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Direct Testimony and Schedules
John M. Goodenough

Before the Minnesota Public Utilities Commission
State of Minnesota

In the Matter of the Application of Northern States Power Company
for Authority to Increase Rates for Electric Service in Minnesota

Docket No. E002/GR-21-630
Exhibit___(JMG-1)

Sales Forecast

October 25, 2021

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Table of Contents

PUBLIC DOCUMENT –
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Schedules

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I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND OCCUPATION.

A. My name is John M. Goodenough. I am the Manager of the Energy Forecasting department for Xcel Energy Services Inc. (XES), which is the service company subsidiary of Xcel Energy Inc. (XEI).

Q. PLEASE SUMMARIZE YOUR QUALIFICATIONS AND EXPERIENCE.

A. I graduated from the University of Delaware with a Doctor of Philosophy degree in Economics. I also hold a Masters of Arts degree in Economics from the University of Delaware and a Bachelor of Arts degree in Economics from the University of Maryland. I have worked in a sales forecasting role since 2007. I began my career in forecasting as a Regulatory Affairs Analyst at Pepco Holdings, Inc. from 2007-2010, followed by a role as a Principal Analyst at Baltimore Gas and Electric from 2010-2014. I worked as an Energy Markets Specialist at Southern California Edison from 2014-2016 and as a Manager, Energy and Revenue Forecasting and Analysis at Arizona Public Service from 2016-2019. I started my current role as Manager, Energy Forecasting for Xcel Energy in October 2019. My resume is included as Exhibit___(JMG-1), Schedule 1.

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

A. I support the Company's forecast of sales and customers for the period of January 1, 2022 through December 31, 2024 which is the term of the Company's proposed multi-year rate plan. This forecast forms the basis for the Company's revenue forecast in this proceeding. I also support the Company's forecast of

sales and customers for the period of January 1, 2025 through December 31, 2026, which is provided for informational purposes.

II. OVERVIEW

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. My testimony presents the sales and customer count forecast and discusses the methodology used to develop the forecast. As I discuss below, the Company's forecast is based on sound statistical methodologies and provides a reasonable estimate of 2022 through 2026 megawatt-hour (MWh) sales and customer counts. The forecast supports the Company's revenue projections and should be adopted for the purpose of determining the revenue requirement and final rates in this proceeding.

I discuss the weather normalization of the sales forecast, the preparation of data used in the forecasting process, how unbilled and calendar-month sales are calculated, adjustments made to the forecast, and how the rate schedule forecast is derived. I also discuss the compliance requirements related to the sales forecast following previous electric rate cases, compliance requirements from Docket No. E,G999/M-12-587 (2012 Electric Rate Case), and the issues raised in Docket No. E002/GR-13-868 (2013 Electric Rate Case) and Docket No. E002/GR-15-826 (2015 Electric Rate Case) related to the sales forecast. In addition, I discuss a "true-up" for the Company's test year sales, in an effort to minimize the disputed issues in this proceeding.

Q. WHAT TRENDS ARE YOU SEEING IN THE COMPANY'S SALES?

A. The Company's Minnesota electric sales steadily declined from 2008 through 2019 before showing a sharper decline in 2020 due to the impacts of the COVID-19 pandemic. While there was an increase in the number of customers taking service during this period, the Company believes the steady decline in sales is due to increased energy efficiency for residential customers, resulting in less consumption per household and declining commercial and industrial sales. I further discuss the drivers of these trends later in my testimony.

Q. IS THE COMPANY'S FORECAST PRESENTED IN THIS PROCEEDING CONSISTENT WITH THESE TRENDS?

A. Generally, yes. Electric sales are expected to be relatively flat through 2026 despite steady growth in the number of customers. During this period, customer growth, electricity sales for electric vehicles, commercial and industrial sales growth due to the economic rebound from the pandemic, and a small permanent increase in residential sales due to more customers working from home are offset by greater sales reductions due to Demand Side Management (DSM) achievements and distributed generation (DG) solar. In a continuation of the recently observed downward trend, sales are not expected to reach pre-pandemic (2019) levels during the 2022-2026 timeframe. The pandemic impacts on 2020 sales and expectations for the future are discussed later in my testimony. I note that the Company's past forecasts have overstated sales when compared to actual outcomes, which is due to greater than anticipated declines in customer electricity consumption. These variances are discussed later in my testimony.

Q. PLEASE DISCUSS THE COMPLIANCE REQUIREMENTS RELATED TO THE SALES FORECAST FOLLOWING PREVIOUS ELECTRIC RATE CASES.

A. In the Company's 2016 Electric Rate Case, Docket No. E002/GR-15-826, a settlement agreement was approved that included an agreement to use 2016 weather-normalized actual sales to set final rates for all customer classes.[1] There were no compliance requirements related to the sales forecast resulting from that proceeding.

In the Company's 2012 Electric Rate Case, Docket No. E002/GR-12-961, Order Point No. 18a of the Commission's September 3, 2013 Order (12-961 Order) required the Company to provide the Department of Commerce, Division of Energy Resources (Department), the data used in the test year sales forecast at least 30 days prior to filing a general rate case. The Company provided this information prior to filing its subsequent electric rate cases in Docket No. E002/GR-13-868, Docket No. E002/GR-15-826, Docket No. E002/GR-19-564, Docket No. E002/GR-20/723, and continued this practice in the current case by providing the required information on September 24, 2021. The information was e-filed through the Commission's electronic filing system. I discuss the compliance requirements in more detail in Section XII of my testimony.

[1] *In the Matter of the Application of Northern States Power Company for Authority to Increase Rates for Electric Service in the State of Minnesota*, STIPULATION AND SETTLEMENT at 6, Docket No. E002/GR-15-826 (August 16, 2016); *In the Matter of the Application of Northern States Power Company for Authority to Increase Rates for Electric Service in the State of Minnesota*, FINDINGS OF FACT, CONCLUSIONS, AND ORDER at 68, Docket No. E002/GR-15-826 (June 12, 2017) (approving the settlement in its entirety).

Q. ARE THERE SALES FORECAST COMPLIANCE REQUIREMENTS RELATED TO THE MULTIYEAR RATE PLAN FILED IN THIS CASE?

A. Yes. The Commission's June 17, 2013 Order in Docket No. E,G999/M-12-587 requires that, in addition to testimony supporting the proposed sales forecast and sales forecast methodology, the utility submit an analysis of the historical accuracy of our short-term, medium-term, and long-term forecasts.[2] This comparison is provided in Exhibit___(JMG-1), Schedule 2 and discussed later in this section of my testimony.

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___(JMG-1), Schedule 3.

Q. PLEASE EXPLAIN THE IMPORTANCE OF AN ACCURATE SALES FORECAST IN A RATE CASE PROCEEDING.

A. We share an interest with our customers in having accurate forecasts. In a rate case proceeding, an accurate sales forecast allows the Company to recover its costs, no more and no less. In addition, forecasts are used for purposes other than setting rates, such as resource planning, where it is important that the Company has sufficient resources to meet customer needs over time.

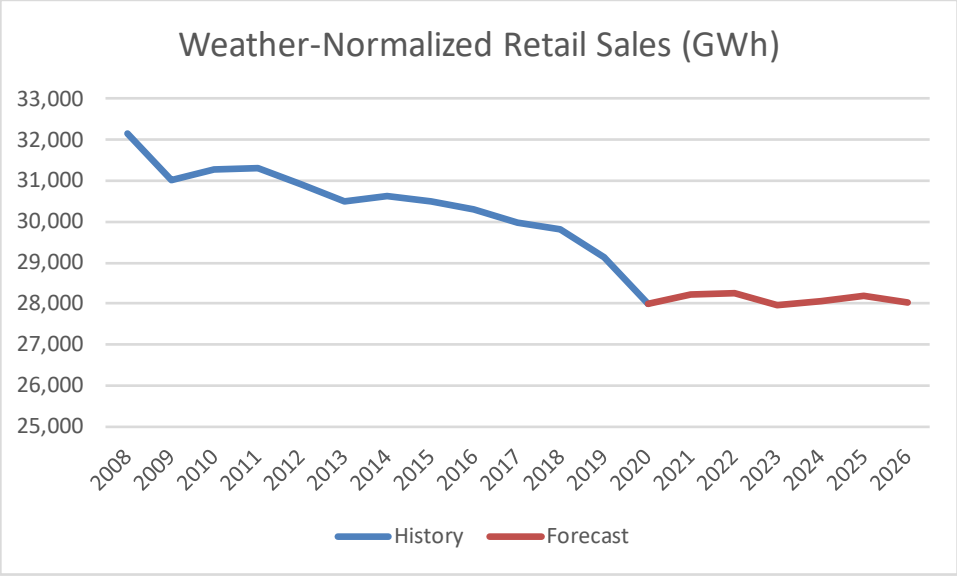
[2] *In the Matter of the Minnesota Office of the Attorney General – Antitrust and Utilities Division's Petition for a Commission Investigation Regarding Criteria and Standards for a Multiyear Rate Plans under Minn. Stat. 216B.16, subd. 19*, ORDER ESTABLISHING TERMS, CONDITIONS, AND PROCEDURES FOR MULTIYEAR RATE PLANS at 12, Docket No. E, G999/M-12-587 (June 17, 2013).

A. Overview of Customer and Sales Forecast

Q. PLEASE SUMMARIZE THE COMPANY'S FORECAST FOR 2022 THROUGH 2026.

A. Our forecast indicates that, although overall customers are increasing, overall sales are relatively flat through 2026. This is continuing the trend of declining use per customer we have seen since 2008, with a small trend change due to the COVID-19 pandemic in 2020. Sales remain flat due to reductions from DSM achievements and DG solar that are offset by a small permanent increase in residential sales resulting from the pandemic, a rebound in commercial and industrial sales, and sales related to the adoption of electric vehicles. Figure 1 below shows these trends along with historical actuals since 2008.

Figure 1



The Company forecasts 2022 total sales to remain 3.0 percent below 2019 levels, but increase from 2021 levels by 0.2 percent to 28,264,912 MWh. The Company forecasts 2023 total sales to decrease from 2022 levels by 1.0 percent to 27,979,592 MWh. The Company forecasts 2024 total sales to increase from 2023 levels by 0.3 percent to 28,068,548 MWh. The Company forecasts2025 total sales to increase from 2024 levels by 0.5 percent to 28,198,389 MWh, and 2026 total sales to decrease from 2025 levels by 0.6 percent to 28,017,703 MWh.

Notwithstanding our forecasted flat sales, total year-end retail customers are expected to increase annually by 1.2 percent to 1,336,406 customers in 2021, 1.0 percent to 1,349,906 customers in 2022, 0.7 percent to 1,359,191 customers in 2023, 0.8 percent to 1,369,993 customers in 2024, 0.9 percent to 1,381,920 customers in 2025, and 0.9 percent to 1,393,693 customers in 2026.

Q. WHAT IMPACT HAS THE COVID-19 PANDEMIC HAD ON THE MINNESOTA ECONOMY?

A. Like most areas of the country, the COVID-19 pandemic significantly impacted the Minnesota economy in 2020. Total nonfarm employment for the state, as reported by the U.S. Bureau of Labor Statistics, declined 9.1 percent from 3,013,513 in February 2020 to 2,739,692 in May 2020 and improved to only 2,904,806 in December,[3] which is still 3.6 percent below February levels. Through June 2021, employment still remains 3.5 percent below February 2020 levels at 2,909,233. Minneapolis-St. Paul nonfarm employment declined 10.9 percent from 1,983,447 in February 2020 to 1,767,992 in April, before

[3] https://www.bls.gov/regions/midwest/minnesota.htm, accessed August 29,2021.

recovering to 1,867,593 in December 2020,[4] which is 5.8 percent below February 2020 levels. Through June 2021, employment still remains 4.1 percent below February 2020 levels at 1,901,259.

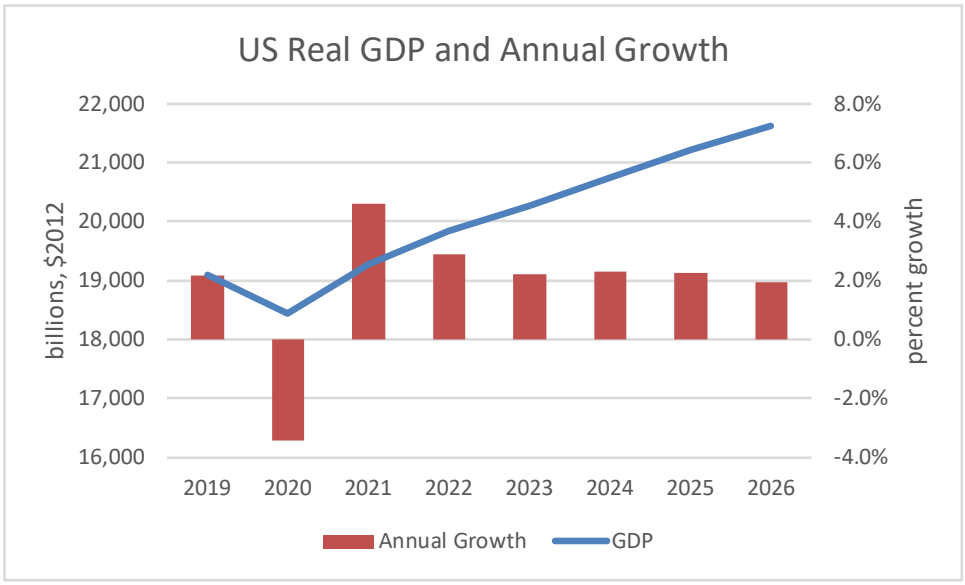
Q. WHAT ARE THE EXPECTED CONTINUING ECONOMIC EFFECTS FROM COVID-19 DURING DURING 2022 AND BEYOND?

A. The greatest economic impact from the pandemic is expected to have happened in 2020, with a strong rebound in 2021. Real Gross State Product (GSP) for the state of Minnesota is expected to exceed pre-pandemic levels in 2021, though employment has still has not fully recovered. We expect to see continued strong economic growth through 2022 as businesses more fully reopen and employment returns to pre-pandemic levels. Beyond 2022, economic growth is expected to return to its long-term growth trend.

This outlook is consistent with the outlook of the Congressional Budget Office (CBO). Figure 2 provides the CBO's history and projected level of U.S. Real Gross Domestic Product (GDP) and annual growth rates. As seen in Figure 2, U.S. GDP is expected to exceed 2019 levels in 2021 and continue its strong growth in 2022 followed by relatively flat to declining growth from 2023 through 2026.

[4] https://www.bls.gov/regions/midwest/mn_minneapolis_msa.htm, accessed August 29,2021.

Figure 2[5]



Q. WHAT TYPES OF ECONOMIC DATA DOES THE COMPANY RELY ON FOR ITS CUSTOMER AND SALES FORECAST?

A. To develop the customer and sales forecast, the Company relies on historical and forecasted economic and demographic variables for the state and the Minneapolis-St. Paul metropolitan area that are obtained from IHS Markit (formerly IHS Global Insight, Inc.), a respected economic forecasting firm frequently relied on by forecasting professionals and by the Company since the 1990s. Similar to the CBO outlook, economic data from IHS Markit shows that GSP exceeds 2019 levels in 2021, while employment continues to lag pre-pandemic levels. GSP is expected to show strong growth again in 2022 as employment returns to pre-pandemic levels. Beyond 2022, employment is expected to return to steady, long-run growth.

[5] Congress of the United States Congressional Budget Office, "The 2021 Long-Term Budget Outlook," March 2021, www.cbo.gov/publication/56977

Q. HOW DO YOU EXPECT THE COVID-19 PANDEMIC TO AFFECT SALES AND CUSTOMER GROWTH OVER THE NEXT FEW YEARS?

A. In general, we expect Residential sales to continue to be be strong in 2021, combined with growth in Commercial and Industrial sector sales as the economy rebounds. We expect Residential sales will decline in 2022 as people spend less time at home and return to the pre-pandemic declining sales trend for 2023 through 2026. Residential customer growth is expected to average 0.9 percent from 2022 through 2026. We expect Small Commercial and Industrial sales to increase in 2022 as the economy rebounds before returning to a declining trend for 2023 through 2026. Small Commercial and Industrial customer growth is expected to average 0.6 percent from 2022 through 2026. Large Commercial and Industrial Sales are expected to increase in 2022, decrease in 2023, and increase from 2024 through 2026 due to the addition of a large, new customer.

Q. TO WHAT DO YOU ATTRIBUTE THE LONGER-TERM DECLINING SALES TREND?

A. The longer-term declining sales trend is due to DSM achievements, DG solar, and large customers reducing operations or leaving the Company's service territory. The trend has been somewhat altered by the impact of the COVID-19 pandemic. Residential sales increased in 2020 and 2021 due to more people staying at home, while Commercial and Industrial sales dropped sharply in 2020 due to business shutdowns and less economic activity. Beginning in 2022, Residential sales are expected to decline from the high 2020 and 2021 levels due to more people returning to the office and spending less time at home. Small Commercial and Industrial sales are expected to rebound through 2022 before returning to a downward trend. Large Commercial and Industrial sales are also

projected to rebound through 2022 but then decline due to the expected loss of individual customer's loads, and then to increase modestly as a result of a large, new customer in 2024. The overall decline in Residential and Small Commercial and Industrial sales is accompanied by customer growth and reflects a declining use per customer for these classes. This declining use per customer is somewhat mitigated by the adoption of electric vehicles.

A more detailed discussion of the forecast results is provided in Section IV of my testimony. The forecast methodology is discussed in Section V through Section XI of my testimony.

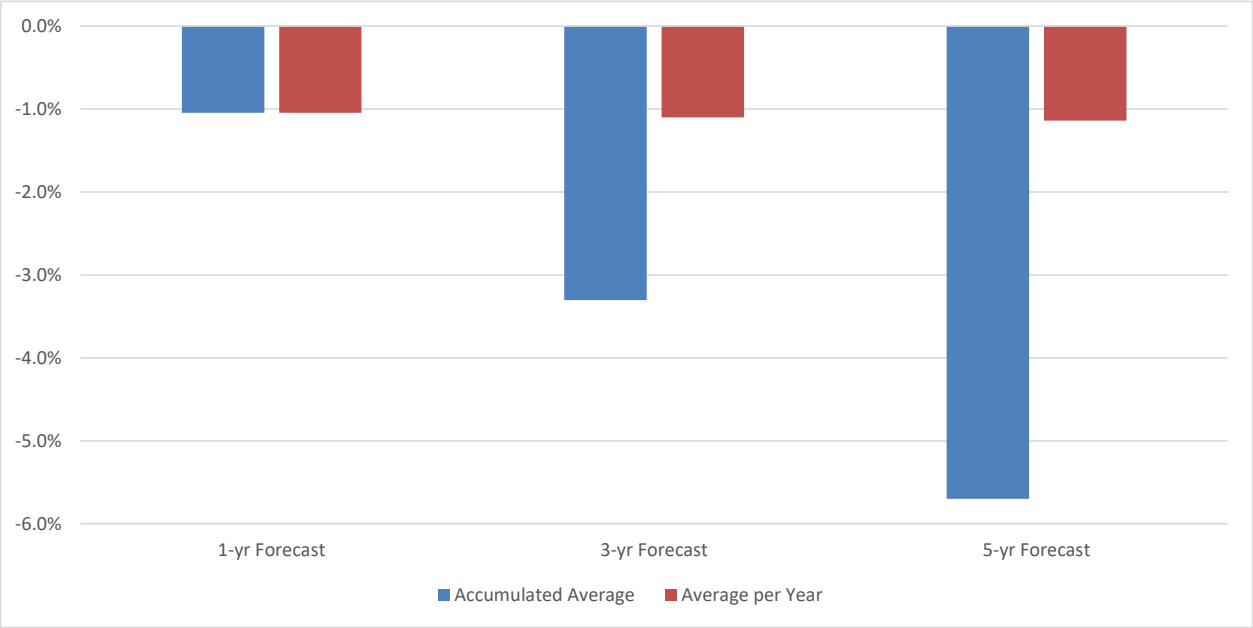
B. Forecast Accuracy

Q. HAVE YOU REVIEWED THE HISTORICAL ACCURACY OF THE COMPANY'S SHORT-TERM, MEDIUM-TERM, AND LONG-TERM FORECASTS?

A. Yes. We analyzed forecasts from the past 12 years, beginning with the forecasts developed in 2008. Over this period, we found that our forecasting accuracy is improving. However, while the validity of our methodology and accuracy of our forecasts provide reasonable results, our actual sales continue to trail our forecast as demonstrated by Figure 3, below. The blue bars in Figure 3 show the average accumulated variance based on the duration of the forecast, while the red bars show the average per year. For example, the average 1-yr ahead variance is -1.0 percent (or an average of -1.0 percent per year), while the average 5-yr ahead variance is -5.7 percent (or an average of about -1.1 percent per year).

Figure 3

Historical Forecast Accuracy



Q. HOW DID YOU PERFORM THIS ANALYSIS?

A. For this analysis, we considered short-term to be the forecast for the one year out (*i.e.*, the next full year), medium-term to be three years out, and long-term to be five years out. We have full-year actual results for 2020, which means that long-term forecast accuracy statistics are available for forecasts developed in 2014 and earlier, medium-term statistics are available for forecasts developed in 2016 and earlier, and short-term statistics are available for forecasts developed in 2018 and earlier. Figure 3 shows the short-term, medium-term, and long-term average forecast variance. Because forecast variance compounds over time, the variances were divided by the number of years to derive an average per year. Both the accumulated average and the average per year are shown in Figure 3.

The forecast variance is provided in Schedule 2. This schedule provides a table with the annual forecast variances from 2009 to 2020. The table is shown three times: once with the long-term variances (five-year forecast accuracy) highlighted, once with the medium-term variances (three-year forecast accuracy) highlighted and once with the short-term variances (one-year forecast accuracy) highlighted. In the table, a negative number indicates weather-normalized actual sales were lower than was forecasted, and a positive number indicates weather-normalized actual sales were higher than was forecasted.

Q. WHAT DO YOU CONCLUDE?

A. I conclude that our forecast variance is generally smaller for short-term forecasts and larger for long-term forecasts, but in all cases the results show that the Company's forecasts tend to modestly overstate actual sales. This means that our forecasts are generally accurate, but our actual sales tend to be lower than our forecasts.

Q. WHAT IS THE RATE IMPACT OF MODESTLY OVERSTATED SALES FORECASTS IN A RATE SETTING PROCEEDING?

A. All else being equal, a modestly overstated sales forecast benefits customers, since such a forecast assumes the Company will sell more electricity than it actually does. Therefore, rates will be set lower on a per kilowatt-hour (kWh) basis than would have been set with a lower forecast. However, this would also mean that rates will be set lower than the amount necessary for the Company to recover our cost of service.

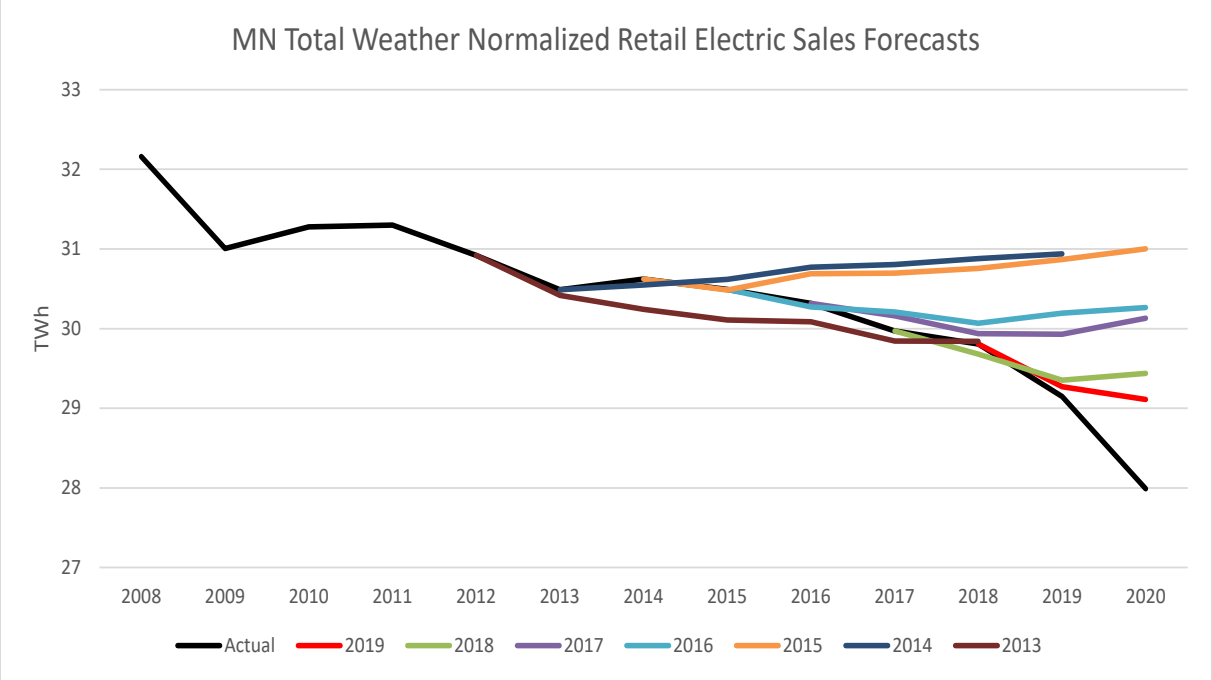
Q. CAN YOU PROVIDE ADDITIONAL DETAILS REGARDING THE ACCURACY OF THE COMPANY'S SALES FORECASTS?

A. Yes. As detailed in Schedule 2, the following are the variances between actuals sales and the Company's forecasts for the different types of forecasts:

- long-term forecasts variance is -5.7 percent,
- medium-term forecasts variance is -3.3 percent, and
- short-term forecast variance is -1.0 percent.

Schedule 2 also shows that the forecast variance has generally improved since 2012, with the exception of the pandemic impacted year of 2020. As a graphical view, Figure 4 below provides the forecasts from 2013-2019 and weather normalized actual sales for the following years.

Figure 4



Q. WHAT IS CONTRIBUTING TO THESE VARIANCES?

A. There are several key contributors. First, there has been a significant shift in the relationship between energy sales and economic indicators. Prior to the great recession of 2008, energy sales were on an upward trajectory that closely followed growth in economic measures, such as Gross Domestic Product. Following the great recession, however, that relationship changed. Even though prior to the pandemic in 2020 the economy continued to grow, energy sales did not correspondingly increase. Rather, sales have shown a declining trend as appliances, equipment, lighting, and other end-uses have become more efficient. Based on projected economic growth, our past sales forecasts generally predicted a return to an increasing sales trend, which has not materialized.

In addition to the shift in the relationship between energy sales and economic indicators, the unforeseen impacts of the COVID-19 pandemic contributed to the negative variances in 2020. The increase in residential sales were not large enough to offset the large declines in commercial and industrial sales due to shutdowns and lower economic activity.

Q. IS THE COMPANY'S FORECAST VARIANCE WITHIN A REASONABLE RANGE?

A. Yes, I believe so. I compared the Company's forecast variance with the variances reported in Itron's 2020 Forecast Benchmark Survey, which is provided as Exhibit___(JMG-1), Schedule 4. Itron's survey provides the one-year-out average annual forecast variance as reported by the survey respondents (for example, the 2020 Survey reports the variance for 2019 sales). Itron's 2020 survey also provides the survey results for total system energy forecast variance

(measured as the unweighted Mean Absolute Percent Error) from the 2015 to 2020 surveys. The average total system energy forecast variance as reported by more than 60 utilities in Itron's 2015 to 2020 surveys is 1.4 percent. The Company's comparable average variance for this same time period is 1.0 percent, which is in line with, and slightly better than, the industry average.

III. SALES FORECAST TRUE-UP PROPOSAL

Q. BEFORE TURNING TO THE SPECIFICS OF THE COMPANY'S FORECAST AND METHODOLOGY, PLEASE DISCUSS THE GOALS SOUGHT TO BE ACHIEVED IN A SALES FORECAST.

A. The goal of the sales forecast, as used in a rate case, is to best predict the amount of sales that the Company will make in the test year and plan years. Sales forecasts often become highly disputed issues in rate cases, given their impact on final rates. For example, if the sales forecast projects lower sales than the utility ultimately achieves, rates will have been overstated, all else being equal, and customers will have paid more than is necessary for the Company to earn its authorized return. Conversely, if the sales forecast is overstated, rates will be set too low, and the utility will be denied a reasonable opportunity to earn its authorized return.

The Company believes its sales forecast is based on sound methodologies and reasonable assumptions and can be relied on to set rates in this proceeding. As shown in Section II of my testimony, the Company's sales forecasts have been reasonably accurate in the past, with variances in-line with or smaller than industry averages. However, the Company recognizes that other parties to this

proceeding may disagree with the Company's methodologies, assumptions and forecast results, and may introduce their own forecast, as they have done in past rate cases.

