EXHIBIT 7

Direct Testimony and Schedules
Jannell E. 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-10-____
Exhibit___(JEM-1)

Sales Forecast

December 20, 2010

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Schedules

I. INTRODUCTION AND QUALIFICATIONS

Q. PLEASE STATE YOUR NAME AND OCCUPATION.

A. My name is Jannell E. Marks. I am the Director of the Sales, Energy and Demand Forecasting Department for Xcel Energy Services Inc. ("XES"), which is the service company subsidiary of Xcel Energy Inc.

Q. PLEASE SUMMARIZE YOUR QUALIFICATIONS AND EXPERIENCE.

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. ("NCE") and Northern States Power Company ("NSP"), I assumed the position of Manager, Economics and Energy Forecasting with XES. I was promoted to my current position with XES in February 2007. My resume is included as Exhibit___(JEM-1), Schedule 1.

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

A. I am testifying on behalf of Northern States Power Company, a Minnesota corporation ("Xcel Energy" or the "Company") operating in North Dakota. I sponsor the Company's forecasts of sales and customers for the 2011 test year. I recommend that the North Dakota Public Service Commission ("Commission") adopt my forecasts of sales and customers for the purpose of determining the revenue requirement and final rates in this proceeding. In support of my recommended forecasts, I first compare our customer and sales forecast to historical customer and megawatt hour ("MWh") sales trends for Xcel Energy's North Dakota service territory. Then I present details of the

methods I used to develop the electric MWh sales and customer forecasts and the results.

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

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

II. 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 classes comprise Xcel Energy's North Dakota electric 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 kW 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. HAVE THE DEFINITIONS OF THESE CUSTOMER CLASSES CHANGED DURING THE HISTORICAL SAMPLE PERIOD USED TO DEVELOP THE CUSTOMER AND SALES FORECASTS?

A. Yes. Prior to 2001, Xcel Energy's North operations (the NSP operating system) considered a Commercial and Industrial customer "large" if the customer met or exceeded a maximum demand of 100 kW at any point in the previous 12-month period. To achieve consistency in reporting among operating companies within Xcel Energy, in 2001 that threshold changed to 1,000 kW. The 1,000 kW threshold was selected because it follows the Federal Energy Regulatory Commission's ("FERC") suggested standards.

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

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

1) The monthly and annual electric supply requirements;
2) Test-year revenue under present rates; and
3) Test-year revenue under proposed rates.

Q. WHAT IS XCEL ENERGY'S FORECAST OF ELECTRIC SALES AND CUSTOMERS FOR THE TEST YEAR ENDING DECEMBER 31, 2011?

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

Q. WHAT HAS BEEN THE HISTORICAL CUSTOMER GROWTH IN NORTH DAKOTA?

A. The total number of electric retail customers in the Xcel Energy North Dakota service territory increased at an average annual rate of 0.9 percent from 1998 through 2009, or 737 customers per year on average. The largest class of customers is the Residential class, which represents 86 percent of total customers and has averaged a growth rate of 0.8 percent or 603 additions per year during the period from 1998 through 2009. My calculation of average growth from 1998 to 2009 excludes 2005, the year the Company implemented a new billing system. As I explain more fully in the Data Preparation section of my testimony, the associated customer-count definitional changes resulted in a reduction in the count of customers following the billing system conversion.

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

A. I expect 2010 and 2011 retail customer additions to be very similar to the 1998 to 2009 historical growth (excluding 2005), and average 755 customer additions per year, or 0.9 percent. The 2010 customer forecast is based on actual customer data through June 2010. I will explain the methodologies used to develop this forecast in the following section of my testimony.

Table 1 provides the historical and forecast annual customer growth rate by class for the time period 1998-2011.

Table 1

1998-2011 Average Annual Percent Change in Customers

Customer Class	1998-2009 Average excluding 2005	2010 Forecast	2011 Test Year
Residential	0.8%	0.9%	0.8%
Commercial & Industrial	1.2%	0.7%	1.1%
Street Lighting	1.8%	2.9%	-0.9%
Public Authority	0.0%	0.5%	-0.1%
Total Retail	**0.9%**	**0.9%**	**0.8%**

Q. WHAT HAS BEEN THE HISTORICAL WEATHER-NORMALIZED ELECTRIC SALES GROWTH IN NORTH DAKOTA?

A. After normalizing for weather, Xcel Energy's North Dakota service territory total electric retail sales have increased an average of 1.2 percent per year during the period of 1998 through 2009. Residential sales have averaged growth of 1.0 percent, while total Commercial and Industrial sales have increased at an average annual rate of 1.4 percent during the period of 1998 through 2009.

The effect of the economic recession of 2009 is evident on sales in North Dakota. With the onset of the economic recession in 2008, retail sales growth slowed from the 1998-2007 historical average annual rate of 1.5 percent to only 0.7 percent. In 2009, retail sales *declined* 0.6 percent from 2008 levels.

The 2008 slowdown was seen primarily in sales to the Commercial and Industrial sector, which increased by only 0.7 percent in 2008, followed by a decline of 2.0 percent in 2009. Growth in the Commercial and Industrial class has been slow in 2010, and is expected to be only 0.2 percent for the year. Table 2 shows the impacts of the economic recession on sales by customer class and the sales forecast for 2010 and 2011.

Table 2

1998-2011 Average Annual Percent Change in Sales

Customer Class	1998-2009 Average	2010 Forecast	2011 Test Year
Residential	1.0%	1.0%	3.3%
Commercial & Industrial	1.4%	0.2%	1.0%
Street Lighting	1.0%	1.5%	1.4%
Public Authority	-4.5%	7.3%	-5.8%
Total Retail	**1.2%**	**0.5%**	**1.7%**

Q. HOW DO 2011 SALES COMPARE TO HISTORICAL SALES?

A. The total retail sales 2011 test-year growth rate of 1.7 percent is higher than the historical average annual growth rate for the time period 1998-2009, which reflects the impacts of a sluggish economy during 2008 and 2009. The 2010 projection incorporates actual sales data through June 2010. The sales projections for 2011 show a return to the 1998-2009 trend for the Residential class (resulting in a larger-than-average percentage increase over 2010), combined with improving growth in the Commercial and Industrial class. The sales growth in the Residential class is due primarily to expectations of growth in real Gross Metropolitan Product in 2011, combined with continued growth

in the number of Residential customers. I will explain the methodologies used to develop the forecast in the following section of my testimony.

Q. PLEASE EXPLAIN THE COMMERCIAL AND INDUSTRIAL SALES GROWTH PROJECTIONS RELATIVE TO HISTORICAL GROWTH.

A. As I previously explained, the Commercial and Industrial sector experienced the greatest impact from the economic recession, with sales growth slowing in 2008, and declining in 2009. This sector is expected to be the slowest to recover from the effects of the recession, with 2011 test-year growth at a slightly lower rate than average historical growth.

Q. WHY DOES THE PUBLIC AUTHORITY CLASS SHOW A LARGE INCREASE IN 2010 SALES, FOLLOWED BY A DECLINE IN SALES IN 2011?

A. Our 2010 forecast for the Public Authority class includes actual sales through June and forecasted sales for July through December. The actual sales for January through June 2010 were stronger than we have seen historically, leading to an overall expected annual growth of 7.3 percent in this class in 2010. I should note that annual sales growth in this class has historically been volatile, ranging between -33.0 percent in 2001 to +9.1 percent in 2005. In consideration of this, we based our 2011 test-year forecast on the average sales for this class over the past two years. Because of the higher-than-normal 2010 results, the 2011 forecast results in a negative rate of annual growth when compared to 2010 sales.

Q. HOW DO THE 2011 TEST-YEAR ELECTRIC SALES COMPARE WITH THE FORECAST INCLUDED IN THE COMPANY'S MOST RECENT RESOURCE PLAN SUBMITTED TO THE NORTH DAKOTA PUBLIC SERVICE COMMISSION?

A. This forecast is slightly lower than the North Dakota forecast used in the Company's most recent Resource Plan. The North Dakota forecast filed in the Resource Plan predicts 2011 retail sales totaling 2,267,271 MWh, which is 15,991 MWh or 0.7 percent higher than the forecast reflected in this rate application. The lower test-year forecast is due to a slightly slower-than-expected recovery from the recession during 2010, and slower recovery in the Commercial and Industrial sector in 2011 than previously projected.

Q. WHY DID THE COMPANY USE A DIFFERENT FORECAST FOR THIS FILING THAN FOR THE RESOURCE PLAN?

A. Due to the lead-time required to prepare a resource plan filing, the Company relied on a forecast completed in the Spring of 2010 for that filing. In order to use the most current customer and sales information available, and to use the most current economic and demographic data available, the Company updated its forecast in August 2010, and is using that updated forecast for this filing.

Q. HOW DID THE 2008 WEATHER-NORMALIZED ACTUAL SALES COMPARE TO THE 2008 TEST-YEAR ELECTRIC SALES FORECAST FILED IN THE COMPANY'S PREVIOUS ELECTRIC RATE CASE (CASE NO. PU-07-776)?

A. A comparison of the weather-normalized 2008 actual sales and the 2008 test-year forecasted sales filed in Case No. PU-07-776 is provided in Table 3. The 2008 overall sales forecast was very close to the 2008 weather-normalized actual sales. Weather-normalized 2008 actual sales were slightly weaker (4,544 MWh or 0.2 percent) than predicted for the test year, validating the reasonableness of our 2008 test-year forecast. Lower-than-expected sales in the Residential sector were almost entirely offset by higher-than-expected sales in the Commercial and Industrial sector.

Table 3

2008 Weather-Normalized Sales by Class (MWh)

Customer Class	2008 Test Year Forecast	2008 Actual	Variance	Percentage
Residential	780,383	758,402	-21,981	-2.8%
Total Commercial & Industrial	1,410,912	1,428,914	18,002	1.3%
Street Lighting	14,862	14,618	-244	-1.6%
Public Authority	11,760	11,439	-321	-2.7%
Total Retail	**2,217,917**	**2,213,373**	**-4,544**	**-0.2%**

Q. HOW DO YOU EXPECT THE ECONOMY TO PERFORM OVER THE NEXT SEVERAL YEARS?

A. North Dakota is in a stronger position than many states, because the impacts from the recession have been less than experienced in many other areas of the country. Based on the economic outlook for the Fargo area and the state of North Dakota provided by Global Insight, Inc., I expect the economy in the State to improve over the next several years, but the rate of improvement will likely be slower than the historical average growth rate. For example, total employment levels in North Dakota declined by 0.5 percent in 2009 and are expected to improve slightly (0.4 percent) in 2010 and improve to a 1.5 percent annual growth rate by the end of 2011, close to the historical average rate of growth.

The manufacturing sector, as measured by the North Dakota Industrial Production Index for Manufacturing, declined much more rapidly and significantly than employment, losing 16 percent from the peak in the first

quarter of 2008 to the lowest level of the index, which occurred in the second quarter of 2009. This sector has been improving since the end of 2009 and is expected to reach pre-recessionary levels of activity during 2011.

All in all, the economic outlook calls for slow but steady growth over the next few years. My forecast in this proceeding is based on these economic indicators.

III. OVERVIEW OF SALES AND CUSTOMER FORECASTING METHODOLOGY

Q. IS THE TEST-YEAR FORECAST THE SAME FORECAST USED BY XCEL ENERGY FOR THE 2011 FINANCIAL BUDGET?

A. Yes, it is.

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

A. The sales forecast for the 2011 financial budget was completed in August 2010 and was based on actual customers and sales through June 2010. The Sales, Energy and Demand Forecasting Department coordinated the electric sales and customer forecast preparation using 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, COMMERCIAL AND INDUSTRIAL, AND PUBLIC STREET AND HIGHWAY LIGHTING CUSTOMER CLASSES?

A. I developed Ordinary Least Squares ("OLS") multiple regression models as the foundation for the sales forecasts of the Residential without Space Heating, Residential with Space Heating, Small Commercial and Industrial, Large Commercial and Industrial, and Public Street and Highway Lighting customer classes. OLS multiple regression techniques are very well-known, 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. Xcel Energy 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. In all of the models, monthly historical data from January 1998 through June 2010 was used to determine these relationships. The modeled relationships were then simulated over the forecast period by assuming normal weather (expressed in terms of 20-year-averaged heating-degree days and THI) and the projected levels of the independent predictor variables.

Q. WERE ANY SPECIAL VARIABLES USED TO ADDRESS THE PREVIOUSLY-DISCUSSED COMMERCIAL AND INDUSTRIAL RECLASSIFICATION?

A. Yes. As I explained earlier in my testimony, in 2001, Xcel Energy changed the threshold used to determine "large" Commercial and Industrial customers. In order to maintain the January 1998 to June 2010 sample time period and account for the reclassification, a step-change binary variable was incorporated in the Small Commercial and Industrial and Large Commercial and Industrial sales regression models. The binary variable equaled "1" in months prior to the reclassification in January 2001, and "0" for all months after the reclassification. Because the reclassification was not completed in one month, additional binary variables were used in January and February 2001 to account for customer shifts between the Small and the Large Commercial and Industrial classes as they occurred.

Q. WHAT PROCESS WAS USED TO FORECAST SALES IN THE PUBLIC AUTHORITY CUSTOMER CLASS?

A. Sales in the Public Authority customer class make up only 0.5 percent of total retail electric sales in North Dakota in the test year. Usage in this class often is impacted by factors that are difficult to capture in an OLS multiple regression model. To develop the sales forecast for this class, the annual forecast for Public Authority sales was calculated by summing the monthly calendar-month sales for the time period July 2009 through June 2010. Because this value was substantially higher than the actual annual sales for the prior four years (2006 to 2009), the average of the sum of sales for the past two years was calculated and used as the projection of annual sales for the test year. Using historical monthly calendar-month sales, the average monthly percentage of annual sales was calculated based on data from the five-year historical time period January 2005 through December 2009. This average monthly

percentage was then applied to the annual sales forecast to derive the calendar-month sales forecast.

Q. WHAT PROCESS WAS USED FOR FORECASTING NUMBER OF CUSTOMERS?

A. The number of customers by customer class for the classes Residential without Space Heating, Residential with Space Heating, Small Commercial and Industrial, Public Street and Highway Lighting, and Public Authority 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. The customer forecast for the Large Commercial and Industrial customer class was developed by holding constant the average number of customers for the July 2009 to June 2010 period of time.

IV. 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 projections of sales are provided in Exhibit___(JEM-1), Schedule 4, and the regression models and associated analysis used in Xcel Energy's statistical projections of customers are provided in Exhibit___(JEM-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 XCEL ENERGY 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 historical sales variability. The regression models used to develop the sales forecast demonstrate very high R-squared statistics, ranging between 0.935 and 0.995.

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 criteria 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. In the Large Commercial and Industrial model and the Public Street and Highway Lighting model, the t-statistics for the monthly binary variables were less than 2.0, but the monthly binary variables were included in the model, because in aggregate, they provide explanatory value to the model

and allow the forecast to exhibit a monthly pattern of sales similar to the historical monthly sales pattern. In several other cases where the t-statistics were less than 2.0, the variable was included in the model, because it provided additional explanatory value to the model.

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. HOW ACCURATE HAVE XCEL ENERGY'S FORECASTS BEEN HISTORICALLY?

A. Over the last five years, the forecasts have, on average, been within 0.5 percent of actual levels after adjusting for weather.

V. WEATHER NORMALIZATION OF TEST-YEAR SALES

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

A. Residential without Space Heating, Residential with Space Heating, and Small Commercial and Industrial sales projections 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 temperature-humidity index, 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 temperature-humidity index ("THI") variables included in each class' model. Test-year sales were

then projected by simulating the established statistical relationships over the forecast horizon.

For the Large Commercial and Industrial, Public Street and Highway Lighting, and Public Authority 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. HOW WAS NORMAL WEATHER DETERMINED?

A. Normal daily weather was calculated based on the average of historical heating-degree days and THI for the 20-year time period 1990 to 2009. 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.

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 65-degree temperature base. This information was obtained from the National Oceanic and Atmospheric Administration ("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. The majority of Xcel Energy's North Dakota electric customers reside within the Fargo 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.

VI. DATA PREPARATION

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

A. Historical billing-month sales and number of customers were obtained from Xcel Energy's billing system reports. Monthly historical data from January 1998 through June 2010 was obtained and used. This period was selected for analysis to address anomalies in the Company's billing system data occurring in the period prior to January 1998. Using this time period eliminated irregular data from the billing system while still providing an acceptable sample size. It also provided a common start-date for all regression models of sales.

Q. WHAT IS THE SOURCE OF THE COMPANY'S PRE-FEBRUARY 2005 SALES INFORMATION?

A. All of the pre-February 2005 billing data is from Xcel Energy's legacy billing system ("CSS").

Q. WHAT IS THE SOURCE OF THE COMPANY'S POST-FEBRUARY 2005 SALES INFORMATION?

A. In February 2005, the Company converted from CSS to the CRS billing system. Most 2005 data will be from CRS. The definition of a billing month is different under CRS from the definition of a billing month under CSS. Consequently, the data presented by the post-February 2005 CRS monthly billed sales will not be entirely consistent with the data presented by CSS prior to 2005. However, the definitional differences have been addressed by calculating both billing-month weather and billing-cycle days using the same billing-cycle information underlying the billing-month sales.

Q. COULD YOU PLEASE EXPLAIN OTHER AREAS OF DIFFERENCE?

A. Yes. With the conversion from CSS to CRS, the number of customers in 2005 appears lower than it would have been under CSS. Analysis conducted prior to system conversion indicated that CRS would report fewer customers than CSS just based on tests of the change in the definition of active services. These resulted from small definitional changes in what constitutes an active services account needed to bring uniformity between the former NCE system and the former NSP system. However, these customer-count definitional changes did not impact the amount of sales billed to customers.

Q. DID YOU MAKE ANY ADJUSTMENT TO THE CUSTOMER COUNTS AS A RESULT OF THESE CHANGES?

A. No, I did not adjust the customer counts. However, I did use binary variables in the Residential and Commercial and Industrial customer regression models to account for these definitional changes. The use of the binary variable in the regression models provided a better statistical fit to the historical data.

Q. WHAT IS THE SOURCE OF WEATHER DATA?

A. As I explained previously in my testimony, NOAA weather data measured at the Fargo weather station was my data source, and 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. The Company used heating-degree days as a measure of cold weather. 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 20 years of daily heating-degree days using data from 1990 to 2009.

The Company used the temperature-humidity index as the measure of hot weather, because it combines temperature and humidity, both of which impact air conditioning load. THI were calculated for each day using the formula:

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

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 the Fargo metropolitan area were obtained from Global Insight, Inc., a respected economic forecasting firm frequently relied on by forecasting professionals. These variables include population, households, employment, personal income, Gross Metropolitan Product, and the Industrial Production Index for Total Manufacturing. This information is used to determine the historical relationship between customers and sales, and economic and demographic measures. The Company used the most current economic and demographic data available from Global Insight, Inc. at the time of modeling.

VII. UNBILLED SALES

Q. PLEASE EXPLAIN THE TERM "UNBILLED SALES".

A. Xcel Energy reads electric meters each working day according to a meter-reading schedule based on 21 billing cycles per billing month. Meters read early in the month mostly reflect consumption that occurred during the previous month. Meters read late in the month mostly reflect consumption that occurred 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 month that is not billed to the customer until the succeeding month.

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

A. The purpose is to align the test-year revenues with the relevant projected test-year expenses, which have been estimated on a calendar-month basis.

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

A. Yes. Xcel Energy 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 projected billing-month sales. The projected billing-month sales were created using the statistical models and other forecasting methods previously described.

VIII. CALENDAR-MONTH SALES DERIVATION

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

A. For the Residential without Space Heating, Residential with Space Heating, and Small 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 terms of the sales load component that is not associated with weather ("base load"), and 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 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 above). 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 Large Commercial and Industrial and Public Authority classes, Xcel Energy calculated the test-year calendar-month sales simply based on the projected billing-month sales in the same manner as detailed for Residential with Space Heating, Residential without Space Heating, and Small Commercial and Industrial classes. However, for the Large Commercial and Industrial and Public Authority classes, 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 classes are billed on a calendar-month basis. Therefore, for these classes, the calendar-month sales equal the billing-month sales.

IX. 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?

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-10-___

AFFIDAVIT OF
Jannell E. 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 E. Marks

Jannell E. Marks

Subscribed and sworn to before me, this 14th day of December, 2010.

Notary Public

CHRISTINE J. CARTER
NOTARY PUBLIC
STATE OF COLORADO

My Commission Expires 02/09/2013

Resume

Jannell E. Marks
Director, Sales, Energy and Demand Forecasting
1800 Larimer Street, Denver, Colorado 80202

February 2007 – Present

Director, Sales, Energy and Demand Forecasting

Responsible for the development of forecasted sales data and economic conditions for Xcel Energy's operating companies, and the presentation of this information to Xcel Energy's senior management, other Xcel Energy departments, and externally to various regulatory and reporting agencies. Also responsible for developing and implementing forecasting, planning, and load analysis studies for regulatory proceedings. Testified on forecasting issues before the Colorado Public Utilities Commission, the Minnesota Public Utilities Commission, the North Dakota Public Service Commission, and the Public Service Commission of Wisconsin.

