2001	2	96,098.994	86,159.183	9,939.811	10.34%	1.342
2001	3	89,910.932	84,000.108	5,910.824	6.57%	0.798
2001	4	74,846.627	80,399.919	-5,553.292	-7.42%	-0.750
2001	5	75,530.397	76,095.085	-564.688	-0.75%	-0.076
2001	6	74,000.434	78,053.161	-4,052.727	-5.48%	-0.547
2001	7	77,058.947	82,134.039	-5,075.092	-6.59%	-0.685
2001	8	83,082.800	90,288.990	-7,206.190	-8.67%	-0.973
2001	9	81,149.556	77,575.651	3,573.905	4.40%	0.483
2001	10	72,236.238	69,982.304	2,253.934	3.12%	0.304
2001	11	71,940.817	78,445.473	-6,504.656	-9.04%	-0.878
2001	12	79,516.060	80,016.976	-500.916	-0.63%	-0.068
2002	1	91,920.948	91,995.051	-74.103	-0.08%	-0.010
2002	2	81,277.399	83,872.541	-2,595.142	-3.19%	-0.350
2002	3	81,328.290	82,209.714	-881.424	-1.08%	-0.119
2002	4	78,938.488	81,132.920	-2,194.432	-2.78%	-0.296
2002	5	71,288.502	76,526.937	-5,238.435	-7.35%	-0.707
2002	6	76,518.384	81,590.966	-5,072.582	-6.63%	-0.685
2002	7	86,256.241	87,140.142	-883.901	-1.02%	-0.119
2002	8	80,846.239	85,662.251	-4,816.012	-5.96%	-0.650
2002	9	83,172.337	86,597.266	-3,424.929	-4.12%	-0.462
2002	10	74,044.001	77,270.143	-3,226.142	-4.36%	-0.436
2002	11	76,295.096	81,205.476	-4,910.380	-6.44%	-0.663
2002	12	88,624.556	82,841.245	5,783.311	6.53%	0.781

Xcel Energy North Dakota Small Commercial and Industrial
2008 Test Year Sales Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2003	1	91,302.406	90,393.841	908.565	1.00%	0.123
2003	2	85,805.796	83,299.762	2,506.034	2.92%	0.338
2003	3	83,707.604	80,622.185	3,085.419	3.69%	0.417
2003	4	76,079.455	77,739.502	-1,660.047	-2.18%	-0.224
2003	5	73,072.413	73,960.635	-888.222	-1.22%	-0.120
2003	6	75,921.475	75,666.271	255.204	0.34%	0.034
2003	7	83,132.850	78,874.591	4,258.259	5.12%	0.575
2003	8	84,638.627	84,466.568	172.059	0.20%	0.023
2003	9	84,929.816	84,308.411	621.405	0.73%	0.084
2003	10	75,612.653	74,281.701	1,330.952	1.76%	0.180
2003	11	77,636.056	77,915.756	-279.700	-0.36%	-0.038
2003	12	88,672.720	80,505.039	8,167.681	9.21%	1.103
2004	1	93,475.633	93,106.253	369.380	0.40%	0.050
2004	2	87,111.022	85,705.714	1,405.308	1.61%	0.190
2004	3	81,938.745	80,974.339	964.406	1.18%	0.130
2004	4	76,873.652	80,557.041	-3,683.389	-4.79%	-0.497
2004	5	73,045.684	76,733.023	-3,687.339	-5.05%	-0.498
2004	6	77,660.811	77,847.567	-186.756	-0.24%	-0.025
2004	7	81,206.909	80,286.261	920.648	1.13%	0.124
2004	8	79,518.212	81,127.994	-1,609.782	-2.02%	-0.217
2004	9	78,885.147	79,194.101	-308.954	-0.39%	-0.042
2004	10	74,054.224	77,142.776	-3,088.552	-4.17%	-0.417
2004	11	76,852.921	79,474.950	-2,622.029	-3.41%	-0.354
2004	12	88,292.285	82,350.393	5,941.892	6.73%	0.802
2005	1	95,699.418	96,843.477	-1,144.059	-1.20%	-0.154
2005	2	67,839.513	85,653.369	-17,813.856	-26.26%	-2.405
2005	3	70,763.797	83,267.489	-12,503.692	-17.67%	-1.688
2005	4	72,498.854	82,010.582	-9,511.728	-13.12%	-1.284
2005	5	98,585.964	79,845.704	18,740.260	19.01%	2.530
2005	6	97,485.788	82,168.027	15,317.761	15.71%	2.068

Xcel Energy North Dakota Small Commercial and Industrial
2008 Test Year Sales Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2005	7	78,340.850	84,787.503	-6,446.653	-8.23%	-0.870
2005	8	102,162.000	88,459.797	13,702.203	13.41%	1.850
2005	9	93,334.620	81,813.487	11,521.133	12.34%	1.556
2005	10	84,217.486	78,046.872	6,170.614	7.33%	0.833
2005	11	77,804.852	81,145.691	-3,340.839	-4.29%	-0.451
2005	12	63,918.000	82,834.562	-18,916.562	-29.60%	-2.554
2006	1	104,527.442	93,564.120	10,963.322	10.49%	1.480
2006	2	92,512.852	86,661.120	5,851.732	6.33%	0.790
2006	3	118,867.315	86,462.660	32,404.655	27.26%	4.375
2006	4	45,254.551	79,281.433	-34,026.882	-75.19%	-4.594
2006	5	80,288.625	79,368.166	920.459	1.15%	0.124
2006	6	87,473.390	88,506.892	-1,033.502	-1.18%	-0.140
2006	7	92,185.497	86,683.054	5,502.443	5.97%	0.743
2006	8	95,896.385	93,340.520	2,555.865	2.67%	0.345
2006	9	80,991.171	81,728.775	-737.604	-0.91%	-0.100
2006	10	77,258.408	77,352.302	-93.894	-0.12%	-0.013
2006	11	75,831.225	82,399.326	-6,568.101	-8.66%	-0.887
2006	12	86,132.265	83,633.784	2,498.481	2.90%	0.337
2007	1		97,917.494			
2007	2		87,233.770			
2007	3		85,193.001			
2007	4		83,305.773			
2007	5		79,638.858			
2007	6		85,373.937			
2007	7		86,234.356			
2007	8		90,371.188			
2007	9		86,186.677			
2007	10		80,220.995			
2007	11		83,449.796			
2007	12		85,171.320			