Q. HOW DID PARTIES RESOLVE THIS ISSUE IN THE COMPANY'S 2016 MYRP (DOCKET NO. E002/GR-15-826)?

A. The parties found a reasonable solution, and avoided significant controversy, by agreeing to have actual data inform the proceeding rather than relying exclusively on one or the other of the competing forecasts. We also agreed to a test year sales forecast true-up mechanism in the Company's 2016 MYRP.

Q. IS THIS CONSISTENT WITH OTHER RATE CASE OUTCOMES?

A. Yes. In Docket No. E002/GR-13-868, we also instituted a sales true-up mechanism that helped to ensure rates were accurately set based on actual sales.

Q. PLEASE EXPLAIN MORE HOW ACTUAL DATA CAN BE USED TO MORE ACCURATELY SET RATES IN GENERAL RATE PROCEEDINGS.

A. As is typical in general rate proceedings, a test year sales forecast is produced to determine revenues at current and proposed rates. Due to the timing of the filing and length of time required to put together a complete case, the sales forecast is produced well in advance of the actual test year. In this proceeding, the 2022 test year sales forecast was completed in July 2021, and the Company was able to use actual sales data through May 2021 to develop this forecast. In our 2016 MYRP (Docket No. E002/GR-15-826), we were able to incorporate actual sales data over the course of the proceeding to better inform the record.

Q. HOW DID ACTUAL SALES COMPARE WITH THE FORECAST IN THE COMPANY'S 2016 MYRP RATE CASE?

A. In Docket No. E002/GR-15-826, the Company filed a compliance filing on February 6, 2017, which provided the weather-normalized 2016 actual sales. Table 1 below provides a comparison of the 2016 actual sales with Xcel Energy's 2016 test year forecast. A negative value in the table indicates that actual sales were lower than was forecasted. As the table illustrates, weather-normalized 2016 actual retail sales were lower than was predicted in the Company's 2016 test year forecast (-411,205 MWh or -1.3 percent). This is in line with the Company's historical average short-term forecast variance of -1.0 percent.

Table 1

2016 Weather-Normalized Sales Comparison by Class

Actual Sales vs. Xcel Energy's Test Year Forecast

	Xcel Energy	
Customer Class	**Difference Actual vs. Forecast Sales (MWh)**	**Difference Actual vs. Forecast Sales (%)**
Residential	58,389	0.7%
Small Commercial & Industrial	-257,487	-1.9%
Large Commercial & Industrial	-191,818	-2.3%
Street Lighting	-11,895	-8.1%
Public Authority	-6,660	-9.4%
Interdepartmental	-1,735	-18.8%
Total Retail	-411,205	-1.3%

Q. TURNING TO THE ISSUE OF CUSTOMER COUNTS, HOW DID THE 2016 ACTUAL CUSTOMER COUNTS COMPARE TO THE 2016 TEST YEAR CUSTOMER COUNTS FORECAST FILED IN THE COMPANY'S 2016 MYRP RATE CASE?

A. A comparison of the actual 2016 customer counts and the Company's 2016 test year forecasted customer counts is provided in Table 2 below. Total actual retail customer counts were 326 customers or 0.0 percent different than predicted for the 2016 test year.

Table 2

2016 Average Customer Counts by Class

Customer Class	2016 Customer Counts	2016 Xcel Energy Test Year Forecast	Difference	Difference %
Residential	1,131,107	1,131,309	-202	0.0%
Small Commercial & Industrial	131,350	131,498	-148	-0.1%
Large Commercial & Industrial	503	503	0	0.0%
Street Lighting	4,392	4,351	41	0.9%
Public Authority	2,056	2,073	-17	-0.8%
Interdepartmental	13	13	0	0.0%
Total Retail	**1,269,421**	**1,269,747**	**-326**	**0.0%**

Q. WHAT SALES FORECAST WAS ADOPTED BY THE COMMISSION IN THE 2016 MYRP?

A. In the 2016 MYRP (Docket No. E002/GR-15-826), we worked with the Department to agree on a mechanism to utilize actual weather normalized sales data for the setting of rates for the 2016 test year. This process allowed parties to take advantage of actual sales data rather than relying on the forecast, and the methodological differences therein. This is similar to the methodology we

employed in the previous rate case in Docket No. E002/GR-13-868. It is helpful to recognize that, at the end of the day, the forecast is only an estimate for sales during a period of time. Actual sales are certainly more accurate than a forecast. We therefore agreed in prior rate cases to a test year sales forecast true-up mechanism to ensure a more accurate sales forecast, and proposed a similar approach in this proceeding.

Q. HAS THE COMMISSION APPROVED ANY SUBSEQUENT SALES FORECAST TRUE-UPS?

A. Yes. As part of our True-Up Petition filed November 1, 2019, Xcel Energy proposed, and the Commission approved,[6] a 2020 sales true-up that would operate similarly to the sales forecast true-up established in our 2016 MYRP (Docket No. E002/GR-15-826) but that would apply to all customer classes.[7] A similar sales true-up for 2021 was proposed in our True-Up Petition filed November 1, 2020 and approved by the Commission.

Q. IS THE COMPANY PROPOSING A SIMILAR SALES FORECAST TRUE-UP IN THIS CASE?

A. Yes, we propose to utilize a similar sales true-up mechanism as was utilized in the Company's 2021 True-Up Petition. This proposal is further discussed by Company witnesses Mr. Greg P. Chamberlain and Mr. Nicholas N. Paluck.

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[6] *In the Matter of Northern States Power Company d/b/a Xcel Energy for Approval of True-Up Mechanisms*, ORDER APPROVING TRUE-UPS AND REQUIRING XCEL TO WITHDRAW ITS NOTICE OF CHANGE IN RATES AND INTERIM RATE PETITION, Docket No. E002/M-19-688 (March 13, 2020).

[7] During the 2016 MYRP, the Company incorporated a Commission-approved decoupling pilot for Residential and Small Commercial and Industrial customer classes, along with a sales true-up for those classes not included in the decoupling pilot. That decoupling pilot expired on December 31, 2019.

Q. HOW DOES A TEST YEAR SALES TRUE-UP SUPPORT JUST AND REASONABLE RATES?

A. There is significant uncertainty in many of the factors in our forecast based on the changing utility landscape and the current pandemic and the economic recovery. Changing utility landscape factors include the impact of DG solar and the increasing usage of electric vehicles. As these new technologies come on-line, our forecasts may or may not sufficiently capture their impact on sales – both higher and lower. In the event that these technologies have significantly higher adoption rates, a sales true-up helps to ensure that the Company can fully recover its cost of service. Just as importantly, if these technologies do not materialize as forecasted, we can ensure that rates are set reflecting the higher sales to help ensure that our customers are only paying for our cost of service.

Q. CAN YOU PROVIDE AN EXAMPLE OF HOW A SALES TRUE-UP WOULD PROTECT CUSTOMERS?

A. Yes. We have projected a 2022 sales level of 28,264,912 MWh. While we believe that this is the best prediction of 2022 sales, forecast uncertainty is unavoidable and sales simply cannot be predicted with 0.0 percent error. There are factors unknown today that could result in higher-than-forecasted sales or lower-than-forecasted sales. For example, there is still uncertainty around the long-term sales impacts of the current pandemic. In addition, new large load could be added that has not yet been identified, and, conversely, additional large load could be lost. There also is some level of uncertainty around the adoption of DG solar and electric vehicle charging. A sales true-up protects customers from these and other types of uncertainties.

Q. IF A TEST YEAR TRUE-UP IS UTILIZED, IS IT STILL IMPORTANT TO HAVE A REASONABLE SALES FORECAST?

A. Yes. Although, with the true-up, some of the subtle differences in forecasting methodologies become more of an academic exercise and will not ultimately impact the customer's bill, the sales forecast should still be designed to provide the best prediction of sales. In this way, parties and the Commission can have confidence that our rates will be just and reasonable and can lessen the amount of scarce resources that need to be devoted to this issue.

Q. WILL PARTIES TO THIS PROCEEDING BE ABLE TO REVIEW IN ADVANCE THE CALCULATION THAT WOULD BE USED TO WEATHER NORMALIZE 2022 ACTUAL SALES FOR USE IN A TRUE-UP MECHANISM?

A. Yes. If a sales true-up mechanism is approved in this proceeding, we propose that the same methodology that was used to weather normalize 2016 actual sales in the 2016 MYRP would be used in this proceeding. That being said, it is appropriate to update the inputs to the calculation to reflect more current information. This includes the normal weather values and the weather response coefficients. With these agreed to in advance, then the weather normalization calculation would need only actual sales and actual customer counts in order to be completed.

Regarding the normal weather values, it would be reasonable to use the values created for the 2022 test year sales forecast, which are based on the average of 2001 to 2020 actual weather. I will discuss this in more detail in Section VI. In addition, Exhibit___(JMG-1), Schedule 5 provides the regression models and

calculations of the weather response coefficients that I propose be used to weather normalize 2022 test year actual sales.

IV. CUSTOMER AND SALES FORECAST

Q. WHAT GEOGRAPHICAL AREA DOES THE SALES FORECAST REFLECT?

A. My testimony and exhibits reflect electric usage and customers in Xcel Energy's Minnesota 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 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 more than 999 kW 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; and
- *Interdepartmental Sales* – electric sales made to Xcel Energy gas facilities.

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) Projected revenue under present rates; and
3) Projected revenue under proposed rates.

Q. WHAT IS XCEL ENERGY'S FORECAST OF ELECTRIC SALES AND CUSTOMERS FOR THE PERIOD JANUARY 1, 2022, THROUGH DECEMBER 31, 2026?

A. Exhibit___(JMG-1), Schedule 6 summarizes monthly MWh sales and number of customers for each customer class for the 2022 through 2026 time period. Table 3 below provides the annual forecasts for each of these years. As I previously discussed, total retail sales are expected to decline slightly from 28,220,781 MWh in 2021 to 28,017,703 MWh in 2026, which represents a -0.1 percent average annual change. Total retail customers are expected to increase from 1,336,406 in 2021 to 1,393,693 in 2026, representing a 0.8 percent average annual growth rate.

Table 3

Total Retail Sales and Customer Forecasts (2022-2026)

	Sales (MWh)	Year-End Customers
2022	28,264,912	1,349,906
2023	27,979,592	1,359,191
2024	28,068,548	1,369,993
2025	28,198,389	1,381,920
2026	28,017,703	1,393,693

Q. HOW DOES THE GROWTH IN THE NUMBER OF ELECTRIC CUSTOMERS IN 2022 THROUGH 2026 COMPARE WITH HISTORICAL CUSTOMER GROWTH?

A. The 0.8 percent projected average annual growth rate for total retail customers is comparable to the historical growth rate. The total number of year-end electric retail customers in the Xcel Energy Minnesota service territory increased at an average annual rate of 0.7 percent from 2003 through 2020, or 9,773 customers per year on average. The largest class of customers is the Residential class, which represents 89 percent of total customers and has averaged a growth rate of 0.7 percent or 8,771 additions per year during the period from 2003 through 2020.

While annual growth in the number of electric customers has averaged 0.7 percent from 2003 through 2019, this growth has not been steady during this period of time. Customer growth in 2004 topped 22,000, followed by a decline of nearly 18,000 in 2005, and then growth in 2006 of more than 20,000. In 2005, the Company implemented a new billing system, and as I explain more fully in Section VIII of my testimony, the resulting customer-count definitional

changes resulted in a reduction in the count of customers following the billing system conversion.

Year-end customer growth slowed in 2007, with only 11,400 customer additions (1.0 percent). When the economic recession hit in 2008, electric retail customer growth slowed to fewer than 8,500 new customers (0.7 percent), followed by very weak growth in 2009 of about 3,100 new customers (0.3 percent). Some economic recovery occurred in 2010, with nearly 8,800 customer additions (0.7 percent), but then growth slowed again in 2011 and 2012, with only 5,300 and 5,800 new customers added (0.4 percent and 0.5 percent), respectively. From 2013 through 2019, growth has stabilized, with annual additions ranging between 8,900 and 11,800 customers per year (0.7 percent to 0.9 percent). Customer growth increased in 2020, with 13,900 total customers added (1.1 percent growth), driven by primarily by additions of 13,300 Residential customers. I expect customer growth to be strong in 2021, with growth of 1.2 percent (16,400 customers), driven by an additional 15,100 Residential customers. I expect slowing growth in 2022, adding 13,500 total customers (1.0 percent) before returning to historical levels of growth. From 2023, I expect customer growth to average just under 10,000 customers per year (0.8 percent). I will explain the methodologies used to develop this forecast in Section V through Section XI of my testimony.

Table 4 below provides the historical and forecast annual customer growth rate by class for the time period 2003-2026.

Table 4

2003-2026 Year-End Percent Change in Customers

	Residential	Commercial & Industrial	Street Lighting	Public Authority	Total Retail
2003-2020 Average	0.7%	0.7%	4.3%	-2.2%	0.7%
2021 Forecast	1.3%	1.2%	1.5%	-0.6%	1.2%
2022 Forecast	1.0%	1.0%	1.8%	-0.3%	1.0%
2023 Forecast	0.7%	0.7%	1.4%	-0.3%	0.7%
2024 Forecast	0.8%	0.8%	1.6%	-0.2%	0.8%
2025 Forecast	0.9%	0.9%	1.6%	-0.1%	0.9%
2026 Forecast	0.9%	0.9%	1.5%	-0.1%	0.9%

Q. PLEASE EXPLAIN WHY THE STREET LIGHTING CUSTOMER COUNT GROWTH RATES ARE HIGHER THAN THE OTHER CLASSES.

A. The majority of the increase in the number of Street Lighting customers is occurring in the "customer owned metered street lighting" rate class where the customer, such as a municipality, owns and operates the street light system and the Company provides only the energy. An individual, non-metered street light within a customer owned street light system is not counted as an individual customer. However, a metered ornamental street light is counted as an individual customer. Therefore, when a Street Lighting customer replaces a non-metered street light with a metered ornamental street light, the customer count increases by one.

Q. HOW DO THE 2022 THROUGH 2026 FORECASTED ELECTRIC SALES COMPARE WITH HISTORICAL WEATHER-NORMALIZED ELECTRIC SALES?

A. As I previously explained, Xcel Energy's Minnesota service territory total electric retail sales are projected to decrease at an average annual rate of 0.1

percent during the 2022 to 2026 time period. This is less negative than the 0.5 percent decline from 2010-2019 (i.e., the period following the great recession, but preceding the pandemic), after normalizing for weather. During the 2010 through 2019 time period, Residential sales declined 0.2 percent per year on average, while total Commercial and Industrial sales declined 0.6 percent per year on average. In 2020, due to the pandemic, Residential sales increased 4.2 percent while Commercial and Industrial sales declined 7.4 percent.

Similar to the pattern seen in historical customer growth, the economic recession in 2008 and 2009 had a major lasting effect on sales, and the average annual growth rates prior to the recession were much larger than those during and following the recession. As shown below on Table 5, in 2009, retail sales declined a significant 3.6 percent from 2008 levels due to the recession. Following the recession, retail sales growth from 2010 to 2019 declined, on average, 0.5 percent per year. Retail sales declined 4.0 percent in 2020 as the increase in Residential sales was more than offset than the decline in Commercial and Industrial sales.

From 2010-2019, positive annual retail sales growth has been recorded in only three years (2010, 2011, and 2014) and the average decline was 0.5 percent per year. Primary factors contributing to the declining sales during this period are use per customer declines in the Residential and Small Commercial and Industrial sectors due to energy efficiency and the loss of load for several Large Commercial and Industrial customers in 2012-2013 and 2017-2019.

Table 5 below shows the growth by customer class for the pre-recession (2003-2007 average), during recession (2008, 2009), post-recession, pre-pandemic (2010-2019 average), and pandemic (2020) time periods, along with our sales forecast growth for 2021 through 2026. In 2021, we expect to see continued strength in Residential sales combined with a small rebound in Commercial and Industrial sales. Sales in 2022 increase slightly as gains in Commercial and Industrial sales are partially offset by declines in Residential. Sales are expected to continue the pre-pandemic downward trend in 2023, increase slightly in 2024 and 2025 due to the addition of a single, large customer, and return to the downward trend in 2026. Overall, Total Retail sales are about flat from 2021 to 2026.

Table 5

2003-2026 Percent Change in MWh Sales

	Residential	Commercial & Industrial	Street Lighting	Public Authority	Inter-departmental	Total Retail
2003-07 Avg	1.3%	1.4%	1.2%	-3.8%	-3.5%	1.4%
2008	-1.7%	1.1%	0.2%	-9.9%	-41.7%	0.3%
2009	0.6%	-5.2%	-1.2%	-3.5%	29.5%	-3.6%
2010-19 Avg	-0.2%	-0.6%	-2.3%	-0.8%	-3.9%	-0.5%
2020	4.2%	-7.4%	-3.5%	-5.7%	21.5%	-4.0%
2021 Forecast	0.5%	1.0%	-7.3%	6.4%	-14.0%	0.8%
2022 Forecast	-2.8%	1.5%	5.8%	-6.6%	5.1%	0.2%
2023 Forecast	-0.2%	-1.4%	0.7%	-1.6%	0.0%	-1.0%
2024 Forecast	0.2%	0.4%	0.7%	-0.8%	0.0%	0.3%
2025 Forecast	-0.4%	0.9%	0.7%	-1.2%	0.0%	0.5%
2026 Forecast	-0.4%	-0.8%	0.7%	-1.0%	0.0%	-0.6%

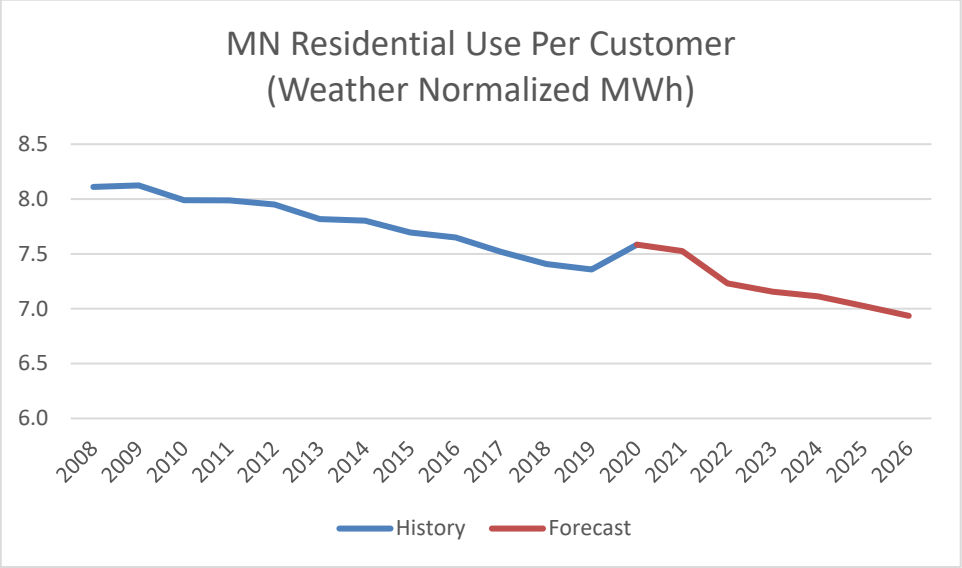
I will explain the methodologies used to develop this forecast in Section V through Section XI of my testimony.

Q. WHY ARE RESIDENTIAL SALES PROJECTED TO DECLINE 2.8 PERCENT IN 2022?

A. As I explained earlier in my testimony, sales to the Residential class were very strong in 2020 and remain strong in 2021 due to the pandemic as customers are spending more time at home, and in some cases working from home. Residential use per customer is expected to decline from late 2021 through 2022 as customers return to more normal, pre-pandemic, activities outside their home. After 2022, residential use per customer is expected to return to a declining trend, partially offset by the adoption of electric vehicles.

Sales to the Residential class have shown a declining trend from 2007-2019, driven by declining use per customer. Although the number of customers continues to increase, the customer growth is not strong enough to offset the decline in use per customer. Figure 5 below highlights this historical trend, the strength in use per customer in 2020 and 2021, and the return to the declining trend in the Residential sales forecast.

Figure 5



Q. WHAT IS THE DRIVER OF DECLINING USE PER CUSTOMER IN THE RESIDENTIAL CLASS?

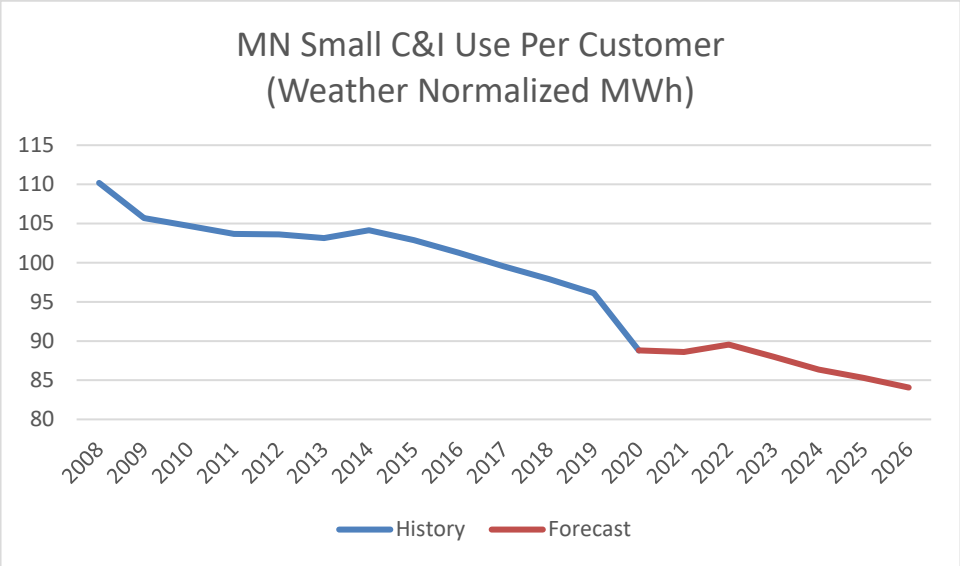
A. One of the key drivers of declining residential use per customer is energy efficiency, including both Company-sponsored energy efficiency achievements as well as customer- and market-driven conservation outside of our programs. For example, according to the U.S. Energy Information Administration's *2021 Annual Energy Outlook*, residential lighting usage per household is expected to decrease by an average of 1.4 percent per year from 2021 to 2026. Declining usage per household is also projected for electric space heating (-1.1 percent per year), televisions and related equipment (-1.5 percent per year), refrigeration (-1.3 percent per year), and water heaters (-0.7 percent per year). The information from the *2021 Annual Energy Outlook* is provided as Exhibit___(JMG-1), Schedule 7.

Q. WHAT IS THE DRIVER OF DECLINING SALES IN THE SMALL COMMERCIAL AND INDUSTRIAL CLASS?

A. Through 2019, sales in the Commercial and Industrial class declined due to declining use per customer in the Small Commercial and Industrial class and loss of load for specific customers in the Large Commercial and Industrial class. In 2020, Commercial and Industrial sales declined due to the business closures and economic slowdown that resulted from the COVID-19 pandemic. Small Commercial and Industrial sales are expected to rebound from the pandemic lows through 2022 before returning to the historical declining trend starting in 2023.

The historical and forecasted (beyond 2022) declines in Small Commercial and Industrial sales are driven by energy efficiency. Similar to the Residential class, use per customer in the Small Commercial and Industrial class historically has been declining, and energy efficiency is expected to continue to dampen growth during the forecast period, as shown in Figure 6 below. The 2021 Annual Energy Outlook projects lighting usage per square foot in the commercial sector to decrease an average of 2.9 percent per year from 2021 to 2026. Declining usage per square foot in the commercial sector is also projected for computing (-1.6 percent per year), ventilation (-1.7 percent per year), and refrigeration (-1.2 percent per year).

Figure 6



Q. PLEASE DESCRIBE SALES TRENDS IN THE LARGE COMMERCIAL AND INDUSTRIAL CLASS SINCE THE LAST ECONOMIC RECESSION.

A. From 2008 to 2020, sales to the Large Commercial and Industrial class have declined by more than 2.4 million MWh or 25.9 percent. The Large Commercial

and Industrial sector suffered a significant impact from the economic recession in 2008 and 2009, with sales declining 9.5 percent in 2009. This class saw considerable recovery in 2010, with sales growth of 5.9 percent. In 2011, sales growth in this class slowed to only 0.1 percent. Sales in the Large Commercial and Industrial class then declined significantly in 2012 (-4.7 percent) and 2013 (-4.0 percent) due in large part to shutdowns at two large customer sites. Loss of load from other Large Commerical and Industrial customers caused sales in the class in 2014 to decline another 1.4 percent, followed by a small increase of 0.4 percent in 2015. Sales declined again in 2016 and 2017 (-0.6 percent and -0.8 percent, respectively), with the 2017 decline due in large part to a customer adding combined heat and power (CHP) operations at their location. A 0.5 percent increase in sales in 2018 was then followed by a 6.2 percent decline in 2019 due to additional CHP operations and plant closures. Finally, sales declined 8.1 percent due in the 2020 due to the COVID-19 pandemic, a full-year of the 2019 new CHP operation, and the shutdown of a large customer site. Large Commercial and Industrial sales are expected to follow a trend similar to Small Commercial sales before increasing in 2024 and 2025 due to the addition of a new, large customer.

Since the Company's 2016 MYRP 2016 test year, sales have declined by 1,155,000 MWh or 14.2 percent. In many cases, these types of declines are hard to predict and are due to circumstances outside of our control like plant closures or changes in the customer's operations.

Large Commercial and Industrial sales are expected to rebound from the pandemic lows in 2021 and 2022, growing at 1.5 percent and 0.9 percent,

respectively. After 2022, the Large Commercial and Industrial sales forecast has been adjusted to account for additional loss of large loads as well as the addition of anticipated new loads. Sales are also expected to grow in 2024 and 2025 due to the addition of a large, new customer. The adjustments made to the Large Commercial and Industrial sales forecast are provided in Exhibit___(JMG-1), Schedule 8 and discussed in more detail in Section X of my testimony.

Q. PLEASE DISCUSS THE SALES FORECAST FOR THE STREET LIGHTING CLASS.

A. Sales in the Street Lighting class have declined over the past several years due to the installation of more efficient LED lighting. Sales are expected to decline 2021, and then to resume increasing.

Q. HOW DOES THIS FORECAST COMPARE TO THE MINNESOTA SALES FORECAST IN THE COMPANY'S 2022 FUEL COST ADJUSTMENT FILING (DOCKET NO. E002/AA-21-295) AND THE MINNESOTA STATE PORTION OF THE SYSTEM FORECAST IN THE COMPANY'S 2019 RESOURCE PLAN SUPPLEMENT (DOCKET NO. E002/RP-19-368)?

A. A comparison of this Rate Case forecast with the Fuel Cost Adjustment forecast and the Resource Plan Supplement forecast is provided in Table 6 and Figure 7 below. The Fuel Cost Adjustment forecast was developed in the first quarter of 2021 based on historical data through December 2020. The Resource Plan forecast was developed in the fall of 2019 based on historical data through May 2019 and did not include any impacts from the COVID-19 pandemic. Differences between the forecasts are due to:

1) incorporating more recent actual customer, sales, and weather data,

2) updating the economic and demographic variables with the most currently available information, which includes the expected economic and demographic impacts related to the COVID-19 pandemic,
3) updating the behind-the-meter solar generation forecasts,
4) updating the assumptions regarding new load additions and reductions,
5) updating the forecast of the impact of electric vehicle charging,
6) updating the DSM forecast, and
7) updating the forecast to include Integrated Volt-Var Optimization (IVVO) impacts in 2024, which began with the Fuel Cost Adjustment filing in Docket No. E002/AA-20-417.