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

Definition 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.

Commission – North Dakota Public Service Commission.

Company – Northern States Power Company, a Minnesota corporation.

CRS – Customer Resource System, Xcel Energy's billing system since February 2005.

CSS – Xcel Energy's billing system prior to February 2005.

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.

FERC – Federal Energy Regulatory Commission.

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.

Definition of Terms (continued)

NCE – New Centuries Energy Inc.

NOAA – National Oceanic and Atmospheric Administration.

Normal Weather – the average of 20 years of historical weather.

NSP – Northern States Power Company.

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, 2011-December 31, 2011.

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.

Xcel Energy – Northern States Power Company, a Minnesota corporation.

XEI – Xcel Energy Inc.

XES – Xcel Energy Services Inc.

Xcel Energy - North Dakota State
Test Year Sales and Customers by Customer Class

Weather Normalized Calendar Month Sales (MWh)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Residential without Space Heat	52,545	49,063	44,820	39,918	39,199	41,177	50,569	50,304	38,871	38,856	44,714	52,433	542,468
Residential with Space Heat	39,231	33,105	28,014	18,853	13,721	12,269	13,911	14,137	12,152	16,912	25,506	36,030	263,842
Small Commercial & Industrial	98,970	88,093	95,652	82,464	86,508	82,721	93,553	92,634	83,180	87,481	88,639	96,257	1,076,153
Large Commercial & Industrial	25,132	28,571	26,632	25,603	28,237	28,215	29,783	28,133	29,867	32,646	29,976	28,258	341,052
Public Street & Highway Lighting	1,703	1,480	1,419	1,235	1,082	993	984	1,075	1,226	1,402	1,555	1,701	15,856
Other Sales to Public Authority	944	936	983	984	1,095	984	1,148	1,103	950	962	857	964	11,910
Total Retail Sales	218,526	201,248	197,521	169,058	169,841	166,358	189,947	187,386	166,247	178,259	191,247	215,643	2,251,280

Number of Customers

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average
Residential without Space Heat	56,531	56,580	56,623	56,649	56,674	56,706	56,753	56,805	56,858	56,910	56,961	57,018	56,756
Residential with Space Heat	19,754	19,763	19,773	19,783	19,793	19,803	19,813	19,823	19,834	19,844	19,855	19,865	19,809
Small Commercial & Industrial	12,076	12,086	12,106	12,126	12,146	12,160	12,174	12,188	12,207	12,225	12,243	12,267	12,167
Large Commercial & Industrial	19	19	19	19	19	19	19	19	19	19	19	19	19
Public Street & Highway Lighting	93	93	93	93	93	93	93	93	93	93	93	93	93
Other Sales to Public Authority	191	190	190	190	190	190	190	190	190	190	190	190	190
Total Retail Customers	88,664	88,731	88,804	88,860	88,915	88,971	89,042	89,118	89,201	89,281	89,361	89,452	89,033

Xcel Energy North Dakota Residential without Space Heat
2011 Test-Year Sales Forecast

Variable	Coefficient	StdErr	T-Stat	P-Value	Definition
CONST	-4754.042	4272.587	-1.113	26.79%	Constant term
FGO.GMP2000C_FGO	2.621	0.207	12.682	0.00%	Fargo, ND Real Gross Metro Product (millions 2001$)
NDRXSales.NDTotRes_RAP_ma12	-256.596	104.376	-2.458	1.53%	Residential Real Average Price, 12-month moving average ($/MWh)
BillingDayscellnet.BillDaysCellnet21	920.796	74.933	12.288	0.00%	Billing Days
NDRXWeather.H65_bill_RX_ND_Jan	0.000168566	0.000	30.850	0.00%	January HDD65 * January customers
NDRXWeather.H65_bill_RX_ND_Feb	0.000137988	0.000	26.090	0.00%	February HDD65 * February customers
NDRXWeather.H65_bill_RX_ND_Mar	0.000118902	0.000	21.026	0.00%	March HDD65 * March customers
NDRXWeather.H65_bill_RX_ND_Apr	0.000081238	0.000	10.351	0.00%	April HDD65 * April customers
NDRXWeather.H65_bill_RX_ND_Nov	0.000060327	0.000	5.448	0.00%	November HDD65 * November customers
NDRXWeather.H65_bill_RX_ND_Dec	0.000142419	0.000	21.318	0.00%	December HDD65 * December customers
NDRXWeather.T65_bill_RX_ND_Jun	0.001319081	0.000	5.934	0.00%	June THI65 * June customers
NDRXWeather.T65_bill_RX_ND_Jul	0.001863417	0.000	26.495	0.00%	July THI65 * July customers
NDRXWeather.T65_bill_RX_ND_Aug	0.002102225	0.000	33.186	0.00%	August THI65 * August customers
NDRXWeather.T65_bill_RX_ND_Sep	0.002187146	0.000	17.859	0.00%	September THI65 * September customers
NDRXWeather.T65_bill_RX_ND_Oct	0.002291065	0.001	3.334	0.11%	October THI65 * October customers
Binary2.Sep2007	-3685.086	1153.445	-3.195	0.18%	Binary variable September 2007
Binary2.May2001	3632.024	1081.979	3.357	0.10%	Binary variable May 2001
BinaryTrans.Oct09	1988.105	1130.064	1.759	8.09%	Binary variable October 2009
AR(1)	0.453	0.079	5.743	0.00%	First order autoregressive term

Xcel Energy North Dakota Residential without Space Heat
2011 Test-Year Sales Forecast

Regression Statistics	
Iterations	10
Adjusted Observations	149
Deg. of Freedom for Error	130
R-Squared	0.972
Adjusted R-Squared	0.968
AIC	14.236
BIC	14.619
F-Statistic	250.969
Prob (F-Statistic)	0.0000
Log-Likelihood	-1,252.98
Model Sum of Squares	6,107,639,113.82
Sum of Squared Errors	175,761,440.42
Mean Squared Error	1,352,011.08
Std. Error of Regression	1,162.76
Mean Abs. Dev. (MAD)	862.07
Mean Abs. % Err. (MAPE)	2.19%
Durbin-Watson Statistic	1.940
Durbin-H Statistic	
Ljung-Box Statistic	68.42
Prob (Ljung-Box)	0.0000
Skewness	0.038
Kurtosis	3.025
Jarque-Bera	0.039
Prob (Jarque-Bera)	0.9805

Xcel Energy North Dakota Residential without Space Heat
2011 Test-Year Sales Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
1998	1	44,316.000				
1998	2	35,791.000	37,678.038	-1,887.038	-5.27%	-1.623
1998	3	33,866.000	34,510.270	-644.270	-1.90%	-0.554
1998	4	31,951.000	32,009.446	-58.446	-0.18%	-0.050
1998	5	30,344.000	28,982.131	1,361.869	4.49%	1.171
1998	6	30,986.000	31,486.932	-500.932	-1.62%	-0.431
1998	7	40,762.000	40,982.909	-220.909	-0.54%	-0.190
1998	8	41,049.000	41,636.426	-587.426	-1.43%	-0.505
1998	9	39,020.000	39,871.338	-851.338	-2.18%	-0.732
1998	10	31,487.000	30,751.877	735.123	2.33%	0.632
1998	11	32,946.000	31,563.746	1,382.254	4.20%	1.189
1998	12	39,639.000	41,686.758	-2,047.758	-5.17%	-1.761
1999	1	48,745.000	48,856.630	-111.630	-0.23%	-0.096
1999	2	37,868.000	38,506.325	-638.325	-1.69%	-0.549
1999	3	34,164.000	35,559.444	-1,395.444	-4.08%	-1.200
1999	4	31,853.000	32,743.757	-890.757	-2.80%	-0.766
1999	5	31,350.000	28,381.715	2,968.285	9.47%	2.553
1999	6	33,274.000	34,117.954	-843.954	-2.54%	-0.726
1999	7	38,692.000	39,711.803	-1,019.803	-2.64%	-0.877
1999	8	40,871.000	41,207.871	-336.871	-0.82%	-0.290
1999	9	36,018.000	34,727.062	1,290.938	3.58%	1.110
1999	10	30,337.000	29,740.382	596.618	1.97%	0.513
1999	11	30,579.000	32,091.551	-1,512.551	-4.95%	-1.301
1999	12	40,622.000	40,566.956	55.044	0.14%	0.047
2000	1	46,612.000	47,189.571	-577.571	-1.24%	-0.497
2000	2	37,936.000	40,325.359	-2,389.359	-6.30%	-2.055
2000	3	34,945.000	34,882.125	62.875	0.18%	0.054
2000	4	33,726.000	32,751.445	974.555	2.89%	0.838
2000	5	31,280.000	30,718.786	561.214	1.79%	0.483
2000	6	32,672.000	32,244.080	427.920	1.31%	0.368
2000	7	40,384.000	39,034.105	1,349.895	3.34%	1.161
2000	8	44,633.000	44,348.343	284.657	0.64%	0.245
2000	9	38,638.000	37,666.699	971.301	2.51%	0.835
2000	10	31,370.000	30,872.978	497.022	1.58%	0.427
2000	11	33,812.000	32,662.930	1,149.070	3.40%	0.988
2000	12	45,198.000	45,547.963	-349.963	-0.77%	-0.301
2001	1	47,764.000	50,928.717	-3,164.717	-6.63%	-2.722
2001	2	40,203.225	40,310.841	-107.616	-0.27%	-0.093

Xcel Energy North Dakota Residential without Space Heat
2011 Test-Year Sales Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2001	3	39,141.759	38,746.883	394.876	1.01%	0.340
2001	4	33,923.787	34,585.487	-661.700	-1.95%	-0.569
2001	5	33,988.927	33,703.141	285.786	0.84%	0.246
2001	6	32,624.886	31,993.648	631.238	1.93%	0.543
2001	7	41,705.293	43,546.528	-1,841.235	-4.41%	-1.584
2001	8	47,993.200	49,469.675	-1,476.475	-3.08%	-1.270
2001	9	40,949.400	38,055.076	2,894.324	7.07%	2.489
2001	10	31,850.586	31,371.157	479.429	1.51%	0.412
2001	11	33,199.296	33,097.009	102.287	0.31%	0.088
2001	12	41,246.746	41,146.070	100.676	0.24%	0.087
2002	1	47,005.856	47,831.373	-825.517	-1.76%	-0.710
2002	2	39,857.773	40,370.495	-512.722	-1.29%	-0.441
2002	3	38,894.726	38,796.785	97.941	0.25%	0.084
2002	4	37,611.056	36,272.421	1,338.635	3.56%	1.151
2002	5	32,806.907	31,436.017	1,370.890	4.18%	1.179
2002	6	35,030.527	35,398.511	-367.984	-1.05%	-0.316
2002	7	49,494.447	49,395.788	98.659	0.20%	0.085
2002	8	45,100.215	43,624.445	1,475.770	3.27%	1.269
2002	9	42,276.235	43,610.799	-1,334.564	-3.16%	-1.148
2002	10	34,655.576	33,402.385	1,253.191	3.62%	1.078
2002	11	35,856.897	35,198.856	658.041	1.84%	0.566
2002	12	44,158.574	45,658.832	-1,500.258	-3.40%	-1.290
2003	1	48,689.120	49,477.336	-788.216	-1.62%	-0.678
2003	2	43,829.897	44,047.216	-217.319	-0.50%	-0.187
2003	3	42,764.704	41,788.356	976.348	2.28%	0.840
2003	4	35,994.629	36,421.214	-426.585	-1.19%	-0.367
2003	5	32,856.133	32,935.964	-79.831	-0.24%	-0.069
2003	6	34,494.593	34,456.685	37.908	0.11%	0.033
2003	7	43,081.177	41,678.970	1,402.207	3.25%	1.206
2003	8	47,732.371	47,759.925	-27.554	-0.06%	-0.024
2003	9	46,308.886	45,825.400	483.486	1.04%	0.416
2003	10	33,262.167	34,536.172	-1,274.005	-3.83%	-1.096
2003	11	35,411.604	34,877.180	534.424	1.51%	0.460
2003	12	45,782.351	46,425.771	-643.420	-1.41%	-0.553
2004	1	50,627.425	51,162.892	-535.467	-1.06%	-0.461
2004	2	46,067.241	45,819.725	247.516	0.54%	0.213
2004	3	39,789.184	40,038.337	-249.153	-0.63%	-0.214
2004	4	36,535.000	36,935.419	-400.419	-1.10%	-0.344

Xcel Energy North Dakota Residential without Space Heat
2011 Test-Year Sales Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2004	5	32,909.000	32,792.253	116.747	0.35%	0.100
2004	6	34,211.000	34,809.622	-598.622	-1.75%	-0.515
2004	7	38,876.000	39,710.257	-834.257	-2.15%	-0.717
2004	8	40,383.000	39,112.847	1,270.153	3.15%	1.092
2004	9	36,352.000	38,114.227	-1,762.227	-4.85%	-1.516
2004	10	34,746.000	34,440.696	305.304	0.88%	0.263
2004	11	35,383.000	34,902.219	480.781	1.36%	0.413
2004	12	44,790.000	45,578.546	-788.546	-1.76%	-0.678
2005	1	54,161.205	53,225.469	935.736	1.73%	0.805
2005	2	42,065.877	42,223.153	-157.276	-0.37%	-0.135
2005	3	41,515.863	43,392.951	-1,877.088	-4.52%	-1.614
2005	4	38,625.350	36,243.080	2,382.270	6.17%	2.049
2005	5	33,290.698	33,753.551	-462.853	-1.39%	-0.398
2005	6	38,083.726	37,325.264	758.462	1.99%	0.652
2005	7	46,497.632	45,343.731	1,153.901	2.48%	0.992
2005	8	51,643.000	51,761.894	-118.894	-0.23%	-0.102
2005	9	39,018.387	39,554.981	-536.594	-1.38%	-0.461
2005	10	34,120.576	34,478.923	-358.347	-1.05%	-0.308
2005	11	33,295.276	34,108.517	-813.241	-2.44%	-0.699
2005	12	45,629.000	44,090.485	1,538.515	3.37%	1.323
2006	1	49,264.760	49,673.530	-408.770	-0.83%	-0.352
2006	2	40,845.697	41,577.573	-731.876	-1.79%	-0.629
2006	3	45,796.967	44,820.718	976.249	2.13%	0.840
2006	4	34,981.493	34,435.415	546.078	1.56%	0.470
2006	5	34,158.121	35,325.918	-1,167.797	-3.42%	-1.004
2006	6	40,662.503	38,773.119	1,889.384	4.65%	1.625
2006	7	45,082.334	44,289.753	792.581	1.76%	0.682
2006	8	56,302.661	55,037.065	1,265.596	2.25%	1.088
2006	9	38,605.426	37,784.614	820.812	2.13%	0.706
2006	10	36,385.095	35,736.710	648.385	1.78%	0.558
2006	11	35,715.605	35,657.367	58.238	0.16%	0.050
2006	12	42,769.632	41,884.517	885.115	2.07%	0.761
2007	1	53,545.460	52,568.994	976.466	1.82%	0.840
2007	2	46,928.329	45,553.113	1,375.216	2.93%	1.183
2007	3	45,451.306	44,722.924	728.382	1.60%	0.626
2007	4	37,983.062	38,008.892	-25.830	-0.07%	-0.022
2007	5	35,562.979	35,832.691	-269.712	-0.76%	-0.232
2007	6	38,439.593	38,631.551	-191.958	-0.50%	-0.165

Xcel Energy North Dakota Residential without Space Heat
2011 Test-Year Sales Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2007	7	49,312.167	49,474.828	-162.661	-0.33%	-0.140
2007	8	54,916.417	52,893.230	2,023.187	3.68%	1.740
2007	9	35,426.511	35,846.553	-420.042	-1.19%	-0.361
2007	10	38,164.641	39,092.418	-927.777	-2.43%	-0.798
2007	11	34,396.175	35,441.780	-1,045.605	-3.04%	-0.899
2007	12	44,718.373	44,175.780	542.593	1.21%	0.467
2008	1	56,624.684	56,356.965	267.719	0.47%	0.230
2008	2	50,067.737	48,130.571	1,937.166	3.87%	1.666
2008	3	44,384.161	44,353.791	30.370	0.07%	0.026
2008	4	41,520.763	41,911.617	-390.854	-0.94%	-0.336
2008	5	33,616.673	35,009.845	-1,393.172	-4.14%	-1.198
2008	6	33,698.321	35,761.103	-2,062.782	-6.12%	-1.774
2008	7	44,086.065	43,398.764	687.301	1.56%	0.591
2008	8	43,404.185	44,616.886	-1,212.701	-2.79%	-1.043
2008	9	43,111.868	43,916.782	-804.914	-1.87%	-0.692
2008	10	37,546.016	37,511.482	34.535	0.09%	0.030
2008	11	31,309.150	32,549.480	-1,240.331	-3.96%	-1.067
2008	12	50,040.245	48,651.509	1,388.736	2.78%	1.194
2009	1	59,514.317	57,378.171	2,136.147	3.59%	1.837
2009	2	48,132.113	46,396.615	1,735.498	3.61%	1.493
2009	3	48,408.633	47,275.640	1,132.992	2.34%	0.974
2009	4	41,081.062	40,983.494	97.568	0.24%	0.084
2009	5	34,311.651	34,587.310	-275.659	-0.80%	-0.237
2009	6	35,967.726	38,151.842	-2,184.116	-6.07%	-1.878
2009	7	42,626.956	41,598.000	1,028.956	2.41%	0.885
2009	8	39,271.676	40,840.911	-1,569.235	-4.00%	-1.350
2009	9	41,096.457	41,197.002	-100.545	-0.24%	-0.086
2009	10	39,870.332	40,351.729	-481.397	-1.21%	-0.414
2009	11	34,255.585	35,318.881	-1,063.297	-3.10%	-0.914
2009	12	48,751.528	48,539.974	211.554	0.43%	0.182
2010	1	55,861.794	54,409.386	1,452.408	2.60%	1.249
2010	2	46,832.767	46,752.274	80.493	0.17%	0.069
2010	3	47,355.960	48,177.634	-821.674	-1.74%	-0.707
2010	4	37,931.472	39,811.220	-1,879.749	-4.96%	-1.617
2010	5	32,494.000	33,774.449	-1,280.449	-3.94%	-1.101
2010	6	39,291.360	39,795.279	-503.919	-1.28%	-0.433
2010	7		46,357.970			
2010	8		50,325.459			

Xcel Energy North Dakota Residential without Space Heat
2011 Test-Year Sales Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2010	9		45,048.912			
2010	10		37,935.429			
2010	11		38,509.760			
2010	12		48,807.140			
2011	1		56,769.455			
2011	2		47,230.549			
2011	3		47,742.066			
2011	4		41,925.900			
2011	5		36,978.796			
2011	6		41,629.370			
2011	7		46,077.435			
2011	8		53,164.018			
2011	9		45,637.043			
2011	10		38,226.555			
2011	11		38,867.700			
2011	12		48,879.729			

Xcel Energy North Dakota Residential with Space Heat
2011 Test-Year Sales Forecast

Variable	Coefficient	StdErr	T-Stat	P-Value	Definition
ND.HH_ND	35.154	5.524	6.364	0.00%	North Dakota Households (thousands)
BillingDayscellnet.BillDaysCellnet21	150.703	32.949	4.574	0.00%	Billing Days
NDRHSales.NDTotRes_RAP_ma3	-107.911	30.173	-3.576	0.05%	Residential Real Average Price, 3-month moving average ($/MWh)
NDRHWeather.H65_bill_RH_ND_Jan	0.000849201	0.000	71.358	0.00%	January HDD65 * January customers
NDRHWeather.H65_bill_RH_ND_Feb	0.000847512	0.000	68.277	0.00%	February HDD65 * February customers
NDRHWeather.H65_bill_RH_ND_Mar	0.000751933	0.000	52.329	0.00%	March HDD65 * March customers
NDRHWeather.H65_bill_RH_ND_Apr	0.000689253	0.000	30.905	0.00%	April HDD65 * April customers
NDRHWeather.H65_bill_RH_ND_May	0.000520304	0.000	12.427	0.00%	May HDD65 * May customers
NDRHWeather.H65_bill_RH_ND_Jun	0.000288370	0.000	3.063	0.27%	June HDD65 * June customers
NDRHWeather.H65_bill_RH_ND_Sep	0.000185577	0.000	0.811	41.88%	September HDD65 * September customers
NDRHWeather.H65_bill_RH_ND_Oct	0.000411754	0.000	8.908	0.00%	October HDD65 * October customers
NDRHWeather.H65_bill_RH_ND_Nov	0.000609931	0.000	25.079	0.00%	November HDD65 * November customers
NDRHWeather.H65_bill_RH_ND_Dec	0.000815463	0.000	57.671	0.00%	December HDD65 * December customers
NDRHWeather.T65_bill_RH_ND_Jun	0.001579646	0.000	3.514	0.06%	June THI65 * June customers
NDRHWeather.T65_bill_RH_ND_Jul	0.001604600	0.000	9.693	0.00%	July THI65 * July customers
NDRHWeather.T65_bill_RH_ND_Aug	0.001583083	0.000	11.140	0.00%	August THI65 * August customers
NDRHWeather.T65_bill_RH_ND_Sep	0.001837216	0.000	5.940	0.00%	September THI65 * September customers
BinaryTrans.Jan08	-2503.380	603.994	-4.145	0.01%	Binary variable January 2008
Binary2.May2001	2649.581	581.918	4.553	0.00%	Binary variable May 2001
Binary2.Mar2003	2668.530	595.642	4.480	0.00%	Binary variable March 2003
Binary2.Jan1999	3482.953	643.223	5.415	0.00%	Binary variable January 1999
BinaryTrans.Feb09	1033.952	591.169	1.749	8.30%	Binary variable February 2009
SAR(1)	-0.266	0.094	-2.825	0.56%	First order seasonal autoregressive term
MA(1)	0.367	0.089	4.128	0.01%	First order moving average term