Xcel Energy North Dakota Small Commercial and Industrial
2008 Test Year Sales Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2008	1		99,088.867			
2008	2		88,817.101			
2008	3		85,930.980			
2008	4		84,827.631			
2008	5		80,790.149			
2008	6		86,407.959			
2008	7		87,705.436			
2008	8		90,366.178			
2008	9		88,606.651			
2008	10		81,451.447			
2008	11		84,233.816			
2008	12		86,992.983			

Xcel Energy North Dakota Large Commercial and Industrial
2008 Test Year Sales Forecast

Variable	Coefficient	StdErr	T-Stat	P-Value	Definition
ActCustfcst.NLCIND	74.627	1.771	42.136	0.00%	Number of customers
Fgo.EEMFG_FGO	3101.121	121.667	25.489	0.00%	Fargo Manufacturing Employment
ND_Large_CI_Sales.HDDJanFebNovDec	0.871947804	0.713	1.223	22.43%	Weather for given month weighted by number of customers
ND_Large_CI_Sales.CDDJunJulAugSep	23.866692209	9.915	2.407	1.79%	Weather for given month weighted by number of customers
RealPriceperMwhfcst.NDLCI_RAP	-70.880	21.888	-3.238	0.16%	Real Revenue per MWh
AR(1)	0.162	0.101	1.594	11.42%	AR term

Xcel Energy North Dakota Large Commercial and Industrial 2008 Test Year Sales Forecast

Regression Statistics	
Iterations	8
Adjusted Observations	107
Deg. of Freedom for Error	101
R-Squared	0.957
Adjusted R-Squared	0.955
Durbin-Watson Statistic	1.982
Durbin-H Statistic	#NA
AIC	16.647
BIC	16.797
F-Statistic	376.740
Prob (F-Statistic)	0.0000
Log-Likelihood	-1026.74
Model Sum of Squares	36321665921
Sum of Squared Errors	1622908729
Mean Squared Error	16068403.26
Std. Error of Regression	4008.54
Mean Abs. Dev. (MAD)	2912.03
Mean Abs. % Err. (MAPE)	8.56%
Ljung-Box Statistic	17.72
Prob (Ljung-Box)	0.8166

Xcel Energy North Dakota Large Commercial and Industrial 2008 Test Year Sales Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
1998	1	72,081.000				
1998	2	62,215.000	66,305.861	-4,090.861	-6.58%	-1.021
1998	3	63,321.000	66,941.660	-3,620.660	-5.72%	-0.903
1998	4	54,962.000	62,945.297	-7,983.297	-14.53%	-1.992
1998	5	65,385.000	63,896.791	1,488.209	2.28%	0.371
1998	6	65,012.000	65,608.928	-596.928	-0.92%	-0.149
1998	7	73,498.000	69,360.661	4,137.339	5.63%	1.032
1998	8	67,715.000	69,254.907	-1,539.907	-2.27%	-0.384
1998	9	69,161.000	68,239.119	921.881	1.33%	0.230
1998	10	64,248.000	66,298.231	-2,050.231	-3.19%	-0.511
1998	11	65,366.000	68,195.013	-2,829.013	-4.33%	-0.706
1998	12	62,524.000	67,155.337	-4,631.337	-7.41%	-1.155
1999	1	58,942.000	65,859.238	-6,917.238	-11.74%	-1.726
1999	2	84,246.000	67,865.953	16,380.047	19.44%	4.086
1999	3	60,375.000	70,433.657	-10,058.657	-16.66%	-2.509
1999	4	63,153.000	66,832.781	-3,679.781	-5.83%	-0.918
1999	5	63,492.000	63,961.015	-469.015	-0.74%	-0.117
1999	6	66,743.000	66,947.505	-204.505	-0.31%	-0.051
1999	7	63,963.000	67,802.241	-3,839.241	-6.00%	-0.958
1999	8	71,726.000	67,823.495	3,902.505	5.44%	0.974
1999	9	66,580.000	65,997.950	582.050	0.87%	0.145
1999	10	62,449.000	66,008.684	-3,559.684	-5.70%	-0.888
1999	11	62,782.000	65,614.669	-2,832.669	-4.51%	-0.707
1999	12	70,090.000	66,839.720	3,250.280	4.64%	0.811
2000	1	70,181.000	68,637.198	1,543.802	2.20%	0.385
2000	2	66,634.000	68,569.588	-1,935.588	-2.90%	-0.483
2000	3	61,038.000	63,843.602	-2,805.602	-4.60%	-0.700
2000	4	64,218.000	61,726.761	2,491.239	3.88%	0.621
2000	5	64,324.000	63,517.813	806.187	1.25%	0.201
2000	6	70,563.000	64,384.473	6,178.527	8.76%	1.541

Xcel Energy North Dakota Large Commercial and Industrial
2008 Test Year Sales Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2000	7	66,303.000	66,365.361	-62.361	-0.09%	-0.016
2000	8	70,632.000	68,069.212	2,562.788	3.63%	0.639
2000	9	73,285.000	65,228.621	8,056.379	10.99%	2.010
2000	10	65,090.000	65,086.556	3.444	0.01%	0.001
2000	11	66,771.000	65,202.598	1,568.402	2.35%	0.391
2000	12	75,363.000	66,563.176	8,799.824	11.68%	2.195
2001	1	13,800.000	21,316.198	-7,516.198	-54.47%	-1.875
2001	2	16,868.802	20,958.081	-4,089.279	-24.24%	-1.020
2001	3	14,876.612	19,057.764	-4,181.152	-28.11%	-1.043
2001	4	27,095.762	22,148.426	4,947.336	18.26%	1.234
2001	5	26,781.359	23,250.453	3,530.906	13.18%	0.881
2001	6	28,184.316	23,431.344	4,752.972	16.86%	1.186
2001	7	29,718.924	25,628.384	4,090.540	13.76%	1.020
2001	8	26,039.300	26,130.728	-91.428	-0.35%	-0.023
2001	9	29,222.755	27,119.039	2,103.716	7.20%	0.525
2001	10	28,088.530	25,710.124	2,378.406	8.47%	0.593
2001	11	26,127.408	23,389.365	2,738.043	10.48%	0.683
2001	12	26,229.925	23,675.493	2,554.432	9.74%	0.637
2002	1	28,377.747	24,950.539	3,427.208	12.08%	0.855
2002	2	30,367.169	25,707.495	4,659.674	15.34%	1.162
2002	3	24,157.648	23,796.649	360.999	1.49%	0.090
2002	4	24,450.372	23,584.288	866.084	3.54%	0.216
2002	5	23,994.309	23,761.023	233.286	0.97%	0.058
2002	6	27,767.204	23,888.329	3,878.875	13.97%	0.968
2002	7	26,199.237	28,685.620	-2,486.383	-9.49%	-0.620
2002	8	25,856.313	25,066.682	789.631	3.05%	0.197
2002	9	29,003.625	25,101.018	3,902.607	13.46%	0.974
2002	10	28,174.630	24,558.168	3,616.462	12.84%	0.902
2002	11	27,433.524	25,096.459	2,337.065	8.52%	0.583
2002	12	22,536.023	24,124.927	-1,588.904	-7.05%	-0.396