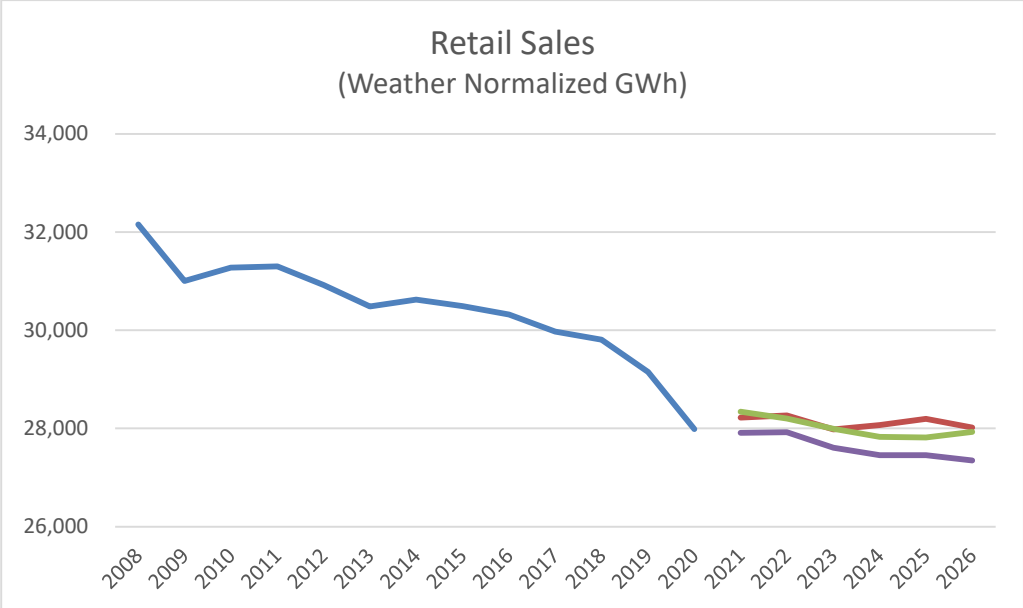
As seen in Table 6, the annual percentage differences between the Rate Case forecast and the Resource Plan forecast range between 0.0 percent and 1.4 percent. The annual percentage differences between the Rate Case forecast and the Fuel Cost Adjustment range between 1.2 percent and 2.7 percent. The primary drivers of the differences from the Fuel Cost Adjustment filing are assumptions of the pace of the economic rebound from the COVID-19 pandemic and the size of an addition, large customer added in 2024.

Table 6

Electric Forecast Comparisons (MWh)

	2021 Rate Case	2019 Resource Plan Supplement	MWh Difference	% Difference	2021 Fuel Cost Adjustment	MWh Difference	% Difference
2022	28,264,912	28,203,983	60,929	0.2%	27,921,306	343,605	1.2%
2023	27,979,592	27,993,013	(13,421)	0.0%	27,608,332	371,260	1.3%
2024	28,068,548	27,828,041	240,507	0.9%	27,453,216	615,332	2.2%
2025	28,198,389	27,812,888	385,500	1.4%	27,454,311	744,077	2.7%
2026	28,017,703	27,929,799	87,905	0.3%	27,349,149	668,554	2.4%

Figure 7



Q. DO YOU BELIEVE THE ECONOMIC RECOVERY FROM THE PANDEMIC COULD OCCUR AT A DIFFERENT RATE THAN YOU ARE PROJECTING?

A. Yes. The economic rebound from the COVID-19 pandemic has been challenging to forecast, and the IHS Markit forecasts of national and regional economic variables has changed fairly significantly over the last 18 months. We continue to believe that the medium-term (1-2 year) forecasts have more uncertainty than usual and the economic recovery could occur at a slower or faster rate than projected. While we are using IHS Markit's baseline scenario rather than incorporating the potential for faster or slower growth, we will continue to monitor the economic outlook as this case proceeds.

Q. IS IT ALSO POSSIBLE THAT NEW CUSTOMERS OR INCREASED SALES TO EXISTING CUSTOMERS THAT ARE NOT CURRENTLY REFLECTED IN YOUR FORECAST WILL DEVELOP?

A. Yes. We continually explore opportunities with new and existing customers and some of those could well develop during the course of this proceeding. Our forecasts do reflect anticipated new customers in all customer classes.

Q. WILL PARTIES TO THIS PROCEEDING HAVE THE OPPORTUNITY TO REVIEW MORE CURRENT INFORMATION AS THIS CASE PROGRESSES?

A. Yes. We will make available to parties more current information as the case progresses through Rebuttal or Surrebuttal Testimony, or both. This information and expected trends can be reviewed by parties to provide assurance that the sales forecast we have used to set rates in this proceeding continues to be appropriate for ratemaking purposes. In addition, this information can be used as a basis for a test year sales true-up mechanism. If, through the course of this proceeding, the updated information and expected trends indicate that the Company's sales forecast is either too high or too low, then our rates will be too low or too high. Should more current information indicate that adjustments to the forecast are needed, we will work with parties to see that appropriate steps are taken to ensure our sales forecast has theadvantage of the most current information available.

V. OVERVIEW OF SALES AND CUSTOMER FORECASTING METHODOLOGY

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

A. The sales forecast for 2022 through 2026 was completed in July 2021 and was based on actual customers and sales through May 2021. In order to provide the most up-to-date information at the time this testimony was written, I have replaced forecast values for June and July 2021 with actual values. 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. These techniques are used to develop sales and customer forecasts for all of Xcel Energy's jurisdictions. In addition, these techniques were used by the Department in prior proceedings to develop its proposed sales and customer forecasts.

Q. HOW WERE THE SALES FORECASTS DEVELOPED FOR THE RESIDENTIAL, SMALL COMMERCIAL AND INDUSTRIAL, LARGE COMMERCIAL AND INDUSTRIAL, PUBLIC STREET AND HIGHWAY LIGHTING, AND PUBLIC AUTHORITY CUSTOMER CLASSES?

A. Regression models were developed 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, Public Street and Highway Lighting, and Public Authority customer classes. The regression

models were developed using the Metrix ND[8] software program which is commonly used in the utility industry. 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. The use of regression modeling is a standard approach in the utility industry, and Xcel Energy has been using these types of regression models since 1991.

Monthly sales forecasts for these customer classes were developed based on regression models designed to define a statistical relationship between the historical sales and the independent predictor variables, including historical economic and demographic indicators, historical weather (expressed in heating degree days (HDD) and temperature-humidity index (THI)), and historical number of customers. In all of the models, monthly historical data from January 2003 through May 2021 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 HDD and THI) and the projected levels of the independent predictor variables.

[8] Metrix ND 4.7, Copyright © 1997-2016, Itron, Inc., http://www.itron.com.

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

A. Sales in the Interdepartmental customer class make up only 0.02 percent of the Company's total retail electric sales in Minnesota in 2020. The forecast for Interdepartmental sales was calculated by averaging historical monthly sales over the past three years of actual data. Using an averaging method to forecast sales is appropriate in circumstances where the class is small, such as with the Interdepartmental class, and the circumstances in the forecast period for that class are expected to be similar to the historical period used.

Q. DOES THE COMPANY USE BINARY VARIABLES IN THE FORECAST MODEL?

A. Yes. Binary variables are used to help the model account for outliers or step changes in the historical data associated with another variable. Generally, a forecast is initially developed without any binary variables, and such variables are added later as deemed advisable to improve the overall model fit or monthly pattern of the forecast. In prior rate cases, both the Company and the Department have used binary variables in their models to develop sales and customer forecasts.

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

A. The number of customers by customer class for the classes Residential without Space Heating, Residential with Space Heating, Public Street and Highway Lighting, and Public Authority is forecasted using demographic data for the Minneapolis-St. Paul metropolitan area and the state of Minnesota in regression models and other statistical techniques. The customer forecast for the Small Commercial and Industrial class was developed based on the average annual

growth rate over the past three years, with a very small decay factor of -0.01 percent per year. The Large Commercial and Industrial class customer forecast was based on the last actual value, then decreased by one customer per year in each year during the 2023 through 2026 time period to reflect a slowly declining trend. The customer forecast for the Interdepartmental customer class was developed by averaging the monthly number of customers from June 2020 through May 2021.

A. 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___(JMG-1), Schedule 9, and the regression models and associated analysis used in Xcel Energy's statistical projections of customers are provided in Exhibit___(JMG-1), Schedule 10. These schedules include, by customer class, the models with their summary statistics and output and descriptions for each variable included in the model.

Q. DID XCEL ENERGY EMPLOY VALIDITY TESTS OR OTHER TECHNIQUES TO EVALUATE THE PLAUSIBILITY OF ITS QUANTITATIVE FORECASTING MODELS AND SALES PROJECTIONS?

A. Yes. We used a number of quantitative and qualitative validity tests that are applicable to 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 for the Residential without Space Heating, Residential with Space Heating, Small Commercial and Industrial, Large Commercial and Industrial, and Public Street and Highway Lighting classes demonstrate very high R-squared statistics, ranging between 0.904 and 0.988. The historical sales in the Public Authority class, which accounts for 0.2 percent of total retail electric sales, exhibit more variability that is not fully explained with economic variables, resulting in a lower R-squared statistic. However, the combination of variables used in the regression model for this class explains a large amount of the historical variation, with an R-squared statistic of 0.851. The regression models used to develop the customer forecast demonstrated very high R-squared statistics at 0.999.

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 1.960 to be considered statistically significant at the 95 percent confidence level. This standard 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.

While the Company generally adheres to the 95 percent confidence level to ensure that the impact of a variable is meaningful, this is a guideline rather than a hard and fast rule. Including a variable with a lower level of significance is statistically acceptable, and its inclusion does not necessarily make the model invalid or result in an unreliable forecast.

In this forecast, there is one case where the variable in question does not meet this standard. In the Large Commercial and Industrial sales model, the t-statistic for the April monthly binary variable is statistically significant at the 91 percent confidence level.

Q. HOW ELSE DID THE COMPANY EVALUATE THE REASONABLENESS OF ITS QUANTITATIVE FORECASTING MODELS AND SALES PROJECTIONS?

A. We inspected each model 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 overestimation in one period is likely to lead to an overestimation in the succeeding period under the presence of first-order autocorrelation. Thus, when forecasting with a 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 mis-specified, 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 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. WHAT RECENT CHANGES HAS THE COMPANY MADE TO ITS METHODOLOGIES?

A. Since the Company's 2016 MYRP (Docket No. E002/GR-15-826), the Company has changed the methodology for forecasting Small Commercial and Industrial customers and Large Commercial and Industrial customers from a regression model approach to a trend approach. The Company determined that the customer counts in these two classes did not track well with economic indicators or other explanatory variables needed for a regression model, and therefore changed to a trend approach that does not require economic indicators or other explanatory variables.

In addition, the Company no longer uses a price variable in the sales forecast models. As additional historical data was added to the regression models, the model results indicated that the price variable was no longer significant or added very little value to the overall model results, and therefore it has been dropped as an explanatory variable.

Q. PLEASE DESCRIBE THE METHODOLOGY THE COMPANY USED IN THIS PROCEEDING TO ACCOUNT FOR FUTURE DSM IMPACTS.

A. The Company accounted for future DSM impacts by first developing a forecast that included no impacts of DSM, then adjusting that forecast to account for future DSM impacts, related to both historical achievements with continuing impacts and planned future new programs. I discuss the adjustment of historical sales in Section VII of my testimony.

Q. IS THIS THE SAME METHODOLOGY THE COMPANY USED TO ACCOUNT FOR FUTURE DSM IMPACTS IN DOCKET NOS. E002/GR-13-868 AND E002/GR-15-826?

A. Yes. We have adjusted the sales forecast to account for future impacts of DSM programs for many years, not only for rate cases but also for resource planning purposes. Because the Company has previously achieved savings from DSM programs, some level of impact is already embedded in the historical sales used in the regression models. Therefore, prior to Docket No. E002/GR-13-868, the Company adjusted the sales forecast only for the incremental amount of DSM, *i.e.*, the amount of expected future DSM that is greater than or incremental to the amount of DSM inherently embedded in the sales forecast.

In Docket No. E002/GR-12-961, the Department asserted that DSM was fully embedded in historical sales, and therefore no adjustment to future sales was necessary. At that time, the Department based its recommendation on the fact that since 2007, when the Next Generation Energy Act (NGEA) was enacted, the Company's DSM achievements had leveled off, and future expected savings were at a level similar to the past few years of actual savings. The Department continued to assert that no DSM adjustment was necessary in Docket Nos. E002/GR-13-868 and E002/GR-15-826.

Q. DID THE COMPANY AGREE WITH THE DEPARTMENT'S ASSERTIONS?

A. No. The Company has disagreed with the Department's assertions in the past and continues to believe that a DSM adjustment is needed. The Company's DSM achievements have increased since 2007 and are expected to be even higher in the next few years, based on the Company's projected savings in its July 1, 2020 Resource Plan Supplement (Docket No. E002/RP-19-368). This requires an adjustment to be made to the sales forecast in order to account for the difference between actual historical DSM achievements and projected future DSM achievements. The Company's methodology in this proceeding provides a transparent and reliable method to account for the impacts of future DSM. Again, however, any debate on this issue becomes unnecessary if the parties and Commission agree to a sales true-up as recommended by the Company in Section III of my testimony.

B. Weather Normalization of Sales Forecast

Q. HOW DID XCEL ENERGY ADJUST ITS SALES FORECAST 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 regression models used to forecast sales included weather, as measured in terms of HDD and THI, as an explanatory variable. In this way, the historical weather impact on historical consumption for each class was modeled through the respective coefficients for the HDD and THI variables included in each class's model. Forecasted sales were then projected by simulating the established statistical relationships over the forecast horizon assuming normal weather.

For the Large Commercial and Industrial, Public Street and Highway Lighting, Public Authority, and Interdepartmental 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 HDD and THI for the 20-year time period 2001 to 2020. Xcel Energy's method for calculating normal weather using a 20-year period of actual data has been accepted by the Commission in several previous rate cases.[9] These normal HDD and THI were related to the forecasted billing month in the same manner as were the actual HDD and THI.

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

A. The measure of weather used was HDD and THI, using a 65-degree temperature base. This information was obtained from the National Oceanic and Atmospheric Administration (NOAA), as measured at its Minneapolis-St. Paul airport weather station.

Q. IS IT APPROPRIATE TO USE THE MINNEAPOLIS-ST. PAUL WEATHER STATION TO REPRESENT XCEL ENERGY'S MINNESOTA SERVICE TERRITORY?

A. Yes, it is. The majority of Xcel Energy's Minnesota electric customers (80 percent) reside within the Minneapolis-St. Paul metropolitan area. The majority of the remaining 20 percent reside less than 100 miles from Minneapolis-St. Paul.

[9] Docket Nos. E002/GR-92-1185, G002/GR-97-1606, G002/GR-04-1511, E002/GR-05-1428, G002/GR-06-1429, E002/GR-08-1065, G002/GR-09-1153, E002/GR-10-971, E002/GR-12-961, E002/GR-13-868, and E002/GR-15-826.

The coefficients for the HDD and THI variables that were included in each class's model were determined based on the historical relationship between sales throughout Xcel Energy's Minnesota service territory and Minneapolis-St. Paul weather. Therefore, the coefficients accurately reflect the distribution of customers geographically within the Minnesota service territory. Since this geographic distribution is not expected to change during the 2022-2026 period, it is appropriate to use this historical relationship and Minneapolis-St. Paul weather.

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

A. Yes. The HDD and THI were weighted by the number of times a particular day was included in a particular billing month. These weighted HDD and THI were divided by the total billing-cycle days to arrive at average daily HDD and THI for a billing month.

Q. HOW DOES THE WEATHER NORMALIZATION METHODOLOGY USED IN THIS CASE COMPARE WITH THE METHODOLOGY USED IN DOCKET NO. E002/GR-15-826?

A. The methodology we are using for this case is the same as the final methodology used in the previously litigated 2016 MYRP case. The weather response coefficients and normal weather values have been updated based on more current actual sales, customer counts, and weather, but no other changes have been made.

D. 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 2003 through May 2021 was obtained and used. This period provides a common start date for all regression models of sales, which addressed an issue raised by the Department in previous discussions. The starting period in the Company's 2016 electric rate case was 1998. The Company has moved to a 2003 starting period because this eliminates needing to provide explanation and use of explanatory binary variables for the reclassification of sales that occurred in 2001, while still providing a sufficient number of data points to provide reliable statistical estimates.

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 BETWEEN CSS AND CRS DATA?

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 into a consistent customer count method under CRS. While there were pre-2005 customer count differences under the NCE and NSP systems prior to 2005, these customer count definitional differences did not impact the amount of total sales billed to customers. Exhibit___(JMG-1), Schedule 11, provides a detailed comparison of the 2005 definitional changes.

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, in order to maintain the January 2003 to May 2021 sample time period and account for the definitional changes, a step-change binary variable was incorporated in the Residential customer regression models. The binary variable equaled "1" in months prior to the billing system conversion in February 2005, and "0" for all months after

the conversion. The use of the binary variable in the regression models provided a better statistical fit to the historical data.

D. Data Sources

Q. WHAT IS THE SOURCE OF WEATHER DATA?

A. As I explained previously, weather data was obtained from NOAA's Minneapolis-St. Paul weather station. The Company uses both HDD and THI in the forecasting process. Eight temperature readings per day were obtained, and the average daily temperature was determined by averaging the eight temperature readings. HDD 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 HDD were calculated for that day. If the average daily temperature was greater than 65 degrees Fahrenheit, then that day recorded zero HDD. Normal daily HDD were calculated by averaging 20 years of daily HDD using data from 2001 to 2020.

Average actual dew point temperature based on the eight readings of dew point temperature was also calculated for each day. The Company calculates THI were calculated for each day using the formula:

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

THI degree days are calculated by subtracting the base of 65°F from each day's average THI (not less than zero).

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

A. Historical and forecasted economic and demographic variables for Minnesota, the Minneapolis-St. Paul metropolitan area, and the U.S. were obtained from IHS Markit. These variables include population, households, total employment, real personal income per capita, and the Minnesota Industrial Production Index, 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 IHS Markit at the time of modeling.

Q. WHY DID YOU CHOOSE TO USE IHS MARKIT'S DATA RATHER THAN PUBLIC SOURCES?

A. We prefer to use IHS Markit over public sources, because IHS Markit provides forecasts of various economic and demographic indicators, while the publicly-available information is available only on a historical basis. The Company is not purchasing historical data from IHS Markit, but rather, is paying for IHS Markit's forecasting service. Obtaining this information from a third-party vendor also mitigates any potential appearance of bias that might exist if the Company developed its own economic and demographic forecasts.

Q. WHAT STEPS HAS THE COMPANY TAKEN TO VALIDATE IHS MARKIT'S DATA?

A. As part of the information provided to the Department 30 days prior to filing this general rate case, we included documentation about how the historical and forecasted economic and demographic variables or indicators for each variable are calculated and derived. In addition, we identified the original source of the data, and provided a comparison of the historical data provided by IHS Markit

to the original source data where the data was available via the internet. In instances where there were variances between the original source data and the data provided by IHS Markit, we worked with IHS Markit to obtain satisfactory explanations for the variances.

Q. WERE ANY ADJUSTMENTS MADE TO HISTORICAL SALES?

A. Yes. The Company has removed sales to two large customers from the historical data series. As I previously discussed, these two large customers closed during 2012 and 2013, resulting in a substantial loss of load in the Large Commercial and Industrial sector. By removing these large customers' sales from the historical data series, we no longer have the large decreases in sales occurring at the time the customer closed its business. Therefore, we are able to continue to use the regression methodology, which allows for the identification of historical relationships and the projection of those relationships into the future.

In addition, historical sales were adjusted to remove the impact of actual DSM achievements and DG solar. We collected monthly historical data on actual DSM achievements and DG solar by class and added these amounts to historical actual monthly sales to derive sales excluding the impact of DSM achievements and DG solar. This restated time series was used as the input data to the regression modeling process described above, and a forecast of sales excluding any DSM or DG solar impacts was developed. We then reduced the forecast of sales excluding DSM and DG solar by the amount of future DSM related to both historical achievements with continuing impacts and planned future new programs and future DG solar amounts.

Q. WHY DID YOU REMOVE THE IMPACT OF ACTUAL DSM AND DG SOLAR ACHIEVEMENTS FROM HISTORICAL SALES?

A. There are several approaches in the electric utility industry for accounting for DSM and DG solar impacts in a sales forecast. One methodology is to develop the forecast based on actual sales and then adjust the forecast for incremental DSM and DG solar impacts, *i.e.,* impacts greater than the amount embedded in the historical sales. Another approach is to add back historical achievements before developing the regression model. As I briefly discussed in Section V of my testimony, the model results are then adjusted by the expected amount of continuing historical DSM and DG solar impacts and future DSM and DG solar impacts.

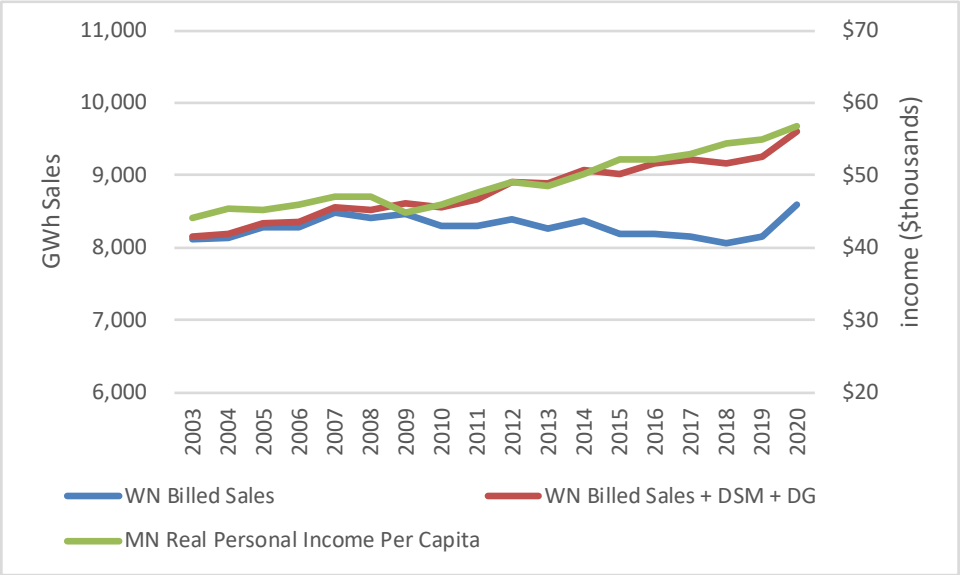
The Company uses this "add-back" method, because we have a long history of DSM achievements and DG solar, which, when accumulated over time, have changed the rate of electric sales growth. This has resulted in a disconnect between historical sales growth and growth in the underlying economic indicators. Figure 8 below graphically demonstrates this by showing historical annual billed sales for the Residential without Space Heat class and Minnesota real personal income per capita. As seen in Figure 8, real personal income per capita has increased throughout the 2003 to 2020 time period, with decreases seen in only a few years, followed by continued increases. Sales, however, peaked in 2007 and generally decreased before increasing in 2020 due to the COVID-19 pandemic. This disconnect between sales and the economic indicator, i.e., decreasing sales and increasing economic values, leads to challenges in creating theoretically reasonable regression models.

This disconnect can be resolved, however, by adjusting the historical sales to remove the source of the declining sales. This is demonstrated in Figure 8 below, where historical DSM achievements and DG solar have been added back to historical sales. After adding back the DSM and DG solar, the adjusted sales increase over time, which is positively correlated with the economic indicator and results in a theoretically reasonable regression model.

Figure 8

Residential Without Space Heat Sales

Vs. MN Real Personal Income Per Capita



Q. PLEASE SUMMARIZE THE ADJUSTMENTS MADE TO HISTORICAL SALES BEFORE CONDUCTING THE REGRESSION MODELING.

A. The Large Commercial and Industrial sales were adjusted by subtracting historical sales for two large customers that have been closed down and by adding back the impacts of historical DSM savings and DG solar. In addition, the Residential without Space Heating, Residential with Space Heating, and

Small Commercial and Industrial sales were adjusted by adding back the impacts of historical DSM savings and DG solar.

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

A. Yes. Unbilled sales reflect electricity consumed in the current month that is not billed to the customer until the succeeding month. 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.

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

A. The purpose is to align the projected revenues with the relevant projected 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 and it has been accepted by the Commission in all of the Company's past rate cases.

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

A. Xcel Energy determined its projected 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.

E. 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 forecasted calendar-month sales based on the projected billing-month sales. The forecasted 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 HDD 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 HDD (or THI) and number of customers), times billing-month normal HDD (or 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 HDD (or THI) and number of customers) and the calendar-month normal HDD (or 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 class, Xcel Energy calculated the forecasted 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 forecasted calendar-month total sales for this class were calculated only in terms of their projected billing-month sales, number of days in the billing month, and number of days in the calendar month.

The Public Authority, Public Street and Highway Lighting, and Interdepartmental classes are billed on a calendar-month basis and are assumed not to be weather sensitive. Therefore, for these classes, the calendar-month sales equal the billing-month sales.

VI. FORECAST ADJUSTMENTS

Q. WERE ANY POST-MODELING ADJUSTMENTS MADE TO THE STATISTICALLY MODELED SALES FORECAST RESULTS?

A. Yes. In addition to the derivation of calendar-month sales discussed in Section IX of my testimony, the Residential without Space Heat, Residential with Space Heat, Small Commercial and Industrial and Large Commercial and Industrial classes were adjusted to account for: 1) the expected impact from electric vehicle charging, 2) distributed behind-the-meter solar generation, 3) the impacts of Company-sponsored DSM programs, and 4) small potential impacts in 2024 through 2026 due to the implementation of IVVO. The Large Commercial and Industrial sales forecast has been adjusted for customer-specific load additions or losses. The Small Commercial and Industrial customer forecast has been adjusted to account for the loss of customers due to business closures. These adjustments are provided in Schedule 8.

Please note that, since the development of this forecast, the Company no longer plans to in service any portion of IVVO in 2023 or 2024. While this adjustment is very small (a 0.06 percent reduction of sales in 2026 with smaller impacts in 2024 and 2025), the Company will file a revised forecast in Rebuttal testimony that removes this adjustment.

Q. PLEASE EXPLAIN THE ADJUSTMENT MADE FOR ELECTRIC VEHICLE CHARGING.

A. The penetration of light-duty electric vehicles in Xcel Energy's service territory has been increasing over the past few years and is expected to continue increasing. Because the penetration of electric vehicles is expected to increase, the sales forecasts for the Residential without Space Heat and Residential with Space Heat classes have been adjusted to account for future Residential electricity usage from the home charging of electric vehicles. In addition, the Small Commercial and Industrial and Large Commercial and Industrial sales forecasts have been adjusted to account for future electricity usage from the charging of medium-duty and heavy-duty electric vehicles in Xcel Energy's service territory. The assumption about the number the electric vehicles and the expected MWh sales impact was developed by Xcel Energy's Risk Management department. By 2026, sales related to the charging of electric vehicles are expected to be 1.1 percent of total sales.

Q. PLEASE EXPLAIN THE ADJUSTMENT MADE FOR CUSTOMER-SPECIFIC LOAD ADDITIONS OR LOSSES.

A. Based on input from Xcel Energy's Key Account Managers, specific known future load additions or losses are quantified, and corresponding adjustments were made to the Large Commercial and Industrial sales forecast. These

adjustments were made because the impact of the additions or losses are not correlated with the economic indicator used in the Large Commercial and Industrial sales model, and, therefore, are not accounted for in the model output.

In addition, the forecast has been adjusted in 2023 through 2026 to account for additional losses of large customer loads as well as the addition of anticipated new loads. The adjustment for additional loss of load is made to reflect the historical trend of load losses. The assumption used is that each year the Company will lose approximately 100,000 MWh of sales due to factors such as changes in customers' operations, relocation outside of the service area, or the addition of combined heat and power operations. This reduction is in line with the declining sales trend seen in the past and is based on an analysis of our 50 largest customers.

Q. PLEASE EXPLAIN THE ADJUSTMENT MADE FOR DISTRIBUTED BEHIND-THE-METER SOLAR GENERATION.

A. The sales forecasts for the Residential without Space Heat, Residential with Space Heat, Small Commercial and Industrial and Large Commercial and Industrial classes have been adjusted to account for reductions due to customers' behind-the-meter solar generation. The adjustments are based on expected installed capacity targets (both Solar*Rewards and non-Solar*Rewards).

Q. PLEASE EXPLAIN THE ADJUSTMENT FOR FUTURE DSM IMPACTS.

A. The sales forecasts for the Residential without Space Heat, Residential with Space Heat, Small Commercial and Industrial and Large Commercial and Industrial classes have been adjusted to account for the continuing impacts of historical DSM programs and future DSM programs. The basis for the future DSM adjustment is the Minnesota Integrated Resource Plan Supplement.

VII. RATE SCHEDULE FORECAST DERIVATION

Q. IN ADDITION TO THE CUSTOMER CLASS LEVEL FORECAST YOU DESCRIBED ABOVE, DOES THE COMPANY ALSO PREPARE A FORECAST AT THE RATE SCHEDULE LEVEL OF DETAIL?

A. Yes. The rate schedule level of detail is needed to appropriately estimate revenues. For example, the Residential class of service is an aggregation of multiple rate schedules: Residential water heating service (A00), Residential overhead service (A01), Residential time of day overhead service (A02), Residential underground service (A03), Residential time of day underground service (A04), Residential energy controlled service (A05), Residential limited off peak service (A06), Residential automatic protective lighting service (A07), Residential electric vehicle service (A08), Residential electric vehicle pilot service bundled (A80), and Residential electric vehicle pilot service pre-pay option (A81). Exhibit___(JMG-1), Schedule 12 provides the 2022 through 2026 customer and sales forecast by month at the rate schedule level of detail.