Xcel Energy North Dakota Residential with Space Heat
2011 Test-Year Sales Forecast

Regression Statistics	
Iterations	26
Adjusted Observations	138
Deg. of Freedom for Error	114
R-Squared	0.996
Adjusted R-Squared	0.996
AIC	13.063
BIC	13.572
F-Statistic	
Prob (F-Statistic)	
Log-Likelihood	-1,073.17
Model Sum of Squares	12,722,429,338.95
Sum of Squared Errors	45,927,250.35
Mean Squared Error	402,870.62
Std. Error of Regression	634.72
Mean Abs. Dev. (MAD)	430.94
Mean Abs. % Err. (MAPE)	2.21%
Durbin-Watson Statistic	1.964
Durbin-H Statistic	
Ljung-Box Statistic	41.08
Prob (Ljung-Box)	0.0163
Skewness	-0.088
Kurtosis	3.867
Jarque-Bera	4.500
Prob (Jarque-Bera)	0.1054

Xcel Energy North Dakota Residential with Space Heat
2011 Test-Year Sales Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
1998	1	38,108.000				
1998	2	30,444.000				
1998	3	26,540.000				
1998	4	20,953.000				
1998	5	12,817.000				
1998	6	11,011.000				
1998	7	13,182.000				
1998	8	12,448.000				
1998	9	11,887.000				
1998	10	12,309.000				
1998	11	18,704.000				
1998	12	27,888.000				
1999	1	43,481.000	43,430.007	50.993	0.12%	0.080
1999	2	32,726.000	31,415.192	1,310.808	4.01%	2.065
1999	3	25,757.000	25,948.829	-191.829	-0.74%	-0.302
1999	4	19,586.000	19,892.674	-306.674	-1.57%	-0.483
1999	5	14,689.000	13,025.390	1,663.610	11.33%	2.621
1999	6	11,487.000	12,380.654	-893.654	-7.78%	-1.408
1999	7	12,271.000	11,775.038	495.962	4.04%	0.781
1999	8	12,322.000	12,498.264	-176.264	-1.43%	-0.278
1999	9	11,229.000	11,001.989	227.011	2.02%	0.358
1999	10	12,582.000	12,489.541	92.459	0.73%	0.146
1999	11	15,811.000	16,515.779	-704.779	-4.46%	-1.110
1999	12	27,027.000	27,278.002	-251.002	-0.93%	-0.395
2000	1	37,239.000	35,814.730	1,424.270	3.82%	2.244
2000	2	33,383.000	33,761.370	-378.370	-1.13%	-0.596
2000	3	23,939.000	24,201.444	-262.444	-1.10%	-0.413
2000	4	20,962.000	20,469.626	492.374	2.35%	0.776
2000	5	13,988.000	13,562.193	425.807	3.04%	0.671
2000	6	11,659.000	11,480.161	178.839	1.53%	0.282
2000	7	12,585.000	11,943.793	641.207	5.10%	1.010
2000	8	13,005.000	13,080.996	-75.996	-0.58%	-0.120
2000	9	11,820.000	11,465.960	354.040	3.00%	0.558
2000	10	12,631.000	12,532.238	98.762	0.78%	0.156
2000	11	17,652.000	17,117.920	534.080	3.03%	0.841
2000	12	35,981.000	34,848.336	1,132.664	3.15%	1.785
2001	1	41,130.000	41,026.229	103.771	0.25%	0.163
2001	2	35,016.134	35,537.948	-521.814	-1.49%	-0.822

Xcel Energy North Dakota Residential with Space Heat
2011 Test-Year Sales Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2001	3	31,535.984	31,155.005	380.979	1.21%	0.600
2001	4	22,479.986	22,770.640	-290.654	-1.29%	-0.458
2001	5	16,015.795	16,101.711	-85.916	-0.54%	-0.135
2001	6	11,101.266	10,841.282	259.984	2.34%	0.410
2001	7	12,854.687	13,086.483	-231.796	-1.80%	-0.365
2001	8	14,089.900	14,316.579	-226.679	-1.61%	-0.357
2001	9	12,259.532	11,871.152	388.380	3.17%	0.612
2001	10	11,804.914	12,072.607	-267.693	-2.27%	-0.422
2001	11	16,959.893	16,683.894	275.999	1.63%	0.435
2001	12	26,081.860	26,005.857	76.003	0.29%	0.120
2002	1	34,417.792	34,637.914	-220.122	-0.64%	-0.347
2002	2	31,851.359	31,678.307	173.052	0.54%	0.273
2002	3	30,211.282	28,903.042	1,308.240	4.33%	2.061
2002	4	24,935.422	24,333.142	602.280	2.42%	0.949
2002	5	17,253.683	16,387.673	866.010	5.02%	1.364
2002	6	12,723.733	12,572.442	151.291	1.19%	0.238
2002	7	14,665.038	15,199.999	-534.961	-3.65%	-0.843
2002	8	13,132.431	12,774.781	357.650	2.72%	0.563
2002	9	13,006.387	13,174.088	-167.701	-1.29%	-0.264
2002	10	13,529.753	13,335.667	194.086	1.43%	0.306
2002	11	21,925.063	20,783.877	1,141.186	5.20%	1.798
2002	12	30,884.817	31,504.799	-619.982	-2.01%	-0.977
2003	1	35,862.488	35,930.381	-67.893	-0.19%	-0.107
2003	2	37,503.114	37,128.310	374.804	1.00%	0.591
2003	3	34,802.005	34,724.690	77.315	0.22%	0.122
2003	4	21,412.183	20,620.276	791.907	3.70%	1.248
2003	5	14,410.910	14,391.378	19.532	0.14%	0.031
2003	6	11,595.108	11,406.314	188.794	1.63%	0.297
2003	7	12,921.598	12,630.439	291.159	2.25%	0.459
2003	8	13,855.685	13,579.545	276.140	1.99%	0.435
2003	9	13,307.722	13,691.819	-384.097	-2.89%	-0.605
2003	10	12,052.122	12,353.068	-300.946	-2.50%	-0.474
2003	11	19,586.769	18,877.645	709.124	3.62%	1.117
2003	12	31,907.062	31,659.866	247.196	0.77%	0.389
2004	1	37,779.443	37,631.086	148.357	0.39%	0.234
2004	2	38,686.256	38,712.036	-25.780	-0.07%	-0.041
2004	3	27,595.598	26,786.875	808.723	2.93%	1.274
2004	4	21,022.000	21,217.844	-195.844	-0.93%	-0.309

Xcel Energy North Dakota Residential with Space Heat
2011 Test-Year Sales Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2004	5	14,835.000	15,164.738	-329.738	-2.22%	-0.520
2004	6	12,238.000	11,799.292	438.708	3.58%	0.691
2004	7	12,023.000	12,031.644	-8.644	-0.07%	-0.014
2004	8	11,613.000	11,548.103	64.897	0.56%	0.102
2004	9	11,143.000	11,625.289	-482.289	-4.33%	-0.760
2004	10	12,120.000	12,140.683	-20.683	-0.17%	-0.033
2004	11	17,347.000	17,332.217	14.783	0.09%	0.023
2004	12	28,549.000	29,240.420	-691.420	-2.42%	-1.089
2005	1	41,380.813	40,035.990	1,344.823	3.25%	2.119
2005	2	32,239.592	32,135.803	103.789	0.32%	0.164
2005	3	28,615.014	29,512.793	-897.779	-3.14%	-1.414
2005	4	19,476.964	19,335.930	141.034	0.72%	0.222
2005	5	15,057.378	15,017.478	39.900	0.26%	0.063
2005	6	11,836.661	12,010.538	-173.877	-1.47%	-0.274
2005	7	13,402.365	13,319.993	82.372	0.61%	0.130
2005	8	14,008.000	14,075.041	-67.041	-0.48%	-0.106
2005	9	11,237.375	11,458.731	-221.356	-1.97%	-0.349
2005	10	11,889.611	11,788.192	101.419	0.85%	0.160
2005	11	15,612.944	16,554.201	-941.257	-6.03%	-1.483
2005	12	29,777.000	29,217.148	559.852	1.88%	0.882
2006	1	30,307.750	31,604.853	-1,297.103	-4.28%	-2.044
2006	2	28,477.696	29,081.254	-603.558	-2.12%	-0.951
2006	3	29,964.242	30,778.657	-814.415	-2.72%	-1.283
2006	4	18,369.168	18,449.865	-80.697	-0.44%	-0.127
2006	5	12,479.930	13,636.047	-1,156.117	-9.26%	-1.821
2006	6	12,327.042	12,184.897	142.145	1.15%	0.224
2006	7	13,158.551	13,260.132	-101.581	-0.77%	-0.160
2006	8	15,013.123	15,284.070	-270.947	-1.80%	-0.427
2006	9	11,519.801	11,353.455	166.346	1.44%	0.262
2006	10	13,408.234	13,354.762	53.472	0.40%	0.084
2006	11	18,895.167	18,824.332	70.835	0.37%	0.112
2006	12	26,997.138	26,339.916	657.222	2.43%	1.035
2007	1	34,012.449	34,964.292	-951.842	-2.80%	-1.500
2007	2	36,749.657	36,400.221	349.436	0.95%	0.551
2007	3	30,277.178	29,907.682	369.496	1.22%	0.582
2007	4	21,655.484	21,204.686	450.798	2.08%	0.710
2007	5	13,335.355	13,935.845	-600.490	-4.50%	-0.946
2007	6	11,951.284	11,945.400	5.884	0.05%	0.009

Xcel Energy North Dakota Residential with Space Heat
2011 Test-Year Sales Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2007	7	13,669.357	14,124.157	-454.800	-3.33%	-0.717
2007	8	14,229.403	14,187.333	42.070	0.30%	0.066
2007	9	10,955.661	11,436.344	-480.683	-4.39%	-0.757
2007	10	12,233.315	12,303.943	-70.628	-0.58%	-0.111
2007	11	16,164.982	17,037.558	-872.576	-5.40%	-1.375
2007	12	30,610.059	29,875.365	734.694	2.40%	1.158
2008	1	38,146.729	37,921.079	225.650	0.59%	0.356
2008	2	38,474.776	38,080.191	394.585	1.03%	0.622
2008	3	31,137.120	30,541.105	596.015	1.91%	0.939
2008	4	22,684.732	23,517.204	-832.472	-3.67%	-1.312
2008	5	15,090.144	14,982.207	107.937	0.72%	0.170
2008	6	11,341.464	11,405.216	-63.752	-0.56%	-0.100
2008	7	12,337.792	12,195.797	141.995	1.15%	0.224
2008	8	12,539.236	12,207.867	331.369	2.64%	0.522
2008	9	12,575.508	12,355.107	220.401	1.75%	0.347
2008	10	12,169.017	12,742.952	-573.935	-4.72%	-0.904
2008	11	15,434.528	15,797.040	-362.512	-2.35%	-0.571
2008	12	32,242.573	32,569.550	-326.977	-1.01%	-0.515
2009	1	42,514.871	43,203.294	-688.423	-1.62%	-1.085
2009	2	36,451.718	36,031.360	420.357	1.15%	0.662
2009	3	32,805.825	32,282.870	522.954	1.59%	0.824
2009	4	23,491.310	23,560.343	-69.033	-0.29%	-0.109
2009	5	14,833.616	14,957.523	-123.907	-0.84%	-0.195
2009	6	11,953.691	12,098.048	-144.357	-1.21%	-0.227
2009	7	12,439.614	11,610.705	828.909	6.66%	1.306
2009	8	11,278.539	11,386.889	-108.350	-0.96%	-0.171
2009	9	11,670.553	11,441.029	229.524	1.97%	0.362
2009	10	14,214.303	13,741.000	473.303	3.33%	0.746
2009	11	17,214.314	17,738.085	-523.771	-3.04%	-0.825
2009	12	29,728.285	31,220.087	-1,491.802	-5.02%	-2.350
2010	1	39,658.605	39,963.983	-305.378	-0.77%	-0.481
2010	2	33,670.290	35,105.765	-1,435.475	-4.26%	-2.262
2010	3	29,352.595	31,138.799	-1,786.204	-6.09%	-2.814
2010	4	17,883.137	18,516.935	-633.798	-3.54%	-0.999
2010	5	12,716.553	13,621.382	-904.829	-7.12%	-1.426
2010	6	12,294.225	11,934.116	360.109	2.93%	0.567
2010	7		13,360.075			
2010	8		13,901.632			

Xcel Energy North Dakota Residential with Space Heat
2011 Test-Year Sales Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2010	9		13,027.058			
2010	10		13,300.489			
2010	11		19,350.884			
2010	12		31,894.035			
2011	1		40,303.474			
2011	2		35,763.755			
2011	3		32,159.095			
2011	4		23,163.698			
2011	5		15,327.563			
2011	6		12,698.900			
2011	7		13,232.890			
2011	8		14,435.439			
2011	9		13,187.485			
2011	10		13,733.601			
2011	11		19,572.515			
2011	12		31,468.314			

Xcel Energy North Dakota Small Commercial and Industrial
2011 Test-Year Sales Forecast

Variable	Coefficient	StdErr	T-Stat	P-Value	Definition
ND.GSP2000C_ND	0.531	0.239	2.224	2.79%	North Dakota Real Gross Metro Product (millions 2001$)
BillingDayscellnet.BillDaysCellnet21	2305.396	177.285	13.004	0.00%	Billing Days
NDSmCIWeather.H65_bill_SmCI_ND_Jan	0.000738330	0.000	10.730	0.00%	January HDD65 * January customers
NDSmCIWeather.H65_bill_SmCI_ND_Feb	0.000694764	0.000	8.953	0.00%	February HDD65 * February customers
NDSmCIWeather.H65_bill_SmCI_ND_MarAprMayJun	0.000655844	0.000	7.185	0.00%	HDD65 * customers for March through June
NDSmCIWeather.H65_bill_SmCI_ND_OctNov	0.000427209	0.000	2.659	0.88%	HDD65 * customers for October and November
NDSmCIWeather.H65_bill_SmCI_ND_Dec	0.000557396	0.000	6.109	0.00%	December HDD65 * December customers
NDSmCIWeather.T65_bill_SmCI_ND_Jul	0.005196048	0.001	4.887	0.00%	July THI65 * July customers
NDSmCIWeather.T65_bill_SmCI_ND_Aug	0.007823423	0.001	8.482	0.00%	August THI65 * August customers
NDSmCIWeather.T65_bill_SmCI_ND_Sep	0.009302824	0.002	5.169	0.00%	September THI65 * September customers
Binary.CIReclass01Pre	-44523.377	885.999	-50.252	0.00%	Binary variable for 2001 C&I reclassification
Binary.CRS	-6750.021	1132.598	-5.960	0.00%	Binary variable for CRS conversion
Binary2.Feb2005	-18645.848	3744.712	-4.979	0.00%	Binary variable February 2005
Binary2.Mar2005	-22181.472	3815.076	-5.814	0.00%	Binary variable March 2005
Binary2.Jun2005	11264.015	3743.885	3.009	0.32%	Binary variable June 2005
Binary2.Dec2005	-26747.162	3781.306	-7.074	0.00%	Binary variable December 2005
Binary2.Apr2006	-34323.727	3637.727	-9.435	0.00%	Binary variable April 2006
Binary2.May2005	15925.193	3654.656	4.358	0.00%	Binary variable May 2005
Binary2.Mar2006	22294.491	3860.946	5.774	0.00%	Binary variable March 2006
Binary2.Apr2005	-14195.478	3685.998	-3.851	0.02%	Binary variable April 2005
Binary2.Feb2001	13047.287	3799.624	3.434	0.08%	Binary variable February 2001
BinaryTrans.PostMay09	-2400.685	1416.186	-1.695	9.25%	Binary variable post May 2009

Xcel Energy North Dakota Small Commercial and Industrial
2011 Test-Year Sales Forecast

Regression Statistics	
Iterations	1
Adjusted Observations	150
Deg. of Freedom for Error	128
R-Squared	0.981
Adjusted R-Squared	0.977
AIC	16.500
BIC	16.942
F-Statistic	
Prob (F-Statistic)	
Log-Likelihood	-1,428.35
Model Sum of Squares	82,510,597,970.33
Sum of Squared Errors	1,639,174,010.15
Mean Squared Error	12,806,046.95
Std. Error of Regression	3,578.55
Mean Abs. Dev. (MAD)	2,475.62
Mean Abs. % Err. (MAPE)	3.76%
Durbin-Watson Statistic	1.844
Durbin-H Statistic	
Ljung-Box Statistic	26.13
Prob (Ljung-Box)	0.3468
Skewness	-0.107
Kurtosis	3.087
Jarque-Bera	0.333
Prob (Jarque-Bera)	0.8464

Xcel Energy North Dakota Small Commercial and Industrial
2011 Test-Year Sales Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
1998	1	40,748.000	45,980.246	-5,232.246	-12.84%	-1.462
1998	2	34,487.000	35,386.760	-899.760	-2.61%	-0.251
1998	3	33,307.000	33,274.168	32.832	0.10%	0.009
1998	4	30,940.000	33,031.403	-2,091.403	-6.76%	-0.584
1998	5	30,735.000	29,236.447	1,498.553	4.88%	0.419
1998	6	29,120.000	29,618.507	-498.507	-1.71%	-0.139
1998	7	34,827.000	34,779.633	47.367	0.14%	0.013
1998	8	37,092.000	35,415.566	1,676.434	4.52%	0.468
1998	9	29,910.000	37,019.071	-7,109.071	-23.77%	-1.987
1998	10	29,997.000	28,105.546	1,891.454	6.31%	0.529
1998	11	31,145.000	29,677.981	1,467.019	4.71%	0.410
1998	12	35,768.000	40,313.176	-4,545.176	-12.71%	-1.270
1999	1	42,672.000	48,955.577	-6,283.577	-14.73%	-1.756
1999	2	36,137.000	35,596.651	540.349	1.50%	0.151
1999	3	31,842.000	33,382.564	-1,540.564	-4.84%	-0.430
1999	4	31,355.000	34,044.218	-2,689.218	-8.58%	-0.751
1999	5	30,315.000	28,397.334	1,917.666	6.33%	0.536
1999	6	31,605.000	29,590.013	2,014.987	6.38%	0.563
1999	7	34,981.000	33,591.237	1,389.763	3.97%	0.388
1999	8	34,945.000	35,330.221	-385.221	-1.10%	-0.108
1999	9	32,188.000	32,348.352	-160.352	-0.50%	-0.045
1999	10	30,028.000	28,369.019	1,658.981	5.52%	0.464
1999	11	29,372.000	29,505.670	-133.670	-0.46%	-0.037
1999	12	38,132.000	40,018.414	-1,886.414	-4.95%	-0.527
2000	1	41,828.000	46,769.388	-4,941.388	-11.81%	-1.381
2000	2	38,766.000	36,856.972	1,909.028	4.92%	0.533
2000	3	35,282.000	33,043.150	2,238.850	6.35%	0.626
2000	4	33,580.000	32,352.044	1,227.956	3.66%	0.343
2000	5	32,459.000	31,541.897	917.103	2.83%	0.256
2000	6	33,398.000	30,408.405	2,989.595	8.95%	0.835
2000	7	35,917.000	33,068.212	2,848.788	7.93%	0.796
2000	8	37,622.000	36,910.823	711.177	1.89%	0.199
2000	9	35,677.000	34,012.103	1,664.897	4.67%	0.465
2000	10	31,829.000	28,441.568	3,387.432	10.64%	0.947
2000	11	34,308.000	29,813.608	4,494.392	13.10%	1.256
2000	12	44,215.000	42,343.055	1,871.945	4.23%	0.523
2001	1	102,996.000	95,215.086	7,780.914	7.55%	2.174
2001	2	96,098.994	96,098.994	0.000	0.00%	0.000