Xcel Energy North Dakota Large Commercial and Industrial
2008 Test Year Sales Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2003	1	28,949.759	28,167.782	781.977	2.70%	0.195
2003	2	30,121.193	28,152.481	1,968.712	6.54%	0.491
2003	3	23,980.773	26,623.000	-2,642.227	-11.02%	-0.659
2003	4	22,441.608	25,828.107	-3,386.499	-15.09%	-0.845
2003	5	29,208.468	26,175.890	3,032.578	10.38%	0.757
2003	6	26,896.051	27,083.898	-187.847	-0.70%	-0.047
2003	7	27,830.538	28,832.158	-1,001.620	-3.60%	-0.250
2003	8	22,025.573	29,409.364	-7,383.791	-33.52%	-1.842
2003	9	29,331.770	27,857.520	1,474.250	5.03%	0.368
2003	10	28,298.409	26,949.102	1,349.307	4.77%	0.337
2003	11	27,772.338	27,950.600	-178.262	-0.64%	-0.044
2003	12	27,951.041	28,077.870	-126.829	-0.45%	-0.032
2004	1	31,677.018	28,762.673	2,914.345	9.20%	0.727
2004	2	29,161.092	29,156.910	4.182	0.01%	0.001
2004	3	26,714.131	27,218.911	-504.780	-1.89%	-0.126
2004	4	28,194.185	27,900.225	293.960	1.04%	0.073
2004	5	29,572.737	27,964.727	1,608.010	5.44%	0.401
2004	6	28,010.563	28,430.304	-419.741	-1.50%	-0.105
2004	7	31,534.905	29,422.190	2,112.715	6.70%	0.527
2004	8	32,081.210	29,939.669	2,141.541	6.68%	0.534
2004	9	32,281.206	29,281.992	2,999.214	9.29%	0.748
2004	10	30,272.712	31,162.336	-889.624	-2.94%	-0.222
2004	11	29,420.714	29,737.904	-317.190	-1.08%	-0.079
2004	12	28,381.473	28,885.170	-503.697	-1.77%	-0.126
2005	1	30,300.340	29,925.613	374.727	1.24%	0.093
2005	2	28,851.000	29,852.502	-1,001.502	-3.47%	-0.250
2005	3	25,368.166	27,481.179	-2,113.013	-8.33%	-0.527
2005	4	24,861.045	28,305.596	-3,444.551	-13.86%	-0.859
2005	5	21,372.955	28,095.392	-6,722.437	-31.45%	-1.677
2005	6	27,055.029	29,340.457	-2,285.428	-8.45%	-0.570

Xcel Energy North Dakota Large Commercial and Industrial
2008 Test Year Sales Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2005	7	25,880.924	30,842.149	-4,961.225	-19.17%	-1.238
2005	8	32,505.127	30,536.920	1,968.207	6.06%	0.491
2005	9	23,430.828	29,369.033	-5,938.205	-25.34%	-1.481
2005	10	28,224.101	27,546.406	677.695	2.40%	0.169
2005	11	26,600.258	29,030.334	-2,430.076	-9.14%	-0.606
2005	12	22,914.000	29,433.781	-6,519.781	-28.45%	-1.626
2006	1	26,898.673	28,775.792	-1,877.119	-6.98%	-0.468
2006	2	26,477.780	29,397.476	-2,919.696	-11.03%	-0.728
2006	3	32,706.839	28,346.518	4,360.321	13.33%	1.088
2006	4	26,065.000	28,779.140	-2,714.140	-10.41%	-0.677
2006	5	25,375.000	27,893.901	-2,518.901	-9.93%	-0.628
2006	6	28,416.000	29,201.497	-785.497	-2.76%	-0.196
2006	7	30,647.000	30,874.441	-227.441	-0.74%	-0.057
2006	8	28,107.000	32,270.420	-4,163.420	-14.81%	-1.039
2006	9	36,842.591	29,169.611	7,672.980	20.83%	1.914
2006	10	37,270.227	29,885.985	7,384.242	19.81%	1.842
2006	11	30,234.658	30,430.755	-196.097	-0.65%	-0.049
2006	12	26,903.439	29,510.321	-2,606.882	-9.69%	-0.650
2007	1		29,572.395			
2007	2		29,601.640			
2007	3		28,366.612			
2007	4		28,461.170			
2007	5		28,462.552			
2007	6		29,287.515			
2007	7		30,886.596			
2007	8		31,407.091			
2007	9		29,807.868			
2007	10		28,551.390			
2007	11		29,246.432			
2007	12		29,617.489			

Xcel Energy North Dakota Large Commercial and Industrial 2008 Test Year Sales Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2008	1		30,184.082			
2008	2		29,950.122			
2008	3		28,604.068			
2008	4		28,671.953			
2008	5		28,671.953			
2008	6		29,472.939			
2008	7		31,208.187			
2008	8		31,297.232			
2008	9		30,291.074			
2008	10		28,787.692			
2008	11		29,385.035			
2008	12		29,977.780			

Xcel Energy North Dakota Residential without Space Heat
2008 Test Year Customer Forecast

Variable	Coefficient	StdErr	T-Stat	P-Value	Definition
Fgo.NR_FGO	139.136	32.866	4.233	0.01%	Fargo Population
mthlybinaries.Jan	28489.049	5961.856	4.779	0.00%	Monrhly binary
mthlybinaries.Feb	28583.706	5956.137	4.799	0.00%	Monrhly binary
mthlybinaries.Mar	28612.955	5948.895	4.810	0.00%	Monrhly binary
mthlybinaries.Apr	28431.356	5959.352	4.771	0.00%	Monrhly binary
mthlybinaries.May	28320.707	5953.233	4.757	0.00%	Monrhly binary
mthlybinaries.Jun	28340.378	5947.550	4.765	0.00%	Monrhly binary
mthlybinaries.Jul	28318.856	5959.040	4.752	0.00%	Monrhly binary
mthlybinaries.Aug	28328.971	5953.921	4.758	0.00%	Monrhly binary
mthlybinaries.Sep	28490.552	5949.079	4.789	0.00%	Monrhly binary
mthlybinaries.Oct	28509.932	5961.210	4.783	0.00%	Monrhly binary
mthlybinaries.Nov	28533.697	5956.905	4.790	0.00%	Monrhly binary
mthlybinaries.Dec	28522.946	5952.853	4.791	0.00%	Monrhly binary
AR(1)	0.588	0.100	5.878	0.00%	AR Term
AR(2)	0.296	0.099	3.001	0.35%	AR Term