Q. HOW IS THE RATE SCHEDULE LEVEL FORECAST DERIVED FROM THE CUSTOMER CLASS LEVEL FORECAST?

A. After the class level sales and customer forecasts are completed, the rate schedule level forecasts are developed. Monthly rate schedule sales and customer allocation factors are developed based on historical rate schedule level sales and customer data. The monthly rate schedule allocation factors are averaged over several years, and the average allocation factors are then applied to the class level forecasts to derive the rate schedule level forecasts.

VIII. COMPLIANCE REQUIREMENTS

Q. PLEASE DESCRIBE THE SALES FORECAST INFORMATION PROVIDED ON SEPTEMBER 24, 2021.

A. The September 24, 2021 electric sales forecast pre-filing provided the data used in the test year sales forecast. The information provided is extensive, and includes all customer count, sales, weather, economic and binary data used, as well as the following items:

1) An explanation of the source and work papers supporting the derivation or calculation of each of these data series, as well as a description and justification for each binary variable used.
2) All regression models and results, and a description of methods used and the results for the forecasts that are not based on a regression methodology.
3) A comparison and reconciliation of the input data, the variables used in the forecast models, and the test year forecast results to the data, models and forecast used in the Docket No. E002/GR-15-826 (2016 Test Year

Rate Case), Docket No. E002/AA-21-295 (2022 Annual Fuel Forecast and Monthly Fuel Cost Charges), and Docket No. E002/RP-19-368 (Resource Plan Supplement).

4) An explanation of any exogenous adjustments made to the forecast.
5) An explanation of the unbilled sales estimation process for the test year and historical time period and all data necessary to recreate the conversion, including a description of the weather response coefficients and all data necessary to recreate the coefficients, and an explanation of the calculation of calendar month weather response coefficients.
6) All data necessary to weather normalize historical calendar-month sales.
7) A reconciliation between different sources for historical billing-month sales.

We note that in Docket No. E002/GR-15-826, the Company requested that it no longer be required to provide account information for large customers. The Department supported the Company's request. Therefore, the Company did not include the large customers account information in its September 24, 2021 sales forecast information filing.

Q. PLEASE PROVIDE MORE DETAILS AROUND INFORMATION PROVIDED AS PART OF ITEM 1 ABOVE.

A. As part of item 1 above, the Company conducts an audit of the historical economic and demographic data accessed through IHS Markit databases. To conduct this audit, the Company accesses multiple publicly available U.S. government web sites, collects the source data, compares this data to the data accessed through IHS Markit's databases, and provides explanations for any

differences. The reasons for differences have been due to: 1) timing differences between when the data was accessed from IHS Markit and what is currently available on the government web sites, 2) the manner in which IHS Markit converts nominal data to deflated data, or 3) the extrapolation of 2010 Census data to more recent years at the metropolitan level.

Q. DOES THE COMPANY CONDUCT THIS AUDIT AS PART OF ITS NORMAL FORECASTING PROCESS OR FOR ANY OTHER PURPOSE?

A. No. The Company only conducts this audit when preparing the forecast prefiling information provided with a Minnesota rate case filing. The Company believes that IHS Markit, as a matter of good business, is providing its clients with current and accurate economic and demographic data. This audit of information obtained from a well-respected source is time-consuming and in previous Minnesota rate cases filings has led to the discovery of no irregularities in the historical data accessed from IHS Markit.

Q. WHAT IS YOUR RECOMMENDATION RELATED TO THIS FORECAST PREFILING INFORMATION?

A. I recommend that the Company not be required to conduct an audit of the historical economic and demographic data accessed through IHS Markit's databases. To be clear, in future rate filings, the Company will continue to provide the historical economic and demographic data accessed from IHS Markit and work papers supporting the derivation of the economic and demographic data used to develop the customer and sales forecast. The Company's request is limited to conducting an audit of the data accessed through IHS Markit's databases.

Q. HAVE YOU ADDRESSED ANY OF THE ISSUES RAISED WITH RESPECT TO THE SALES FORECAST METHODOLOGY IN DOCKET NOS. E002/GR-13-868 AND E002/GR-15-826?

A. Yes. In Docket No. E002/GR-13-868, the Department raised an issue related to the price escalator, the DSM adjustment, and weather normalization. The Company met with the Department about those methodological differences in advance of filing the 2016 Electric Rate Case (Docket No. E002/GR-15-826), and those issues were addressed in that rate case.

In the Company's Electric Rate Case MYRP (Docket No. E002/GR-15-826), the Department raised issues concerning the Large Commercial and Industrial sales input data, the use of a certain price variable, and the Company's DSM adjustments. Because a settlement agreement was approved in the 2016 MYRP, I believe those concerns were not fully resolved, and I discussed the steps the Company has taken to address them in Section V and Section VIII of my testimony. In addition, in both the 13-868 Docket and the 15-826 Docket, the Company agreed to a true-up to actuals for test year sales. We propose a similar true-up in this case, which I discuss in Section III of my testimony.

IX. CONCLUSION

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. The Company's goal is to produce an accurate sales forecast to support its rate request. The Company's forecast is based on sound methodologies and provides a reasonable estimate of 2022 through 2026 MWh sales and customer counts. Therefore, the Company's forecasts for the 2022 test year and the 2023

and 2024 plan years can be relied on for the purpose of setting rates and to serve as the baseline for the Company's true-up proposal.

I have presented the Company's forecasts of sales and customers for the January 1, 2022 to December 31, 2026 time period. I also presented details of the methods used to develop the MWh sales and customer forecast and the results.

Because sales forecasts often become highly disputed issues in rate cases, and in order to minimize controversy regarding sales forecast issues in this proceeding, I recommend that the Commission adopt a test year sales true-up. Such a mechanism was used in Docket No. E002/GR-13-868 and our 2016 MYRP, and using a similar approach in this case can minimize controversy in this proceeding and ensure that test year rates are just and reasonable.

Finally, I have described the steps the Company has taken to comply with all requirements resulting from the previous rate case, as well as agreements the Company has made in the past to provide particular forecasting data. I also have provided an update regarding the forecasting issues identified by the Department in the Company's rate cases in Docket Nos. E002/GR-13-868 and E002/GR-15-826.

Q. IN YOUR OPINION, DOES THE COMPANY'S SALES AND CUSTOMER FORECAST PROVIDE A REASONABLE BASIS FOR ESTABLISHING RATES IN THE CASE?

A. Yes. The forecast data is a reasonable estimate of 2022 through 2026 sales and customer counts and supports the Company's revenue projections. I recommend the Commission adopt my forecasts of sales and customers, as reflected in Schedule 6, for the purpose of determining the revenue requirement and final rates in this proceeding.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

JOHN GOODENOUGH, PHD

EDUCATION

PhD in Economics, University of Delaware **2012**
Dissertation: *Economic Welfare Impacts of Real-Time Pricing and CO2 Emissions Trading: Simulation Results at the Customer Class Level for an Investor-Owned Utility*

MA in Economics, University of Delaware **2006**

BA in Economics, University of Maryland **2002**

PROFESSIONAL EXPERIENCE

XCEL ENERGY **Denver, CO**
Manager, Energy Forecasting **10/2019-Present**

Management and Leadership:
- Manage the work and development of six employees
- Serve as company witness for sales forecasting and weather normalization in rate cases and resource plans
- Provide regulatory support for routine filings, Integrated Resource Plans, and rate cases
- Provide analytical and statistical analysis for special projects

Load Forecasting:
- Develop monthly short and long-term forecasts of electric customers, sales, and peak demand using time-series analysis and end-use modeling for four OpCos operating in eight states
- Sponsor projects to improve forecast accuracy and develop new forecasting tools
- Track regional economic indicators in support of forecasting models

ARIZONA PUBLIC SERVICE (APS) **Phoenix, AZ**
Manager, Energy and Revenue Analysis and Forecasting **11/2016-10/2019**

Management and Leadership:
- Manage the work and development of six employees
- Serve as expert on matters related to load forecasting and act as liaison to external stakeholders
- Provide regulatory support for monthly fuel cost filings, annual transmission filings, bi-annual Integrated Resource Plans, and rate cases
- Provide economic commentary for quarterly earnings release
- Provide analytical and statistical analysis for special projects

Load Forecasting:
- Develop monthly short and long-term forecasts of electric customers, sales, prices, and revenue using time-series analysis and end-use modeling
- Provide hourly system demand forecasts for use in medium and long-term dispatch modeling
- Develop company forecasts of customer adoption of electric vehicles and distributed generation
- Develop price elasticity models to assess customer response to changing rate design

- Track and forecast regional economic indicators in support of forecasting models

Financial Analysis:

- Analyze monthly financial impacts of fuel prices, plant dispatch, and plant outages
- Conduct monthly variance analysis and financial reporting
- Evaluate billing determinants and rate design impacts on company revenue

SOUTHERN CALIFORNIA EDISON (SCE) **Rosemead, CA**
Senior Energy Market Specialist, Short-Term Demand Forecasting **07/2014-10/2016**

Load Forecasting:

- Developed hourly short-term load forecasts using time-series analysis
- Created hourly prompt month load forecasts for the territory and the ISO
- Monitored short-term load forecasting errors and analyzed the impacts on procurement costs
- Developed semi-parametric econometric model for forecasting bundled load
- Created daily market bids for integrated demand response resources

EXELON CORPORATION, BALTIMORE GAS AND ELECTRIC (BGE) **Baltimore, MD**
Principal Analyst, Load Analysis and Settlements **06/2010-06/2014**

Management and Leadership:

- Supervised the work of employees in the forecasting unit
- Participated in quarterly calls with senior management explaining regional trends in energy usage and economics
- Represented BGE Load Forecasting in the PJM Load Forecasting Group
- Supported conservation and electric supply groups in policy development and goal setting
- Conducted ad-hoc analysis for senior management

Load Forecasting and Financial Analysis:

- Provided monthly short and long-term forecasts of gas and electric sales, customers, prices, and revenue using time-series analysis
- Developed annual gas design-day forecast
- Conducted monthly variance analyses and financial reporting

PEPCO HOLDINGS, INC. **Washington, DC**
Regulatory Affairs Analyst **12/2007-06/2010**

DEPARTMENT OF ENERGY, ENERGY INFORMATION ADMINISTRATION
Program Assistant **Washington, D.C.**
Summer, 2007

DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS
Economist **Washington, D.C.**
02/2003-08/2004

DEPARTMENT OF COMMERCE, BUREAU OF THE CENSUS
Survey Statistician **Suitland, MD**
06/2002-01/2003

Five-Year Forecast Accuracy

Forecast Variance	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
March 2008 Forecast	-6.2%	-6.4%	-7.3%	-9.4%	**-11.5%**							
October 2008 Forecast	-4.1%	-4.1%	-4.7%	-6.5%	**-8.5%**							
March 2009 Forecast	-2.2%	-2.3%	-2.8%	-4.7%	-6.8%	**-7.0%**						
October 2009 Forecast		0.1%	-1.5%	-4.1%	-6.4%	**-6.7%**						
March 2010 Forecast		0.4%	-1.0%	-3.5%	-5.5%	-6.0%	**-7.0%**					
July 2010 Forecast			-1.0%	-3.3%	-5.3%	-5.9%	**-7.0%**					
March 2011 Forecast			-0.9%	-3.2%	-5.2%	-5.6%	-6.7%	**-8.1%**				
September 2011 Forecast				-1.6%	-3.4%	-3.5%	-4.4%	**-5.6%**				
March 2012 Forecast				0.0%	-1.0%	-0.5%	-1.2%	-2.5%	**-4.0%**			
July 2012 Forecast					0.2%	0.8%	0.2%	-1.0%	**-2.3%**			
March 2013 Forecast					0.3%	1.1%	0.7%	-0.4%	-1.6%	**-2.4%**		
July 2013 Forecast						1.3%	1.3%	0.8%	0.4%	**-0.1%**		
March 2014 Forecast						1.0%	0.9%	0.2%	-1.0%	-1.8%	**-4.4%**	
August 2014 Forecast							-0.4%	-1.5%	-2.7%	-3.5%	**-5.8%**	
March 2015 Forecast							-0.8%	-2.0%	-3.0%	-3.6%	-5.9%	**-9.8%**
July 2015 Forecast								-1.2%	-2.4%	-3.1%	-5.6%	**-9.7%**
March 2016 Forecast								-1.2%	-2.3%	-2.4%	-5.0%	-9.2%
July 2016 Forecast									-0.8%	-0.9%	-3.5%	-7.5%
March 2017 Forecast									-0.7%	-0.8%	-3.5%	-7.4%
July 2017 Forecast										-0.4%	-2.6%	-7.1%
March 2018 Forecast										1.1%	-0.1%	-4.2%
July 2018 Forecast											-0.7%	-4.8%
March 2019 Forecast											-0.4%	-3.9%
July 2019 Forecast												-3.0%

5-Year Range: -11.5% to -0.1% Average: -5.7%

Three-Year Forecast Accuracy

Forecast Variance	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
March 2008 Forecast	-6.2%	-6.4%	**-7.3%**	-9.4%	-11.5%							
October 2008 Forecast	-4.1%	-4.1%	**-4.7%**	-6.5%	-8.5%							
March 2009 Forecast	-2.2%	-2.3%	-2.8%	**-4.7%**	-6.8%	-7.0%						
October 2009 Forecast		0.1%	-1.5%	**-4.1%**	-6.4%	-6.7%						
March 2010 Forecast		0.4%	-1.0%	-3.5%	**-5.5%**	-6.0%	-7.0%					
July 2010 Forecast			-1.0%	-3.3%	**-5.3%**	-5.9%	-7.0%					
March 2011 Forecast			-0.9%	-3.2%	-5.2%	**-5.6%**	-6.7%	-8.1%				
September 2011 Forecast				-1.6%	-3.4%	**-3.5%**	-4.4%	-5.6%				
March 2012 Forecast				0.0%	-1.0%	-0.5%	**-1.2%**	-2.5%	-4.0%			
July 2012 Forecast					0.2%	0.8%	**0.2%**	-1.0%	-2.3%			
March 2013 Forecast					0.3%	1.1%	0.7%	**-0.4%**	-1.6%	-2.4%		
July 2013 Forecast						1.3%	1.3%	**0.8%**	0.4%	-0.1%		
March 2014 Forecast						1.0%	0.9%	0.2%	**-1.0%**	-1.8%	-4.4%	
August 2014 Forecast							-0.4%	-1.5%	**-2.7%**	-3.5%	-5.8%	
March 2015 Forecast							-0.8%	-2.0%	-3.0%	**-3.6%**	-5.9%	-9.8%
July 2015 Forecast								-1.2%	-2.4%	**-3.1%**	-5.6%	-9.7%
March 2016 Forecast								-1.2%	-2.3%	-2.4%	**-5.0%**	-9.2%
July 2016 Forecast									-0.8%	-0.9%	**-3.5%**	-7.5%
March 2017 Forecast									-0.7%	-0.8%	-3.5%	**-7.4%**
July 2017 Forecast										-0.4%	-2.6%	**-7.1%**
March 2018 Forecast										1.1%	-0.1%	-4.2%
July 2018 Forecast											-0.7%	-4.8%
March 2019 Forecast											-0.4%	-3.9%
July 2019 Forecast												-3.0%

3-Year Range: -7.4% to +0.8% Average: -3.3%

One-Year Forecast Accuracy

Forecast Variance	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
March 2008 Forecast	**-6.2%**	-6.4%	-7.3%	-9.4%	-11.5%							
October 2008 Forecast	**-4.1%**	-4.1%	-4.7%	-6.5%	-8.5%							
March 2009 Forecast	-2.2%	**-2.3%**	-2.8%	-4.7%	-6.8%	-7.0%						
October 2009 Forecast		**0.1%**	-1.5%	-4.1%	-6.4%	-6.7%						
March 2010 Forecast		0.4%	**-1.0%**	-3.5%	-5.5%	-6.0%	-7.0%					
July 2010 Forecast			**-1.0%**	-3.3%	-5.3%	-5.9%	-7.0%					
March 2011 Forecast			-0.9%	**-3.2%**	-5.2%	-5.6%	-6.7%	-8.1%				
September 2011 Forecast				**-1.6%**	-3.4%	-3.5%	-4.4%	-5.6%				
March 2012 Forecast				0.0%	**-1.0%**	-0.5%	-1.2%	-2.5%	-4.0%			
July 2012 Forecast					**0.2%**	0.8%	0.2%	-1.0%	-2.3%			
March 2013 Forecast					0.3%	**1.1%**	0.7%	-0.4%	-1.6%	-2.4%		
July 2013 Forecast						**1.3%**	1.3%	0.8%	0.4%	-0.1%		
March 2014 Forecast						1.0%	**0.9%**	0.2%	-1.0%	-1.8%	-4.4%	
August 2014 Forecast							**-0.4%**	-1.5%	-2.7%	-3.5%	-5.8%	
March 2015 Forecast							-0.8%	**-2.0%**	-3.0%	-3.6%	-5.9%	-9.8%
July 2015 Forecast								**-1.2%**	-2.4%	-3.1%	-5.6%	-9.7%
March 2016 Forecast								-1.2%	**-2.3%**	-2.4%	-5.0%	-9.2%
July 2016 Forecast									**-0.8%**	-0.9%	-3.5%	-7.5%
March 2017 Forecast									-0.7%	**-0.8%**	-3.5%	-7.4%
July 2017 Forecast										**-0.4%**	-2.6%	-7.1%
March 2018 Forecast										1.1%	**-0.1%**	-4.2%
July 2018 Forecast											**-0.7%**	-4.8%
March 2019 Forecast											-0.4%	**-3.0%**
July 2019 Forecast												**-3.9%**

1-Year Range: -6.2% to +1.3% Average: -1.0%

Definitions of Terms

12-961 Order – Commission's September 3, 2013 Order issued in the Company's electric rate case in Docket No. E002/GR-12-961.

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.

CBO – Congress of the United States Congressional Budget Office.

CHP – Combined Heat and Power.

Commission – Minnesota Public Utilities Commission.

Company – Northern States Power Company, doing business as Xcel Energy.

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

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

Department – Minnesota Department of Commerce, Division of Energy Resources.

DG – Distributed Generation.

DSM – Demand Side Management.

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

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

Definitions of Terms (continued)

GDP – Real Gross Domestic Product.

GSP – Real Gross State Product.

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

IVVO – Integrated Volt-Var Optimization.

kW – Kilowatt; measure of electricity demand.

kWh – Kilowatt-hour; measure of electricity sales.

MWh – Megawatt-hour; measure of electricity sales; one MWh = 1,000 KWh.

NCE – New Centuries Energy Inc.

NGEA – Next Generation Energy Act.

NOAA – National Oceanic and Atmospheric Administration.

NSP – Northern States Power Company.

Regression – 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.

THI – Temperature-humidity index.

Definitions of Terms (continued)

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.

XEI – Xcel Energy Inc.

XES – Xcel Energy Services Inc.

Northern States Power Company

2020 Forecasting Benchmark Survey

Itron, Inc.
12348 High Bluff Drive, Suite 210
San Diego, CA 92130-2650
858-724-2620

September 22, 2020

2020 Forecasting Benchmark Survey

Since 2012, Itron's annual benchmarking survey has reported a broad picture of the electric and gas industry forecasting practices. Like prior years, the 2020 survey examines utility forecast accuracy, growth projections and forecast characteristics.

Annually, the survey collects data from February through June culminating with this report in the fall. In March 2020, the COVID-19 pandemic disrupted normal business practices and utility operations resulting in fewer survey responses than normal. Despite this disruption, the survey still includes 48 electric companies and 11 natural gas companies representing approximately 1.74 billion kWh of electricity and 1.4 BCF of natural gas. Figure 1 shows the number of survey responses for 2020 and the prior years.

Figure 1: Survey Respondents

Year	Electric	Natural Gas	Total
2012	77	NA	77
2013	74	NA	74
2014	71	10	81
2015	75	9	84
2016	64	8	72
2017	73	13	86
2018	78	16	94
2019	61	12	73
2020	48	11	59

With the COVID-19 pandemic impacting electric consumption, companies were updating their forecasts in the first half of 2020 to revise business plans. As a result, the forecasts generated at the end of 2019 for the 2020 budget year were discarded in favor of an updated forecast. To remove any potential confusion in the survey responses, all respondents were asked to report pre-pandemic forecasts for 2020 and beyond. As a result, the forecast values in this report show a "business as usual" case excluding the reduction of sales or revisions caused by COVID-19.

Additionally, the low number of survey responses substantially increases the margin of error in regional reporting. As a result, this year's results are only reported at the total level.

This report includes the following sections.

- Forecast Accuracy Overview
- Electric Forecast Growth Overview
- Natural Gas Forecast Growth Overviews
- Customer Growth
- Residential Sales Growth
- Commercial Sales Growth
- Industrial Sales Growth
- System Sales Growth
- Electric Forecast Accuracy
- Natural Gas Forecast Accuracy
- Key Forecast Characteristics

Forecast Accuracy Overview

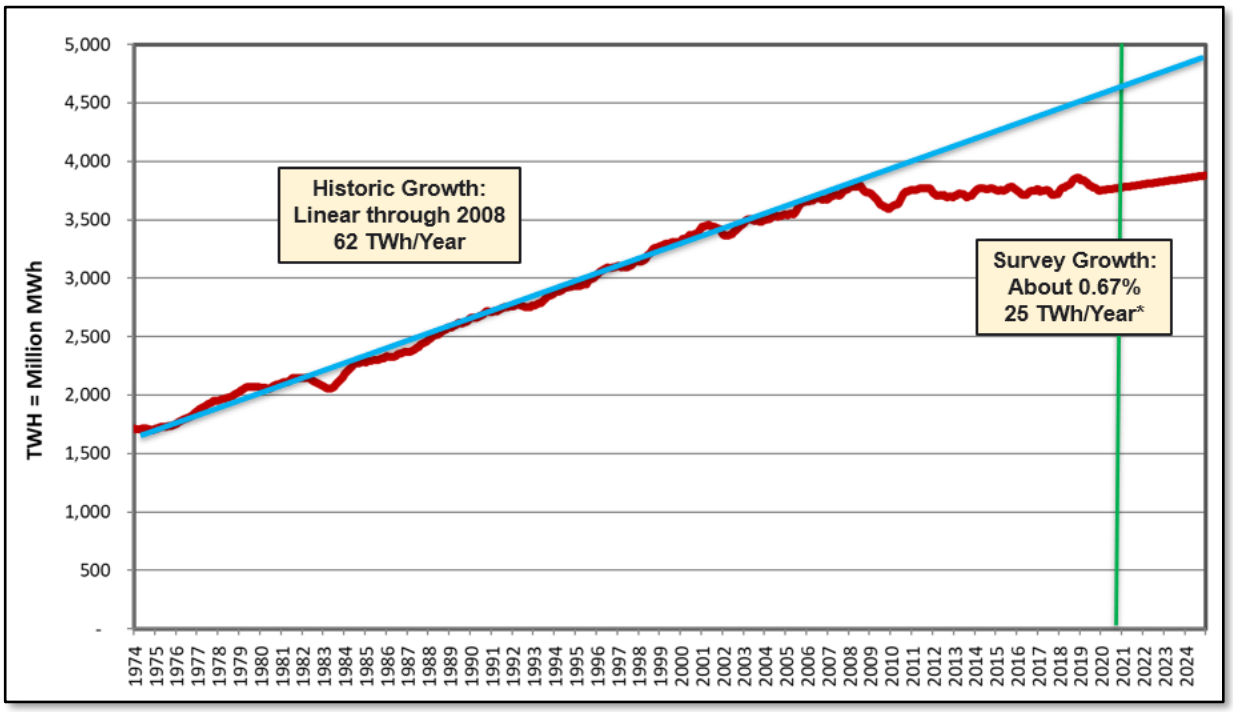
The 2020 survey asks companies about their 2019 forecast accuracy by comparing their 2019 forecast (generated in 2018) with their 2019 weather normalized sales. Except for the electric industrial class, the average electric forecast sales accuracy is consistent with prior years and ranges between 1.1% and 2.4%. The 2019 electric industrial class sales accuracy is slightly over 4% and significantly higher than prior survey results. The 2019 natural gas sales accuracy for the residential, commercial and system is consistent with prior years and ranges between 3.0% and 5.0%. Like prior years, the natural gas industrial class sales error is large, but consistent with prior surveys. Detailed results are further discussed in this report with the accuracy values shown in Figure 12 and Figure 24.

Electric Forecast Growth Overview

When averaged across electric company responses, the system sales are forecasted to grow 0.59% per year over the next ten years. The ten-year forecasted annual growth rate for retail sales (i.e., residential, commercial and industrial classes) is slightly higher at 0.67%. The difference between systems sales and retail sales is that system sales include additional classes such as wholesale and street lighting. The long-term sales growth outlook is consistent with the prior year survey results and continues to show a sharp contrast to historic growth in the United States from 1974 through 2008.

Figure 2 shows historical sales from 1974 through 2019 as 12-month rolling sums. The red line shows historic sales through 2019 with forecast sales based on the survey's retail projections through 2025. The blue lines show the long-term growth trend through 2008 and extrapolated from 2009 through the forecast period.

Figure 2: Survey Electric Sales Growth



Beginning with the "Great Recession" in 2008, sales deviate from the long-term trend line. Since 2008, sales are relatively flat despite the economic recovery. Accounting for the absence of growth, utilities are cautiously optimistic that sales will grow over the next decade. Figure 3 shows historic annual growth rates over various time periods from 1974 through 2019 for the major electric classes.

Figure 3: U.S. Historical Electric Sales Growth Rate (%)

Time Frame	Residential	Commercial	Industrial	Total
1974-2014	2.23%	2.77%	0.94%	1.96%
1980-1990	2.81%	3.93%	1.36%	2.56%
1990-2000	2.49%	3.23%	1.46%	2.37%
2000-2008	2.22%	2.29%	-0.27%	1.49%
2009-2019	0.36%	0.17%	-0.42%	0.08%

Since 2009, the annual growth rate for total sales has averaged close to zero (0.08%) which is consistent with the survey results.

Natural Gas Forecast Growth Overview

Natural gas companies expect sales to increase by 0.56% per year over the next ten years. The ten-year forecasted annual growth rate for retail sales (i.e., residential, commercial and industrial classes) is lower at 0.19%. Detailed growth rates are shown in Figure 11. Historically, gas sales have shown long cycles of growth and decline with smaller year-to-year fluctuations based on weather. Despite gas sales being at a 40-year high, survey respondents are forecasting modest increases in all classes.

Figure 4 shows a 12-month rolling sum of monthly retail gas sales. The forecast is based on reported forecast growth rates beginning in 2019. Figure 5 shows average annual growth rates for selected periods of time.