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Year	Month	Actual	Pred	Resid	%Resid	StdResid
2001	3	89,910.932	81,651.555	8,259.377	9.19%	2.308
2001	4	74,846.627	79,442.083	-4,595.456	-6.14%	-1.284
2001	5	75,530.397	75,099.682	430.715	0.57%	0.120
2001	6	74,000.434	74,640.697	-640.263	-0.87%	-0.179
2001	7	77,058.947	80,425.857	-3,366.910	-4.37%	-0.941
2001	8	83,082.800	86,826.915	-3,744.115	-4.51%	-1.046
2001	9	81,149.556	80,470.282	679.274	0.84%	0.190
2001	10	72,236.238	72,840.009	-603.771	-0.84%	-0.169
2001	11	71,940.817	75,100.468	-3,159.651	-4.39%	-0.883
2001	12	79,516.060	83,772.687	-4,256.627	-5.35%	-1.189
2002	1	91,920.948	92,464.632	-543.684	-0.59%	-0.152
2002	2	81,277.399	81,699.515	-422.116	-0.52%	-0.118
2002	3	81,328.290	81,051.832	276.458	0.34%	0.077
2002	4	78,938.488	81,678.626	-2,740.138	-3.47%	-0.766
2002	5	71,288.502	75,760.812	-4,472.310	-6.27%	-1.250
2002	6	76,518.384	75,252.598	1,265.786	1.65%	0.354
2002	7	86,256.241	84,003.546	2,252.695	2.61%	0.629
2002	8	80,846.239	80,878.073	-31.834	-0.04%	-0.009
2002	9	83,172.337	83,197.081	-24.744	-0.03%	-0.007
2002	10	74,044.001	74,048.366	-4.365	-0.01%	-0.001
2002	11	76,295.096	75,796.679	498.417	0.65%	0.139
2002	12	88,624.556	87,259.410	1,365.146	1.54%	0.381
2003	1	91,302.406	93,482.219	-2,179.813	-2.39%	-0.609
2003	2	85,805.796	84,766.716	1,039.080	1.21%	0.290
2003	3	83,707.604	83,282.065	425.539	0.51%	0.119
2003	4	76,079.455	78,762.422	-2,682.967	-3.53%	-0.750
2003	5	73,072.413	76,798.459	-3,726.046	-5.10%	-1.041
2003	6	75,921.475	75,629.267	292.208	0.38%	0.082
2003	7	83,132.850	79,319.626	3,813.224	4.59%	1.066
2003	8	84,638.627	83,510.644	1,127.983	1.33%	0.315
2003	9	84,929.816	85,370.317	-440.501	-0.52%	-0.123
2003	10	75,612.653	73,847.279	1,765.374	2.33%	0.493
2003	11	77,636.056	75,936.776	1,699.280	2.19%	0.475
2003	12	88,672.720	88,495.983	176.737	0.20%	0.049
2004	1	93,475.633	94,389.248	-913.615	-0.98%	-0.255
2004	2	87,111.022	86,236.403	874.619	1.00%	0.244
2004	3	81,938.745	80,412.887	1,525.858	1.86%	0.426
2004	4	76,873.652	79,929.601	-3,055.949	-3.98%	-0.854

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Year	Month	Actual	Pred	Resid	%Resid	StdResid
2004	5	73,045.684	76,361.335	-3,315.651	-4.54%	-0.927
2004	6	77,660.811	76,718.122	942.689	1.21%	0.263
2004	7	81,206.909	77,926.785	3,280.124	4.04%	0.917
2004	8	79,518.212	77,414.072	2,104.140	2.65%	0.588
2004	9	78,885.147	77,857.202	1,027.945	1.30%	0.287
2004	10	74,054.224	73,857.841	196.383	0.27%	0.055
2004	11	76,852.921	75,369.423	1,483.498	1.93%	0.415
2004	12	88,292.285	87,269.750	1,022.535	1.16%	0.286
2005	1	95,699.418	96,384.893	-685.475	-0.72%	-0.192
2005	2	67,839.513	67,839.513	0.000	0.00%	0.000
2005	3	70,763.797	70,763.797	0.000	0.00%	0.000
2005	4	72,498.854	72,498.854	0.000	0.00%	0.000
2005	5	98,585.964	98,585.964	0.000	0.00%	0.000
2005	6	97,485.788	97,485.788	0.000	0.00%	0.000
2005	7	78,340.850	85,594.279	-7,253.429	-9.26%	-2.027
2005	8	102,162.000	97,968.974	4,193.026	4.10%	1.172
2005	9	93,334.620	86,326.716	7,007.904	7.51%	1.958
2005	10	84,217.486	81,148.291	3,069.195	3.64%	0.858
2005	11	77,804.852	80,087.329	-2,282.477	-2.93%	-0.638
2005	12	63,918.000	63,918.000	0.000	0.00%	0.000
2006	1	104,527.442	99,422.408	5,105.034	4.88%	1.427
2006	2	92,512.852	86,173.999	6,338.853	6.85%	1.771
2006	3	118,867.315	118,867.315	0.000	0.00%	0.000
2006	4	45,254.551	45,254.551	0.000	0.00%	0.000
2006	5	80,288.625	86,897.455	-6,608.830	-8.23%	-1.847
2006	6	87,473.390	85,869.473	1,603.917	1.83%	0.448
2006	7	92,185.497	85,165.272	7,020.225	7.62%	1.962
2006	8	95,896.385	100,631.563	-4,735.178	-4.94%	-1.323
2006	9	80,991.171	82,165.480	-1,174.309	-1.45%	-0.328
2006	10	77,258.408	84,971.121	-7,712.713	-9.98%	-2.155
2006	11	75,831.225	81,128.546	-5,297.321	-6.99%	-1.480
2006	12	86,132.265	85,664.959	467.306	0.54%	0.131
2007	1	110,621.670	104,445.379	6,176.291	5.58%	1.726
2007	2	83,728.258	89,835.162	-6,106.904	-7.29%	-1.707
2007	3	92,769.263	93,106.471	-337.208	-0.36%	-0.094
2007	4	85,239.670	85,451.798	-212.128	-0.25%	-0.059
2007	5	84,851.147	86,391.304	-1,540.157	-1.82%	-0.430
2007	6	84,993.666	83,434.171	1,559.495	1.83%	0.436

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Year	Month	Actual	Pred	Resid	%Resid	StdResid
2007	7	84,823.583	91,550.228	-6,726.645	-7.93%	-1.880
2007	8	97,199.849	99,546.229	-2,346.380	-2.41%	-0.656
2007	9	83,411.150	81,899.038	1,512.112	1.81%	0.423
2007	10	93,102.096	88,685.980	4,416.116	4.74%	1.234
2007	11	79,493.324	81,826.395	-2,333.071	-2.93%	-0.652
2007	12	92,057.682	88,597.098	3,460.584	3.76%	0.967
2008	1	111,317.823	108,097.646	3,220.177	2.89%	0.900
2008	2	93,979.937	94,710.378	-730.441	-0.78%	-0.204
2008	3	95,367.645	89,594.048	5,773.597	6.05%	1.613
2008	4	89,946.403	93,810.084	-3,863.681	-4.30%	-1.080
2008	5	81,686.080	85,299.676	-3,613.596	-4.42%	-1.010
2008	6	80,914.420	85,245.703	-4,331.283	-5.35%	-1.210
2008	7	91,252.626	91,180.902	71.724	0.08%	0.020
2008	8	91,946.032	86,605.931	5,340.101	5.81%	1.492
2008	9	96,053.411	93,776.747	2,276.664	2.37%	0.636
2008	10	91,750.315	88,996.877	2,753.438	3.00%	0.769
2008	11	72,821.969	74,311.704	-1,489.735	-2.05%	-0.416
2008	12	97,519.969	98,386.409	-866.440	-0.89%	-0.242
2009	1	107,266.058	107,007.843	258.215	0.24%	0.072
2009	2	92,966.381	90,629.903	2,336.478	2.51%	0.653
2009	3	101,631.115	96,150.056	5,481.059	5.39%	1.532
2009	4	83,007.292	90,683.438	-7,676.146	-9.25%	-2.145
2009	5	80,204.869	83,095.693	-2,890.825	-3.60%	-0.808
2009	6	84,626.999	86,884.245	-2,257.246	-2.67%	-0.631
2009	7	93,294.702	88,181.829	5,112.873	5.48%	1.429
2009	8	88,196.908	83,781.299	4,415.609	5.01%	1.234
2009	9	86,107.718	86,735.673	-627.955	-0.73%	-0.175
2009	10	86,988.349	85,368.012	1,620.337	1.86%	0.453
2009	11	76,950.668	76,828.228	122.440	0.16%	0.034
2009	12	96,442.731	95,478.780	963.951	1.00%	0.269
2010	1	97,352.031	99,997.745	-2,645.714	-2.72%	-0.739
2010	2	85,307.464	88,746.494	-3,439.030	-4.03%	-0.961
2010	3	104,359.706	97,046.327	7,313.379	7.01%	2.044
2010	4	81,558.814	87,598.323	-6,039.509	-7.41%	-1.688
2010	5	72,245.902	79,119.914	-6,874.012	-9.51%	-1.921
2010	6	89,269.629	86,934.752	2,334.877	2.62%	0.652
2010	7		88,104.601			
2010	8		93,541.191			

Xcel Energy North Dakota Small Commercial and Industrial
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Year	Month	Actual	Pred	Resid	%Resid	StdResid
2010	9		89,127.259			
2010	10		82,250.718			
2010	11		81,389.648			
2010	12		92,390.998			
2011	1		103,834.712			
2011	2		89,308.984			
2011	3		94,874.201			
2011	4		89,566.955			
2011	5		83,810.860			
2011	6		87,524.183			
2011	7		85,100.918			
2011	8		97,687.582			
2011	9		89,608.313			
2011	10		82,690.542			
2011	11		81,921.796			
2011	12		92,044.575			

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Variable	Coefficient	StdErr	T-Stat	P-Value	Definition
US.IPSB00004_US	162.960	76.538	2.129	3.51%	U.S. Industrial Production Index - Manufacturing; 2002 = 100
Binary.CIReclass01Pre	39124.684	987.108	39.636	0.00%	Binary variable for 2001 C&I reclassification
Binary.Jan	9374.624	8101.733	1.157	24.94%	Binary variable January
Binary.Feb	11068.728	8092.990	1.368	17.38%	Binary variable February
Binary.Mar	9103.645	8082.378	1.126	26.21%	Binary variable March
Binary.Apr	8374.911	8100.997	1.034	30.32%	Binary variable April
Binary.May	9191.147	8107.403	1.134	25.90%	Binary variable May
Binary.Jun	12427.719	8103.248	1.534	12.76%	Binary variable June
Binary.Jul	10230.552	8095.420	1.264	20.86%	Binary variable July
Binary.Aug	11558.965	8146.202	1.419	15.83%	Binary variable August
Binary.Sep	12513.844	8150.171	1.535	12.71%	Binary variable September
Binary.Oct	13268.600	8154.140	1.627	10.61%	Binary variable October
Binary.Nov	10428.317	8180.252	1.275	20.47%	Binary variable November
Binary.Dec	9958.732	8159.574	1.220	22.45%	Binary variable December
Binary2.Jun2005	20308.711	4917.279	4.130	0.01%	Binary variable June 2005
Binary2.Feb1999	18065.483	4978.176	3.629	0.04%	Binary variable February 1999
Binary2.Feb2005	-21234.478	4930.527	-4.307	0.00%	Binary variable February 2005
Binary2.Mar2005	-21124.843	4916.801	-4.296	0.00%	Binary variable March 2005
Binary2.Jul2007	15473.457	4974.507	3.111	0.23%	Binary variable July 2007
Binary2.Jan2001	-12340.210	4909.843	-2.513	1.32%	Binary variable January 2001
BinaryTrans.Nov08	-12105.542	4928.644	-2.456	1.54%	Binary variable November 2008

Xcel Energy North Dakota Large Commercial and Industrial
2011 Test-Year Sales Forecast

Regression Statistics	
Iterations	1
Adjusted Observations	150
Deg. of Freedom for Error	129
R-Squared	0.940
Adjusted R-Squared	0.930
AIC	17.044
BIC	17.466
F-Statistic	
Prob (F-Statistic)	
Log-Likelihood	-1,470.17
Model Sum of Squares	44,686,408,431.67
Sum of Squared Errors	2,862,852,261.29
Mean Squared Error	22,192,653.19
Std. Error of Regression	4,710.91
Mean Abs. Dev. (MAD)	3,339.25
Mean Abs. % Err. (MAPE)	11.25%
Durbin-Watson Statistic	2.001
Durbin-H Statistic	
Ljung-Box Statistic	35.64
Prob (Ljung-Box)	0.0594
Skewness	-0.020
Kurtosis	3.109
Jarque-Bera	0.084
Prob (Jarque-Bera)	0.9589

Xcel Energy North Dakota Large Commercial and Industrial
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Year	Month	Actual	Pred	Resid	%Resid	StdResid
1998	1	72,081.000	63,727.387	8,353.613	11.59%	1.773
1998	2	62,215.000	65,495.736	-3,280.736	-5.27%	-0.696
1998	3	63,321.000	63,564.279	-243.279	-0.38%	-0.052
1998	4	54,962.000	62,869.171	-7,907.171	-14.39%	-1.678
1998	5	65,385.000	63,719.033	1,665.967	2.55%	0.354
1998	6	65,012.000	66,994.241	-1,982.241	-3.05%	-0.421
1998	7	73,498.000	64,835.710	8,662.290	11.79%	1.839
1998	8	67,715.000	66,202.759	1,512.241	2.23%	0.321
1998	9	69,161.000	67,249.375	1,911.625	2.76%	0.406
1998	10	64,248.000	68,095.870	-3,847.870	-5.99%	-0.817
1998	11	65,366.000	65,347.324	18.676	0.03%	0.004
1998	12	62,524.000	64,941.999	-2,417.999	-3.87%	-0.513
1999	1	58,942.000	64,422.152	-5,480.152	-9.30%	-1.163
1999	2	84,246.000	84,246.000	-0.000	-0.00%	-0.000
1999	3	60,375.000	64,270.138	-3,895.138	-6.45%	-0.827
1999	4	63,153.000	63,596.108	-443.108	-0.70%	-0.094
1999	5	63,492.000	64,467.048	-975.048	-1.54%	-0.207
1999	6	66,743.000	67,754.174	-1,011.174	-1.52%	-0.215
1999	7	63,963.000	65,607.561	-1,644.561	-2.57%	-0.349
1999	8	71,726.000	66,986.528	4,739.472	6.61%	1.006
1999	9	66,580.000	68,069.321	-1,489.321	-2.24%	-0.316
1999	10	62,449.000	68,951.993	-6,502.993	-10.41%	-1.380
1999	11	62,782.000	66,239.624	-3,457.624	-5.51%	-0.734
1999	12	70,090.000	65,842.153	4,247.847	6.06%	0.902
2000	1	70,181.000	65,330.158	4,850.842	6.91%	1.030
2000	2	66,634.000	67,096.376	-462.376	-0.69%	-0.098
2000	3	61,038.000	65,196.187	-4,158.187	-6.81%	-0.883
2000	4	64,218.000	64,532.348	-314.348	-0.49%	-0.067
2000	5	64,324.000	65,413.479	-1,089.479	-1.69%	-0.231
2000	6	70,563.000	68,643.353	1,919.647	2.72%	0.407
2000	7	66,303.000	66,439.488	-136.488	-0.21%	-0.029
2000	8	70,632.000	67,761.203	2,870.797	4.06%	0.609
2000	9	73,285.000	68,676.117	4,608.883	6.29%	0.978
2000	10	65,090.000	69,390.908	-4,300.908	-6.61%	-0.913
2000	11	66,771.000	66,510.660	260.340	0.39%	0.055
2000	12	75,363.000	65,945.038	9,417.962	12.50%	1.999
2001	1	13,800.000	13,800.000	-0.000	-0.00%	-0.000
2001	2	16,868.802	27,738.279	-10,869.477	-64.44%	-2.307

Xcel Energy North Dakota Large Commercial and Industrial
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Year	Month	Actual	Pred	Resid	%Resid	StdResid
2001	3	14,876.612	25,695.123	-10,818.511	-72.72%	-2.296
2001	4	27,095.762	24,888.317	2,207.445	8.15%	0.469
2001	5	26,781.359	25,626.481	1,154.878	4.31%	0.245
2001	6	28,184.316	28,774.960	-590.644	-2.10%	-0.125
2001	7	29,718.924	26,489.700	3,229.224	10.87%	0.685
2001	8	26,039.300	27,730.020	-1,690.720	-6.49%	-0.359
2001	9	29,222.755	28,618.967	603.788	2.07%	0.128
2001	10	28,088.530	29,307.791	-1,219.261	-4.34%	-0.259
2001	11	26,127.408	26,401.576	-274.168	-1.05%	-0.058
2001	12	26,229.925	25,971.929	257.996	0.98%	0.055
2002	1	28,377.747	25,427.759	2,949.988	10.40%	0.626
2002	2	30,367.169	27,161.801	3,205.368	10.56%	0.680
2002	3	24,157.648	25,265.140	-1,107.492	-4.58%	-0.235
2002	4	24,450.372	24,604.828	-154.456	-0.63%	-0.033
2002	5	23,994.309	25,489.485	-1,495.176	-6.23%	-0.317
2002	6	27,767.204	28,764.862	-997.658	-3.59%	-0.212
2002	7	26,199.237	26,606.499	-407.262	-1.55%	-0.086
2002	8	25,856.313	27,973.717	-2,117.404	-8.19%	-0.449
2002	9	29,003.625	28,916.337	87.288	0.30%	0.019
2002	10	28,174.630	29,658.835	-1,484.205	-5.27%	-0.315
2002	11	27,433.524	26,806.293	627.231	2.29%	0.133
2002	12	22,536.023	26,369.733	-3,833.710	-17.01%	-0.814
2003	1	28,949.759	25,818.650	3,131.109	10.82%	0.665
2003	2	30,121.193	27,545.779	2,575.414	8.55%	0.547
2003	3	23,980.773	25,553.190	-1,572.417	-6.56%	-0.334
2003	4	22,441.608	24,796.951	-2,355.343	-10.50%	-0.500
2003	5	29,208.468	25,585.681	3,622.787	12.40%	0.769
2003	6	26,896.051	28,853.349	-1,957.298	-7.28%	-0.415
2003	7	27,830.538	26,687.278	1,143.260	4.11%	0.243
2003	8	22,025.573	28,046.788	-6,021.215	-27.34%	-1.278
2003	9	29,331.770	29,064.363	267.407	0.91%	0.057
2003	10	28,298.409	29,881.816	-1,583.407	-5.60%	-0.336
2003	11	27,772.338	27,104.228	668.110	2.41%	0.142
2003	12	27,951.041	26,669.153	1,281.888	4.59%	0.272
2004	1	31,677.018	26,119.554	5,557.464	17.54%	1.180
2004	2	29,161.092	27,848.169	1,312.923	4.50%	0.279
2004	3	26,714.131	25,923.820	790.311	2.96%	0.168
2004	4	28,194.185	25,235.821	2,958.364	10.49%	0.628

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Year	Month	Actual	Pred	Resid	%Resid	StdResid
2004	5	29,572.737	26,092.792	3,479.945	11.77%	0.739
2004	6	28,010.563	29,379.164	-1,368.601	-4.89%	-0.291
2004	7	31,534.905	27,231.798	4,303.107	13.65%	0.913
2004	8	32,081.210	28,610.012	3,471.198	10.82%	0.737
2004	9	32,281.206	29,637.636	2,643.570	8.19%	0.561
2004	10	30,272.712	30,465.138	-192.426	-0.64%	-0.041
2004	11	29,420.714	27,697.600	1,723.114	5.86%	0.366
2004	12	28,381.473	27,315.461	1,066.012	3.76%	0.226
2005	1	30,300.340	26,818.799	3,481.541	11.49%	0.739
2005	2	7,365.872	7,365.872	-0.000	-0.00%	-0.000
2005	3	5,538.200	5,538.200	-0.000	-0.00%	-0.000
2005	4	18,809.595	25,962.085	-7,152.490	-38.03%	-1.518
2005	5	22,382.224	26,806.096	-4,423.872	-19.77%	-0.939
2005	6	50,358.347	50,358.347	-0.000	-0.00%	-0.000
2005	7	24,577.196	27,859.436	-3,282.240	-13.35%	-0.697
2005	8	23,159.000	29,194.817	-6,035.817	-26.06%	-1.281
2005	9	30,346.269	30,243.781	102.488	0.34%	0.022
2005	10	34,274.840	31,092.624	3,182.216	9.28%	0.675
2005	11	30,414.545	28,346.426	2,068.119	6.80%	0.439
2005	12	18,409.000	27,925.579	-9,516.579	-51.70%	-2.020
2006	1	28,013.924	27,390.209	623.715	2.23%	0.132
2006	2	22,345.383	29,133.051	-6,787.668	-30.38%	-1.441
2006	3	34,952.402	27,182.647	7,769.755	22.23%	1.649
2006	4	31,270.018	26,468.592	4,801.426	15.35%	1.019
2006	5	28,886.974	27,299.508	1,587.466	5.50%	0.337
2006	6	27,714.049	30,557.054	-2,843.005	-10.26%	-0.603
2006	7	24,106.000	28,380.862	-4,274.862	-17.73%	-0.907
2006	8	34,155.000	29,730.250	4,424.750	12.95%	0.939
2006	9	37,638.067	30,671.606	6,966.461	18.51%	1.479
2006	10	38,692.881	31,412.841	7,280.040	18.81%	1.545
2006	11	31,126.933	28,559.035	2,567.898	8.25%	0.545
2006	12	23,670.478	28,115.073	-4,444.595	-18.78%	-0.943
2007	1	20,290.406	27,556.587	-7,266.181	-35.81%	-1.542
2007	2	37,053.118	29,276.315	7,776.803	20.99%	1.651
2007	3	32,677.490	27,359.086	5,318.404	16.28%	1.129
2007	4	31,122.942	26,678.207	4,444.735	14.28%	0.943
2007	5	32,497.819	27,542.297	4,955.522	15.25%	1.052
2007	6	24,713.583	30,815.669	-6,102.086	-24.69%	-1.295