Xcel Energy North Dakota Residential without Space Heat
2008 Test Year Customer Forecast

Regression Statistics	
Iterations	5
Adjusted Observations	106
Deg. of Freedom for Error	91
R-Squared	0.962
Adjusted R-Squared	0.957
Durbin-Watson Statistic	2.135
Durbin-H Statistic	#NA
AIC	10.727
BIC	11.104
F-Statistic	154.931
Prob (F-Statistic)	0.0000
Log-Likelihood	-703.94
Model Sum of Squares	92946701
Sum of Squared Errors	3639534
Mean Squared Error	39994.88
Std. Error of Regression	199.99
Mean Abs. Dev. (MAD)	123.21
Mean Abs. % Err. (MAPE)	0.23%
Ljung-Box Statistic	26.43
Prob (Ljung-Box)	0.3318

Xcel Energy North Dakota Residential without Space Heat
2008 Test Year Customer Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
1998	1	51,089.864				
1998	2	51,173.864				
1998	3	51,378.864	51,336.102	42.762	0.08%	0.214
1998	4	51,159.864	51,329.351	-169.487	-0.33%	-0.847
1998	5	50,839.864	51,204.791	-364.927	-0.72%	-1.825
1998	6	50,754.864	51,068.295	-313.431	-0.62%	-1.567
1998	7	51,212.864	50,992.750	220.114	0.43%	1.101
1998	8	51,236.864	51,212.884	23.980	0.05%	0.120
1998	9	51,461.864	51,503.914	-42.050	-0.08%	-0.210
1998	10	51,647.864	51,634.149	13.715	0.03%	0.069
1998	11	51,814.864	51,733.740	81.124	0.16%	0.406
1998	12	51,910.864	51,835.873	74.990	0.14%	0.375
1999	1	51,805.864	51,976.639	-170.776	-0.33%	-0.854
1999	2	52,081.864	52,020.208	61.656	0.12%	0.308
1999	3	52,187.864	52,114.399	73.465	0.14%	0.367
1999	4	51,870.864	52,101.201	-230.337	-0.44%	-1.152
1999	5	51,288.864	51,892.757	-603.893	-1.18%	-3.020
1999	6	52,629.864	51,574.837	1,055.027	2.00%	5.275
1999	7	52,041.864	52,255.235	-213.371	-0.41%	-1.067
1999	8	51,977.864	52,285.110	-307.246	-0.59%	-1.536
1999	9	52,382.864	52,216.401	166.462	0.32%	0.832
1999	10	52,457.864	52,421.873	35.991	0.07%	0.180
1999	11	52,332.864	52,512.121	-179.257	-0.34%	-0.896
1999	12	52,381.864	52,411.193	-29.329	-0.06%	-0.147
2000	1	52,443.864	52,433.414	10.450	0.02%	0.052
2000	2	52,517.864	52,563.892	-46.028	-0.09%	-0.230
2000	3	52,462.864	52,590.139	-127.275	-0.24%	-0.636
2000	4	52,577.864	52,406.604	171.260	0.33%	0.856
2000	5	52,470.864	52,413.770	57.094	0.11%	0.285
2000	6	52,267.864	52,507.428	-239.565	-0.46%	-1.198
2000	7	52,577.864	52,398.111	179.753	0.34%	0.899
2000	8	52,509.864	52,512.509	-2.645	-0.01%	-0.013
2000	9	52,732.864	52,713.828	19.036	0.04%	0.095
2000	10	52,898.864	52,788.262	110.602	0.21%	0.553
2000	11	52,976.864	52,891.620	85.244	0.16%	0.426
2000	12	52,860.864	52,943.655	-82.791	-0.16%	-0.414
2001	1	52,975.864	52,906.137	69.727	0.13%	0.349
2001	2	52,989.864	53,032.370	-42.507	-0.08%	-0.213
2001	3	53,046.864	53,045.789	1.074	0.00%	0.005
2001	4	52,809.864	52,898.932	-89.068	-0.17%	-0.445
2001	5	53,015.864	52,739.091	276.773	0.52%	1.384
2001	6	53,008.864	52,915.920	92.943	0.18%	0.465
2001	7	53,136.864	53,010.113	126.751	0.24%	0.634
2001	8	53,101.864	53,078.018	23.846	0.04%	0.119