Figure 4: U.S. Historical Natural Gas Sales

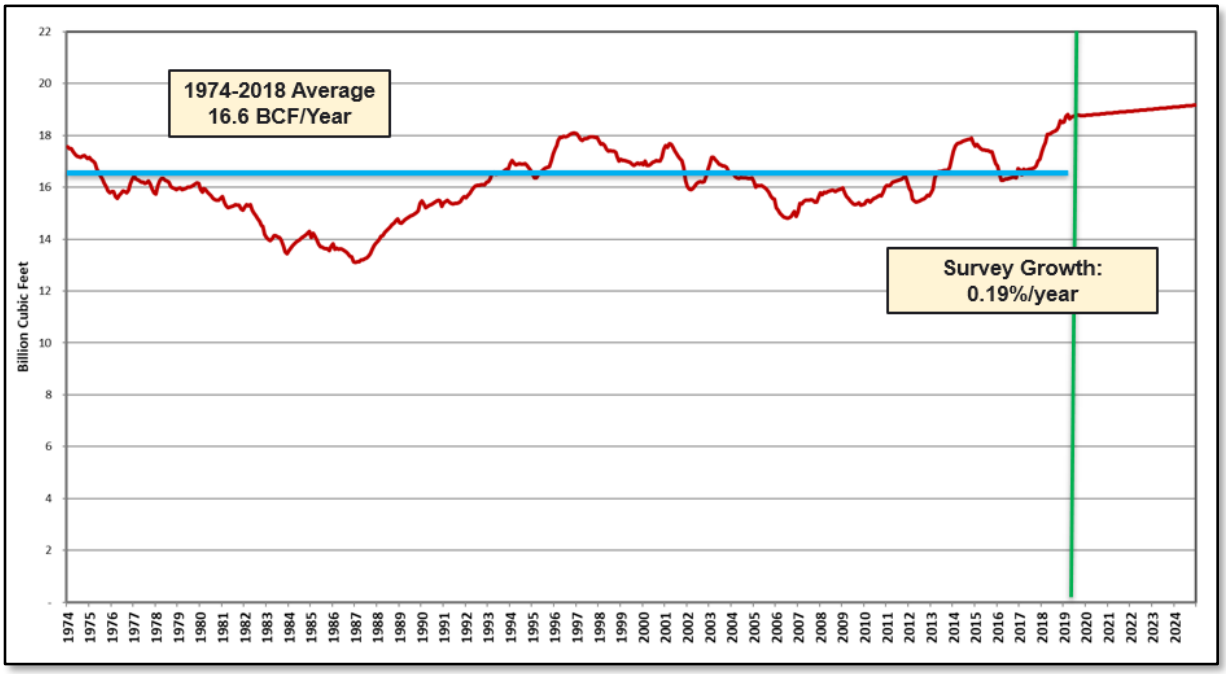


Figure 5: U.S. Historical Natural Gas Sales Growth Rate (%)

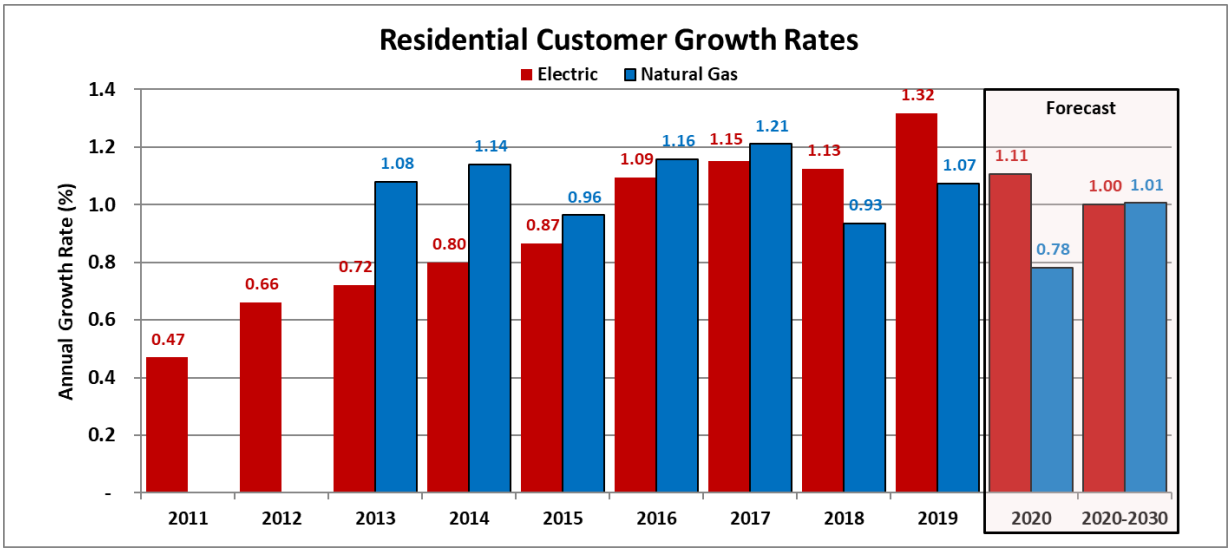
Time Frame	Residential	Commercial	Industrial	Total
1974-2014	0.30%	0.80%	-0.20%	0.09%
1980-1990	-0.50%	0.23%	-0.99%	-0.58%
1990-2000	0.29%	1.50%	1.94%	1.32%
2000-2008	0.51%	0.25%	-1.57%	-0.64%
2009-2019	0.83%	1.44%	2.27%	2.92%

Customer Growth

Historic and forecast customer growth rates for the residential and commercial classes are shown in Figure 6 and Figure 7. Forecast growth rates for 2020 and the long term (2020-2030) are highlighted and reflect pre-Covid19 forecasts. For comparative purposes, growth rates from the 2012 through 2019 surveys are displayed with the 2020 survey results.

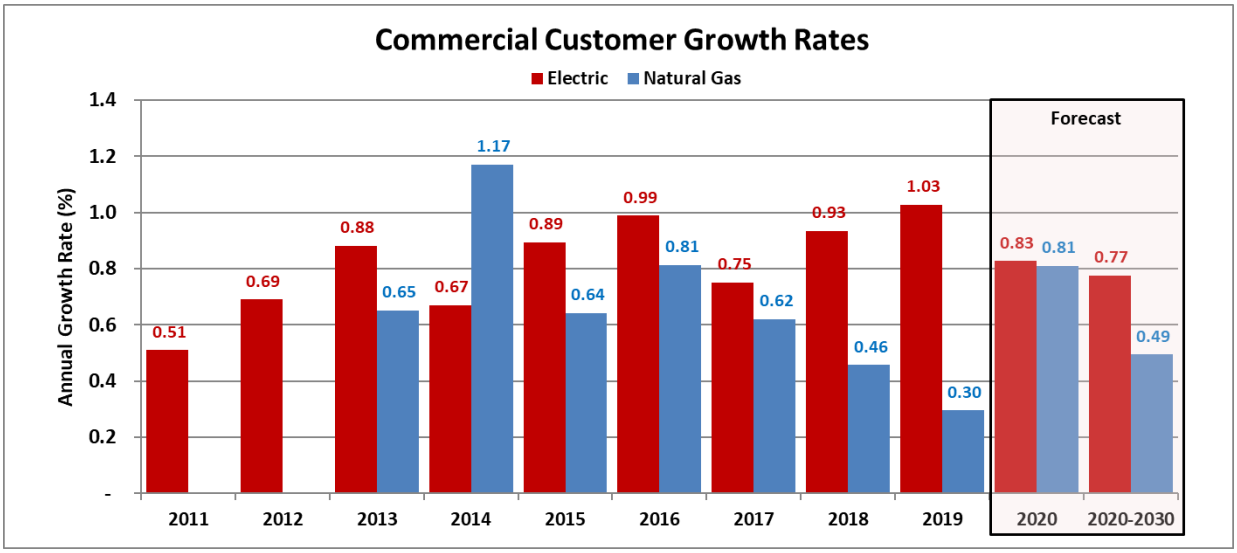
Reported 2019 electric customer growth is 1.32% for the residential class and 1.03% for the commercial class. Natural gas customer growth is 1.07% for the residential class and 0.30% for the commercial class.

Figure 6: Residential Average Customer Growth (%)



Residential electric customer growth has consistently increased from 0.47% (2011) to 1.32% (2019) exceeding the most recent the 5-year (2015-2019) average of 1.11%. Unlike the residential electric customer growth, the residential natural gas customer growth fluctuates between 0.96% and 1.16% consistent with the most recent 5-year average of 1.07%. Both electric and natural gas customer growth rate forecasts are slightly higher than the Energy Information Administration's (EIA's) 2020 Annual Energy Outlook long-term single-family household forecast growth rate of 0.7%.

Figure 7: Commercial Average Customer Growth (%)



Unlike residential electric customer growth, commercial electric customer growth fluctuates between 0.51% and 1.03% consistent with the most recent 5-year average growth of 0.92%. Commercial natural gas customer growth has been declining from 1.17% (2014) to 0.30% (2019). The current natural gas customer growth forecast is slightly below the most recent 5-year average of 0.57%. For comparative purposes, the EIA's 2020 Annual Energy Outlook long-term commercial floorspace growth rate is 1.0%.

Residential Sales Growth

Figure 8 shows past and current reported weather normalized residential sales growth rates. The figure also shows the 2020 forecast growth rate and the ten-year forecast growth rate. Both forecasts reflect pre-COVID-19 input assumptions.

Figure 8: Residential Sales Growth

Region	Actual 2011	Actual 2012	Actual 2013	Actual 2014	Actual 2015	Actual 2016	Actual 2017	Actual 2018	Actual 2019	Forecast 2020	Forecast 2020-2030
Electric Total	0.41	0.25	0.35	0.66	(0.38)	0.33	0.16	1.19	0.03	0.76	0.78
Itron WN	0.06	0.29	(0.14)	0.36	0.31	0.17	0.74	0.62	(0.80)		
Natural Gas Total			3.13	0.63	(0.72)	0.91	1.53	(1.88)	1.08	(1.05)	0.55

Electric. Electric companies report 0.03% weather normalized residential sales growth for 2019. Since 2011, electric sales growth has fluctuated between -0.38% and 0.66%, excluding the 2018 sales growth of 1.19%. Over the past 5-years (2015-2019), the annual average growth rate is 0.27%.

Each year, Itron weather normalizes United States sales based on EIA data. While Itron shows a -0.80% growth in 2019, we expect this growth rate to increase when EIA updates the data at the end of 2020. Despite the negative growth in 2019, Itron's historic 5-year average growth rate is 0.21% which is consistent with the most recent 5-year average (2015-2019) survey growth of 0.27%.

The 2019 survey sales growth (0.03%) coupled with the residential customer growth (1.32%) imply a 1.28% decrease in average use. The declining average use is slightly larger than the most recent 5-year average (2015-2019) of -0.84% and EIA's long -term residential energy intensity forecast growth rate of -0.60%.

Natural Gas. Natural gas companies saw average weather normal sales increase of 1.08% in 2019 and forecast long-term growth forecast to be 0.55% per year. The most recent 5-year annual average residential sales growth rate is 0.19%. Historic fluctuations in the residential sales growth are expected given the relatively small number of reporting natural gas companies.

Commercial Sales Growth

Figure 9 shows past and current historical weather normalized commercial sales growth rates. The figure also shows the 2020 forecast growth rate and the ten-year forecast growth rate. The forecasts reflect pre-COVID-19 input assumptions.

Figure 9: Commercial Sales Growth

Region	Actual 2011	Actual 2012	Actual 2013	Actual 2014	Actual 2015	Actual 2016	Actual 2017	Actual 2018	Actual 2019	Forecast 2020	Forecast 2020-2030
Electric Total	0.15	0.24	0.51	0.80	0.28	0.32	0.32	1.25	(0.42)	0.70	0.40
Itron WN	(0.08)	0.23	1.51	0.88	0.04	(0.07)	(0.01)	1.34	(1.44)		
Natural Gas Total			4.38	2.25	(0.58)	0.69	3.99	(1.04)	2.13	(1.89)	0.39

Electric. Companies reported a weather normalized sales decline of 0.42% in 2019 and project a 0.70% growth rate in 2020. The ten-year average forecast growth rate is 0.40%. The commercial sales decline is the first reported decline since Itron began surveying utilities in 2011. Despite the 2019 decline, the long-term forecast (2019-2029) growth of 0.40% is consistent with the most recent 5-year average growth rate of 0.35%.

Consistent with the survey's reported 2019 sales decline, Itron's estimate of weather normalized commercial sales shows a decline of 1.44%. Like the residential data, Itron's weather normalized sales are preliminary since the EIA updates its data at the end of the year. Despite the expected update, Itron expects the weather 2019 normalizes sales to remain negative due to its current size.

Like the residential class, commercial average use per customer is also declining. In 2019, the survey average use declines 1.45% which is a stronger then the most recent 5-year average decline of 0.57%. For comparison, the EIA's 2020 AEO forecast shows a long-term commercial intensity decline of 0.7% per year.

Natural Gas. Companies report 2.13% increase in 2019 weather-normal gas sales. The short and long-term forecasts of commercial sales show mixed results with the 2020 forecast decreasing 1.89% and the long-term forecast (2020-2030) increasing 0.39%.

Industrial Sales Growth

Responses to historic and forecast industrial growth are shown in Figure 10. This figure combines reported growth rates from the prior surveys with reported and forecasted growth rates from the 2019 Survey. The forecasts reflect pre-COVID-19 forecasts.

Figure 10: Industrial Sales Growth

Region	Actual 2011	Actual 2012	Actual 2013	Actual 2014	Actual 2015	Actual 2016	Actual 2017	Actual 2018	Actual 2019	Forecast 2020	Forecast 2020-2030
Electric Total	1.78	0.73	0.32	1.30	(0.33)	(0.23)	0.33	0.76	0.21	2.39	0.83
Natural Gas Total			4.47	(0.43)	(0.13)	4.61	2.33	(0.33)	3.23	(1.64)	0.37

Electric Growth. The 2019 sales growth of 0.21% is consistent with the most recent 5-year average (2015-2019) of 0.15%. The pre-Covid industrial forecasts show some optimism, with a 2020 forecast of more than 2% growth and 10-year forecast close to 1% growth.

Natural Gas. The 2019 sales growth is 3.23%. This strong growth is driven by a few companies with new large industrial projects.

System Sales Growth

Total system (electric and natural gas) growth and electric system peak demand growth are shown in Figure 11. Total system growth includes all utility classes and may include wholesale, resale, and agricultural classes. Electric peaks are aggregated for all companies. Beginning in 2018, peak growth is divided between summer and winter peak companies. In 2019, approximately 84% of companies are summer peaking.

Figure 11: System Energy and Peak Growth

Region	Actual 2012	Actual 2013	Actual 2014	Actual 2015	Actual 2016	Actual 2017	Actual 2018	Actual 2019	Forecast 2020	Forecast 2020-2030
Electric Energy	0.22	0.33	0.87	(0.12)	0.21	0.26	1.24	(0.25)	1.38	0.59
Electric Peak	(0.35)	(0.45)	0.18	0.70	0.65	(0.28)	1.71	0.26	0.92	0.62
Summer Peak	-	-	-	-	-	-	1.93	0.25	1.05	0.64
Winter Peak	-	-	-	-	-	-	1.12	0.32	0.45	0.58
Natural Gas	-	2.97	1.13	1.50	1.48	1.54	(0.56)	2.82	(3.18)	0.56

Electric Growth. 2019 weather normalized system energy requirement declines 0.25% driven by the declines in the commercial class. The decline reverses the growth trend from 2016 and is opposite to the most recent 5-year average (2015-2019) growth of 0.27%. System peak demand growth increases 0.26% with similar growth rates for both summer (0.25%) and winter (0.32%) peaking companies. The increasing peak demand with decreasing system energy suggests declining system load factors.

Natural Gas. 2019 natural gas system normalized energy shows an increase of 2.82%, which is consistent with the reported growth in the residential, commercial, and industrial sectors. While the near-term forecast projects a decline in 2020, the long-term forecast shows modest growth of 0.56%.

Electric Forecast Accuracy

The survey asks companies about their 2019 forecast accuracy. Companies are asked for three error calculations. First, companies are asked to compare their 2019 forecast (generated in 2018) against weather normalized 2019 sales. Second, companies are asked to compare the same forecast against actual 2019 sales. These calculations report errors on an annual basis. For the third calculation, companies are asked to compare the same forecast and report the errors on a monthly average basis.

Annual Forecast Accuracy. The average forecast errors calculated as the Mean Absolute Percent Error (MAPE) are shown in Figure 12 and Figure 13. The figures show the 2020 MAPE, the average annual MAPEs from the 2015 through 2019 surveys, and the variance associated with the annual average MAPEs from 2015 through 2019. Figure 12 shows the annual forecast errors measured against weather normalized values. Figure 13 shows the annual forecast error measured against actual sales values. All MAPE values are unweighted.

Figure 12: Annual Electric MAPE - Forecast vs. Weather Normal Actuals

Class	2020 Survey	2015-2020 Mean	2015-2020 Variance
Residential	1.17	1.57	0.08
Commerical	1.65	1.60	0.08
Industrial	4.07	2.99	0.62
System	1.39	1.41	0.08
Peak	2.38	2.57	0.11

Figure 13: Annual Electric MAPE - Forecast vs. Actuals

Class	2020 Survey	2015-2020 Mean	2015-2020 Variance
Residential	1.83	2.56	0.74
Commerical	1.50	1.64	0.07
Industrial	4.02	3.06	0.60
System	1.18	1.60	0.11
Peak	2.92	2.04	0.65

The distributions of the sales forecast errors are shown in Figure 14 through Figure 17. The forecast error distributions are measured against normalized sales (left chart) and actual sales (right chart). When the error is below zero, this means that actual sales came in below the forecast value. When the forecast error is above zero, this means that the actual sales came in above the forecast value.

The figures show that the error distribution against normalized actuals are relatively balanced for the residential and industrial forecasts, but are skewed to the left for the commercial, system and peak forecast. When the errors are skewed left, this means that normalized results came in weaker than the forecast values, both of which are intended to reflect the same “normal” weather forecast.

When compared against actual values, the residential forecast shows errors skewed to the right, implying that actual sales came in above the forecast values. This is expected since 2019’s summer was warmer than normal in most regions. Unlike the residential forecasts, the commercial and system forecasts are skewed left indicating weak sales despite the presence of stronger than normal weather patterns.

Figure 14: Residential Electric Error Distributions

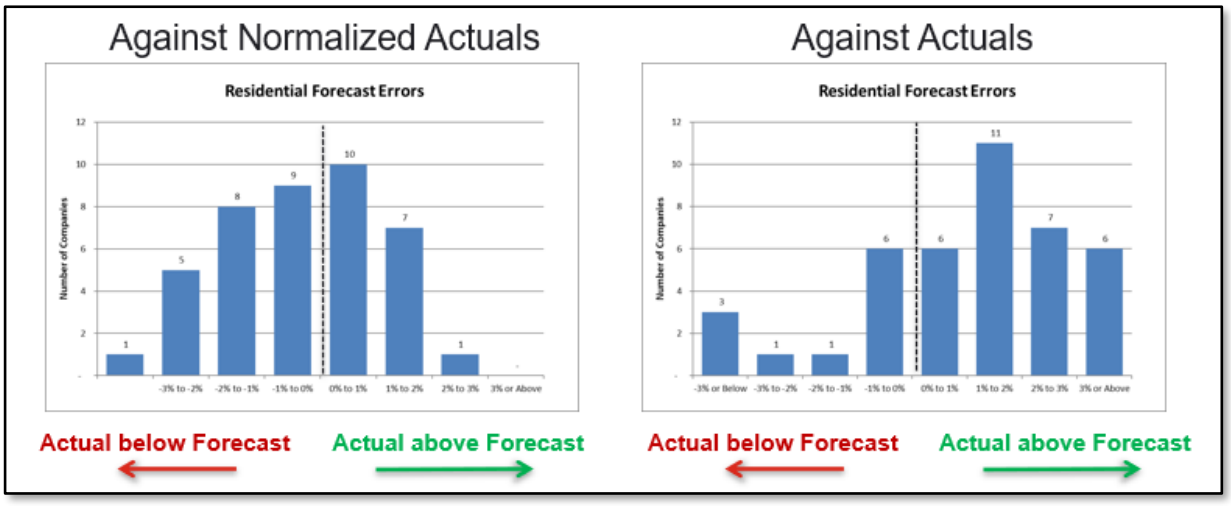


Figure 15: Commercial Electric Error Distributions

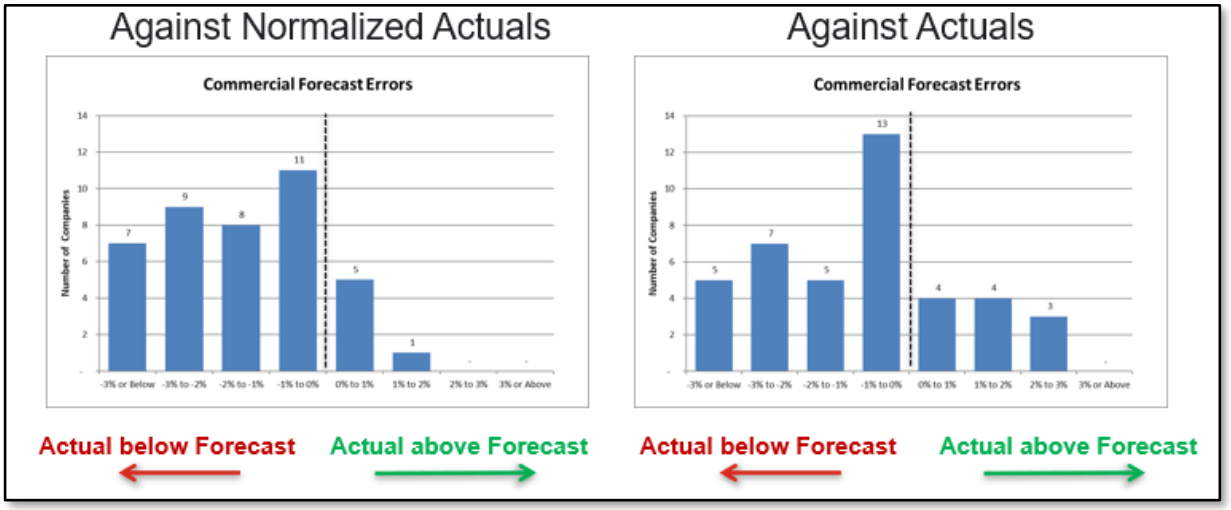


Figure 16: Industrial Electric Error Distributions

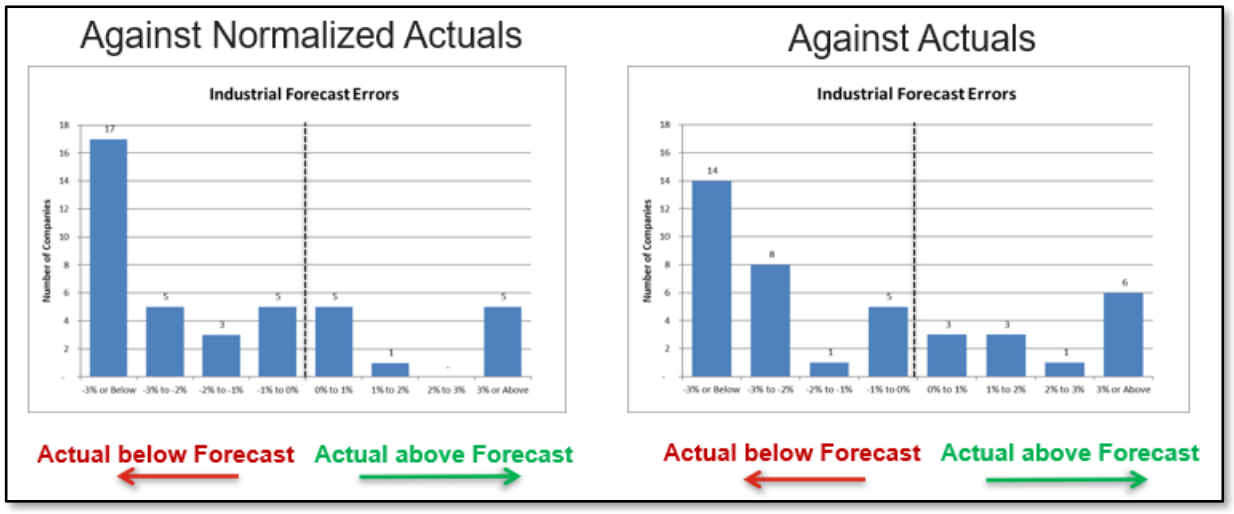
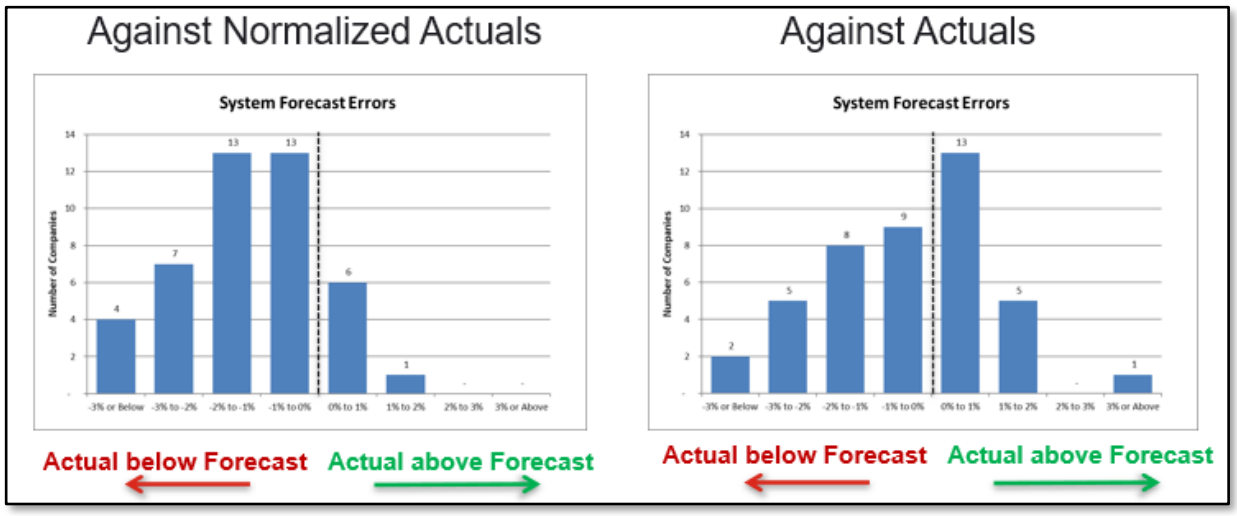


Figure 17: Electric System Error Distributions



The distribution of peak forecast errors is shown in Figure 18 and Figure 19. In these figures, the summer peak and winter peaks are separated. Like the system sales forecast distributions, both error distributions skew left indicating that peaks are weaker than expected despite a warmer than normal summer and colder than normal winter.

Figure 18: Summer Peak Error Distributions

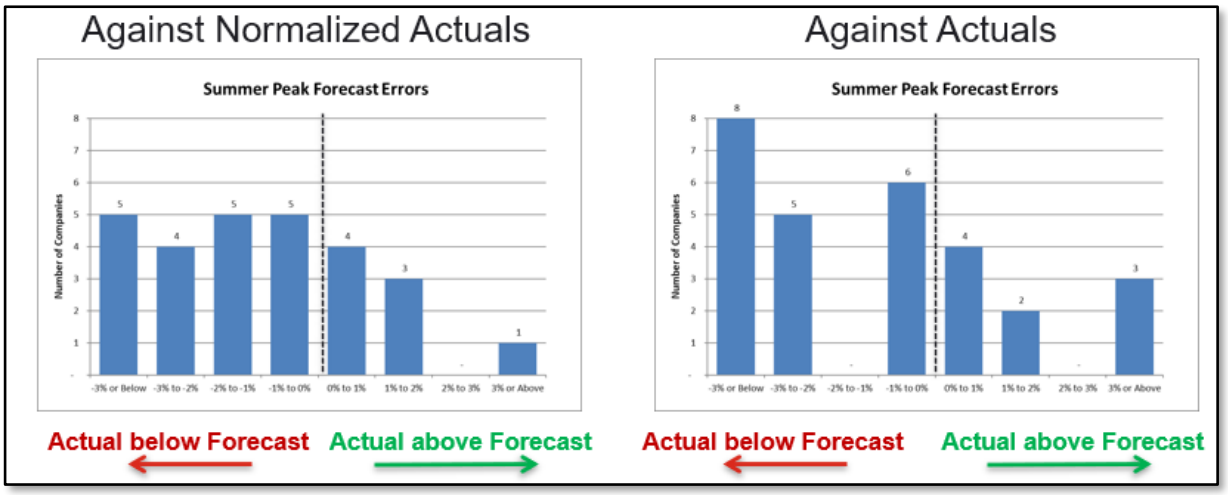
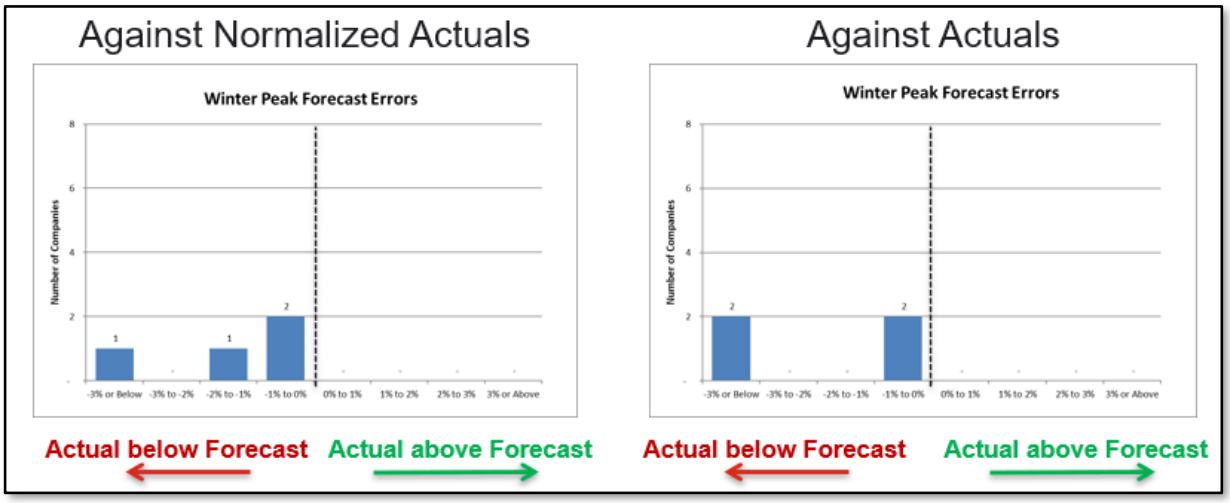


Figure 19: Winter Peak Error Distributions



Monthly Forecast Accuracy. While Figure 12 through Figure 19 present annual forecast errors, Figure 20 through Figure 23 present monthly average forecast errors. Monthly average errors are calculated as the average of the 12 monthly errors in 2019 and comparable to monthly model estimation errors for 2019. Figure 20 shows the monthly average errors by class with comparative values from the 2018 and 2019 surveys. As expected, the reported errors are higher than the annual error reported in Figure 12 because errors in one month are not offset by errors in another month. The large Industrial error is driven by 27% of companies showing errors above 6%.