Xcel Energy North Dakota Large Commercial and Industrial
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Year	Month	Actual	Pred	Resid	%Resid	StdResid
2007	7	44,128.759	44,128.759	-0.000	-0.00%	-0.000
2007	8	28,644.655	30,020.515	-1,375.860	-4.80%	-0.292
2007	9	20,776.513	30,976.994	-10,200.481	-49.10%	-2.165
2007	10	42,212.183	31,733.351	10,478.832	24.82%	2.224
2007	11	28,081.008	28,894.668	-813.660	-2.90%	-0.173
2007	12	26,556.926	28,406.118	-1,849.192	-6.96%	-0.393
2008	1	23,368.823	27,803.045	-4,434.222	-18.97%	-0.941
2008	2	24,152.457	29,478.185	-5,325.728	-22.05%	-1.131
2008	3	26,387.610	27,428.409	-1,040.799	-3.94%	-0.221
2008	4	25,904.784	26,614.983	-710.199	-2.74%	-0.151
2008	5	27,812.451	27,346.527	465.924	1.68%	0.099
2008	6	33,080.709	30,436.844	2,643.865	7.99%	0.561
2008	7	18,626.956	28,093.422	-9,466.466	-50.82%	-2.009
2008	8	33,113.378	29,275.580	3,837.798	11.59%	0.815
2008	9	30,420.492	29,942.413	478.079	1.57%	0.101
2008	10	24,795.858	30,409.125	-5,613.267	-22.64%	-1.192
2008	11	15,175.254	15,175.254	-0.000	-0.00%	-0.000
2008	12	37,707.980	26,472.384	11,235.596	29.80%	2.385
2009	1	17,414.501	25,549.448	-8,134.947	-46.71%	-1.727
2009	2	34,472.963	26,904.726	7,568.237	21.95%	1.607
2009	3	23,631.745	24,819.892	-1,188.147	-5.03%	-0.252
2009	4	26,157.749	23,971.408	2,186.341	8.36%	0.464
2009	5	19,775.915	24,667.894	-4,891.979	-24.74%	-1.038
2009	6	33,624.194	28,009.689	5,614.505	16.70%	1.192
2009	7	27,791.743	25,917.745	1,873.998	6.74%	0.398
2009	8	23,736.142	27,351.382	-3,615.240	-15.23%	-0.767
2009	9	22,398.311	28,378.099	-5,979.788	-26.70%	-1.269
2009	10	33,007.941	29,204.694	3,803.247	11.52%	0.807
2009	11	23,048.212	26,436.248	-3,388.036	-14.70%	-0.719
2009	12	20,607.583	26,052.808	-5,445.225	-26.42%	-1.156
2010	1	21,922.073	25,554.844	-3,632.771	-16.57%	-0.771
2010	2	31,622.334	27,335.093	4,287.241	13.56%	0.910
2010	3	35,652.566	25,507.064	10,145.502	28.46%	2.154
2010	4	27,354.187	24,915.383	2,438.804	8.92%	0.518
2010	5	21,811.736	25,868.672	-4,056.936	-18.60%	-0.861
2010	6	35,886.353	29,211.663	6,674.690	18.60%	1.417
2010	7		27,120.914			
2010	8		28,555.746			

Xcel Energy North Dakota Large Commercial and Industrial
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Year	Month	Actual	Pred	Resid	%Resid	StdResid
2010	9		29,593.881			
2010	10		30,431.894			
2010	11		27,674.867			
2010	12		27,290.678			
2011	1		26,791.967			
2011	2		28,571.468			
2011	3		26,672.465			
2011	4		26,009.812			
2011	5		26,892.128			
2011	6		30,185.112			
2011	7		28,044.356			
2011	8		29,429.181			
2011	9		30,435.707			
2011	10		31,242.111			
2011	11		28,453.475			
2011	12		28,040.692			

Xcel Energy North Dakota Street Lighting
2011 Test-Year Sales Forecast

Variable	Coefficient	StdErr	T-Stat	P-Value	Definition
ND.HH_ND	5.906	1.028	5.743	0.00%	North Dakota Households (thousands)
Binary.Jan	33.139	276.037	0.120	90.46%	Binary variable January
Binary.Feb	-191.408	275.452	-0.695	48.84%	Binary variable February
Binary.Mar	-253.654	275.670	-0.920	35.92%	Binary variable March
Binary.Apr	-439.638	275.840	-1.594	11.34%	Binary variable April
Binary.May	-593.455	276.845	-2.144	3.39%	Binary variable May
Binary.Jun	-684.131	277.045	-2.469	1.48%	Binary variable June
Binary.Jul	-694.961	275.398	-2.523	1.28%	Binary variable July
Binary.Aug	-604.610	275.470	-2.195	3.00%	Binary variable August
Binary.Sep	-455.169	275.629	-1.651	10.11%	Binary variable September
Binary.Oct	-280.855	275.798	-1.018	31.04%	Binary variable October
Binary.Nov	-129.515	275.366	-0.470	63.89%	Binary variable November
Binary.Dec	15.373	275.856	0.056	95.56%	Binary variable December
Binary2.May1999	-893.652	86.512	-10.330	0.00%	Binary variable May 1999
Binary2.Jun1999	863.257	86.262	10.007	0.00%	Binary variable June 1999
Binary2.Feb2005	-1354.732	85.415	-15.861	0.00%	Binary variable February 2005
Binary2.Dec2006	-421.383	86.139	-4.892	0.00%	Binary variable December 2006
Binary2.Jan2007	457.917	86.058	5.321	0.00%	Binary variable January 2007
BinaryTrans.Nov08	-392.487	86.716	-4.526	0.00%	Binary variable November 2008
AR(1)	0.099	0.089	1.120	26.48%	First order autoregressive term

Xcel Energy North Dakota Street Lighting
2011 Test-Year Sales Forecast

Regression Statistics	
Iterations	10
Adjusted Observations	149
Deg. of Freedom for Error	129
R-Squared	0.934
Adjusted R-Squared	0.925
AIC	8.953
BIC	9.356
F-Statistic	
Prob (F-Statistic)	
Log-Likelihood	-858.40
Model Sum of Squares	12,535,590.83
Sum of Squared Errors	880,470.81
Mean Squared Error	6,825.36
Std. Error of Regression	82.62
Mean Abs. Dev. (MAD)	55.17
Mean Abs. % Err. (MAPE)	4.60%
Durbin-Watson Statistic	2.081
Durbin-H Statistic	
Ljung-Box Statistic	140.63
Prob (Ljung-Box)	0.0000
Skewness	1.096
Kurtosis	9.355
Jarque-Bera	280.587
Prob (Jarque-Bera)	0.0000

Xcel Energy North Dakota Street Lighting
2011 Test-Year Sales Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
1998	1	1,497.000				
1998	2	1,246.000	1,318.367	-72.367	-5.81%	-0.876
1998	3	1,218.000	1,253.966	-35.966	-2.95%	-0.435
1998	4	994.000	1,071.857	-77.857	-7.83%	-0.942
1998	5	893.000	914.751	-21.751	-2.44%	-0.263
1998	6	809.000	829.786	-20.786	-2.57%	-0.252
1998	7	852.000	820.094	31.906	3.74%	0.386
1998	8	974.000	916.257	57.743	5.93%	0.699
1998	9	1,117.000	1,069.304	47.696	4.27%	0.577
1998	10	1,312.000	1,243.447	68.553	5.23%	0.830
1998	11	1,408.000	1,397.306	10.694	0.76%	0.129
1998	12	1,554.000	1,536.824	17.176	1.11%	0.208
1999	1	1,507.000	1,554.852	-47.852	-3.18%	-0.579
1999	2	1,268.000	1,324.035	-56.035	-4.42%	-0.678
1999	3	1,239.000	1,260.780	-21.780	-1.76%	-0.264
1999	4	1,006.000	1,078.489	-72.489	-7.21%	-0.877
1999	5	27.000	26.756	0.244	0.91%	0.003
1999	6	1,702.000	1,699.535	2.465	0.14%	0.030
1999	7	851.000	826.139	24.861	2.92%	0.301
1999	8	962.000	918.600	43.400	4.51%	0.525
1999	9	1,100.000	1,069.909	30.091	2.74%	0.364
1999	10	1,294.000	1,242.908	51.092	3.95%	0.618
1999	11	1,393.000	1,396.020	-3.020	-0.22%	-0.037
1999	12	1,546.000	1,535.539	10.461	0.68%	0.127
2000	1	1,499.000	1,553.929	-54.929	-3.66%	-0.665
2000	2	1,264.000	1,322.780	-58.780	-4.65%	-0.711
2000	3	1,232.000	1,260.723	-28.723	-2.33%	-0.348
2000	4	1,008.000	1,078.824	-70.824	-7.03%	-0.857
2000	5	913.000	922.324	-9.324	-1.02%	-0.113
2000	6	824.000	838.568	-14.568	-1.77%	-0.176
2000	7	869.000	828.994	40.006	4.60%	0.484
2000	8	982.000	925.969	56.031	5.71%	0.678
2000	9	1,126.000	1,078.747	47.253	4.20%	0.572
2000	10	1,331.000	1,253.613	77.387	5.81%	0.937
2000	11	1,430.000	1,409.087	20.913	1.46%	0.253
2000	12	1,587.000	1,549.880	37.120	2.34%	0.449
2001	1	1,496.000	1,569.940	-73.940	-4.94%	-0.895
2001	2	1,310.654	1,335.703	-25.049	-1.91%	-0.303

Xcel Energy North Dakota Street Lighting
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Year	Month	Actual	Pred	Resid	%Resid	StdResid
2001	3	1,265.926	1,278.441	-12.515	-0.99%	-0.151
2001	4	1,031.527	1,095.290	-63.763	-6.18%	-0.772
2001	5	935.525	937.769	-2.244	-0.24%	-0.027
2001	6	846.427	853.924	-7.497	-0.89%	-0.091
2001	7	893.497	844.350	49.147	5.50%	0.595
2001	8	1,013.200	941.541	71.659	7.07%	0.867
2001	9	1,196.717	1,094.995	101.722	8.50%	1.231
2001	10	1,362.218	1,273.789	88.429	6.49%	1.070
2001	11	1,473.471	1,425.357	48.114	3.27%	0.582
2001	12	1,632.577	1,567.375	65.202	3.99%	0.789
2002	1	1,578.229	1,587.655	-9.426	-0.60%	-0.114
2002	2	1,322.449	1,357.062	-34.613	-2.62%	-0.419
2002	3	1,291.493	1,292.826	-1.333	-0.10%	-0.016
2002	4	1,055.418	1,111.052	-55.634	-5.27%	-0.673
2002	5	949.990	953.375	-3.385	-0.36%	-0.041
2002	6	860.611	868.607	-7.996	-0.93%	-0.097
2002	7	907.677	859.015	48.662	5.36%	0.589
2002	8	1,024.844	956.216	68.628	6.70%	0.831
2002	9	1,165.514	1,109.429	56.085	4.81%	0.679
2002	10	1,369.520	1,283.985	85.535	6.25%	1.035
2002	11	1,475.941	1,439.381	36.560	2.48%	0.443
2002	12	1,628.164	1,580.931	47.233	2.90%	0.572
2003	1	1,576.911	1,600.539	-23.628	-1.50%	-0.286
2003	2	1,315.433	1,370.263	-54.830	-4.17%	-0.664
2003	3	1,276.596	1,305.474	-28.878	-2.26%	-0.350
2003	4	1,039.713	1,122.928	-83.215	-8.00%	-1.007
2003	5	937.648	965.182	-27.534	-2.94%	-0.333
2003	6	849.004	880.757	-31.753	-3.74%	-0.384
2003	7	895.099	871.249	23.850	2.66%	0.289
2003	8	1,012.924	968.365	44.559	4.40%	0.539
2003	9	1,155.842	1,121.653	34.189	2.96%	0.414
2003	10	1,361.319	1,296.443	64.876	4.77%	0.785
2003	11	1,465.041	1,451.995	13.046	0.89%	0.158
2003	12	1,614.298	1,593.288	21.010	1.30%	0.254
2004	1	1,569.808	1,612.613	-42.805	-2.73%	-0.518
2004	2	1,308.357	1,383.019	-74.662	-5.71%	-0.904
2004	3	1,278.819	1,318.242	-39.423	-3.08%	-0.477
2004	4	1,042.067	1,136.629	-94.562	-9.07%	-1.145

Xcel Energy North Dakota Street Lighting
2011 Test-Year Sales Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2004	5	942.183	978.907	-36.724	-3.90%	-0.445
2004	6	855.795	894.709	-38.914	-4.55%	-0.471
2004	7	896.800	885.436	11.364	1.27%	0.138
2004	8	1,016.498	982.057	34.441	3.39%	0.417
2004	9	1,160.921	1,135.542	25.379	2.19%	0.307
2004	10	1,366.629	1,310.492	56.137	4.11%	0.679
2004	11	1,469.770	1,466.078	3.692	0.25%	0.045
2004	12	1,628.564	1,607.324	21.240	1.30%	0.257
2005	1	1,571.875	1,627.604	-55.729	-3.55%	-0.675
2005	2	54.249	42.080	12.169	22.43%	0.147
2005	3	1,464.550	1,341.818	122.732	8.38%	1.486
2005	4	1,250.813	1,168.655	82.158	6.57%	0.994
2005	5	1,023.259	1,013.225	10.034	0.98%	0.121
2005	6	948.998	916.052	32.946	3.47%	0.399
2005	7	867.968	907.697	-39.729	-4.58%	-0.481
2005	8	921.000	991.934	-70.934	-7.70%	-0.859
2005	9	1,076.155	1,138.523	-62.368	-5.80%	-0.755
2005	10	1,229.277	1,314.252	-84.975	-6.91%	-1.029
2005	11	1,418.956	1,464.339	-45.383	-3.20%	-0.549
2005	12	1,593.000	1,613.879	-20.879	-1.31%	-0.253
2006	1	1,630.027	1,635.385	-5.358	-0.33%	-0.065
2006	2	1,565.089	1,413.598	151.491	9.68%	1.834
2006	3	1,321.623	1,368.030	-46.407	-3.51%	-0.562
2006	4	1,252.070	1,164.928	87.142	6.96%	1.055
2006	5	1,058.533	1,023.507	35.026	3.31%	0.424
2006	6	942.440	928.490	13.950	1.48%	0.169
2006	7	877.653	914.861	-37.208	-4.24%	-0.450
2006	8	897.911	999.583	-101.672	-11.32%	-1.231
2006	9	1,062.154	1,141.796	-79.642	-7.50%	-0.964
2006	10	1,188.266	1,317.299	-129.033	-10.86%	-1.562
2006	11	1,440.443	1,463.581	-23.138	-1.61%	-0.280
2006	12	1,197.909	1,196.806	1.103	0.09%	0.013
2007	1	2,108.089	2,096.961	11.128	0.53%	0.135
2007	2	1,527.751	1,415.519	112.232	7.35%	1.358
2007	3	1,301.555	1,363.121	-61.566	-4.73%	-0.745
2007	4	1,228.230	1,160.602	67.628	5.51%	0.819
2007	5	1,037.680	1,017.678	20.002	1.93%	0.242
2007	6	928.380	924.870	3.510	0.38%	0.042

Xcel Energy North Dakota Street Lighting
2011 Test-Year Sales Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2007	7	857.075	913.526	-56.451	-6.59%	-0.683
2007	8	935.173	999.214	-64.041	-6.85%	-0.775
2007	9	1,057.459	1,148.777	-91.318	-8.64%	-1.105
2007	10	1,210.851	1,321.736	-110.885	-9.16%	-1.342
2007	11	1,431.784	1,472.337	-40.553	-2.83%	-0.491
2007	12	1,526.410	1,625.467	-99.057	-6.49%	-1.199
2008	1	1,635.815	1,639.590	-3.775	-0.23%	-0.046
2008	2	1,531.298	1,425.470	105.828	6.91%	1.281
2008	3	1,314.680	1,376.470	-61.790	-4.70%	-0.748
2008	4	1,252.311	1,176.523	75.788	6.05%	0.917
2008	5	1,028.221	1,036.308	-8.087	-0.79%	-0.098
2008	6	952.861	940.356	12.505	1.31%	0.151
2008	7	874.038	932.702	-58.664	-6.71%	-0.710
2008	8	938.785	1,017.969	-79.184	-8.43%	-0.958
2008	9	1,096.029	1,166.419	-70.390	-6.42%	-0.852
2008	10	1,230.938	1,343.066	-112.128	-9.11%	-1.357
2008	11	1,118.919	1,099.570	19.349	1.73%	0.234
2008	12	1,846.344	1,651.197	195.147	10.57%	2.362
2009	1	1,588.268	1,689.266	-100.998	-6.36%	-1.223
2009	2	1,572.141	1,438.828	133.313	8.48%	1.614
2009	3	1,318.130	1,398.544	-80.414	-6.10%	-0.973
2009	4	1,321.514	1,194.858	126.656	9.58%	1.533
2009	5	1,090.296	1,061.130	29.166	2.68%	0.353
2009	6	987.305	963.989	23.316	2.36%	0.282
2009	7	915.415	953.159	-37.744	-4.12%	-0.457
2009	8	978.045	1,038.676	-60.631	-6.20%	-0.734
2009	9	1,147.909	1,186.606	-38.697	-3.37%	-0.468
2009	10	1,309.194	1,364.181	-54.987	-4.20%	-0.666
2009	11	1,475.191	1,515.465	-40.274	-2.73%	-0.487
2009	12	1,367.291	1,663.047	-295.756	-21.63%	-3.580
2010	1	2,064.297	1,656.987	407.310	19.73%	4.930
2010	2	1,362.332	1,501.029	-138.697	-10.18%	-1.679
2010	3	1,688.751	1,392.688	296.063	17.53%	3.584
2010	4	1,325.455	1,246.483	78.972	5.96%	0.956
2010	5	1,090.904	1,076.328	14.576	1.34%	0.176
2010	6	1,011.715	978.892	32.823	3.24%	0.397
2010	7		970.447			
2010	8		1,059.025			

Xcel Energy North Dakota Street Lighting
2011 Test-Year Sales Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2010	9		1,209.540			
2010	10		1,385.209			
2010	11		1,537.931			
2010	12		1,684.209			
2011	1		1,703.364			
2011	2		1,480.207			
2011	3		1,419.354			
2011	4		1,234.763			
2011	5		1,082.339			
2011	6		993.059			
2011	7		983.626			
2011	8		1,075.374			
2011	9		1,226.215			
2011	10		1,401.929			
2011	11		1,554.668			
2011	12		1,700.960			

Xcel Energy North Dakota Residential without Space Heating
2011 Test-Year Customer Forecast

Variable	Coefficient	StdErr	T-Stat	P-Value	Definition
ND.HH_ND	200.739	3.239	61.984	0.00%	North Dakota Households (thousands)
Binary.CRS	616.330	107.918	5.711	0.00%	Binary variable for CRS conversion
Binary2.May1999	-521.009	90.256	-5.773	0.00%	Binary variable May 1999
Binary2.Jun1999	861.204	91.471	9.415	0.00%	Binary variable June 1999
AR(1)	0.980	0.020	48.204	0.00%	First order autoregressive term
SAR(1)	0.330	0.076	4.352	0.00%	First order seasonal autoregressive term

Xcel Energy North Dakota Residential without Space Heating
2011 Test-Year Customer Forecast

Regression Statistics	
Iterations	18
Adjusted Observations	137
Deg. of Freedom for Error	131
R-Squared	0.984
Adjusted R-Squared	0.983
AIC	9.582
BIC	9.710
F-Statistic	
Prob (F-Statistic)	
Log-Likelihood	-844.78
Model Sum of Squares	111,928,886.88
Sum of Squared Errors	1,820,667.37
Mean Squared Error	13,898.22
Std. Error of Regression	117.89
Mean Abs. Dev. (MAD)	87.30
Mean Abs. % Err. (MAPE)	0.16%
Durbin-Watson Statistic	1.706
Durbin-H Statistic	
Ljung-Box Statistic	66.03
Prob (Ljung-Box)	0.0000
Skewness	-0.334
Kurtosis	4.486
Jarque-Bera	15.152
Prob (Jarque-Bera)	0.0005