Xcel Energy North Dakota Residential without Space Heat
2008 Test Year Customer Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2001	9	53,308.864	53,246.149	62.715	0.12%	0.314
2001	10	53,415.864	53,316.661	99.203	0.19%	0.496
2001	11	53,239.864	53,383.136	-143.272	-0.27%	-0.716
2001	12	53,119.864	53,269.751	-149.887	-0.28%	-0.749
2002	1	53,259.864	53,150.420	109.444	0.21%	0.547
2002	2	53,183.864	53,292.712	-108.848	-0.20%	-0.544
2002	3	53,147.864	53,261.930	-114.066	-0.21%	-0.570
2002	4	53,131.864	53,029.404	102.460	0.19%	0.512
2002	5	53,190.864	52,974.500	216.364	0.41%	1.082
2002	6	53,031.864	53,131.621	-99.757	-0.19%	-0.499
2002	7	53,216.864	53,116.158	100.706	0.19%	0.504
2002	8	53,262.864	53,159.014	103.850	0.19%	0.519
2002	9	53,381.864	53,384.754	-2.890	-0.01%	-0.014
2002	10	53,389.864	53,450.622	-60.759	-0.11%	-0.304
2002	11	53,357.864	53,419.329	-61.466	-0.12%	-0.307
2002	12	53,434.864	53,354.440	80.424	0.15%	0.402
2003	1	53,369.864	53,416.530	-46.666	-0.09%	-0.233
2003	2	53,403.864	53,483.070	-79.206	-0.15%	-0.396
2003	3	53,466.864	53,449.464	17.399	0.03%	0.087
2003	4	53,528.864	53,330.704	198.160	0.37%	0.991
2003	5	53,583.864	53,337.354	246.510	0.46%	1.233
2003	6	53,507.864	53,508.371	-0.507	0.00%	-0.003
2003	7	53,719.864	53,615.937	103.927	0.19%	0.520
2003	8	53,638.864	53,654.875	-16.011	-0.03%	-0.080
2003	9	53,863.864	53,791.669	72.195	0.13%	0.361
2003	10	53,916.864	53,957.728	-40.864	-0.08%	-0.204
2003	11	53,843.864	53,939.881	-96.017	-0.18%	-0.480
2003	12	53,803.864	53,841.891	-38.027	-0.07%	-0.190
2004	1	53,923.864	53,898.605	25.259	0.05%	0.126
2004	2	53,870.864	53,994.885	-124.021	-0.23%	-0.620
2004	3	53,972.864	53,942.548	30.316	0.06%	0.152
2004	4	53,961.864	53,896.490	65.373	0.12%	0.327
2004	5	53,878.864	53,827.412	51.452	0.10%	0.257
2004	6	53,914.864	53,873.424	41.439	0.08%	0.207
2004	7	53,972.864	53,946.440	26.424	0.05%	0.132
2004	8	54,142.864	53,963.003	179.861	0.33%	0.899
2004	9	54,279.864	54,219.339	60.525	0.11%	0.303
2004	10	54,279.864	54,348.352	-68.488	-0.13%	-0.342
2004	11	54,430.864	54,308.341	122.523	0.23%	0.613
2004	12	54,300.864	54,343.906	-43.042	-0.08%	-0.215
2005	1	54,368.864	54,354.388	14.476	0.03%	0.072
2005	2	54,854.000	54,428.515	425.485	0.78%	2.128
2005	3	54,780.000	54,694.609	85.391	0.16%	0.427
2005	4	54,532.000	54,644.663	-112.663	-0.21%	-0.563

Xcel Energy North Dakota Residential without Space Heat
2008 Test Year Customer Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2005	5	54,397.000	54,419.319	-22.319	-0.04%	-0.112
2005	6	53,987.000	54,382.322	-395.322	-0.73%	-1.977
2005	7	53,763.000	54,177.989	-414.989	-0.77%	-2.075
2005	8	53,729.000	53,896.917	-167.917	-0.31%	-0.840
2005	9	53,595.000	53,949.971	-354.971	-0.66%	-1.775
2005	10	53,724.000	53,860.281	-136.281	-0.25%	-0.681
2005	11	53,909.000	53,815.418	93.582	0.17%	0.468
2005	12	53,949.000	53,908.857	40.143	0.07%	0.201
2006	1	54,019.000	54,030.914	-11.914	-0.02%	-0.060
2006	2	54,069.000	54,155.531	-86.531	-0.16%	-0.433
2006	3	54,157.000	54,166.067	-9.067	-0.02%	-0.045
2006	4	54,149.000	54,084.698	64.302	0.12%	0.322
2006	5	54,190.000	54,047.053	142.947	0.26%	0.715
2006	6	54,043.000	54,183.828	-140.828	-0.26%	-0.704
2006	7	54,060.000	54,189.314	-129.314	-0.24%	-0.647
2006	8	54,288.000	54,125.716	162.284	0.30%	0.811
2006	9	54,422.000	54,403.023	18.977	0.03%	0.095
2006	10	54,588.000	54,541.120	46.880	0.09%	0.234
2006	11	54,699.000	54,601.461	97.539	0.18%	0.488
2006	12	54,812.000	54,664.481	147.519	0.27%	0.738
2007	1	54,976.000	54,798.418	177.582	0.32%	0.888
2007	2		55,005.216			
2007	3		55,034.038			
2007	4		54,901.120			
2007	5		54,778.826			
2007	6		54,785.858			
2007	7		54,821.093			
2007	8		54,821.083			
2007	9		54,973.500			
2007	10		55,046.436			
2007	11		55,062.568			
2007	12		55,044.855			
2008	1		55,069.610			
2008	2		55,158.479			
2008	3		55,182.449			
2008	4		55,063.610			
2008	5		54,948.572			
2008	6		54,964.241			
2008	7		55,009.145			
2008	8		55,015.933			
2008	9		55,174.478			
2008	10		55,259.997			
2008	11		55,281.238			
2008	12		55,268.186			

Xcel Energy North Dakota Residential with Space Heat
2008 Test Year Customer Forecast

Variable	Coefficient	StdErr	T-Stat	P-Value	Definition
RXND_CustMod2008.Filled	0.333	0.003	98.249	0.00%	Residential without Space Heating customers
AR(1)	0.660	0.094	7.029	0.00%	AR Term
AR(2)	0.299	0.092	3.264	0.15%	AR Term

Xcel Energy North Dakota Residential with Space Heat
2008 Test Year Customer Forecast

Regression Statistics	
Iterations	10
Adjusted Observations	106
Deg. of Freedom for Error	103
R-Squared	0.825
Adjusted R-Squared	0.822
Durbin-Watson Statistic	2.098
Durbin-H Statistic	#NA
AIC	8.036
BIC	8.112
F-Statistic	162.273
Prob (F-Statistic)	0.0000
Log-Likelihood	-573.33
Model Sum of Squares	1463410
Sum of Squared Errors	309624
Mean Squared Error	3006.06
Std. Error of Regression	54.83
Mean Abs. Dev. (MAD)	35.47
Mean Abs. % Err. (MAPE)	0.20%
Ljung-Box Statistic	23.15
Prob (Ljung-Box)	0.5112