Figure 20: Monthly Average Electric Error Results (Unweighted)

Class	2018 Survey	2019 Survey	2020 Survey
Residential	3.76	4.26	3.02
Commerical	3.03	3.45	2.57
Industrial	3.87	3.86	4.70

The distribution of monthly errors in Figure 21 through Figure 23 show the range of responses. In the residential class, 66% of companies show errors less than 3%. Like the residential class, the commercial class also shows 66% of companies with errors less than 3%. In the industrial class 47% of respondents show less than 4%.

Figure 21: Residential Monthly Errors

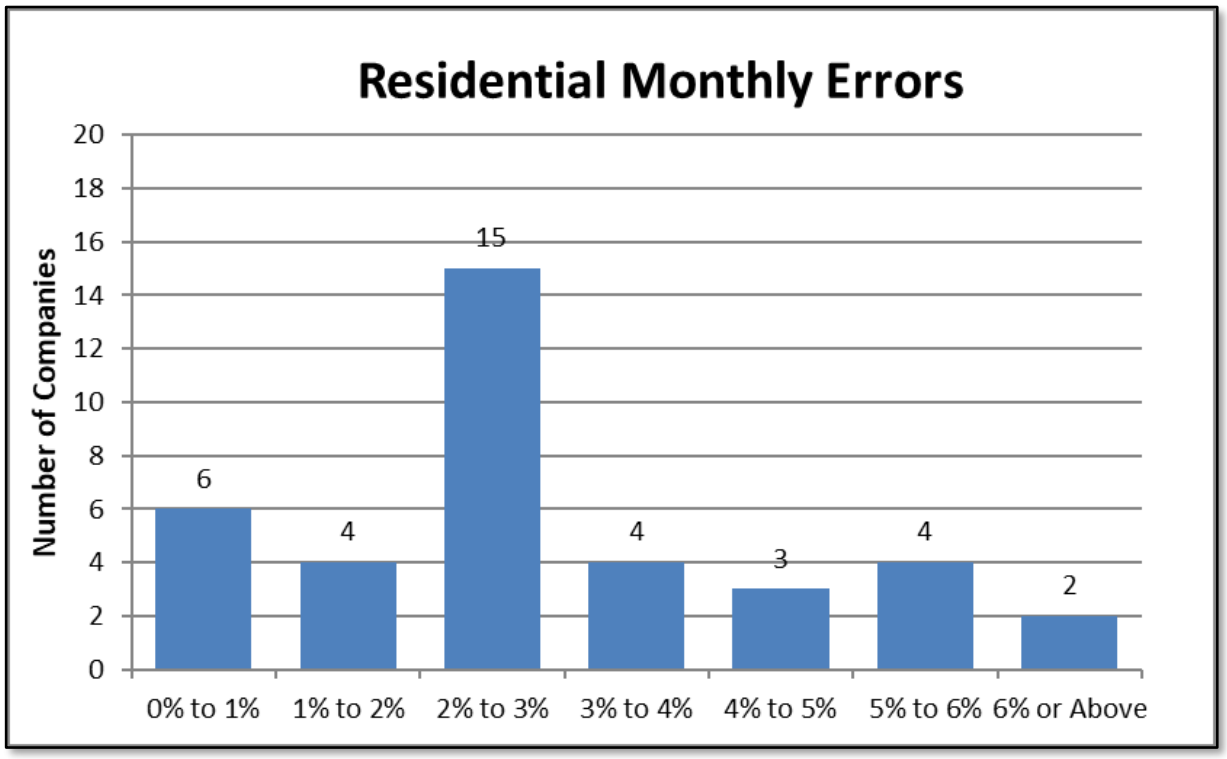


Figure 22: Commercial Monthly Errors

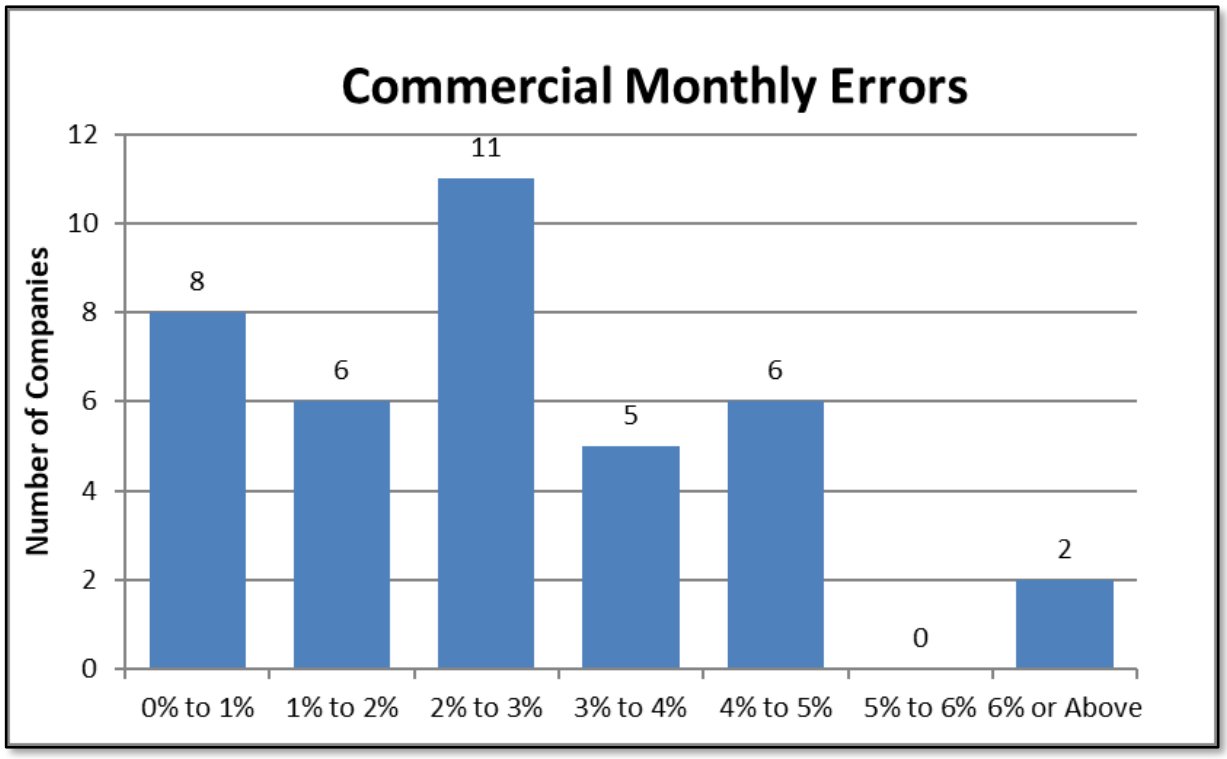
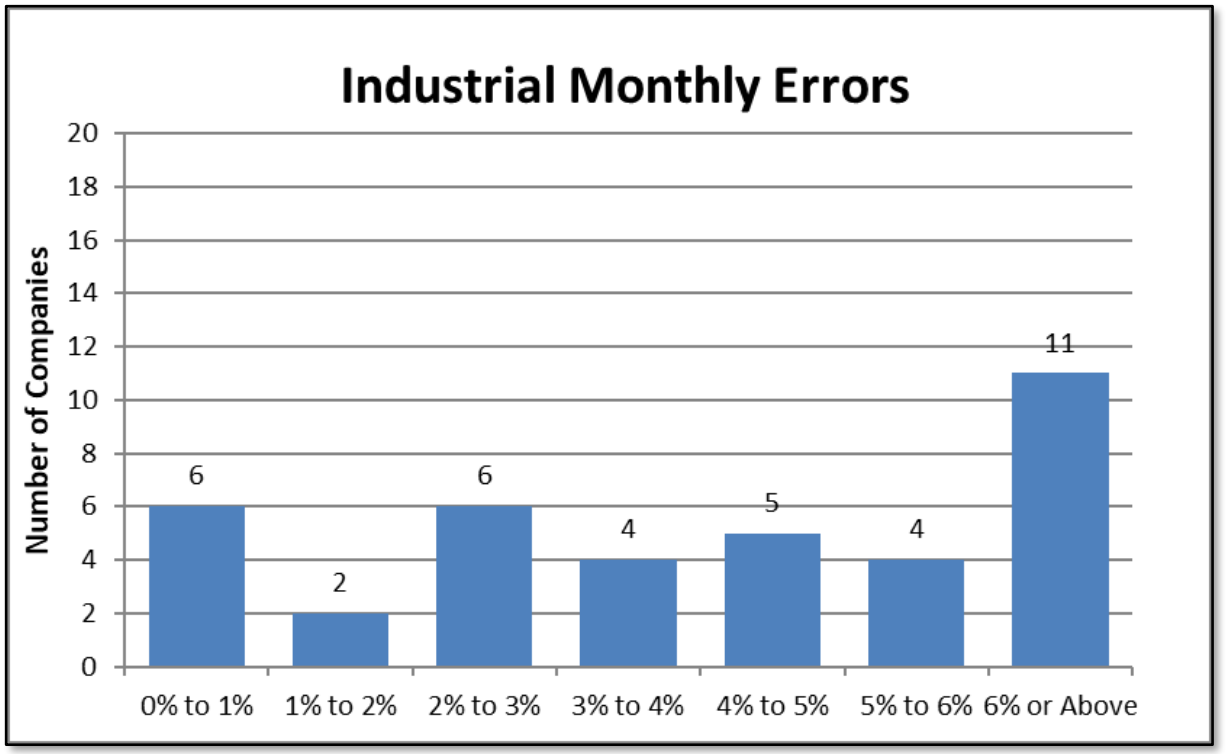


Figure 23: Industrial Monthly Errors



Natural Gas Forecast Accuracy

Similar to the electric forecasting errors, natural gas companies are asked to compare their forecast for 2019 (generated in 2018) against actual and weather normalized sales in 2019. Figure 24 and Figure 25 shows the companies' unweighted annual MAPEs. The figures show the annual MAPE, the average annual MAPEs from the 2015 through 2019 surveys, and the variance associated with the annual average MAPEs from 2015 through 2019. Figure 26 shows the unweighted monthly MAPEs.

Annual Forecast Accuracy. Figure 24 and Figure 25 shows that all class forecasting errors are consistent with prior survey results. The 2020 survey errors are close to the average errors obtained from the 2015 through 2020 surveys.

Figure 24: Annual Natural Gas MAPE - Forecast Versus Weather Normal Actuals

Class	2020 Survey	2015-2020 Mean	2015-2020 Variance
Residential	2.94	2.84	0.45
Commerical	4.82	4.01	1.08
Industrial	8.45	7.67	13.66
System	4.16	4.06	1.55

Figure 25: Annual Natural Gas MAPE - Forecast Versus Actuals

Class	2020 Survey	2015-2020 Mean	2015-2020 Variance
Residential	6.21	9.13	13.43
Commerical	6.98	6.70	6.80
Industrial	9.10	8.47	13.81
System	7.29	7.65	4.49

Monthly Forecast Accuracy. As expected, monthly forecast accuracy statistics show that monthly percentage errors are higher than the corresponding annual errors. The monthly MAPEs are shown in Figure 26.

Figure 26: Monthly Average Gas Error Results (Unweighted)

Class	2018 Survey	2019 Survey	2020 Survey
Residential	7.28	6.82	9.87
Commerical	6.68	8.84	10.98
Industrial	10.17	10.33	13.58

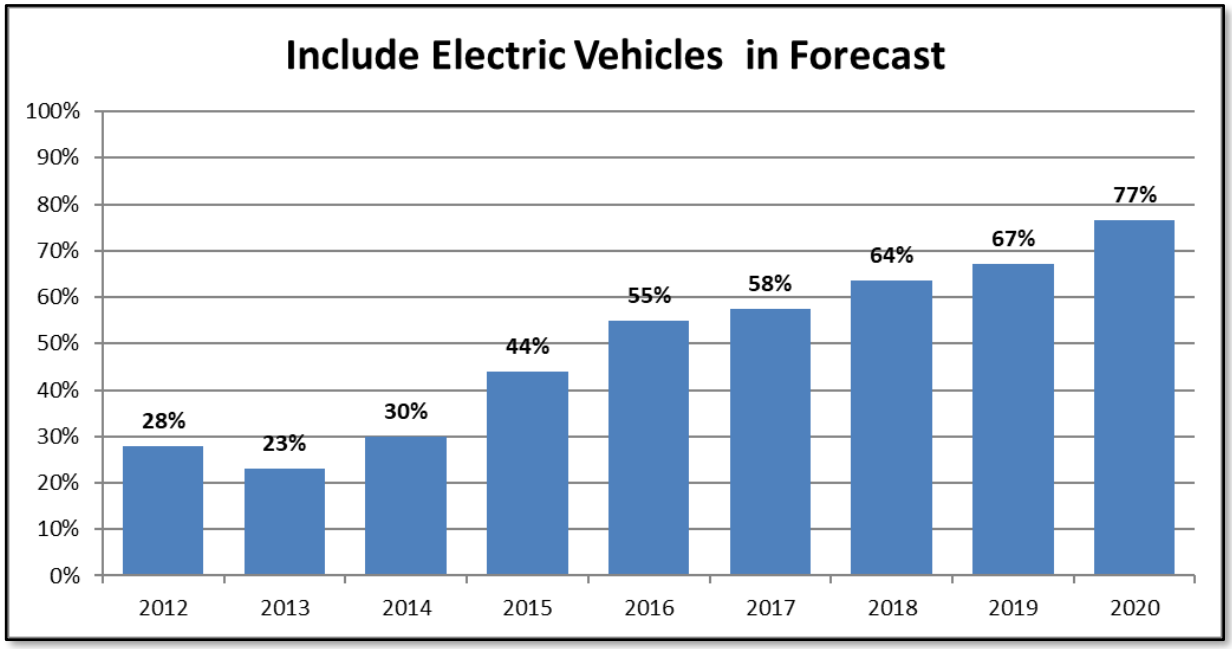
Key Forecast Characteristics

As part of the annual survey, Itron tracks changes in forecasting practices. These changes include accounting for new technologies, forecast methods and business processes. In addition to the regular questions about electric vehicles, photovoltaics, energy storage, normal weather, forecasting techniques and AMI data usage, this year's survey includes questions about CO2 emission targets, climate change adjustments and forecasting staff size.

Electric Vehicles.

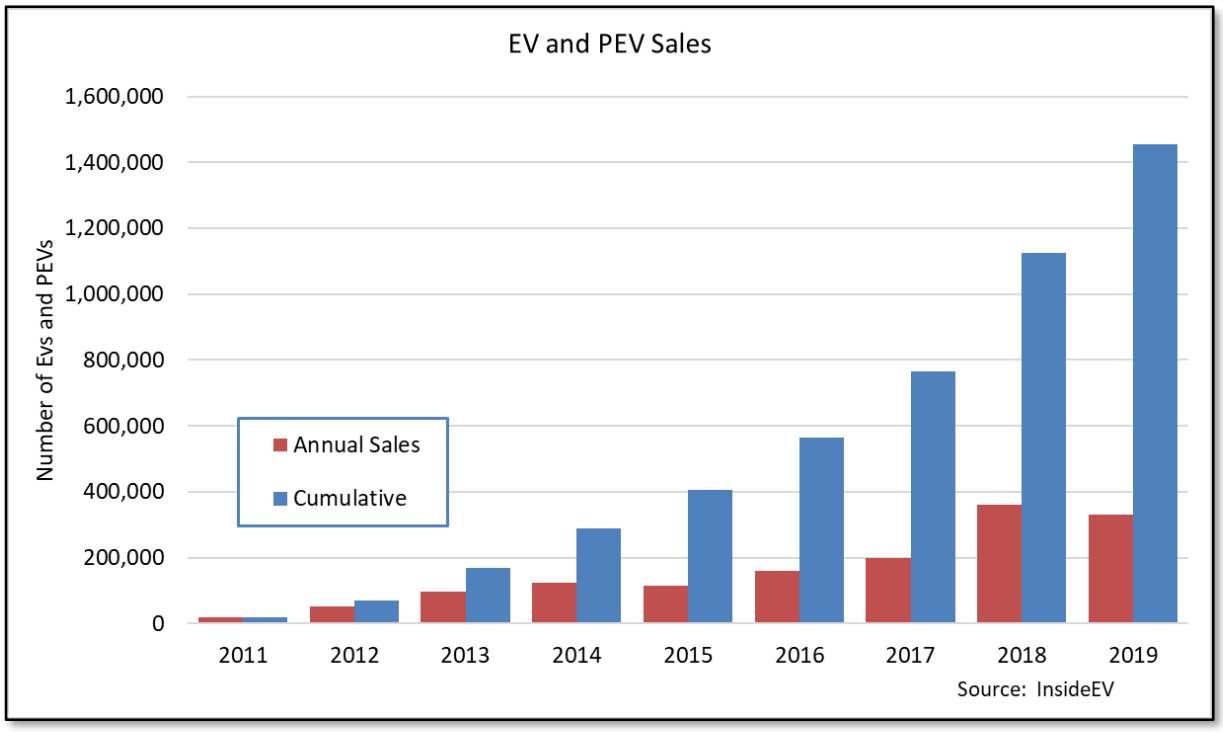
The percentage of companies who explicitly include electric vehicles (EVs) in their forecast continues to increase. Since the question was introduced, the percent of companies including EVs in their forecast has grown from 28% in 2012 to 77% in 2020. Figure 27 shows the 2020 survey result compared with prior year results.

Figure 27: Include Electric Vehicles in the Forecast



In 2019, EV sales plateau with sales slightly lower than 2018. However, EVs constitute approximately 6% of car sales (excluding SUVs, pickups and vans/minivans) and include over one million vehicles on the road. In 2019, Tesla continues to dominate the EV market accounting for approximately 50% of all 2019 EV sales. Figure 28 shows cumulative number of EV and plug-in EV sales, compiled from *InsideEV* data reports.

Figure 28: Historic EV and PEV Sales



Photovoltaics.

Figure 29 shows the share of companies that include photovoltaics (PV) in their forecast. This year, 83% of respondents now include PV forecasts in their forecasts.

Figure 29: Include Photovoltaics in the Forecast

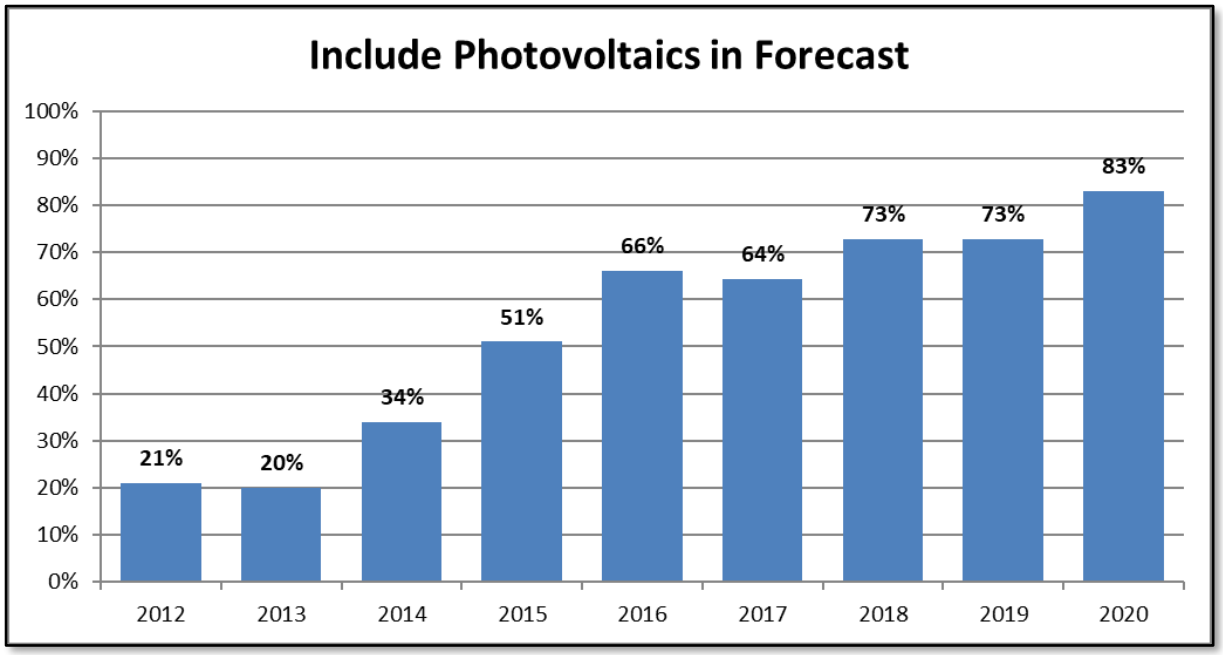
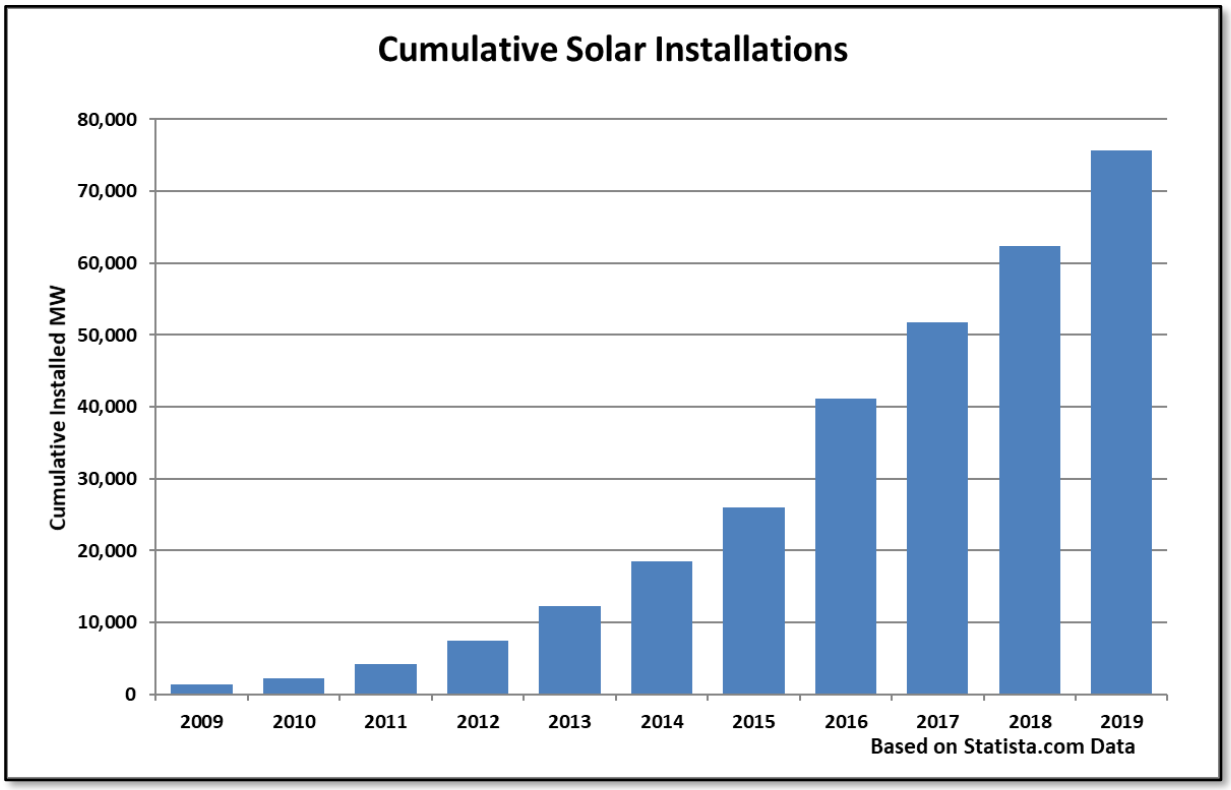


Figure 30 shows the cumulative growth in installed solar capacity across the United States. Based on *Statista.com* data, PV installations slowed in 2017 and 2018 from their peak in 2016. However, 2019 shows a return to strong growth with cumulative PV installations rising 21% from 2018 to 2019. Overall, the cumulative level of installations continues to show a strong upward trend.

Figure 30: Solar Installations

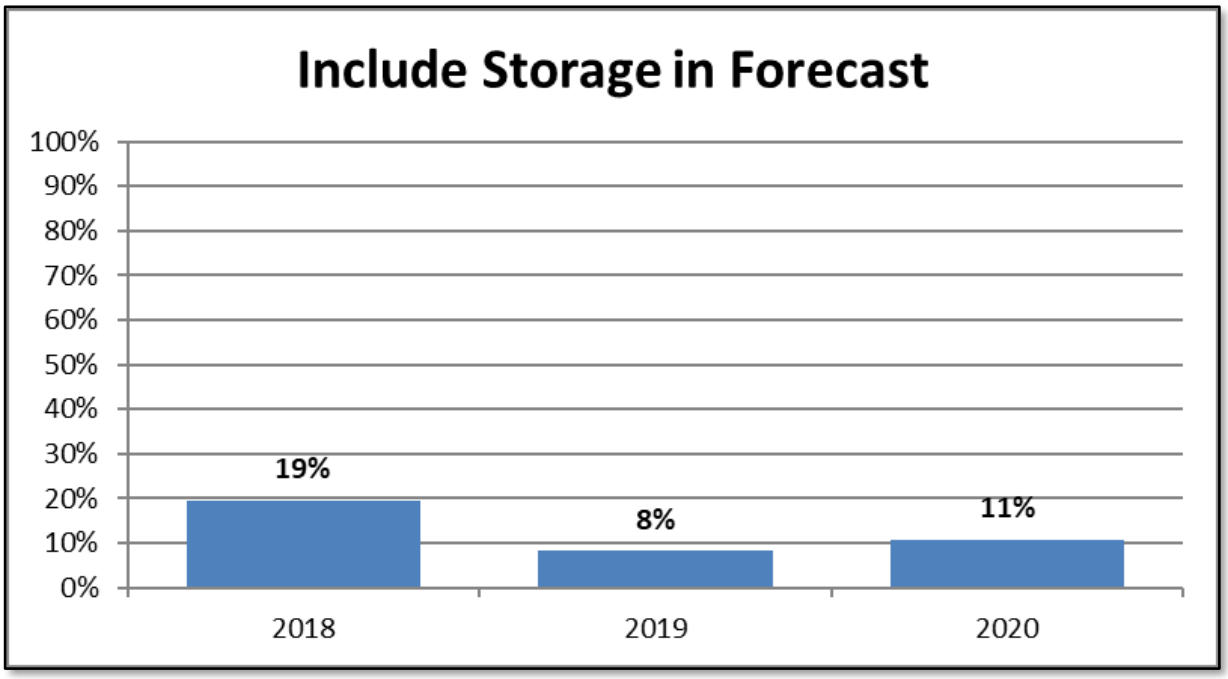


Electric Storage.

For the third consecutive year, the survey asks whether companies are explicitly including energy storage in their forecasts. The results are shown in Figure 31. Over the past three years, very few companies account for storage. While the percentage of survey respondents fluctuates, the difference is attributed to the change in survey participants.

The storage market continues to be in the nascent stages, which makes forecasting technology penetration and usage patterns difficult. As with any new technology, companies should closely watch the market to identify signs and factors that will assist them in forecasting this technology.

Figure 31: Include Battery/Storage in the Forecast



DSM Modeling.

For the second consecutive year, the survey asks companies how they model DSM in their forecast. Figure 32 compares the 2019 and 2020 survey results. Overall, there is not a significant change from the 2019 survey result. Variations in the responses are attributed to the difference in survey respondents.