Xcel Energy North Dakota Residential without Space Heating
2011 Test-Year Customer Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
1998	1	52,166.000				
1998	2	52,250.000				
1998	3	52,455.000				
1998	4	52,236.000				
1998	5	51,916.000				
1998	6	51,831.000				
1998	7	52,289.000				
1998	8	52,313.000				
1998	9	52,538.000				
1998	10	52,724.000				
1998	11	52,891.000				
1998	12	52,987.000				
1999	1	52,882.000				
1999	2	53,158.000	52,896.328	261.672	0.49%	2.220
1999	3	53,264.000	53,217.928	46.072	0.09%	0.391
1999	4	52,947.000	53,183.411	-236.411	-0.45%	-2.005
1999	5	52,365.000	52,317.173	47.827	0.09%	0.406
1999	6	53,706.000	53,693.559	12.441	0.02%	0.106
1999	7	53,118.000	52,970.352	147.648	0.28%	1.252
1999	8	53,054.000	53,097.618	-43.618	-0.08%	-0.370
1999	9	53,459.000	53,101.202	357.798	0.67%	3.035
1999	10	53,534.000	53,486.426	47.574	0.09%	0.404
1999	11	53,409.000	53,554.628	-145.628	-0.27%	-1.235
1999	12	53,458.000	53,413.490	44.510	0.08%	0.378
2000	1	53,520.000	53,395.634	124.366	0.23%	1.055
2000	2	53,594.000	53,581.252	12.748	0.02%	0.108
2000	3	53,539.000	53,644.032	-105.032	-0.20%	-0.891
2000	4	53,654.000	53,451.969	202.031	0.38%	1.714
2000	5	53,547.000	53,647.765	-100.765	-0.19%	-0.855
2000	6	53,344.000	53,557.035	-213.035	-0.40%	-1.807
2000	7	53,654.000	53,462.478	191.522	0.36%	1.625
2000	8	53,586.000	53,657.645	-71.645	-0.13%	-0.608
2000	9	53,809.000	53,746.342	62.658	0.12%	0.531
2000	10	53,975.000	53,859.512	115.488	0.21%	0.980

Xcel Energy North Dakota Residential without Space Heating
2011 Test-Year Customer Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2000	11	54,053.000	53,957.541	95.459	0.18%	0.810
2000	12	53,937.000	54,091.544	-154.544	-0.29%	-1.311
2001	1	54,052.000	53,983.367	68.633	0.13%	0.582
2001	2	54,066.000	54,101.301	-35.301	-0.07%	-0.299
2001	3	54,123.000	54,058.146	64.854	0.12%	0.550
2001	4	53,886.000	54,170.297	-284.297	-0.53%	-2.412
2001	5	54,092.000	53,866.123	225.877	0.42%	1.916
2001	6	54,085.000	54,036.215	48.785	0.09%	0.414
2001	7	54,213.000	54,197.868	15.132	0.03%	0.128
2001	8	54,178.000	54,201.166	-23.166	-0.04%	-0.197
2001	9	54,385.000	54,263.082	121.918	0.22%	1.034
2001	10	54,492.000	54,449.150	42.850	0.08%	0.363
2001	11	54,316.000	54,526.621	-210.621	-0.39%	-1.787
2001	12	54,196.000	54,291.285	-95.285	-0.18%	-0.808
2002	1	54,336.000	54,249.726	86.274	0.16%	0.732
2002	2	54,260.000	54,354.906	-94.906	-0.17%	-0.805
2002	3	54,224.000	54,295.349	-71.349	-0.13%	-0.605
2002	4	54,208.000	54,163.992	44.008	0.08%	0.373
2002	5	54,267.000	54,293.504	-26.504	-0.05%	-0.225
2002	6	54,108.000	54,283.023	-175.023	-0.32%	-1.485
2002	7	54,293.000	54,172.293	120.707	0.22%	1.024
2002	8	54,339.000	54,301.196	37.804	0.07%	0.321
2002	9	54,458.000	54,426.536	31.464	0.06%	0.267
2002	10	54,466.000	54,512.083	-46.083	-0.08%	-0.391
2002	11	54,434.000	54,427.806	6.194	0.01%	0.053
2002	12	54,511.000	54,414.398	96.602	0.18%	0.819
2003	1	54,446.000	54,575.426	-129.426	-0.24%	-1.098
2003	2	54,480.000	54,441.949	38.051	0.07%	0.323
2003	3	54,543.000	54,488.598	54.402	0.10%	0.461
2003	4	54,605.000	54,557.263	47.737	0.09%	0.405
2003	5	54,660.000	54,643.232	16.768	0.03%	0.142
2003	6	54,584.000	54,626.212	-42.212	-0.08%	-0.358
2003	7	54,796.000	54,664.783	131.217	0.24%	1.113
2003	8	54,715.000	54,828.447	-113.447	-0.21%	-0.962

Xcel Energy North Dakota Residential without Space Heating
2011 Test-Year Customer Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2003	9	54,940.000	54,774.112	165.888	0.30%	1.407
2003	10	54,993.000	54,959.318	33.682	0.06%	0.286
2003	11	54,920.000	54,998.678	-78.678	-0.14%	-0.667
2003	12	54,880.000	54,963.547	-83.547	-0.15%	-0.709
2004	1	55,000.000	54,878.575	121.425	0.22%	1.030
2004	2	54,947.000	55,028.977	-81.977	-0.15%	-0.695
2004	3	55,049.000	54,987.482	61.518	0.11%	0.522
2004	4	55,038.000	55,088.095	-50.095	-0.09%	-0.425
2004	5	54,955.000	55,075.994	-120.994	-0.22%	-1.026
2004	6	54,991.000	54,952.440	38.560	0.07%	0.327
2004	7	55,049.000	55,082.835	-33.835	-0.06%	-0.287
2004	8	55,219.000	55,044.958	174.042	0.32%	1.476
2004	9	55,356.000	55,312.632	43.368	0.08%	0.368
2004	10	55,356.000	55,392.186	-36.186	-0.07%	-0.307
2004	11	55,507.000	55,351.535	155.465	0.28%	1.319
2004	12	55,377.000	55,510.551	-133.551	-0.24%	-1.133
2005	1	55,445.000	55,436.284	8.716	0.02%	0.074
2005	2	54,854.000	54,830.870	23.130	0.04%	0.196
2005	3	54,780.000	54,907.140	-127.140	-0.23%	-1.078
2005	4	54,532.000	54,798.595	-266.595	-0.49%	-2.261
2005	5	54,397.000	54,532.331	-135.331	-0.25%	-1.148
2005	6	53,987.000	54,428.294	-441.294	-0.82%	-3.743
2005	7	53,763.000	54,034.399	-271.399	-0.50%	-2.302
2005	8	53,729.000	53,852.611	-123.611	-0.23%	-1.049
2005	9	53,595.000	53,809.915	-214.915	-0.40%	-1.823
2005	10	53,724.000	53,634.667	89.333	0.17%	0.758
2005	11	53,909.000	53,811.265	97.735	0.18%	0.829
2005	12	53,949.000	53,901.194	47.806	0.09%	0.406
2006	1	54,019.000	54,005.230	13.770	0.03%	0.117
2006	2	54,069.000	54,060.552	8.448	0.02%	0.072
2006	3	54,157.000	54,077.317	79.683	0.15%	0.676
2006	4	54,149.000	54,105.994	43.006	0.08%	0.365
2006	5	54,190.000	54,134.162	55.838	0.10%	0.474
2006	6	54,043.000	54,044.050	-1.050	-0.00%	-0.009

Xcel Energy North Dakota Residential without Space Heating
2011 Test-Year Customer Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2006	7	54,060.000	53,958.245	101.755	0.19%	0.863
2006	8	54,288.000	54,035.696	252.304	0.46%	2.140
2006	9	54,422.000	54,225.447	196.553	0.36%	1.667
2006	10	54,588.000	54,442.233	145.767	0.27%	1.236
2006	11	54,699.000	54,623.808	75.192	0.14%	0.638
2006	12	54,812.000	54,685.515	126.485	0.23%	1.073
2007	1	54,976.000	54,805.984	170.016	0.31%	1.442
2007	2	55,033.000	54,960.126	72.874	0.13%	0.618
2007	3	55,158.000	55,028.415	129.585	0.23%	1.099
2007	4	55,228.000	55,119.379	108.621	0.20%	0.921
2007	5	55,274.000	55,203.665	70.335	0.13%	0.597
2007	6	55,202.000	55,261.404	-59.404	-0.11%	-0.504
2007	7	55,220.000	55,245.080	-25.080	-0.05%	-0.213
2007	8	55,287.000	55,333.546	-46.546	-0.08%	-0.395
2007	9	55,281.000	55,370.909	-89.909	-0.16%	-0.763
2007	10	55,427.000	55,377.563	49.437	0.09%	0.419
2007	11	55,467.000	55,504.662	-37.662	-0.07%	-0.319
2007	12	55,489.000	55,546.476	-57.476	-0.10%	-0.488
2008	1	55,647.000	55,586.701	60.299	0.11%	0.511
2008	2	55,702.000	55,708.387	-6.387	-0.01%	-0.054
2008	3	55,741.000	55,786.325	-45.325	-0.08%	-0.384
2008	4	55,783.000	55,808.309	-25.309	-0.05%	-0.215
2008	5	55,791.000	55,843.098	-52.098	-0.09%	-0.442
2008	6	55,719.000	55,805.156	-86.156	-0.15%	-0.731
2008	7	55,755.000	55,764.752	-9.752	-0.02%	-0.083
2008	8	55,884.000	55,817.242	66.758	0.12%	0.566
2008	9	55,976.000	55,917.150	58.850	0.11%	0.499
2008	10	56,051.000	56,058.270	-7.270	-0.01%	-0.062
2008	11	56,038.000	56,098.597	-60.597	-0.11%	-0.514
2008	12	56,073.000	56,077.223	-4.223	-0.01%	-0.036
2009	1	56,087.000	56,157.318	-70.318	-0.13%	-0.596
2009	2	56,099.000	56,138.865	-39.865	-0.07%	-0.338
2009	3	56,094.000	56,140.904	-46.904	-0.08%	-0.398
2009	4	56,019.000	56,137.913	-118.913	-0.21%	-1.009

Xcel Energy North Dakota Residential without Space Heating
2011 Test-Year Customer Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2009	5	56,028.000	56,054.139	-26.139	-0.05%	-0.222
2009	6	56,045.000	56,029.886	15.114	0.03%	0.128
2009	7	56,026.000	56,082.219	-56.219	-0.10%	-0.477
2009	8	56,065.000	56,095.042	-30.042	-0.05%	-0.255
2009	9	56,105.000	56,124.247	-19.247	-0.03%	-0.163
2009	10	56,132.000	56,158.991	-26.991	-0.05%	-0.229
2009	11	56,158.000	56,157.452	0.548	0.00%	0.005
2009	12	56,242.000	56,200.589	41.411	0.07%	0.351
2010	1	56,235.000	56,276.777	-41.777	-0.07%	-0.354
2010	2	56,270.000	56,269.926	0.074	0.00%	0.001
2010	3	56,289.000	56,301.208	-12.208	-0.02%	-0.104
2010	4	56,258.000	56,297.305	-39.305	-0.07%	-0.333
2010	5	56,223.000	56,294.767	-71.767	-0.13%	-0.609
2010	6	56,209.000	56,265.050	-56.050	-0.10%	-0.475
2010	7		56,240.203			
2010	8		56,290.434			
2010	9		56,340.801			
2010	10		56,386.768			
2010	11		56,432.298			
2010	12		56,496.943			
2011	1		56,531.453			
2011	2		56,579.723			
2011	3		56,622.692			
2011	4		56,649.065			
2011	5		56,674.021			
2011	6		56,705.895			
2011	7		56,752.596			
2011	8		56,805.486			
2011	9		56,858.413			
2011	10		56,909.803			
2011	11		56,960.964			
2011	12		57,018.431			

Xcel Energy North Dakota Residential with Space Heating
2011 Test-Year Customer Forecast

Variable	Coefficient	Std Err	T-Stat	P-Value	Definition
ND.HH_ND	68.573	1.030	66.571	0.00%	North Dakota Households (thousands)
Binary.CRS	404.605	63.765	6.345	0.00%	Binary variable for CRS conversion
AR(1)	0.982	0.015	67.659	0.00%	First order autoregressive term

Xcel Energy North Dakota Residential with Space Heating
2011 Test-Year Customer Forecast

Regression Statistics	
Iterations	6
Adjusted Observations	149
Deg. of Freedom for Error	146
R-Squared	0.972
Adjusted R-Squared	0.972
AIC	8.312
BIC	8.373
F-Statistic	
Prob (F-Statistic)	
Log-Likelihood	-827.70
Model Sum of Squares	20,365,952.71
Sum of Squared Errors	583,091.39
Mean Squared Error	3,993.78
Std. Error of Regression	63.20
Mean Abs. Dev. (MAD)	46.73
Mean Abs. % Err. (MAPE)	0.25%
Durbin-Watson Statistic	1.763
Durbin-H Statistic	
Ljung-Box Statistic	38.19
Prob (Ljung-Box)	0.0332
Skewness	-0.489
Kurtosis	4.755
Jarque-Bera	25.070
Prob (Jarque-Bera)	0.0000

Xcel Energy North Dakota Residential with Space Heating
2011 Test-Year Customer Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
1998	1	18,521.000				
1998	2	18,483.000	18,518.836	-35.836	-0.19%	-0.567
1998	3	18,527.000	18,480.195	46.805	0.25%	0.741
1998	4	18,480.000	18,523.504	-43.504	-0.24%	-0.688
1998	5	18,423.000	18,477.475	-54.475	-0.30%	-0.862
1998	6	18,329.000	18,421.562	-92.562	-0.51%	-1.465
1998	7	18,396.000	18,329.391	66.609	0.36%	1.054
1998	8	18,418.000	18,395.279	22.721	0.12%	0.360
1998	9	18,418.000	18,416.905	1.095	0.01%	0.017
1998	10	18,483.000	18,417.016	65.984	0.36%	1.044
1998	11	18,509.000	18,480.939	28.061	0.15%	0.444
1998	12	18,501.000	18,502.489	-1.489	-0.01%	-0.024
1999	1	18,448.000	18,494.671	-46.671	-0.25%	-0.739
1999	2	18,500.000	18,442.675	57.325	0.31%	0.907
1999	3	18,575.000	18,496.927	78.073	0.42%	1.235
1999	4	18,534.000	18,570.651	-36.651	-0.20%	-0.580
1999	5	18,369.000	18,530.493	-161.493	-0.88%	-2.555
1999	6	18,481.000	18,361.174	119.826	0.65%	1.896
1999	7	18,471.000	18,471.087	-0.087	-0.00%	-0.001
1999	8	18,387.000	18,461.227	-74.227	-0.40%	-1.175
1999	9	18,568.000	18,378.712	189.288	1.02%	2.995
1999	10	18,561.000	18,556.364	4.636	0.02%	0.073
1999	11	18,483.000	18,549.449	-66.449	-0.36%	-1.051
1999	12	18,556.000	18,472.824	83.176	0.45%	1.316
2000	1	18,494.000	18,544.448	-50.448	-0.27%	-0.798
2000	2	18,524.000	18,483.538	40.462	0.22%	0.640
2000	3	18,534.000	18,529.267	4.733	0.03%	0.075
2000	4	18,528.000	18,539.340	-11.340	-0.06%	-0.179
2000	5	18,406.000	18,533.706	-127.706	-0.69%	-2.021
2000	6	18,345.000	18,414.223	-69.223	-0.38%	-1.095
2000	7	18,439.000	18,354.593	84.407	0.46%	1.336
2000	8	18,460.000	18,447.133	12.867	0.07%	0.204
2000	9	18,551.000	18,468.039	82.961	0.45%	1.313
2000	10	18,613.000	18,557.634	55.366	0.30%	0.876

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Year	Month	Actual	Pred	Resid	%Resid	StdResid
2000	11	18,582.000	18,618.758	-36.758	-0.20%	-0.582
2000	12	18,560.000	18,588.615	-28.615	-0.15%	-0.453
2001	1	18,580.000	18,567.274	12.726	0.07%	0.201
2001	2	18,546.000	18,587.166	-41.166	-0.22%	-0.651
2001	3	18,622.000	18,554.078	67.922	0.36%	1.075
2001	4	18,599.000	18,628.948	-29.948	-0.16%	-0.474
2001	5	18,612.000	18,606.626	5.374	0.03%	0.085
2001	6	18,617.000	18,619.681	-2.681	-0.01%	-0.042
2001	7	18,655.000	18,624.848	30.152	0.16%	0.477
2001	8	18,617.000	18,662.413	-45.413	-0.24%	-0.719
2001	9	18,718.000	18,625.399	92.601	0.49%	1.465
2001	10	18,749.000	18,724.814	24.186	0.13%	0.383
2001	11	18,722.000	18,755.507	-33.507	-0.18%	-0.530
2001	12	18,611.000	18,729.293	-118.293	-0.64%	-1.872
2002	1	18,668.000	18,620.580	47.420	0.25%	0.750
2002	2	18,632.000	18,676.799	-44.799	-0.24%	-0.709
2002	3	18,635.000	18,641.751	-6.751	-0.04%	-0.107
2002	4	18,676.000	18,644.956	31.044	0.17%	0.491
2002	5	18,644.000	18,685.468	-41.468	-0.22%	-0.656
2002	6	18,577.000	18,654.347	-77.347	-0.42%	-1.224
2002	7	18,664.000	18,588.832	75.168	0.40%	1.189
2002	8	18,663.000	18,674.504	-11.504	-0.06%	-0.182
2002	9	18,760.000	18,673.818	86.182	0.46%	1.364
2002	10	18,730.000	18,769.308	-39.308	-0.21%	-0.622
2002	11	18,551.000	18,740.117	-189.117	-1.02%	-2.993
2002	12	18,608.000	18,564.683	43.317	0.23%	0.685
2003	1	18,564.000	18,620.904	-56.904	-0.31%	-0.900
2003	2	18,588.000	18,577.970	10.030	0.05%	0.159
2003	3	18,586.000	18,601.828	-15.828	-0.09%	-0.250
2003	4	18,563.000	18,600.128	-37.128	-0.20%	-0.588
2003	5	18,618.000	18,577.811	40.189	0.22%	0.636
2003	6	18,589.000	18,632.104	-43.104	-0.23%	-0.682
2003	7	18,681.000	18,603.897	77.103	0.41%	1.220
2003	8	18,673.000	18,694.481	-21.481	-0.12%	-0.340

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Year	Month	Actual	Pred	Resid	%Resid	StdResid
2003	9	18,622.000	18,686.925	-64.925	-0.35%	-1.027
2003	10	18,669.000	18,637.120	31.880	0.17%	0.504
2003	11	18,636.000	18,683.526	-47.526	-0.26%	-0.752
2003	12	18,641.000	18,651.428	-10.428	-0.06%	-0.165
2004	1	18,627.000	18,656.601	-29.601	-0.16%	-0.468
2004	2	18,624.000	18,643.122	-19.122	-0.10%	-0.303
2004	3	18,697.000	18,640.476	56.524	0.30%	0.894
2004	4	18,699.000	18,712.409	-13.409	-0.07%	-0.212
2004	5	18,676.000	18,714.638	-38.638	-0.21%	-0.611
2004	6	18,673.000	18,692.358	-19.358	-0.10%	-0.306
2004	7	18,648.000	18,689.679	-41.679	-0.22%	-0.660
2004	8	18,740.000	18,665.402	74.598	0.40%	1.180
2004	9	18,782.000	18,756.022	25.978	0.14%	0.411
2004	10	18,746.000	18,797.522	-51.522	-0.27%	-0.815
2004	11	18,706.000	18,762.446	-56.446	-0.30%	-0.893
2004	12	18,681.000	18,723.478	-42.478	-0.23%	-0.672
2005	1	18,715.000	18,699.203	15.797	0.08%	0.250
2005	2	18,322.000	18,328.244	-6.244	-0.03%	-0.099
2005	3	18,289.000	18,339.939	-50.939	-0.28%	-0.806
2005	4	18,202.000	18,307.810	-105.810	-0.58%	-1.674
2005	5	18,155.000	18,222.667	-67.667	-0.37%	-1.071
2005	6	17,985.000	18,173.029	-188.029	-1.05%	-2.975
2005	7	17,771.000	18,006.333	-235.333	-1.32%	-3.724
2005	8	17,782.000	17,796.441	-14.441	-0.08%	-0.229
2005	9	17,719.000	17,807.459	-88.459	-0.50%	-1.400
2005	10	17,806.000	17,745.809	60.191	0.34%	0.952
2005	11	17,846.000	17,831.420	14.580	0.08%	0.231
2005	12	17,845.000	17,870.908	-25.908	-0.15%	-0.410
2006	1	17,870.000	17,870.127	-0.127	-0.00%	-0.002
2006	2	17,922.000	17,894.870	27.130	0.15%	0.429
2006	3	17,989.000	17,946.140	42.860	0.24%	0.678
2006	4	17,980.000	18,012.116	-32.116	-0.18%	-0.508
2006	5	18,006.000	18,003.481	2.519	0.01%	0.040
2006	6	17,886.000	18,014.643	-128.643	-0.72%	-2.036