Xcel Energy North Dakota Residential with Space Heat
2008 Test Year Customer Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
1998	1	17,908.071				
1998	2	17,870.071				
1998	3	17,914.071	17,924.132	-10.061	-0.06%	-0.183
1998	4	17,867.071	17,815.435	51.637	0.29%	0.942
1998	5	17,810.071	17,718.708	91.363	0.51%	1.666
1998	6	17,716.071	17,730.882	-14.810	-0.08%	-0.270
1998	7	17,783.071	17,854.917	-71.846	-0.40%	-1.310
1998	8	17,805.071	17,786.813	18.259	0.10%	0.333
1998	9	17,805.071	17,845.442	-40.371	-0.23%	-0.736
1998	10	17,870.071	17,862.119	7.952	0.04%	0.145
1998	11	17,896.071	17,897.363	-1.292	-0.01%	-0.024
1998	12	17,888.071	17,910.695	-22.623	-0.13%	-0.413
1999	1	17,835.071	17,840.478	-5.407	-0.03%	-0.099
1999	2	17,887.071	17,908.580	-21.508	-0.12%	-0.392
1999	3	17,962.071	17,912.145	49.926	0.28%	0.911
1999	4	17,921.071	17,820.808	100.263	0.56%	1.829
1999	5	17,756.071	17,681.425	74.646	0.42%	1.361
1999	6	17,868.071	18,166.495	-298.424	-1.67%	-5.443
1999	7	17,858.071	17,758.341	99.731	0.56%	1.819
1999	8	17,774.071	17,759.695	14.377	0.08%	0.262
1999	9	17,955.071	17,908.773	46.299	0.26%	0.844
1999	10	17,948.071	17,945.447	2.625	0.01%	0.048
1999	11	17,870.071	17,896.467	-26.396	-0.15%	-0.481
1999	12	17,943.071	17,879.236	63.835	0.36%	1.164
2000	1	17,881.071	17,926.433	-45.362	-0.25%	-0.827
2000	2	17,911.071	17,913.467	-2.395	-0.01%	-0.044
2000	3	17,921.071	17,873.981	47.090	0.26%	0.859
2000	4	17,915.071	17,932.580	-17.509	-0.10%	-0.319
2000	5	17,793.071	17,876.155	-83.083	-0.47%	-1.515
2000	6	17,732.071	17,738.299	-6.228	-0.04%	-0.114
2000	7	17,826.071	17,820.136	5.935	0.03%	0.108
2000	8	17,847.071	17,793.347	53.724	0.30%	0.980
2000	9	17,938.071	17,893.674	44.397	0.25%	0.810
2000	10	18,000.071	17,973.045	27.026	0.15%	0.493
2000	11	17,969.071	18,008.445	-39.374	-0.22%	-0.718
2000	12	17,947.071	17,934.198	12.874	0.07%	0.235
2001	1	17,967.071	17,966.465	0.606	0.00%	0.011
2001	2	17,933.071	17,964.017	-30.946	-0.17%	-0.564
2001	3	18,009.071	17,952.017	57.054	0.32%	1.041
2001	4	17,986.071	17,899.144	86.927	0.48%	1.585
2001	5	17,999.071	18,021.726	-22.655	-0.13%	-0.413
2001	6	18,004.071	17,999.400	4.672	0.03%	0.085
2001	7	18,042.071	18,030.259	11.812	0.07%	0.215
2001	8	18,004.071	18,017.729	-13.658	-0.08%	-0.249

Xcel Energy North Dakota Residential with Space Heat
2008 Test Year Customer Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2001	9	18,105.071	18,067.914	37.158	0.21%	0.678
2001	10	18,136.071	18,116.837	19.235	0.11%	0.351
2001	11	18,109.071	18,064.717	44.354	0.24%	0.809
2001	12	17,998.071	18,044.230	-46.159	-0.26%	-0.842
2002	1	18,055.071	18,053.440	1.631	0.01%	0.030
2002	2	18,019.071	18,013.742	5.329	0.03%	0.097
2002	3	18,022.071	17,997.796	24.276	0.13%	0.443
2002	4	18,063.071	17,999.169	63.903	0.35%	1.166
2002	5	18,031.071	18,053.879	-22.808	-0.13%	-0.416
2002	6	17,964.071	17,980.664	-16.593	-0.09%	-0.303
2002	7	18,051.071	18,017.596	33.475	0.19%	0.611
2002	8	18,050.071	18,045.473	4.599	0.03%	0.084
2002	9	18,147.071	18,081.921	65.150	0.36%	1.188
2002	10	18,117.071	18,117.566	-0.494	0.00%	-0.009
2002	11	17,938.071	18,102.484	-164.413	-0.92%	-2.999
2002	12	17,995.071	18,007.272	-12.200	-0.07%	-0.223
2003	1	17,951.071	17,956.015	-4.943	-0.03%	-0.090
2003	2	17,975.071	17,961.958	13.113	0.07%	0.239
2003	3	17,973.071	17,984.633	-11.561	-0.06%	-0.211
2003	4	17,950.071	17,993.902	-43.830	-0.24%	-0.799
2003	5	18,005.071	17,976.545	28.527	0.16%	0.520
2003	6	17,976.071	17,962.393	13.678	0.08%	0.249
2003	7	18,068.071	18,041.542	26.530	0.15%	0.484
2003	8	18,060.071	18,027.569	32.503	0.18%	0.593
2003	9	18,009.071	18,121.436	-112.365	-0.62%	-2.049
2003	10	18,056.071	18,061.636	-5.564	-0.03%	-0.101
2003	11	18,023.071	18,019.055	4.017	0.02%	0.073
2003	12	18,028.071	18,008.767	19.304	0.11%	0.352
2004	1	18,014.071	18,058.241	-44.170	-0.25%	-0.806
2004	2	18,011.071	18,010.438	0.633	0.00%	0.012
2004	3	18,084.071	18,037.963	46.108	0.25%	0.841
2004	4	18,086.071	18,064.431	21.640	0.12%	0.395
2004	5	18,063.071	18,052.179	10.892	0.06%	0.199
2004	6	18,060.071	18,068.932	-8.861	-0.05%	-0.162
2004	7	18,035.071	18,079.747	-44.676	-0.25%	-0.815
2004	8	18,127.071	18,102.647	24.424	0.13%	0.445
2004	9	18,169.071	18,158.386	10.685	0.06%	0.195
2004	10	18,133.071	18,166.553	-33.482	-0.18%	-0.611
2004	11	18,093.071	18,192.008	-98.936	-0.55%	-1.804
2004	12	18,068.071	18,078.348	-10.277	-0.06%	-0.187
2005	1	18,102.071	18,086.103	15.969	0.09%	0.291
2005	2	18,322.000	18,260.669	61.331	0.33%	1.119
2005	3	18,289.000	18,277.900	11.100	0.06%	0.202
2005	4	18,202.000	18,207.201	-5.201	-0.03%	-0.095