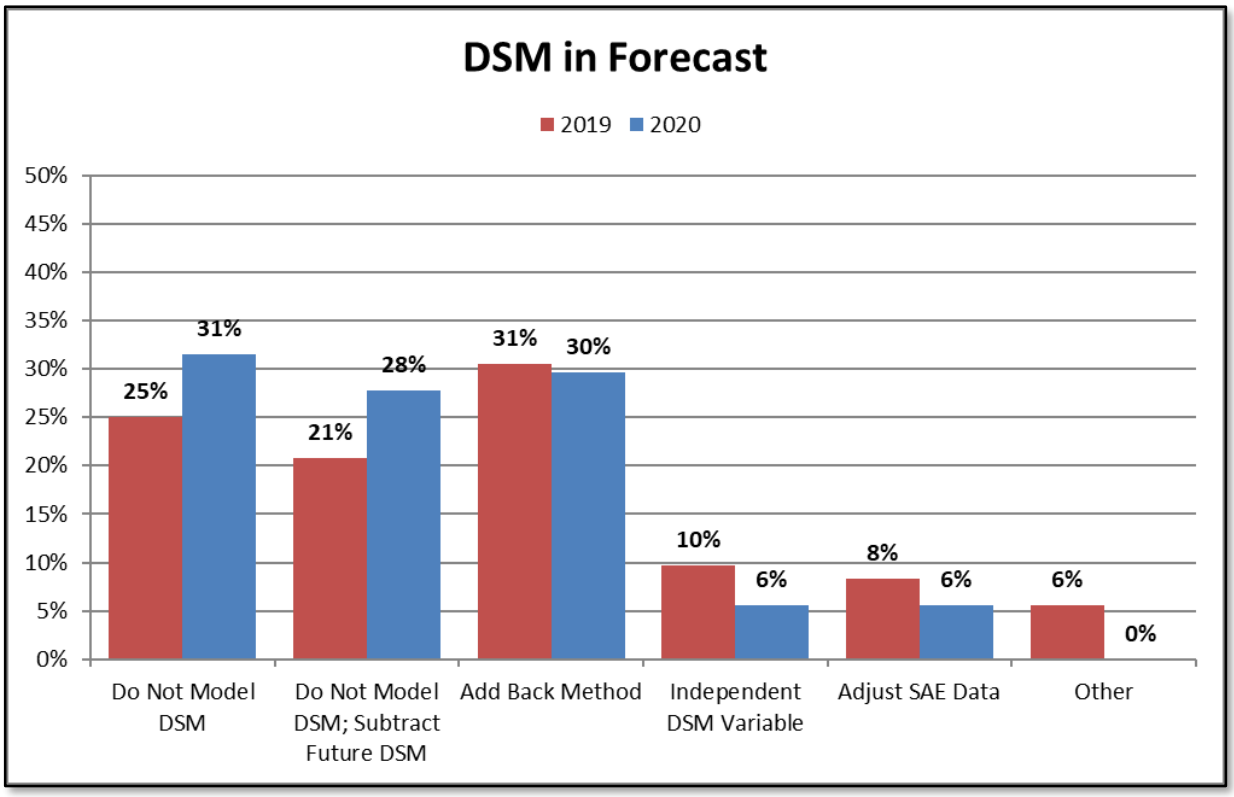
The 2020 results show that 31% of companies do not model DSM and 28% do not model DSM but subtract future DSM from the forecast. These responses imply that historic DSM, if present, is embedded in the historical data series and no further modeling adjustment is needed.

In the Add Back method (30%), companies reconstruct historic sales by reconstituting (or adding back) historic DSM savings. The forecast models are developed assuming growth in the absence of DSM. As a final step, the historic DSM is subtracted from the forecast.

Using an Independent DSM Variable (6%) allows the regression model to capture the statistical significance of historic DSM and applies the regression coefficient to the changes in DSM throughout the forecast period.

A Statistically Adjusted End-Use (SAE) model captures changes in energy efficiency in the embedded regression driver variables. The Adjust SAE Data (6%) method modifies the underlying SAE efficiency driver variables to capture historic DSM savings.

Figure 32: DSM Modeling Techniques

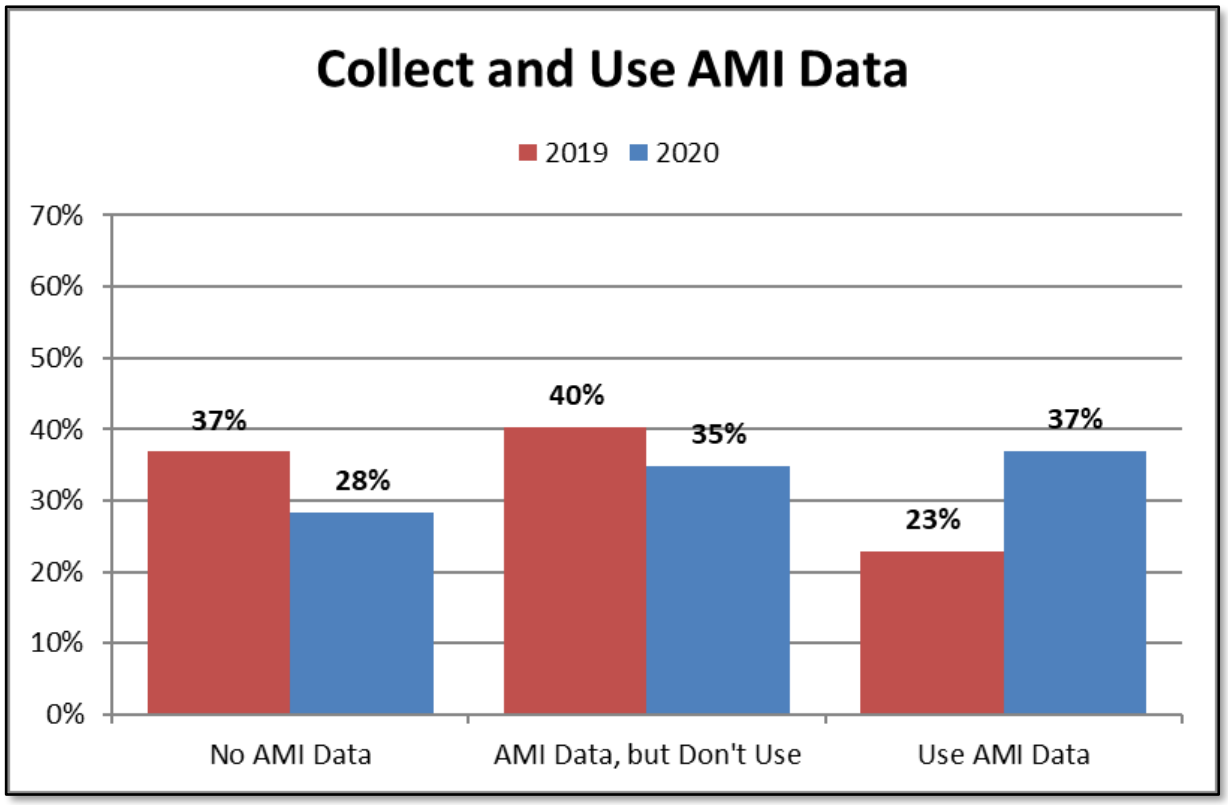


AMI Data Usage.

Like 2019, Itron asked companies about their AMI deployments. Two questions are asked. First, companies are asked whether they have access to AMI data. These results are show in Figure 33. Second, companies that have AMI data are asked how they use the data. These results are shown in Figure 34.

As shown in Figure 33, 72% of companies have access to AMI data with 37% of companies using the data. This result is a small increase from the 2019 results.

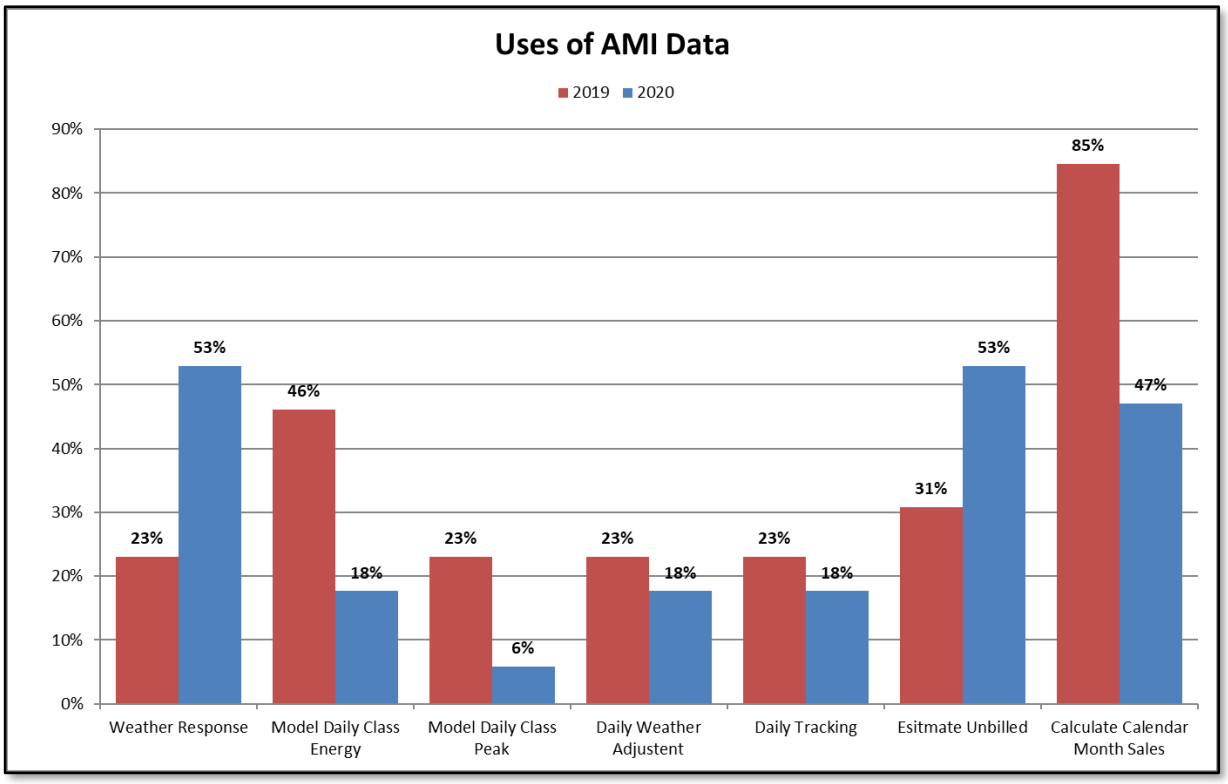
Figure 33: AMI Data Availability



Of respondents who have AMI data, Figure 34 show how companies are using the AMI data. While the difference between the 2019 and 2020 survey results are attributed to the variation in survey participants, the results show that the largest uses of AMI data are in the following areas.

- Weather Response,
- Modeling Daily Class Energy,
- Estimating Unbilled Energy, and
- Calculate Calendar Month Sales.

Figure 34: AMI Data Usage



Forecast Model Method.

Since 2015, Itron has asked companies about their long-term modeling techniques. For the residential and commercial classes, companies are asked whether they use a general econometric approach, Itron's Statistically Adjusted End-Use (SAE) model approach, or another method. The results are shown in Figure 35 and Figure 36.

In 2020, 52% of companies use the SAE approach for the residential class and 42% use it for the commercial class. The 2020 modeling techniques remain consistent with prior survey results and show very little change since 2015.

Unlike the general econometric approach, the SAE approach captures energy efficiency changes by including end-use saturation and efficiency data in the model. These variables allow companies to capture the impact of changing codes and standards as well as energy efficiency programs in their forecast.

Figure 35: Forecasting Model Technique – Residential Class

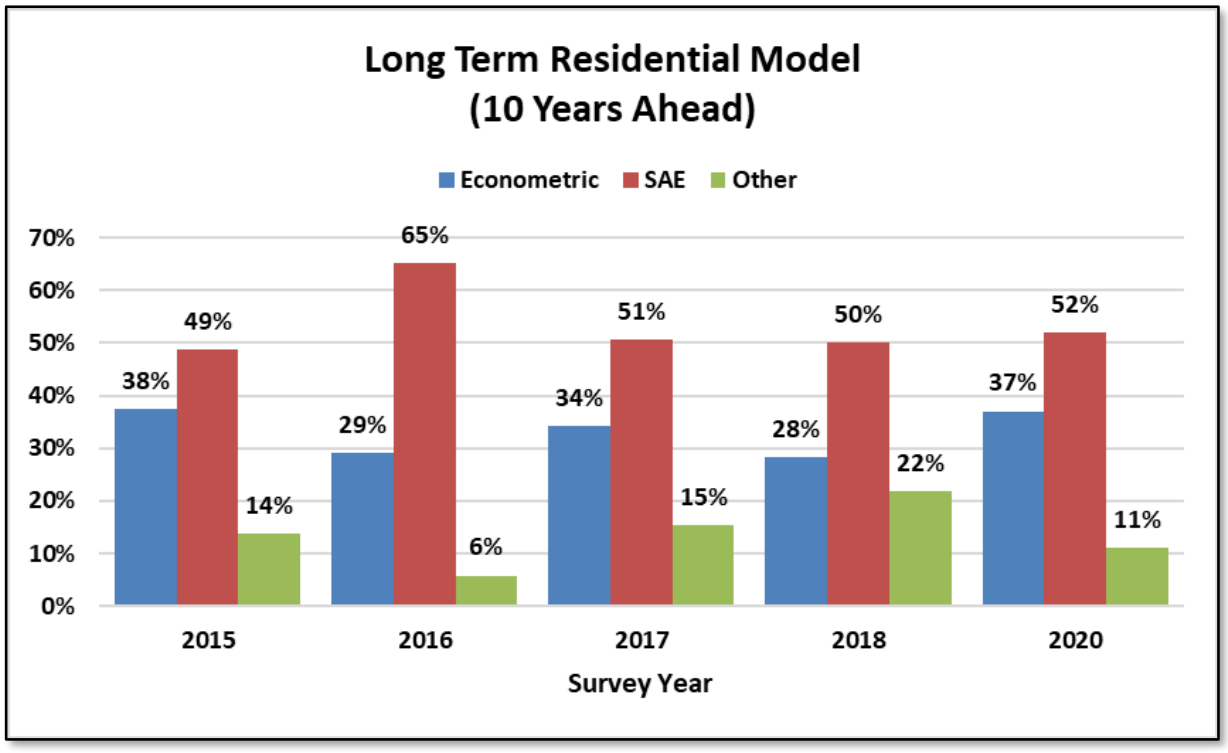
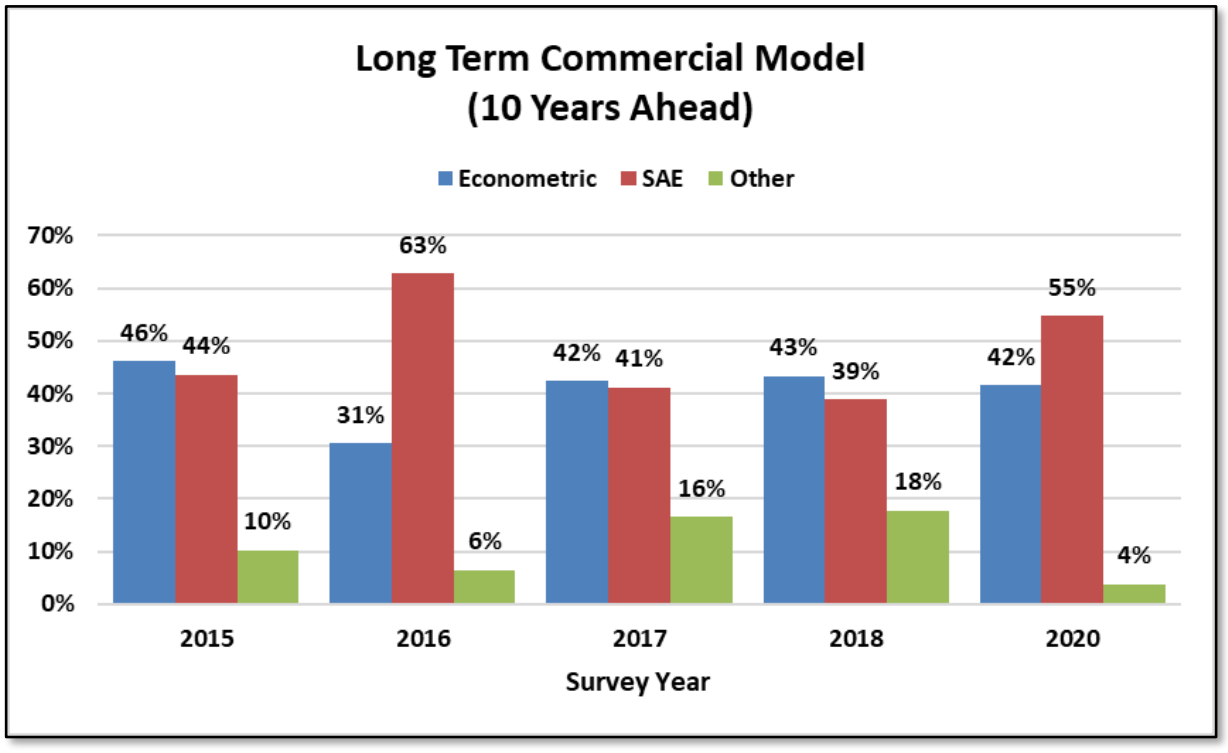


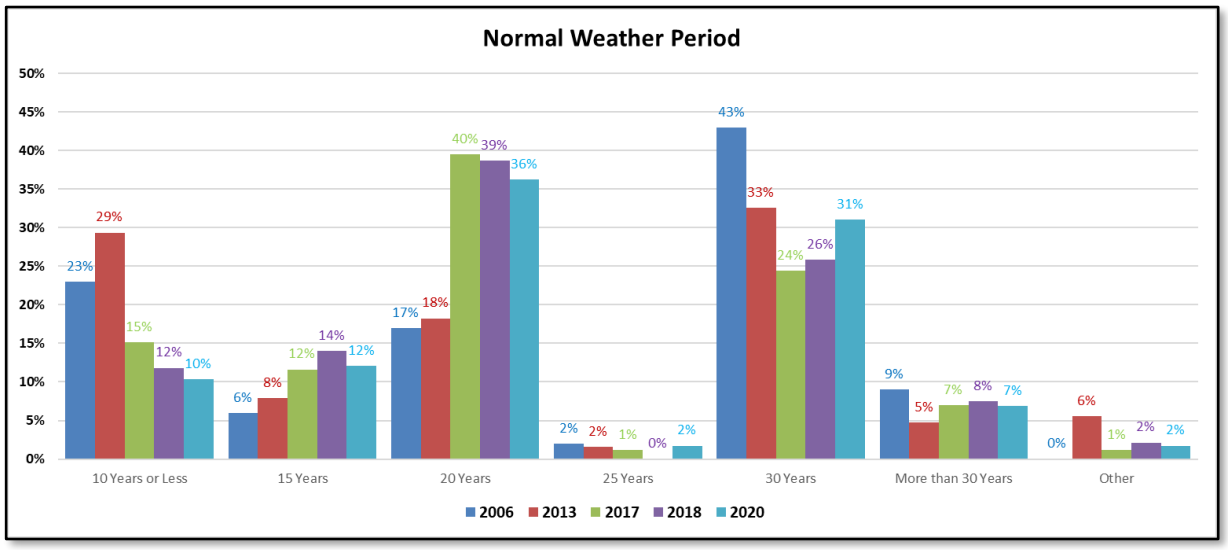
Figure 36: Forecasting Model Technique – Commercial Class



Normal Weather.

The 2020 survey asked respondents how many years of historical weather data they use to calculate normal weather. These results are combined with Itron's 2006, 2013, 2017 and 2018 survey results and are presented in Figure 37.

Figure 37: Normal Weather Years

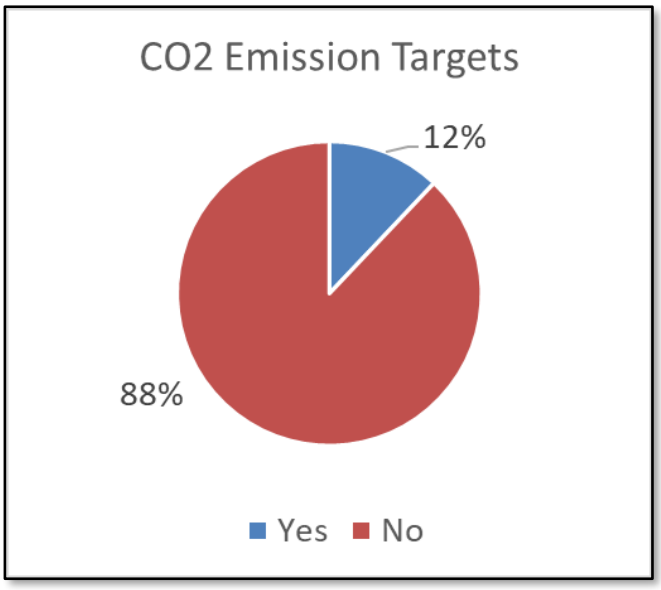


Historically, companies have favored 30-year averages to represent normal weather. In 2006, 43% of companies used the 30-year average. In 2013, the survey shows a slight movement away from the 30-year average toward the 10-year average. Beginning in 2017, the 20-year average becomes the dominate normal weather period. In the 2017, 2018 and 2020 surveys, over 36% of the companies reported using the 20-year average.

CO2 Emission Targets and Climate Change Adjustments.

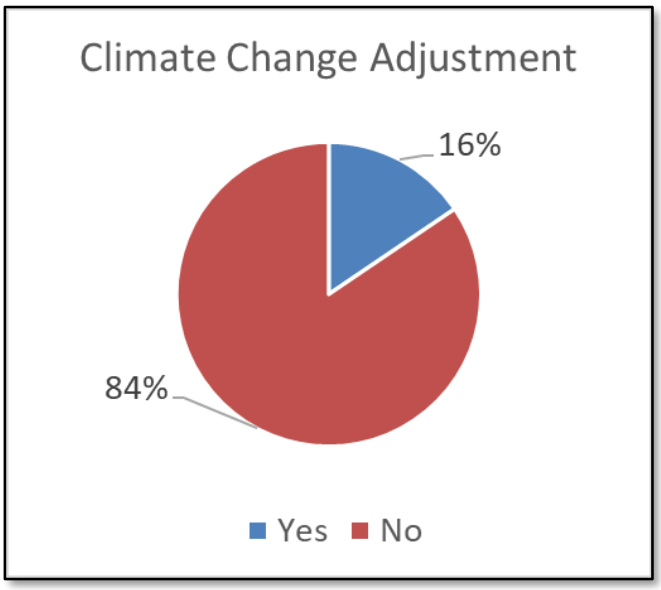
In the 2020 survey, Itron asked two questions to understand how companies are managing climate change issues. First, Itron asked whether companies are adjusting their forecasts for mandated carbon (CO2) emission standards. Second, Itron asked whether companies are adjusting their normal weather calculation beyond managing the number of years used to calculate normal weather. These results are shown in Figure 38 and Figure 39.

Figure 38: Incorporating CO2 Emission Targets in the forecast



CO2 emissions targets refer to the emission reduction level goals set by states to address climate change. Currently, 23 states and the District of Columbia have implemented statewide CO2 emission targets. To achieve the emission targets, states are exploring a variety of methods including increased electrification. If increased electrification is adopted, electric sales forecasts will likely increase. In this year's survey 15% of companies are including the CO2 emissions target impacts in their forecast.

Figure 39: Adjusting Normal Weather for Climate Change



In many areas, climate change impacts the long-term normal weather projections. If average temperatures rise by 1-degree Fahrenheit per decade, the implication is that the long-term forecast

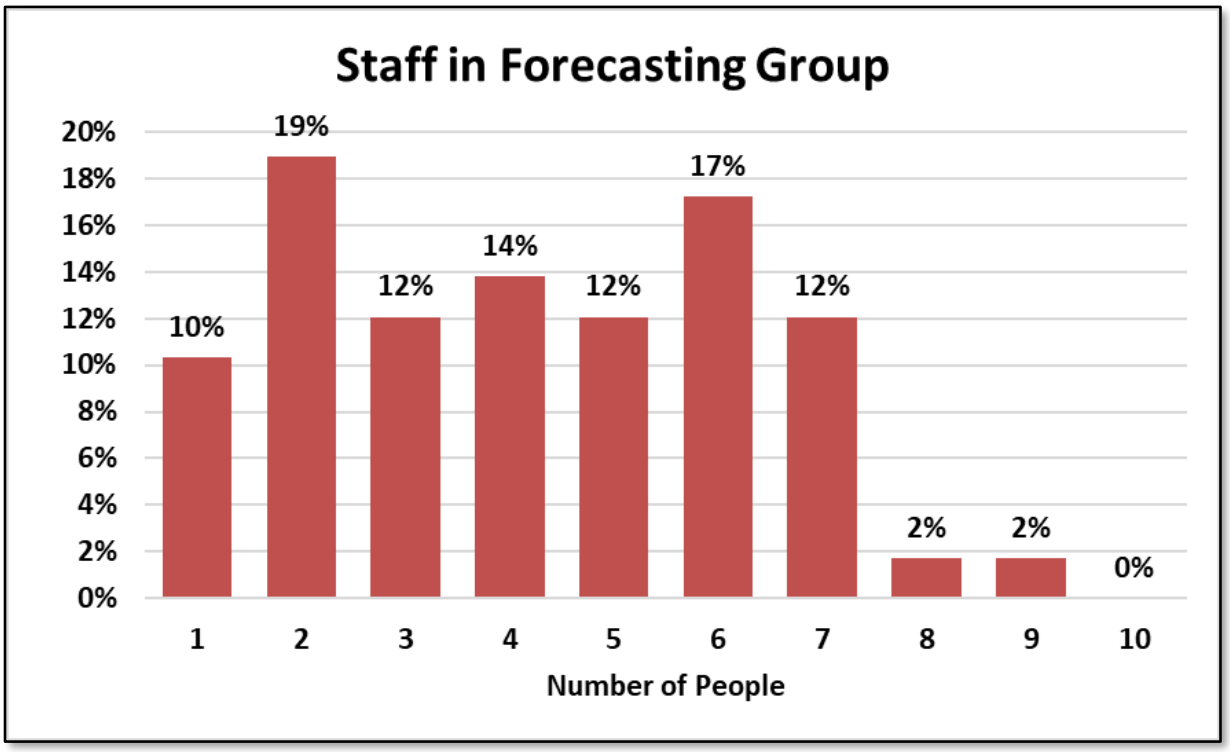
should capture this change. One way to capture this change is by adjusting the normal weather forecast. In this year's survey, 16% of companies are making an additional adjustment to their weather normal calculation to account for climate change. For those making adjustments, the process starts with the traditional normal calculation based on a multiyear average. Next, the companies apply a trend to the normal weather calculation in the forecast period. In the survey, companies only indicated that they trend the result, they did not provide explicit details on the trending assumptions.

While Figure 38 and Figure 39 show a similar percentage, only 3 companies are including both CO2 emission targets and adjusting their normal weather.

Forecasting Staff Size.

In the 2020 survey, Itron asked companies about the size of their forecasting staff. Respondents were asked to include analysts as well as managers. The results shown in Figure 40 show that 55% of forecasting staffs include 5 or fewer members.

Figure 40: Forecasting Staff Size



Conclusion

Since 2012, Itron's Forecasting Benchmark Survey has provided benchmarking data and insights into the changing outlook of energy demand. While the 2020 survey includes fewer companies in the past, these companies still represent 1.74 billion kWh of electricity and 1.4 BCF of natural gas demand.

The 2020 survey shows that forecast accuracy remains consistent with prior year surveys creating a rich set of benchmarking data. The survey also provides a forecast growth baseline prior to the Covid-19 pandemic. For both the electric and natural gas systems the baseline annual growth is slightly higher than 0.5% per year.

Consistent with prior years, the 2020 survey reaffirms several common forecasting practices. These practices include capturing EVs, PV and DSM in the modeling process and capitalizing on available AMI data. New to this year, the survey shows that capturing climate change by adjustment normal weather and incorporating CO2 emission targets are rarely used, but worthwhile to monitor for future development.

Overall, energy forecasting continues to be challenging. While the 2020 survey provides insights into these challenges under normal circumstances, the Covid-19 pandemic will create a new set of challenges in the coming years. Itron intends to continue using this survey as an instrument to inform the energy industry about how these challenges are being addressed.