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Year	Month	Actual	Pred	Resid	%Resid	StdResid
2006	7	17,928.000	17,896.769	31.231	0.17%	0.494
2006	8	18,101.000	17,937.936	163.064	0.90%	2.580
2006	9	18,174.000	18,107.713	66.287	0.36%	1.049
2006	10	18,223.000	18,179.314	43.686	0.24%	0.691
2006	11	18,285.000	18,227.354	57.646	0.32%	0.912
2006	12	18,339.000	18,288.158	50.842	0.28%	0.805
2007	1	18,423.000	18,341.106	81.894	0.44%	1.296
2007	2	18,470.000	18,423.506	46.494	0.25%	0.736
2007	3	18,504.000	18,469.584	34.416	0.19%	0.545
2007	4	18,534.000	18,502.898	31.102	0.17%	0.492
2007	5	18,590.000	18,532.285	57.715	0.31%	0.913
2007	6	18,564.000	18,607.962	-43.962	-0.24%	-0.696
2007	7	18,577.000	18,582.751	-5.751	-0.03%	-0.091
2007	8	18,593.000	18,595.827	-2.827	-0.02%	-0.045
2007	9	18,595.000	18,611.896	-16.896	-0.09%	-0.267
2007	10	18,583.000	18,614.174	-31.174	-0.17%	-0.493
2007	11	18,587.000	18,602.708	-15.708	-0.08%	-0.249
2007	12	18,605.000	18,606.997	-1.997	-0.01%	-0.032
2008	1	18,664.000	18,624.984	39.016	0.21%	0.617
2008	2	18,681.000	18,683.222	-2.222	-0.01%	-0.035
2008	3	18,704.000	18,700.275	3.725	0.02%	0.059
2008	4	18,750.000	18,723.171	26.829	0.14%	0.425
2008	5	18,770.000	18,768.647	1.353	0.01%	0.021
2008	6	18,722.000	18,792.639	-70.639	-0.38%	-1.118
2008	7	18,708.000	18,745.906	-37.906	-0.20%	-0.600
2008	8	18,776.000	18,732.552	43.448	0.23%	0.688
2008	9	18,811.000	18,798.426	12.574	0.07%	0.199
2008	10	18,845.000	18,833.154	11.846	0.06%	0.187
2008	11	18,885.000	18,866.900	18.100	0.10%	0.286
2008	12	18,963.000	18,905.250	57.750	0.30%	0.914
2009	1	18,966.000	18,982.169	-16.169	-0.09%	-0.256
2009	2	19,016.000	18,985.458	30.542	0.16%	0.483
2009	3	19,023.000	19,032.999	-9.999	-0.05%	-0.158
2009	4	19,104.000	19,040.180	63.820	0.33%	1.010

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Year	Month	Actual	Pred	Resid	%Resid	StdResid
2009	5	19,212.000	19,120.010	91.990	0.48%	1.456
2009	6	19,229.000	19,225.157	3.843	0.02%	0.061
2009	7	19,247.000	19,242.134	4.866	0.03%	0.077
2009	8	19,254.000	19,260.093	-6.093	-0.03%	-0.096
2009	9	19,246.000	19,267.458	-21.458	-0.11%	-0.340
2009	10	19,267.000	19,259.895	7.105	0.04%	0.112
2009	11	19,322.000	19,280.802	41.198	0.21%	0.652
2009	12	19,366.000	19,335.129	30.871	0.16%	0.488
2010	1	19,505.000	19,378.617	126.383	0.65%	2.000
2010	2	19,597.000	19,515.370	81.630	0.42%	1.292
2010	3	19,685.000	19,606.021	78.979	0.40%	1.250
2010	4	19,698.000	19,692.706	5.294	0.03%	0.084
2010	5	19,685.000	19,705.761	-20.761	-0.11%	-0.329
2010	6	19,691.000	19,693.331	-2.331	-0.01%	-0.037
2010	7		19,699.515			
2010	8		19,708.167			
2010	9		19,716.995			
2010	10		19,725.955			
2010	11		19,735.046			
2010	12		19,744.305			
2011	1		19,753.689			
2011	2		19,763.196			
2011	3		19,772.865			
2011	4		19,782.653			
2011	5		19,792.557			
2011	6		19,802.616			
2011	7		19,812.788			
2011	8		19,823.070			
2011	9		19,833.500			
2011	10		19,844.037			
2011	11		19,854.679			
2011	12		19,865.464			

Xcel Energy North Dakota Small Commercial and Industrial
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Variable	Coefficient	StdErr	T-Stat	P-Value	Definition
ND.EE_ND	32.828	0.556	59.007	0.00%	North Dakota Total Employment (thousands)
Binary.CIReclass01Pre	-522.900	46.176	-11.324	0.00%	Binary variable for 2001 C&I reclassification
Binary.CRS	286.111	45.369	6.306	0.00%	Binary variable for CRS conversion
Binary2.Jan2002	197.981	38.510	5.141	0.00%	Binary variable January 2002
AR(1)	0.707	0.084	8.444	0.00%	First order autoregressive term
AR(2)	0.271	0.084	3.222	0.16%	Second order autoregressive term

Xcel Energy North Dakota Small Commercial and Industrial
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Regression Statistics	
Iterations	30
Adjusted Observations	148
Deg. of Freedom for Error	142
R-Squared	0.993
Adjusted R-Squared	0.993
AIC	7.743
BIC	7.864
F-Statistic	
Prob (F-Statistic)	
Log-Likelihood	-776.95
Model Sum of Squares	45,122,239.19
Sum of Squared Errors	314,477.53
Mean Squared Error	2,214.63
Std. Error of Regression	47.06
Mean Abs. Dev. (MAD)	33.96
Mean Abs. % Err. (MAPE)	0.30%
Durbin-Watson Statistic	1.953
Durbin-H Statistic	
Ljung-Box Statistic	31.94
Prob (Ljung-Box)	0.1285
Skewness	0.428
Kurtosis	3.963
Jarque-Bera	10.241
Prob (Jarque-Bera)	0.0060

Xcel Energy North Dakota Small Commercial and Industrial
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Year	Month	Actual	Pred	Resid	%Resid	StdResid
1998	1	10,219.000				
1998	2	10,211.000				
1998	3	10,298.000	10,206.772	91.228	0.89%	1.939
1998	4	10,153.000	10,260.248	-107.248	-1.06%	-2.279
1998	5	10,183.000	10,181.140	1.860	0.02%	0.040
1998	6	10,184.000	10,181.387	2.613	0.03%	0.056
1998	7	10,195.000	10,195.473	-0.473	-0.00%	-0.010
1998	8	10,223.000	10,203.711	19.289	0.19%	0.410
1998	9	10,214.000	10,248.200	-34.200	-0.33%	-0.727
1998	10	10,231.000	10,255.934	-24.934	-0.24%	-0.530
1998	11	10,276.000	10,266.166	9.834	0.10%	0.209
1998	12	10,319.000	10,263.855	55.145	0.53%	1.172
1999	1	10,296.000	10,295.576	0.424	0.00%	0.009
1999	2	10,421.000	10,290.788	130.212	1.25%	2.767
1999	3	10,336.000	10,411.742	-75.742	-0.73%	-1.609
1999	4	10,352.000	10,396.816	-44.816	-0.43%	-0.952
1999	5	10,283.000	10,385.709	-102.709	-1.00%	-2.183
1999	6	10,465.000	10,327.697	137.303	1.31%	2.918
1999	7	10,443.000	10,434.112	8.888	0.09%	0.189
1999	8	10,430.000	10,468.290	-38.290	-0.37%	-0.814
1999	9	10,422.000	10,452.376	-30.376	-0.29%	-0.645
1999	10	10,455.000	10,443.213	11.787	0.11%	0.250
1999	11	10,410.000	10,464.687	-54.687	-0.53%	-1.162
1999	12	10,513.000	10,434.123	78.877	0.75%	1.676
2000	1	10,501.000	10,492.689	8.311	0.08%	0.177
2000	2	10,563.000	10,512.300	50.700	0.48%	1.077
2000	3	10,628.000	10,545.355	82.645	0.78%	1.756
2000	4	10,561.000	10,606.027	-45.027	-0.43%	-0.957
2000	5	10,614.000	10,576.279	37.721	0.36%	0.802
2000	6	10,588.000	10,615.237	-27.237	-0.26%	-0.579
2000	7	10,608.000	10,616.989	-8.989	-0.08%	-0.191
2000	8	10,677.000	10,624.475	52.525	0.49%	1.116
2000	9	10,661.000	10,646.256	14.744	0.14%	0.313
2000	10	10,659.000	10,644.453	14.547	0.14%	0.309

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Year	Month	Actual	Pred	Resid	%Resid	StdResid
2000	11	10,703.000	10,638.388	64.612	0.60%	1.373
2000	12	10,660.000	10,720.801	-60.801	-0.57%	-1.292
2001	1	11,260.000	11,240.222	19.778	0.18%	0.420
2001	2	11,230.000	11,283.880	-53.880	-0.48%	-1.145
2001	3	11,280.000	11,249.767	30.233	0.27%	0.642
2001	4	11,210.000	11,267.640	-57.640	-0.51%	-1.225
2001	5	11,258.000	11,231.795	26.205	0.23%	0.557
2001	6	11,306.000	11,223.823	82.177	0.73%	1.746
2001	7	11,355.000	11,264.117	90.883	0.80%	1.931
2001	8	11,366.000	11,311.355	54.645	0.48%	1.161
2001	9	11,403.000	11,360.816	42.184	0.37%	0.896
2001	10	11,362.000	11,397.975	-35.975	-0.32%	-0.764
2001	11	11,343.000	11,379.230	-36.230	-0.32%	-0.770
2001	12	11,270.000	11,340.280	-70.280	-0.62%	-1.493
2002	1	11,583.000	11,477.422	105.578	0.91%	2.243
2002	2	11,495.000	11,340.821	154.179	1.34%	3.276
2002	3	11,440.000	11,452.581	-12.581	-0.11%	-0.267
2002	4	11,442.000	11,444.283	-2.283	-0.02%	-0.049
2002	5	11,438.000	11,430.716	7.284	0.06%	0.155
2002	6	11,431.000	11,434.211	-3.211	-0.03%	-0.068
2002	7	11,458.000	11,429.832	28.168	0.25%	0.599
2002	8	11,450.000	11,447.091	2.909	0.03%	0.062
2002	9	11,500.000	11,461.600	38.400	0.33%	0.816
2002	10	11,523.000	11,498.588	24.412	0.21%	0.519
2002	11	11,415.000	11,528.764	-113.764	-1.00%	-2.417
2002	12	11,504.000	11,447.335	56.665	0.49%	1.204
2003	1	11,543.000	11,477.870	65.130	0.56%	1.384
2003	2	11,496.000	11,529.687	-33.687	-0.29%	-0.716
2003	3	11,576.000	11,504.952	71.048	0.61%	1.510
2003	4	11,531.000	11,548.204	-17.204	-0.15%	-0.366
2003	5	11,544.000	11,538.150	5.850	0.05%	0.124
2003	6	11,560.000	11,547.942	12.058	0.10%	0.256
2003	7	11,605.000	11,566.570	38.430	0.33%	0.817
2003	8	11,599.000	11,603.048	-4.048	-0.03%	-0.086

Xcel Energy North Dakota Small Commercial and Industrial
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Year	Month	Actual	Pred	Resid	%Resid	StdResid
2003	9	11,524.000	11,614.261	-90.261	-0.78%	-1.918
2003	10	11,524.000	11,560.794	-36.794	-0.32%	-0.782
2003	11	11,582.000	11,540.829	41.171	0.36%	0.875
2003	12	11,611.000	11,561.062	49.938	0.43%	1.061
2004	1	11,656.000	11,591.490	64.510	0.55%	1.371
2004	2	11,615.000	11,631.100	-16.100	-0.14%	-0.342
2004	3	11,676.000	11,647.085	28.915	0.25%	0.614
2004	4	11,615.000	11,688.631	-73.631	-0.63%	-1.565
2004	5	11,682.000	11,662.703	19.297	0.17%	0.410
2004	6	11,670.000	11,690.142	-20.142	-0.17%	-0.428
2004	7	11,695.000	11,699.307	-4.307	-0.04%	-0.092
2004	8	11,694.000	11,714.278	-20.278	-0.17%	-0.431
2004	9	11,685.000	11,715.438	-30.438	-0.26%	-0.647
2004	10	11,680.000	11,707.755	-27.755	-0.24%	-0.590
2004	11	11,811.000	11,702.214	108.786	0.92%	2.312
2004	12	11,768.000	11,781.497	-13.497	-0.11%	-0.287
2005	1	11,729.000	11,783.450	-54.450	-0.46%	-1.157
2005	2	11,471.000	11,458.267	12.733	0.11%	0.271
2005	3	11,500.000	11,493.254	6.746	0.06%	0.143
2005	4	11,501.000	11,529.033	-28.033	-0.24%	-0.596
2005	5	11,499.000	11,538.330	-39.330	-0.34%	-0.836
2005	6	11,471.000	11,512.375	-41.375	-0.36%	-0.879
2005	7	11,484.000	11,485.276	-1.276	-0.01%	-0.027
2005	8	11,471.000	11,487.034	-16.034	-0.14%	-0.341
2005	9	11,505.000	11,484.456	20.544	0.18%	0.437
2005	10	11,504.000	11,505.985	-1.985	-0.02%	-0.042
2005	11	11,517.000	11,514.735	2.265	0.02%	0.048
2005	12	11,511.000	11,548.321	-37.321	-0.32%	-0.793
2006	1	11,513.000	11,555.000	-42.000	-0.36%	-0.892
2006	2	11,500.000	11,555.545	-55.545	-0.48%	-1.180
2006	3	11,506.000	11,538.904	-32.904	-0.29%	-0.699
2006	4	11,544.000	11,537.812	6.188	0.05%	0.131
2006	5	11,558.000	11,566.874	-8.874	-0.08%	-0.189
2006	6	11,563.000	11,564.673	-1.673	-0.01%	-0.036

Xcel Energy North Dakota Small Commercial and Industrial
2011 Test-Year Customer Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2006	7	11,601.000	11,565.842	35.158	0.30%	0.747
2006	8	11,649.000	11,594.133	54.867	0.47%	1.166
2006	9	11,661.000	11,657.051	3.949	0.03%	0.084
2006	10	11,667.000	11,684.084	-17.084	-0.15%	-0.363
2006	11	11,685.000	11,692.057	-7.057	-0.06%	-0.150
2006	12	11,656.000	11,702.507	-46.507	-0.40%	-0.988
2007	1	11,687.000	11,686.084	0.916	0.01%	0.019
2007	2	11,692.000	11,700.509	-8.509	-0.07%	-0.181
2007	3	11,687.000	11,712.471	-25.471	-0.22%	-0.541
2007	4	11,710.000	11,710.566	-0.566	-0.00%	-0.012
2007	5	11,754.000	11,725.841	28.159	0.24%	0.598
2007	6	11,761.000	11,755.899	5.101	0.04%	0.108
2007	7	11,782.000	11,770.915	11.085	0.09%	0.236
2007	8	11,809.000	11,787.866	21.134	0.18%	0.449
2007	9	11,798.000	11,833.649	-35.649	-0.30%	-0.758
2007	10	11,853.000	11,839.499	13.501	0.11%	0.287
2007	11	11,866.000	11,876.051	-10.051	-0.08%	-0.214
2007	12	11,821.000	11,913.226	-92.226	-0.78%	-1.960
2008	1	11,825.000	11,889.234	-64.234	-0.54%	-1.365
2008	2	11,819.000	11,880.776	-61.776	-0.52%	-1.313
2008	3	11,811.000	11,854.108	-43.108	-0.36%	-0.916
2008	4	11,824.000	11,840.588	-16.588	-0.14%	-0.352
2008	5	11,869.000	11,848.003	20.997	0.18%	0.446
2008	6	11,865.000	11,880.820	-15.820	-0.13%	-0.336
2008	7	11,886.000	11,889.745	-3.745	-0.03%	-0.080
2008	8	11,895.000	11,903.838	-8.838	-0.07%	-0.188
2008	9	11,892.000	11,908.207	-16.207	-0.14%	-0.344
2008	10	11,911.000	11,906.509	4.491	0.04%	0.095
2008	11	11,925.000	11,919.285	5.715	0.05%	0.121
2008	12	11,895.000	11,892.185	2.815	0.02%	0.060
2009	1	11,905.000	11,862.534	42.466	0.36%	0.902
2009	2	11,911.000	11,860.702	50.298	0.42%	1.069
2009	3	11,905.000	11,900.090	4.910	0.04%	0.104
2009	4	11,906.000	11,906.444	-0.444	-0.00%	-0.009

Xcel Energy North Dakota Small Commercial and Industrial
2011 Test-Year Customer Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2009	5	11,958.000	11,905.483	52.517	0.44%	1.116
2009	6	11,950.000	11,961.807	-11.807	-0.10%	-0.251
2009	7	11,936.000	11,975.889	-39.889	-0.33%	-0.848
2009	8	11,949.000	11,964.201	-15.201	-0.13%	-0.323
2009	9	11,964.000	11,952.464	11.536	0.10%	0.245
2009	10	11,974.000	11,961.844	12.156	0.10%	0.258
2009	11	11,994.000	11,972.984	21.016	0.18%	0.447
2009	12	11,989.000	11,983.271	5.729	0.05%	0.122
2010	1	11,995.000	11,983.239	11.761	0.10%	0.250
2010	2	12,000.000	11,985.981	14.019	0.12%	0.298
2010	3	12,008.000	12,016.423	-8.423	-0.07%	-0.179
2010	4	11,999.000	12,030.743	-31.743	-0.26%	-0.675
2010	5	12,017.000	12,026.961	-9.961	-0.08%	-0.212
2010	6	12,039.000	12,018.823	20.177	0.17%	0.429
2010	7		12,034.151			
2010	8		12,036.693			
2010	9		12,042.379			
2010	10		12,048.614			
2010	11		12,054.678			
2010	12		12,065.261			
2011	1		12,075.818			
2011	2		12,086.363			
2011	3		12,106.119			
2011	4		12,125.860			
2011	5		12,145.588			
2011	6		12,159.880			
2011	7		12,174.158			
2011	8		12,188.424			
2011	9		12,206.699			
2011	10		12,224.962			
2011	11		12,243.212			
2011	12		12,266.509			

Xcel Energy North Dakota Street Lighting
2011 Test-Year Customer Forecast

Variable	Coefficient	StdErr	T-Stat	P-Value	Definition
ND.HH_ND	0.325	0.004	89.666	0.00%	North Dakota Households (thousands)
Binary2.May1999	-67.063	0.803	-83.517	0.00%	Binary variable May 1999
Binary2.Jun1999	66.950	0.803	83.377	0.00%	Binary variable June 1999
Binary2.Dec1999	-29.718	0.867	-34.266	0.00%	Binary variable December 1999
Binary2.Jan2000	-40.198	0.944	-42.587	0.00%	Binary variable January 2000
Binary2.Feb2000	-40.741	0.944	-43.168	0.00%	Binary variable February 2000
Binary2.Mar2000	-11.269	0.867	-13.003	0.00%	Binary variable March 2000
Binary2.Oct2000	6.629	0.770	8.604	0.00%	Binary variable October 2000
Binary2.Feb2001	3.633	0.809	4.490	0.00%	Binary variable February 2001
AR(1)	0.642	0.083	7.749	0.00%	First order autoregressive term
AR(2)	0.272	0.082	3.318	0.12%	Second order autoregressive term

Xcel Energy North Dakota Street Lighting
2011 Test-Year Customer Forecast

Regression Statistics 1	
Iterations	11
Adjusted Observations	148
Deg. of Freedom for Error	137
R-Squared	0.993
Adjusted R-Squared	0.993
AIC	-0.062
BIC	0.161
F-Statistic	
Prob (F-Statistic)	
Log-Likelihood	-194.44
Model Sum of Squares	17,193.92
Sum of Squared Errors	119.93
Mean Squared Error	0.88
Std. Error of Regression	0.94
Mean Abs. Dev. (MAD)	0.56
Mean Abs. % Err. (MAPE)	0.69%
Durbin-Watson Statistic	2.116
Durbin-H Statistic	
Ljung-Box Statistic	10.50
Prob (Ljung-Box)	0.9922
Skewness	0.891
Kurtosis	9.362
Jarque-Bera	269.193
Prob (Jarque-Bera)	0.0000

Xcel Energy North Dakota Street Lighting
2011 Test-Year Customer Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
1998	1	76.000				
1998	2	73.000				
1998	3	75.000	74.748	0.252	0.34%	0.269
1998	4	80.000	75.218	4.782	5.98%	5.111
1998	5	76.000	78.972	-2.972	-3.91%	-3.176
1998	6	75.000	77.765	-2.765	-3.69%	-2.955
1998	7	75.000	76.040	-1.040	-1.39%	-1.111
1998	8	75.000	75.770	-0.770	-1.03%	-0.823
1998	9	75.000	75.773	-0.773	-1.03%	-0.826
1998	10	75.000	75.775	-0.775	-1.03%	-0.828
1998	11	75.000	75.777	-0.777	-1.04%	-0.831
1998	12	75.000	75.761	-0.761	-1.01%	-0.813
1999	1	77.000	75.756	1.244	1.62%	1.329
1999	2	79.000	77.040	1.960	2.48%	2.095
1999	3	79.000	78.883	0.117	0.15%	0.125
1999	4	79.000	79.432	-0.432	-0.55%	-0.462
1999	5	12.000	12.371	-0.371	-3.09%	-0.396
1999	6	146.000	146.392	-0.392	-0.27%	-0.419
1999	7	79.000	79.440	-0.440	-0.56%	-0.470
1999	8	79.000	79.403	-0.403	-0.51%	-0.431
1999	9	79.000	79.389	-0.389	-0.49%	-0.415
1999	10	79.000	79.388	-0.388	-0.49%	-0.414
1999	11	79.000	79.387	-0.387	-0.49%	-0.413
1999	12	50.000	49.667	0.333	0.67%	0.356
2000	1	40.000	39.648	0.352	0.88%	0.376
2000	2	40.000	39.606	0.394	0.98%	0.421
2000	3	70.000	69.634	0.366	0.52%	0.391
2000	4	82.000	81.415	0.585	0.71%	0.625
2000	5	82.000	82.034	-0.034	-0.04%	-0.036
2000	6	81.000	82.238	-1.238	-1.53%	-1.323
2000	7	81.000	81.602	-0.602	-0.74%	-0.644
2000	8	83.000	81.337	1.663	2.00%	1.778
2000	9	82.000	82.626	-0.626	-0.76%	-0.669
2000	10	90.000	89.162	0.838	0.93%	0.896