Xcel Energy North Dakota Residential with Space Heat
2008 Test Year Customer Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2005	5	18,155.000	18,156.840	-1.840	-0.01%	-0.034
2005	6	17,985.000	18,017.612	-32.612	-0.18%	-0.595
2005	7	17,771.000	17,920.329	-149.329	-0.84%	-2.724
2005	8	17,782.000	17,807.027	-25.027	-0.14%	-0.456
2005	9	17,719.000	17,735.481	-16.481	-0.09%	-0.301
2005	10	17,806.000	17,773.005	32.995	0.19%	0.602
2005	11	17,846.000	17,858.204	-12.204	-0.07%	-0.223
2005	12	17,845.000	17,870.409	-25.409	-0.14%	-0.463
2006	1	17,870.000	17,877.812	-7.812	-0.04%	-0.142
2006	2	17,922.000	17,891.298	30.702	0.17%	0.560
2006	3	17,989.000	17,944.442	44.558	0.25%	0.813
2006	4	17,980.000	17,977.209	2.791	0.02%	0.051
2006	5	18,006.000	17,997.945	8.055	0.04%	0.147
2006	6	17,886.000	17,955.229	-69.229	-0.39%	-1.263
2006	7	17,928.000	17,917.699	10.301	0.06%	0.188
2006	8	18,101.000	17,996.411	104.589	0.58%	1.908
2006	9	18,174.000	18,115.957	58.043	0.32%	1.059
2006	10	18,223.000	18,218.968	4.032	0.02%	0.074
2006	11	18,285.000	18,260.262	24.738	0.14%	0.451
2006	12	18,339.000	18,312.538	26.462	0.14%	0.483
2007	1	18,423.000	18,385.442	37.558	0.20%	0.685
2007	2		18,419.444			
2007	3		18,429.050			
2007	4		18,380.805			
2007	5		18,337.450			
2007	6		18,336.880			
2007	7		18,345.913			
2007	8		18,343.255			
2007	9		18,391.468			
2007	10		18,413.282			
2007	11		18,416.252			
2007	12		18,408.024			
2008	1		18,414.016			
2008	2		18,441.436			
2008	3		18,447.306			
2008	4		18,405.670			
2008	5		18,365.365			
2008	6		18,368.664			
2008	7		18,381.762			
2008	8		18,382.221			
2008	9		18,433.291			
2008	10		18,460.088			
2008	11		18,465.527			
2008	12		18,459.594			

Xcel Energy North Dakota Small Commercial and Industrial
2008 Test Year Customer Forecast

Variable	Coefficient	StdErr	T-Stat	P-Value	Definition
ND.EE_ND	33.320	0.255	130.672	0.00%	North Dakota Total Employment
mthlybinaries1.CIReclass01Pre	-502.503	59.210	-8.487	0.00%	Binary for C&I reclassification
mthlybinaries1.CRS	303.240	56.346	5.382	0.00%	Binary for billing system conversion
AR(1)	0.606	0.095	6.374	0.00%	AR Term
AR(2)	0.318	0.095	3.353	0.11%	AR Term

Xcel Energy North Dakota Small Commercial and Industrial 2008 Test Year Customer Forecast

Regression Statistics	
Iterations	14
Adjusted Observations	106
Deg. of Freedom for Error	101
R-Squared	0.987
Adjusted R-Squared	0.987
Durbin-Watson Statistic	2.109
Durbin-H Statistic	#NA
AIC	8.273
BIC	8.399
F-Statistic	1574.879
Prob (F-Statistic)	0.0000
Log-Likelihood	-583.88
Model Sum of Squares	29454021
Sum of Squared Errors	377789
Mean Squared Error	3740.48
Std. Error of Regression	61.16
Mean Abs. Dev. (MAD)	43.48
Mean Abs. % Err. (MAPE)	0.39%
Ljung-Box Statistic	28.88
Prob (Ljung-Box)	0.2248

Xcel Energy North Dakota Small Commercial and Industrial 2008 Test Year Customer Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
1998	1	10,219.000				
1998	2	10,211.000				
1998	3	10,298.000	10,231.045	66.955	0.65%	1.095
1998	4	10,153.000	10,247.928	-94.928	-0.93%	-1.552
1998	5	10,183.000	10,207.908	-24.908	-0.24%	-0.407
1998	6	10,184.000	10,190.547	-6.547	-0.06%	-0.107
1998	7	10,195.000	10,199.593	-4.593	-0.05%	-0.075
1998	8	10,223.000	10,207.254	15.746	0.15%	0.257
1998	9	10,214.000	10,228.087	-14.087	-0.14%	-0.230
1998	10	10,231.000	10,343.721	-112.721	-1.10%	-1.843
1998	11	10,276.000	10,283.147	-7.147	-0.07%	-0.117
1998	12	10,319.000	10,280.133	38.867	0.38%	0.635
1999	1	10,296.000	10,281.657	14.343	0.14%	0.235
1999	2	10,421.000	10,304.970	116.030	1.11%	1.897
1999	3	10,336.000	10,385.814	-49.814	-0.48%	-0.814
1999	4	10,352.000	10,471.807	-119.807	-1.16%	-1.959
1999	5	10,283.000	10,395.188	-112.188	-1.09%	-1.834
1999	6	10,465.000	10,327.331	137.669	1.32%	2.251
1999	7	10,443.000	10,472.363	-29.363	-0.28%	-0.480
1999	8	10,430.000	10,482.614	-52.614	-0.50%	-0.860
1999	9	10,422.000	10,449.697	-27.697	-0.27%	-0.453
1999	10	10,455.000	10,468.475	-13.475	-0.13%	-0.220
1999	11	10,410.000	10,469.101	-59.101	-0.57%	-0.966
1999	12	10,513.000	10,443.482	69.518	0.66%	1.137
2000	1	10,501.000	10,519.376	-18.376	-0.17%	-0.300
2000	2	10,563.000	10,528.052	34.948	0.33%	0.571
2000	3	10,628.000	10,552.986	75.014	0.71%	1.227
2000	4	10,561.000	10,626.573	-65.573	-0.62%	-1.072
2000	5	10,614.000	10,597.885	16.115	0.15%	0.263
2000	6	10,588.000	10,604.096	-16.096	-0.15%	-0.263
2000	7	10,608.000	10,666.291	-58.291	-0.55%	-0.953
2000	8	10,677.000	10,633.101	43.899	0.41%	0.718
2000	9	10,661.000	10,661.859	-0.859	-0.01%	-0.014
2000	10	10,659.000	10,624.142	34.858	0.33%	0.570
2000	11	10,703.000	10,648.141	54.859	0.51%	0.897
2000	12	10,660.000	10,690.093	-30.093	-0.28%	-0.492
2001	1	11,260.000	11,266.053	-6.053	-0.05%	-0.099
2001	2	11,230.000	11,259.625	-29.625	-0.26%	-0.484
2001	3	11,280.000	11,245.247	34.753	0.31%	0.568
2001	4	11,210.000	11,274.899	-64.899	-0.58%	-1.061
2001	5	11,258.000	11,242.985	15.015	0.13%	0.246
2001	6	11,306.000	11,246.977	59.023	0.52%	0.965
2001	7	11,355.000	11,226.942	128.058	1.13%	2.094
2001	8	11,366.000	11,310.991	55.009	0.48%	0.899