Xcel Energy North Dakota Street Lighting
2011 Test-Year Customer Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2000	11	84.000	83.147	0.853	1.02%	0.911
2000	12	85.000	83.929	1.071	1.26%	1.145
2001	1	82.000	84.747	-2.747	-3.35%	-2.936
2001	2	88.000	86.732	1.268	1.44%	1.355
2001	3	86.000	83.810	2.190	2.55%	2.341
2001	4	85.000	85.506	-0.506	-0.60%	-0.541
2001	5	85.000	85.314	-0.314	-0.37%	-0.336
2001	6	85.000	85.048	-0.048	-0.06%	-0.052
2001	7	84.000	85.054	-1.054	-1.25%	-1.127
2001	8	84.000	84.418	-0.418	-0.50%	-0.447
2001	9	86.000	84.153	1.847	2.15%	1.974
2001	10	85.000	85.442	-0.442	-0.52%	-0.472
2001	11	88.000	85.349	2.651	3.01%	2.833
2001	12	85.000	87.009	-2.009	-2.36%	-2.147
2002	1	86.000	85.904	0.096	0.11%	0.102
2002	2	85.000	85.737	-0.737	-0.87%	-0.788
2002	3	85.000	85.373	-0.373	-0.44%	-0.399
2002	4	85.000	85.107	-0.107	-0.13%	-0.115
2002	5	85.000	85.113	-0.113	-0.13%	-0.121
2002	6	85.000	85.119	-0.119	-0.14%	-0.127
2002	7	85.000	85.125	-0.125	-0.15%	-0.134
2002	8	85.000	85.131	-0.131	-0.15%	-0.140
2002	9	85.000	85.137	-0.137	-0.16%	-0.146
2002	10	86.000	85.143	0.857	1.00%	0.916
2002	11	86.000	85.791	0.209	0.24%	0.224
2002	12	86.000	86.068	-0.068	-0.08%	-0.073
2003	1	87.000	86.074	0.926	1.06%	0.990
2003	2	87.000	86.722	0.278	0.32%	0.297
2003	3	87.000	86.999	0.001	0.00%	0.001
2003	4	87.000	87.005	-0.005	-0.01%	-0.006
2003	5	87.000	87.011	-0.011	-0.01%	-0.012
2003	6	87.000	87.017	-0.017	-0.02%	-0.019
2003	7	87.000	87.023	-0.023	-0.03%	-0.025
2003	8	87.000	87.029	-0.029	-0.03%	-0.031

Xcel Energy North Dakota Street Lighting
2011 Test-Year Customer Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2003	9	87.000	87.035	-0.035	-0.04%	-0.038
2003	10	87.000	87.041	-0.041	-0.05%	-0.044
2003	11	87.000	87.047	-0.047	-0.05%	-0.051
2003	12	87.000	87.053	-0.053	-0.06%	-0.057
2004	1	86.000	87.059	-1.059	-1.23%	-1.132
2004	2	86.000	86.424	-0.424	-0.49%	-0.453
2004	3	86.000	86.158	-0.158	-0.18%	-0.169
2004	4	86.000	86.164	-0.164	-0.19%	-0.176
2004	5	86.000	86.170	-0.170	-0.20%	-0.182
2004	6	86.000	86.176	-0.176	-0.21%	-0.188
2004	7	86.000	86.182	-0.182	-0.21%	-0.195
2004	8	86.000	86.188	-0.188	-0.22%	-0.201
2004	9	86.000	86.195	-0.195	-0.23%	-0.208
2004	10	86.000	86.201	-0.201	-0.23%	-0.214
2004	11	86.000	86.207	-0.207	-0.24%	-0.221
2004	12	86.000	86.213	-0.213	-0.25%	-0.227
2005	1	88.000	86.219	1.781	2.02%	1.904
2005	2	87.000	87.508	-0.508	-0.58%	-0.543
2005	3	87.000	87.416	-0.416	-0.48%	-0.444
2005	4	87.000	87.150	-0.150	-0.17%	-0.161
2005	5	87.000	87.156	-0.156	-0.18%	-0.167
2005	6	87.000	87.145	-0.145	-0.17%	-0.154
2005	7	87.000	87.144	-0.144	-0.17%	-0.154
2005	8	87.000	87.149	-0.149	-0.17%	-0.159
2005	9	87.000	87.153	-0.153	-0.18%	-0.164
2005	10	89.000	87.158	1.842	2.07%	1.969
2005	11	88.000	88.446	-0.446	-0.51%	-0.476
2005	12	88.000	88.352	-0.352	-0.40%	-0.376
2006	1	88.000	88.085	-0.085	-0.10%	-0.090
2006	2	88.000	88.089	-0.089	-0.10%	-0.095
2006	3	88.000	88.094	-0.094	-0.11%	-0.100
2006	4	88.000	88.098	-0.098	-0.11%	-0.105
2006	5	88.000	88.103	-0.103	-0.12%	-0.110
2006	6	88.000	88.038	-0.038	-0.04%	-0.041

Xcel Energy North Dakota Street Lighting
2011 Test-Year Customer Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2006	7	88.000	88.018	-0.018	-0.02%	-0.019
2006	8	88.000	88.017	-0.017	-0.02%	-0.018
2006	9	88.000	88.015	-0.015	-0.02%	-0.016
2006	10	88.000	88.014	-0.014	-0.02%	-0.015
2006	11	88.000	88.012	-0.012	-0.01%	-0.013
2006	12	89.000	88.011	0.989	1.11%	1.057
2007	1	88.000	88.651	-0.651	-0.74%	-0.696
2007	2	88.000	88.279	-0.279	-0.32%	-0.299
2007	3	88.000	88.006	-0.006	-0.01%	-0.007
2007	4	88.000	88.005	-0.005	-0.01%	-0.005
2007	5	88.000	88.003	-0.003	-0.00%	-0.004
2007	6	88.000	88.100	-0.100	-0.11%	-0.107
2007	7	88.000	88.134	-0.134	-0.15%	-0.143
2007	8	88.000	88.141	-0.141	-0.16%	-0.151
2007	9	88.000	88.148	-0.148	-0.17%	-0.159
2007	10	89.000	88.156	0.844	0.95%	0.903
2007	11	88.000	88.804	-0.804	-0.91%	-0.860
2007	12	89.000	88.442	0.558	0.63%	0.597
2008	1	88.000	88.819	-0.819	-0.93%	-0.875
2008	2	88.000	88.456	-0.456	-0.52%	-0.487
2008	3	89.000	88.191	0.809	0.91%	0.864
2008	4	87.000	88.840	-1.840	-2.12%	-1.967
2008	5	87.000	87.836	-0.836	-0.96%	-0.893
2008	6	87.000	87.319	-0.319	-0.37%	-0.341
2008	7	87.000	87.333	-0.333	-0.38%	-0.356
2008	8	87.000	87.342	-0.342	-0.39%	-0.365
2008	9	87.000	87.344	-0.344	-0.40%	-0.368
2008	10	88.000	87.351	0.649	0.74%	0.694
2008	11	88.000	88.001	-0.001	-0.00%	-0.001
2008	12	88.000	88.275	-0.275	-0.31%	-0.293
2009	1	90.000	88.281	1.719	1.91%	1.838
2009	2	90.000	89.572	0.428	0.48%	0.458
2009	3	91.000	90.114	0.886	0.97%	0.947
2009	4	90.000	90.760	-0.760	-0.84%	-0.812

Xcel Energy North Dakota Street Lighting
2011 Test-Year Customer Forecast

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2009	5	90.000	90.397	-0.397	-0.44%	-0.424
2009	6	90.000	90.126	-0.126	-0.14%	-0.135
2009	7	91.000	90.131	0.869	0.95%	0.928
2009	8	91.000	90.780	0.220	0.24%	0.236
2009	9	92.000	91.059	0.941	1.02%	1.006
2009	10	93.000	91.707	1.293	1.39%	1.382
2009	11	93.000	92.627	0.373	0.40%	0.399
2009	12	93.000	92.905	0.095	0.10%	0.101
2010	1	93.000	92.912	0.088	0.09%	0.094
2010	2	93.000	92.918	0.082	0.09%	0.087
2010	3	94.000	92.925	1.075	1.14%	1.149
2010	4	94.000	93.573	0.427	0.45%	0.456
2010	5	94.000	93.852	0.148	0.16%	0.159
2010	6	94.000	93.858	0.142	0.15%	0.151
2010	7		93.865			
2010	8		93.785			
2010	9		93.704			
2010	10		93.637			
2010	11		93.578			
2010	12		93.529			
2011	1		93.488			
2011	2		93.456			
2011	3		93.430			
2011	4		93.412			
2011	5		93.400			
2011	6		93.394			
2011	7		93.394			
2011	8		93.399			
2011	9		93.408			
2011	10		93.423			
2011	11		93.441			
2011	12		93.464			

Xcel Energy North Dakota Public Authority
2011 Test-Year Customer Forecast

Variable	Coefficient	StdErr	T-Stat	P-Value	Definition
Binary2.Feb2000	-6.938	2.077	-3.340	0.11%	Binary variable February 2000
Binary2.Jan2005	-5.860	2.089	-2.806	0.57%	Binary variable January 2005
AR(1)	1.000	0.001	1693.146	0.00%	First order autoregressive term
MA(1)	-0.438	0.080	-5.467	0.00%	First moving average term

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Regression Statistics	
Iterations	14
Adjusted Observations	144
Deg. of Freedom for Error	140
R-Squared	0.849
Adjusted R-Squared	0.845
AIC	1.779
BIC	1.862
F-Statistic	
Prob (F-Statistic)	
Log-Likelihood	-328.44
Model Sum of Squares	4,528.81
Sum of Squared Errors	807.18
Mean Squared Error	5.77
Std. Error of Regression	2.40
Mean Abs. Dev. (MAD)	1.53
Mean Abs. % Err. (MAPE)	0.79%
Durbin-Watson Statistic	2.006
Durbin-H Statistic	
Ljung-Box Statistic	20.08
Prob (Ljung-Box)	0.6923
Skewness	0.212
Kurtosis	6.389
Jarque-Bera	69.989
Prob (Jarque-Bera)	0.0000

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Year	Month	Actual	Pred	Resid	%Resid	StdResid
1998	6	200.000				
1998	7	201.000	199.925	1.075	0.53%	0.448
1998	8	202.000	200.453	1.547	0.77%	0.644
1998	9	201.000	201.246	-0.246	-0.12%	-0.102
1998	10	201.000	201.032	-0.032	-0.02%	-0.013
1998	11	200.000	200.939	-0.939	-0.47%	-0.391
1998	12	202.000	200.336	1.664	0.82%	0.693
1999	1	203.000	201.195	1.805	0.89%	0.752
1999	2	202.000	202.132	-0.132	-0.07%	-0.055
1999	3	208.000	201.982	6.018	2.89%	2.506
1999	4	208.000	205.284	2.716	1.31%	1.131
1999	5	200.000	206.732	-6.732	-3.37%	-2.803
1999	6	206.000	202.875	3.125	1.52%	1.301
1999	7	203.000	204.553	-1.553	-0.76%	-0.647
1999	8	212.000	203.604	8.396	3.96%	3.497
1999	9	205.000	208.241	-3.241	-1.58%	-1.350
1999	10	202.000	206.343	-4.343	-2.15%	-1.809
1999	11	202.000	203.827	-1.827	-0.90%	-0.761
1999	12	204.000	202.725	1.275	0.63%	0.531
2000	1	206.000	203.364	2.636	1.28%	1.098
2000	2	193.000	197.829	-4.829	-2.50%	-2.011
2000	3	195.000	201.979	-6.979	-3.58%	-2.907
2000	4	196.000	197.985	-1.985	-1.01%	-0.827
2000	5	194.000	196.796	-2.796	-1.44%	-1.165
2000	6	195.000	195.153	-0.153	-0.08%	-0.064
2000	7	191.000	194.994	-3.994	-2.09%	-1.663
2000	8	193.000	192.678	0.322	0.17%	0.134
2000	9	184.000	192.786	-8.786	-4.78%	-3.659
2000	10	187.000	187.782	-0.782	-0.42%	-0.326
2000	11	189.000	187.272	1.728	0.91%	0.720
2000	12	191.000	188.172	2.828	1.48%	1.178
2001	1	186.000	189.689	-3.689	-1.98%	-1.536
2001	2	191.000	187.547	3.453	1.81%	1.438
2001	3	189.000	189.415	-0.415	-0.22%	-0.173

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Year	Month	Actual	Pred	Resid	%Resid	StdResid
2001	4	187.000	189.111	-2.111	-1.13%	-0.879
2001	5	192.000	187.855	4.145	2.16%	1.726
2001	6	190.000	190.111	-0.111	-0.06%	-0.046
2001	7	191.000	189.977	1.023	0.54%	0.426
2001	8	187.000	190.480	-3.480	-1.86%	-1.449
2001	9	192.000	188.455	3.545	1.85%	1.476
2001	10	188.000	190.374	-2.374	-1.26%	-0.989
2001	11	188.000	188.970	-0.970	-0.52%	-0.404
2001	12	192.000	188.354	3.646	1.90%	1.518
2002	1	189.000	190.330	-1.330	-0.70%	-0.554
2002	2	190.000	189.512	0.488	0.26%	0.203
2002	3	191.000	189.715	1.285	0.67%	0.535
2002	4	189.000	190.365	-1.365	-0.72%	-0.568
2002	5	191.000	189.527	1.473	0.77%	0.613
2002	6	190.000	190.283	-0.283	-0.15%	-0.118
2002	7	189.000	190.052	-1.052	-0.56%	-0.438
2002	8	189.000	189.390	-0.390	-0.21%	-0.162
2002	9	189.000	189.100	-0.100	-0.05%	-0.042
2002	10	189.000	188.973	0.027	0.01%	0.011
2002	11	189.000	188.917	0.083	0.04%	0.035
2002	12	187.000	188.892	-1.892	-1.01%	-0.788
2003	1	188.000	187.759	0.241	0.13%	0.100
2003	2	189.000	187.824	1.176	0.62%	0.490
2003	3	190.000	188.413	1.587	0.84%	0.661
2003	4	191.000	189.233	1.767	0.93%	0.736
2003	5	191.000	190.154	0.846	0.44%	0.352
2003	6	190.000	190.557	-0.557	-0.29%	-0.232
2003	7	191.000	190.173	0.827	0.43%	0.345
2003	8	190.000	190.566	-0.566	-0.30%	-0.236
2003	9	190.000	190.176	-0.176	-0.09%	-0.073
2003	10	190.000	190.006	-0.006	-0.00%	-0.002
2003	11	189.000	189.931	-0.931	-0.49%	-0.388
2003	12	191.000	189.337	1.663	0.87%	0.693
2004	1	189.000	190.199	-1.199	-0.63%	-0.499

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Year	Month	Actual	Pred	Resid	%Resid	StdResid
2004	2	190.000	189.455	0.545	0.29%	0.227
2004	3	190.000	189.689	0.311	0.16%	0.129
2004	4	191.000	189.792	1.208	0.63%	0.503
2004	5	189.000	190.399	-1.399	-0.74%	-0.583
2004	6	188.000	189.542	-1.542	-0.82%	-0.642
2004	7	187.000	188.605	-1.605	-0.86%	-0.668
2004	8	187.000	187.633	-0.633	-0.34%	-0.264
2004	9	187.000	187.207	-0.207	-0.11%	-0.086
2004	10	189.000	187.020	1.980	1.05%	0.824
2004	11	187.000	188.061	-1.061	-0.57%	-0.442
2004	12	195.000	187.395	7.605	3.90%	3.167
2005	1	183.000	185.734	-2.734	-1.49%	-1.138
2005	2	186.000	189.987	-3.987	-2.14%	-1.660
2005	3	186.000	187.677	-1.677	-0.90%	-0.699
2005	4	186.000	186.665	-0.665	-0.36%	-0.277
2005	5	186.000	186.222	-0.222	-0.12%	-0.092
2005	6	186.000	186.027	-0.027	-0.01%	-0.011
2005	7	186.000	185.942	0.058	0.03%	0.024
2005	8	186.000	185.905	0.095	0.05%	0.040
2005	9	186.000	185.888	0.112	0.06%	0.047
2005	10	184.000	185.881	-1.881	-1.02%	-0.783
2005	11	184.000	184.755	-0.755	-0.41%	-0.315
2005	12	189.000	184.262	4.738	2.51%	1.973
2006	1	183.000	186.852	-3.852	-2.11%	-1.604
2006	2	183.000	184.619	-1.619	-0.88%	-0.674
2006	3	184.000	183.641	0.359	0.20%	0.150
2006	4	184.000	183.773	0.227	0.12%	0.094
2006	5	185.000	183.831	1.169	0.63%	0.487
2006	6	184.000	184.418	-0.418	-0.23%	-0.174
2006	7	184.000	184.114	-0.114	-0.06%	-0.048
2006	8	184.000	183.981	0.019	0.01%	0.008
2006	9	184.000	183.922	0.078	0.04%	0.032
2006	10	184.000	183.897	0.103	0.06%	0.043
2006	11	183.000	183.886	-0.886	-0.48%	-0.369

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Year	Month	Actual	Pred	Resid	%Resid	StdResid
2006	12	182.000	183.319	-1.319	-0.72%	-0.549
2007	1	183.000	182.510	0.490	0.27%	0.204
2007	2	183.000	182.716	0.284	0.16%	0.118
2007	3	183.000	182.807	0.193	0.11%	0.080
2007	4	183.000	182.846	0.154	0.08%	0.064
2007	5	184.000	182.864	1.136	0.62%	0.473
2007	6	184.000	183.433	0.567	0.31%	0.236
2007	7	184.000	183.682	0.318	0.17%	0.132
2007	8	184.000	183.792	0.208	0.11%	0.087
2007	9	184.000	183.839	0.161	0.09%	0.067
2007	10	184.000	183.860	0.140	0.08%	0.058
2007	11	184.000	183.870	0.130	0.07%	0.054
2007	12	184.000	183.874	0.126	0.07%	0.053
2008	1	185.000	183.875	1.125	0.61%	0.468
2008	2	189.000	184.438	4.562	2.41%	1.900
2008	3	195.000	186.929	8.071	4.14%	3.361
2008	4	195.000	191.390	3.610	1.85%	1.504
2008	5	193.000	193.344	-0.344	-0.18%	-0.143
2008	6	192.000	193.078	-1.078	-0.56%	-0.449
2008	7	192.000	192.400	-0.400	-0.21%	-0.167
2008	8	191.000	192.103	-1.103	-0.58%	-0.459
2008	9	191.000	191.412	-0.412	-0.22%	-0.171
2008	10	191.000	191.109	-0.109	-0.06%	-0.045
2008	11	192.000	190.976	1.024	0.53%	0.427
2008	12	192.000	191.479	0.521	0.27%	0.217
2009	1	190.000	191.699	-1.699	-0.89%	-0.708
2009	2	190.000	190.673	-0.673	-0.35%	-0.280
2009	3	190.000	190.224	-0.224	-0.12%	-0.093
2009	4	190.000	190.027	-0.027	-0.01%	-0.011
2009	5	190.000	189.940	0.060	0.03%	0.025
2009	6	190.000	189.902	0.098	0.05%	0.041
2009	7	189.000	189.886	-0.886	-0.47%	-0.369
2009	8	189.000	189.317	-0.317	-0.17%	-0.132
2009	9	188.000	189.068	-1.068	-0.57%	-0.445

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Year	Month	Actual	Pred	Resid	%Resid	StdResid
2009	10	188.000	188.397	-0.397	-0.21%	-0.165
2009	11	189.000	188.103	0.897	0.47%	0.373
2009	12	190.000	188.536	1.464	0.77%	0.610
2010	1	189.000	189.287	-0.287	-0.15%	-0.119
2010	2	189.000	189.055	-0.055	-0.03%	-0.023
2010	3	189.000	188.953	0.047	0.02%	0.020
2010	4	188.000	188.908	-0.908	-0.48%	-0.378
2010	5	191.000	188.327	2.673	1.40%	1.113
2010	6	192.000	189.757	2.243	1.17%	0.934
2010	7		190.945			
2010	8		190.873			
2010	9		190.801			
2010	10		190.729			
2010	11		190.657			
2010	12		190.586			
2011	1		190.514			
2011	2		190.442			
2011	3		190.371			
2011	4		190.299			
2011	5		190.228			
2011	6		190.156			
2011	7		190.084			
2011	8		190.013			
2011	9		189.941			
2011	10		189.870			
2011	11		189.799			
2011	12		189.727			