Xcel Energy North Dakota Small Commercial and Industrial
2008 Test Year Customer Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2001	9	11,403.000	11,353.765	49.235	0.43%	0.805
2001	10	11,362.000	11,417.464	-55.464	-0.49%	-0.907
2001	11	11,343.000	11,381.486	-38.486	-0.34%	-0.629
2001	12	11,270.000	11,344.893	-74.893	-0.66%	-1.225
2002	1	11,583.000	11,284.587	298.413	2.58%	4.879
2002	2	11,495.000	11,457.191	37.809	0.33%	0.618
2002	3	11,440.000	11,506.653	-66.653	-0.58%	-1.090
2002	4	11,442.000	11,443.071	-1.071	-0.01%	-0.018
2002	5	11,438.000	11,428.122	9.878	0.09%	0.162
2002	6	11,431.000	11,427.041	3.959	0.03%	0.065
2002	7	11,458.000	11,421.523	36.477	0.32%	0.596
2002	8	11,450.000	11,435.665	14.335	0.13%	0.234
2002	9	11,500.000	11,439.410	60.590	0.53%	0.991
2002	10	11,523.000	11,521.603	1.397	0.01%	0.023
2002	11	11,415.000	11,518.467	-103.467	-0.91%	-1.692
2002	12	11,504.000	11,442.980	61.020	0.53%	0.998
2003	1	11,543.000	11,483.667	59.333	0.51%	0.970
2003	2	11,496.000	11,522.849	-26.849	-0.23%	-0.439
2003	3	11,576.000	11,500.049	75.951	0.66%	1.242
2003	4	11,531.000	11,545.812	-14.812	-0.13%	-0.242
2003	5	11,544.000	11,536.585	7.415	0.06%	0.121
2003	6	11,560.000	11,526.253	33.747	0.29%	0.552
2003	7	11,605.000	11,564.528	40.472	0.35%	0.662
2003	8	11,599.000	11,582.090	16.910	0.15%	0.276
2003	9	11,524.000	11,584.999	-60.999	-0.53%	-0.997
2003	10	11,524.000	11,589.816	-65.816	-0.57%	-1.076
2003	11	11,582.000	11,534.290	47.710	0.41%	0.780
2003	12	11,611.000	11,552.839	58.161	0.50%	0.951
2004	1	11,656.000	11,608.878	47.122	0.40%	0.770
2004	2	11,615.000	11,633.273	-18.273	-0.16%	-0.299
2004	3	11,676.000	11,616.374	59.626	0.51%	0.975
2004	4	11,615.000	11,719.167	-104.167	-0.90%	-1.703
2004	5	11,682.000	11,653.785	28.215	0.24%	0.461
2004	6	11,670.000	11,649.888	20.112	0.17%	0.329
2004	7	11,695.000	11,718.363	-23.363	-0.20%	-0.382
2004	8	11,694.000	11,696.703	-2.703	-0.02%	-0.044
2004	9	11,685.000	11,686.730	-1.730	-0.01%	-0.028
2004	10	11,680.000	11,743.153	-63.153	-0.54%	-1.033
2004	11	11,811.000	11,699.544	111.456	0.94%	1.822
2004	12	11,768.000	11,757.582	10.418	0.09%	0.170
2005	1	11,729.000	11,839.852	-110.852	-0.95%	-1.813
2005	2	11,471.000	11,458.870	12.130	0.11%	0.198
2005	3	11,500.000	11,452.672	47.328	0.41%	0.774
2005	4	11,501.000	11,552.409	-51.409	-0.45%	-0.841

Xcel Energy North Dakota Small Commercial and Industrial 2008 Test Year Customer Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2005	5	11,499.000	11,521.167	-22.167	-0.19%	-0.362
2005	6	11,471.000	11,498.705	-27.705	-0.24%	-0.453
2005	7	11,484.000	11,521.076	-37.076	-0.32%	-0.606
2005	8	11,471.000	11,495.801	-24.801	-0.22%	-0.406
2005	9	11,505.000	11,479.329	25.671	0.22%	0.420
2005	10	11,504.000	11,552.450	-48.450	-0.42%	-0.792
2005	11	11,517.000	11,528.322	-11.322	-0.10%	-0.185
2005	12	11,511.000	11,517.854	-6.854	-0.06%	-0.112
2006	1	11,513.000	11,573.888	-60.888	-0.53%	-0.996
2006	2	11,500.000	11,539.519	-39.519	-0.34%	-0.646
2006	3	11,506.000	11,514.595	-8.595	-0.07%	-0.141
2006	4	11,544.000	11,554.079	-10.079	-0.09%	-0.165
2006	5	11,558.000	11,554.786	3.214	0.03%	0.053
2006	6	11,563.000	11,562.643	0.357	0.00%	0.006
2006	7	11,601.000	11,605.673	-4.673	-0.04%	-0.076
2006	8	11,649.000	11,608.755	40.245	0.35%	0.658
2006	9	11,661.000	11,638.642	22.358	0.19%	0.366
2006	10	11,667.000	11,684.937	-17.937	-0.15%	-0.293
2006	11	11,685.000	11,678.001	6.999	0.06%	0.114
2006	12	11,656.000	11,683.268	-27.268	-0.23%	-0.446
2007	1	11,687.000	11,698.190	-11.190	-0.10%	-0.183
2007	2		11,691.520			
2007	3		11,695.605			
2007	4		11,730.431			
2007	5		11,734.106			
2007	6		11,737.580			
2007	7		11,763.650			
2007	8		11,766.743			
2007	9		11,769.661			
2007	10		11,798.174			
2007	11		11,800.773			
2007	12		11,803.225			
2008	1		11,833.855			
2008	2		11,836.039			
2008	3		11,838.099			
2008	4		11,871.820			
2008	5		11,873.656			
2008	6		11,875.387			
2008	7		11,910.631			
2008	8		11,912.174			
2008	9		11,913.629			
2008	10		11,946.791			
2008	11		11,948.087			
2008	12		11,949.310			