Minnesota Electric Calendar Month Weather Normalization

		Calendar Month Sales (MWh)				Calendar Month Customers			Calendar Month Weather HEATING		Calendar Month Weather COOLING		Coefficients - HEATING Calendar Month - based on HDD65			Coefficients - COOLING Calendar Month - based on THI65		
		Res w/out Space Htg	Res w/ Space Htg	Total Residential	Small C&I	Res w/out Space Htg	Res w/ Space Htg	Small C&I	Actual HDD65	Normal HDD65	Actual THI65	Normal THI65	Res w/out Space Htg	Res w/ Space Htg	Small C&I	Res w/out Space Htg	Res w/ Space Htg	Small C&I
2022	1			0						1,482		0	0.000124796	0.000827762	0.000399976	0.000000000	0.000000000	0.000000000
2022	2			0						1,274		0	0.000097853	0.000786563	0.000439452	0.000000000	0.000000000	0.000000000
2022	3			0						980		0	0.000074989	0.000755259	0.000273639	0.000000000	0.000000000	0.000000000
2022	4			0						530		1	0.000028283	0.000670606	0.000000000	0.000896691	0.000000000	0.000000000
2022	5			0						212		19	0.000000000	0.000286480	0.000000000	0.001856875	0.001270092	0.004923537
2022	6			0						23		98	0.000000000	0.000000000	0.000000000	0.001932295	0.001931062	0.008804324
2022	7			0						3		198	0.000000000	0.000000000	0.000000000	0.001946399	0.001478836	0.008909119
2022	8			0						6		137	0.000000000	0.000000000	0.000000000	0.002043564	0.001522591	0.010520208
2022	9			0						113		51	0.000028616	0.000274085	0.000000000	0.002027535	0.000817266	0.016231065
2022	10			0						499		3	0.000069751	0.000585025	0.000000389	0.000941816	0.000000000	0.010324557
2022	11			0						864		0	0.000102363	0.000698745	0.000145638	0.000000000	0.000000000	0.000000000
2022	12			0						1,314		0	0.000131071	0.000822626	0.000368481	0.000000000	0.000000000	0.000000000
TOTAL		0	0	0	0				0	7,300	0	508						

		Calendar Month Weather Effect from HEATING			Calendar Month Weather Effect from COOLING			Calendar Month Weather Effect HEATING AND COOLING			Calendar Month Weather Normalized Sales (MWh)			
		Res w/out Space Htg	Res w/ Space Htg	Small C&I	Res w/out Space Htg	Res w/ Space Htg	Small C&I	Res w/out Space Htg	Res w/ Space Htg	Small C&I	Res w/out Space Htg	Res w/ Space Htg	Total Residential	Small C&I
2022	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2022	2	0	0	0	0	0	0	0	0	0	0	0	0	0
2022	3	0	0	0	0	0	0	0	0	0	0	0	0	0
2022	4	0	0	0	0	0	0	0	0	0	0	0	0	0
2022	5	0	0	0	0	0	0	0	0	0	0	0	0	0
2022	6	0	0	0	0	0	0	0	0	0	0	0	0	0
2022	7	0	0	0	0	0	0	0	0	0	0	0	0	0
2022	8	0	0	0	0	0	0	0	0	0	0	0	0	0
2022	9	0	0	0	0	0	0	0	0	0	0	0	0	0
2022	10	0	0	0	0	0	0	0	0	0	0	0	0	0
2022	11	0	0	0	0	0	0	0	0	0	0	0	0	0
2022	12	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL		0	0	0	0	0	0	0	0	0	0	0	0	0

Xcel Energy Minnesota Residential without Space Heat
Weather Normalization Model

Variable	Coefficient	StdErr	T-Stat	P-Value	Definition
CYPNR_MN	1262.377	391.861	3.221	0.15%	Real Personal Income per Capita, Minnesota, millions 2012$, Bureau of Economic Analysis
BillDaysCellnet21	15786.295	659.896	23.922	0.00%	Average number of billing days per month
H65_bill_RX_MN_Jan	0.0001421	0.0000045	31.378	0.00%	Heating Degree Days*Number Residential without Space Heat Customers, January
H65_bill_RX_MN_Feb	0.0001085	0.0000044	24.844	0.00%	Heating Degree Days*Number Residential without Space Heat Customers, February
H65_bill_RX_MN_Mar	0.0000906	0.0000047	19.085	0.00%	Heating Degree Days*Number Residential without Space Heat Customers, March
H65_bill_RX_MN_Apr	0.0000575	0.0000068	8.471	0.00%	Heating Degree Days*Number Residential without Space Heat Customers, April
H65_bill_RX_MN_Oct	0.0000595	0.0000229	2.601	1.00%	Heating Degree Days*Number Residential without Space Heat Customers, October
H65_bill_RX_MN_Nov	0.0000795	0.0000097	8.175	0.00%	Heating Degree Days*Number Residential without Space Heat Customers, November
H65_bill_RX_MN_Dec	0.0001193	0.0000057	20.898	0.00%	Heating Degree Days*Number Residential without Space Heat Customers, December
T65_bill_RX_MN_May	0.0017654	0.0008441	2.091	3.78%	Cooling Degree Days*Number Residential without Space Heat Customers, May
T65_bill_RX_MN_Jun	0.0019351	0.0000849	22.799	0.00%	Cooling Degree Days*Number Residential without Space Heat Customers, June
T65_bill_RX_MN_Jul	0.0019292	0.0000334	57.677	0.00%	Cooling Degree Days*Number Residential without Space Heat Customers, July
T65_bill_RX_MN_Aug	0.0019617	0.0000320	61.278	0.00%	Cooling Degree Days*Number Residential without Space Heat Customers, August
T65_bill_RX_MN_Sep	0.0021309	0.0000635	33.571	0.00%	Cooling Degree Days*Number Residential without Space Heat Customers, September
T65_bill_RX_MN_Oct	0.0019160	0.0001944	9.855	0.00%	Cooling Degree Days*Number Residential without Space Heat Customers, October
Dec2016	-42368.243	13600.440	-3.115	0.21%	Binary variable December 2016 = 1, otherwise = 0
Sep2013	-42227.414	15571.114	-2.712	0.73%	Binary variable September 2013 = 1, otherwise = 0
COVID_19_Impacts_Apr2	26776.318	14429.804	1.856	6.50%	COVID-19 pandemic limited term impact variable , values 0.00 - 1.00, April 2020-December 2025
AR(1)	0.74133987	0.05017237	14.776	3.32132E-21	First order autoregressive correction term

Dependent Variable					Definition
SLS_Reswo_MN					Billed Sales (MWh) for the Residential without Space Heat customer class.

Xcel Energy Minnesota Residential without Space Heat
Weather Normalization Model

Model Statistics		
Iterations		18
Adjusted Observations		215
Deg. of Freedom for Error		196
R-Squared		0.985
Adjusted R-Squared		0.984
AIC		19.511
BIC		19.809
F-Statistic	#NA	
Prob (F-Statistic)	#NA	
Log-Likelihood		-2,383.49
Model Sum of Squares		3,514,565,962,938.70
Sum of Squared Errors		53,595,774,668.37
Mean Squared Error		273,447,829.94
Std. Error of Regression		16,536.26
Mean Abs. Dev. (MAD)		11,961.19
Mean Abs. % Err. (MAPE)		1.72%
Durbin-Watson Statistic		2.212
Durbin-H Statistic	#NA	
Ljung-Box Statistic		57.23
Prob (Ljung-Box)		0.0002
Skewness		-0.299
Kurtosis		3.646
Jarque-Bera		6.949
Prob (Jarque-Bera)		0.0310

Forecast Statistics	
Forecast Observations	0
Mean Abs. Dev. (MAD)	0.00
Mean Abs. % Err. (MAPE)	0.00%
Avg. Forecast Error	0.00
Mean % Error	0.00%
Root Mean-Square Error	0.00
Theil's Inequality Coefficient	0.0000
-- Bias Proportion	0.00%
-- Variance Proportion	0.00%
-- Covariance Proportion	0.00%

Xcel Energy Minnesota Residential without Space Heat
Weather Normalization Model

					Original Coefficients			
		PRORATES			HEATING		COOLING	
		Billed Current	1st Future	2nd Future	Billing	Calendar	Billing	Calendar
2022	1	48.85%	50.38%	0.77%	0.000142146	0.000124796	0.000000000	0.000000000
2022	2	40.48%	59.52%	0.00%	0.000108497	0.000097853	0.000000000	0.000000000
2022	3	52.84%	47.16%	0.00%	0.000090616	0.000074989	0.000000000	0.000000000
2022	4	49.21%	50.79%	0.00%	0.000057478	0.000028283	0.000000000	0.000896691
2022	5	46.08%	53.92%	0.00%	0.000000000	0.000000000	0.001765361	0.001856875
2022	6	51.27%	48.57%	0.16%	0.000000000	0.000000000	0.001935093	0.001932295
2022	7	47.16%	52.84%	0.00%	0.000000000	0.000000000	0.001929246	0.001946399
2022	8	51.61%	48.39%	0.00%	0.000000000	0.000000000	0.001961706	0.002043564
2022	9	51.90%	48.10%	0.00%	0.000000000	0.000028616	0.002130878	0.002027535
2022	10	49.16%	50.69%	0.15%	0.000059498	0.000069751	0.001916007	0.000941816
2022	11	42.54%	57.46%	0.00%	0.000079543	0.000102363	0.000000000	0.000000000
2022	12	48.39%	51.61%	0.00%	0.000119258	0.000131071	0.000000000	0.000000000
2023	1				0.000142146		0.000000000	
2023	2				0.000108497		0.000000000	

Xcel Energy Minnesota Residential with Space Heat
Weather Normalization Model

Variable	Coefficient	StdErr	T-Stat	P-Value	Definition
NR_MSP	4.663	0.156	29.920	0.00%	Total population, Minneapolis-St. Paul-Bloomington, MN-WI, thousands, U.S. Census Bureau
H65_bill_RH_MN_Jan	0.0008696	0.0000135	64.353	0.00%	Heating Degree Days*Number Residential Space Heating Customers, January
H65_bill_RH_MN_Feb	0.0007878	0.0000153	51.452	0.00%	Heating Degree Days*Number Residential Space Heating Customers, February
H65_bill_RH_MN_Mar	0.0007857	0.0000164	47.938	0.00%	Heating Degree Days*Number Residential Space Heating Customers, March
H65_bill_RH_MN_Apr	0.0007211	0.0000263	27.454	0.00%	Heating Degree Days*Number Residential Space Heating Customers, April
H65_bill_RH_MN_May	0.0006217	0.0000485	12.823	0.00%	Heating Degree Days*Number Residential Space Heating Customers, May
H65_bill_RH_MN_Oct	0.0005699	0.0000645	8.841	0.00%	Heating Degree Days*Number Residential Space Heating Customers, October
H65_bill_RH_MN_Nov	0.0005991	0.0000317	18.926	0.00%	Heating Degree Days*Number Residential Space Heating Customers, November
H65_bill_RH_MN_Dec	0.0007725	0.0000179	43.259	0.00%	Heating Degree Days*Number Residential Space Heating Customers, December
T65_bill_RH_MN_Jun	0.0023556	0.0002804	8.402	0.00%	Cooling Degree Days*Number Residential Space Heating Customers, June
T65_bill_RH_MN_Jul	0.0014844	0.0001089	13.637	0.00%	Cooling Degree Days*Number Residential Space Heating Customers, July
T65_bill_RH_MN_Aug	0.0014739	0.0001013	14.546	0.00%	Cooling Degree Days*Number Residential Space Heating Customers, August
T65_bill_RH_MN_Sep	0.0015745	0.0001852	8.504	0.00%	Cooling Degree Days*Number Residential Space Heating Customers, September
Dec2016	-4347.869	1378.558	-3.154	0.19%	Binary variable December 2016 = 1, otherwise = 0
AR(1)	0.604	0.058	10.504	0.00%	First order seasonal moving average correction term

Dependent Variable					Definition
SLS_ResSH_MN					Billed Sales (MWh) for the Residential with Space Heat customer class.

Xcel Energy Minnesota Residential with Space Heat
Weather Normalization Model

Model Statistics		
Iterations		10
Adjusted Observations		215
Deg. of Freedom for Error		200
R-Squared		0.986
Adjusted R-Squared		0.985
AIC		14.784
BIC		15.020
F-Statistic	#NA	
Prob (F-Statistic)	#NA	
Log-Likelihood		-1,879.39
Model Sum of Squares		34,964,332,613.28
Sum of Squared Errors		492,719,799.99
Mean Squared Error		2,463,599.00
Std. Error of Regression		1,569.59
Mean Abs. Dev. (MAD)		1,142.57
Mean Abs. % Err. (MAPE)		3.89%
Durbin-Watson Statistic		2.358
Durbin-H Statistic	#NA	
Ljung-Box Statistic		146.23
Prob (Ljung-Box)		0.0000
Skewness		-0.391
Kurtosis		4.140
Jarque-Bera		17.116
Prob (Jarque-Bera)		0.0002

Forecast Statistics	
Forecast Observations	0
Mean Abs. Dev. (MAD)	0.00
Mean Abs. % Err. (MAPE)	0.00%
Avg. Forecast Error	0.00
Mean % Error	0.00%
Root Mean-Square Error	0.00
Theil's Inequality Coefficient	0.0000
-- Bias Proportion	0.00%
-- Variance Proportion	0.00%
-- Covariance Proportion	0.00%

Xcel Energy Minnesota Residential with Space Heat

Weather Normalization Model

					Original Coefficients			
		PRORATES			HEATING		COOLING	
		Billed Current	1st Future	2nd Future	Billing	Calendar	Billing	Calendar
2022	1	48.85%	50.38%	0.77%	0.000869637	0.000827762	0.000000000	0.000000000
2022	2	40.48%	59.52%	0.00%	0.000787806	0.000786563	0.000000000	0.000000000
2022	3	52.84%	47.16%	0.00%	0.000785718	0.000755259	0.000000000	0.000000000
2022	4	49.21%	50.79%	0.00%	0.000721128	0.000670606	0.000000000	0.000000000
2022	5	46.08%	53.92%	0.00%	0.000621662	0.000286480	0.000000000	0.001270092
2022	6	51.27%	48.57%	0.16%	0.000000000	0.000000000	0.002355640	0.001931062
2022	7	47.16%	52.84%	0.00%	0.000000000	0.000000000	0.001484389	0.001478836
2022	8	51.61%	48.39%	0.00%	0.000000000	0.000000000	0.001473880	0.001522591
2022	9	51.90%	48.10%	0.00%	0.000000000	0.000274085	0.001574549	0.000817266
2022	10	49.16%	50.69%	0.15%	0.000569879	0.000585025	0.000000000	0.000000000
2022	11	42.54%	57.46%	0.00%	0.000599145	0.000698745	0.000000000	0.000000000
2022	12	48.39%	51.61%	0.00%	0.000772482	0.000822626	0.000000000	0.000000000
2023	1				0.000869637		0.000000000	
2023	2				0.000787806		0.000000000	

Xcel Energy Minnesota Small Commercial and Industrial
Weather Normalization Model

Variable	Coefficient	StdErr	T-Stat	P-Value	Definition
H65_bill_SmCI_MN_Jan	0.00047632	0.00005399	8.823	0.00%	Heating Degree Days*Number Small C&I Customers, January
H65_bill_SmCI_MN_Feb	0.00032417	0.00005304	6.112	0.00%	Heating Degree Days*Number Small C&I Customers, February
H65_bill_SmCI_MN_Mar	0.00051785	0.00005387	9.612	0.00%	Heating Degree Days*Number Small C&I Customers, March
H65_bill_SmCI_MN_Dec	0.00025346	0.00006020	4.210	0.00%	Heating Degree Days*Number Small C&I Customers, December
T65_bill_SmCI_MN_Jun	0.00913169	0.00107093	8.527	0.00%	Cooling Degree Days*Number Small C&I Customers, June
T65_bill_SmCI_MN_Jul	0.00845711	0.00043408	19.483	0.00%	Cooling Degree Days*Number Small C&I Customers, July
T65_bill_SmCI_MN_Aug	0.00931251	0.00040122	23.211	0.00%	Cooling Degree Days*Number Small C&I Customers, August
T65_bill_SmCI_MN_Sep	0.01180842	0.00068833	17.155	0.00%	Cooling Degree Days*Number Small C&I Customers, September
T65_bill_SmCI_MN_Oct	0.02100402	0.00247728	8.479	0.00%	Cooling Degree Days*Number Small C&I Customers, October
Mar2005	-85865.10988181	32288.18199931	-2.659	0.85%	Binary variable March 2005 = 1, otherwise = 0
May2006	-114758.03051949	30200.54702264	-3.800	0.02%	Binary variable May 2006 = 1, otherwise = 0
Feb2005	-217475.72744396	32541.08223560	-6.683	0.00%	Binary variable February 2005 = 1, otherwise = 0
PostCRS2005	89269.99182416	11960.68681904	7.464	0.00%	Binary variable to account for billing system change starting in February 2005=1, otherwise=0
Post2012	-42772.24185550	8162.86492485	-5.240	0.00%	Binary variable starting in January 2012=1, otherwise=0
Post2018	-5518.04876725	697.49890015	-7.911	0.00%	Trend variable starting in June 2018=1 through December 2019=19 and onward, otherwise=0
EE_MN	117.22176030	15.11020631	7.758	0.00%	12-month moving average of Non-farm employment, Minnesota, thousands, Bureau of Labor Statistics
BillDaysCellnet21	21553.25987533	1331.52808342	16.187	0.00%	Average number of billing days per month
AR(1)	0.37947701	0.06603905	5.746	0.00%	First order autoregressive correction term

Dependent Variable					Definition
SLS_SmCI_MN					Billed Sales (MWh) for the Small Commercial customer class.

Xcel Energy Minnesota Small Commercial and Industrial
Weather Normalization Model

Model Statistics		
Iterations		12
Adjusted Observations		215
Deg. of Freedom for Error		197
R-Squared		0.919
Adjusted R-Squared		0.912
AIC		20.807
BIC		21.089
F-Statistic	#NA	
Prob (F-Statistic)	#NA	
Log-Likelihood		-2,523.85
Model Sum of Squares		2,243,313,089,387.87
Sum of Squared Errors		197,790,257,241.89
Mean Squared Error		1,004,011,458.08
Std. Error of Regression		31,686.14
Mean Abs. Dev. (MAD)		23,962.42
Mean Abs. % Err. (MAPE)		2.18%
Durbin-Watson Statistic		2.159
Durbin-H Statistic	#NA	
Ljung-Box Statistic		34.02
Prob (Ljung-Box)		0.0842
Skewness		0.205
Kurtosis		3.551
Jarque-Bera		4.220
Prob (Jarque-Bera)		0.1212

Forecast Statistics	
Forecast Observations	0
Mean Abs. Dev. (MAD)	0.00
Mean Abs. % Err. (MAPE)	0.00%
Avg. Forecast Error	0.00
Mean % Error	0.00%
Root Mean-Square Error	0.00
Theil's Inequality Coefficient	0.0000
-- Bias Proportion	0.00%
-- Variance Proportion	0.00%
-- Covariance Proportion	0.00%

Xcel Energy Minnesota Small Commercial and Industrial

Weather Normalization Model

					Original Coefficients			
		PRORATES			HEATING		COOLING	
		Billed Current	1st Future	2nd Future	Billing	Calendar	Billing	Calendar
2022	1	48.85%	50.38%	0.77%	0.000476315	0.000399976	0.000000000	0.000000000
2022	2	40.48%	59.52%	0.00%	0.000324168	0.000439452	0.000000000	0.000000000
2022	3	52.84%	47.16%	0.00%	0.000517845	0.000273639	0.000000000	0.000000000
2022	4	49.21%	50.79%	0.00%	0.000000000	0.000000000	0.000000000	0.000000000
2022	5	46.08%	53.92%	0.00%	0.000000000	0.000000000	0.000000000	0.004923537
2022	6	51.27%	48.57%	0.16%	0.000000000	0.000000000	0.009131689	0.008804324
2022	7	47.16%	52.84%	0.00%	0.000000000	0.000000000	0.008457111	0.008909119
2022	8	51.61%	48.39%	0.00%	0.000000000	0.000000000	0.009312511	0.010520208
2022	9	51.90%	48.10%	0.00%	0.000000000	0.000000000	0.011808419	0.016231065
2022	10	49.16%	50.69%	0.15%	0.000000000	0.000000389	0.021004020	0.010324557
2022	11	42.54%	57.46%	0.00%	0.000000000	0.000145638	0.000000000	0.000000000
2022	12	48.39%	51.61%	0.00%	0.000253458	0.000368481	0.000000000	0.000000000
2023	1				0.000476315		0.000000000	
2023	2				0.000324168		0.000000000	

Xcel Energy - Minnesota State
Test Year Sales and Customers Forecast by Customer Class

Weather Normalized Calendar Month Sales (MWh)

	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	2022 Year
Residential without Space Heat	750,326	608,660	634,355	542,174	582,447	759,256	920,585	870,373	643,782	588,704	601,816	726,483	8,228,962
Residential with Space Heat	65,932	49,095	41,266	28,316	26,649	24,730	29,047	26,918	22,517	28,201	43,564	59,178	445,414
Small Commercial & Industrial	1,002,817	929,529	988,520	867,930	1,022,471	1,074,579	1,195,016	1,150,961	1,004,611	1,008,256	981,976	1,024,513	12,251,179
Large Commercial & Industrial	557,005	526,436	595,158	562,229	575,353	591,338	668,556	702,678	639,737	626,024	557,928	573,909	7,176,350
Public Street & Highway Lighting	11,524	9,355	9,023	7,334	6,011	5,042	4,627	5,377	6,544	8,038	9,326	10,826	93,026
Other Sales to Public Authority	4,971	4,278	5,132	4,564	4,550	5,604	6,148	7,368	6,487	5,452	4,386	4,909	63,848
Interdepartmental	400	307	471	252	327	353	410	1,237	1,209	524	342	303	6,133
Total Retail	2,392,975	2,127,661	2,273,924	2,012,799	2,217,807	2,460,902	2,824,388	2,764,911	2,324,887	2,265,198	2,199,339	2,400,122	28,264,912

Number of Customers

	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	2022 Year
Residential without Space Heat	1,151,952	1,153,000	1,154,279	1,154,958	1,155,618	1,156,535	1,157,488	1,158,484	1,159,354	1,160,328	1,161,175	1,161,993	1,157,097
Residential with Space Heat	41,749	41,888	42,028	42,170	42,314	42,458	42,544	42,631	42,720	42,809	42,899	42,990	42,433
Small Commercial & Industrial	136,401	136,474	136,548	136,621	136,695	136,769	136,842	136,916	136,990	137,064	137,138	137,212	136,806
Large Commercial & Industrial	498	498	498	498	498	498	498	498	498	498	498	498	498
Public Street & Highway Lighting	5,661	5,669	5,677	5,686	5,694	5,703	5,712	5,721	5,730	5,739	5,748	5,756	5,708
Other Sales to Public Authority	1,457	1,456	1,456	1,455	1,455	1,454	1,454	1,453	1,453	1,452	1,452	1,452	1,454
Interdepartmental	5	5	5	5	5	5	5	5	5	5	5	5	5
Total Retail	1,337,723	1,338,990	1,340,491	1,341,393	1,342,279	1,343,422	1,344,543	1,345,708	1,346,750	1,347,895	1,348,915	1,349,906	1,344,001

Xcel Energy - Minnesota State
Test Year Sales and Customers Forecast by Customer Class

Weather Normalized Calendar Month Sales (MWh)

	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	2023 Year
Residential without Space Heat	746,195	604,929	630,281	537,658	579,255	756,044	919,291	869,231	642,537	589,093	602,474	727,554	8,204,541
Residential with Space Heat	67,240	49,998	41,863	28,598	26,875	24,832	29,167	27,022	22,637	28,386	43,889	59,510	450,018
Small Commercial & Industrial	1,049,886	880,145	1,093,502	919,479	1,017,285	1,051,079	1,150,785	1,106,928	962,569	958,369	944,126	979,966	12,114,118
Large Commercial & Industrial	546,246	516,578	584,568	550,618	564,421	579,286	656,551	690,798	626,789	618,556	549,655	564,259	7,048,325
Public Street & Highway Lighting	11,577	9,408	9,076	7,387	6,064	5,095	4,680	5,429	6,596	8,090	9,379	10,879	93,660
Other Sales to Public Authority	4,814	4,138	5,024	4,262	4,685	5,521	6,080	7,293	6,211	5,592	4,312	4,864	62,797
Interdepartmental	400	307	471	252	327	353	410	1,237	1,209	524	342	303	6,133
Total Retail	2,426,358	2,065,503	2,364,785	2,048,254	2,198,911	2,422,210	2,766,963	2,707,938	2,268,548	2,208,612	2,154,176	2,347,334	27,979,592

Number of Customers

	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	2023 Year
Residential without Space Heat	1,162,781	1,163,501	1,164,272	1,164,795	1,165,278	1,165,861	1,166,463	1,167,087	1,167,717	1,168,436	1,169,160	1,169,900	1,166,271
Residential with Space Heat	43,022	43,054	43,088	43,122	43,156	43,191	43,227	43,264	43,301	43,339	43,377	43,416	43,213
Small Commercial & Industrial	137,284	137,357	137,430	137,503	137,576	137,649	137,722	137,795	137,868	137,942	138,015	138,088	137,686
Large Commercial & Industrial	497	497	497	497	497	497	497	497	497	497	497	497	497
Public Street & Highway Lighting	5,762	5,769	5,775	5,781	5,788	5,795	5,802	5,808	5,816	5,823	5,830	5,837	5,799
Other Sales to Public Authority	1,451	1,451	1,450	1,450	1,450	1,449	1,449	1,449	1,448	1,448	1,448	1,448	1,449
Interdepartmental	5	5	5	5	5	5	5	5	5	5	5	5	5
Total Retail	1,350,802	1,351,634	1,352,517	1,353,153	1,353,750	1,354,447	1,355,165	1,355,905	1,356,652	1,357,490	1,358,332	1,359,191	1,354,920

Xcel Energy - Minnesota State
Test Year Sales and Customers Forecast by Customer Class

Weather Normalized Calendar Month Sales (MWh)

	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	2024 Year
Residential without Space Heat	745,300	628,036	629,214	536,464	578,670	754,312	917,755	867,588	641,104	588,607	602,419	727,642	8,217,111
Residential with Space Heat	67,279	51,922	41,767	28,443	26,716	24,558	28,883	26,731	22,392	28,261	43,918	59,648	450,519
Small Commercial & Industrial	1,034,490	900,344	1,078,785	904,602	1,001,948	1,036,577	1,135,133	1,090,624	946,971	941,919	928,360	964,215	11,963,970
Large Commercial & Industrial	540,421	533,301	586,606	557,485	575,766	595,623	675,228	714,242	656,903	648,957	585,896	603,737	7,274,164
Public Street & Highway Lighting	11,630	9,462	9,130	7,442	6,119	5,151	4,736	5,486	6,653	8,147	9,436	10,936	94,328
Other Sales to Public Authority	4,703	4,291	4,538	4,626	4,635	5,050	6,453	7,032	6,185	5,730	4,204	4,874	62,322
Interdepartmental	400	307	471	252	327	353	410	1,237	1,209	524	342	303	6,133
Total Retail	2,404,223	2,127,663	2,350,511	2,039,313	2,194,181	2,421,623	2,768,598	2,712,939	2,281,418	2,222,146	2,174,575	2,371,356	28,068,548

Number of Customers

	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	2024 Year
Residential without Space Heat	1,170,656	1,171,415	1,172,206	1,172,924	1,173,643	1,174,404	1,175,178	1,175,966	1,176,758	1,177,581	1,178,408	1,179,241	1,174,865
Residential with Space Heat	43,455	43,495	43,535	43,576	43,617	43,659	43,702	43,745	43,788	43,832	43,877	43,922	43,684
Small Commercial & Industrial	138,160	138,232	138,305	138,377	138,449	138,521	138,594	138,666	138,739	138,811	138,884	138,956	138,558
Large Commercial & Industrial	496	496	496	496	496	496	496	496	496	496	496	496	496
Public Street & Highway Lighting	5,844	5,852	5,859	5,866	5,874	5,882	5,889	5,897	5,904	5,912	5,920	5,928	5,886
Other Sales to Public Authority	1,447	1,447	1,447	1,446	1,446	1,446	1,446	1,446	1,445	1,445	1,445	1,445	1,446
Interdepartmental	5	5	5	5	5	5	5	5	5	5	5	5	5
Total Retail	1,360,063	1,360,942	1,361,853	1,362,690	1,363,530	1,364,413	1,365,310	1,366,221	1,367,135	1,368,082	1,369,035	1,369,993	1,364,939

Xcel Energy - Minnesota State
Test Year Sales and Customers Forecast by Customer Class

Weather Normalized Calendar Month Sales (MWh)

	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25	2025 Year
Residential without Space Heat	745,954	605,363	629,200	536,139	578,786	751,959	915,546	864,693	638,353	587,465	601,512	726,441	8,181,411
Residential with Space Heat	67,854	50,391	42,089	28,712	27,155	24,713	29,015	26,870	22,612	28,532	44,361	60,091	452,393
Small Commercial & Industrial	1,031,507	862,732	1,075,653	901,688	998,637	1,033,703	1,131,893	1,086,970	943,720	938,148	924,851	960,902	11,890,403
Large Commercial & Industrial	586,566	550,129	623,687	589,471	606,089	618,172	697,320	730,342	666,447	655,257	586,238	601,733	7,511,451
Public Street & Highway Lighting	11,688	9,520	9,189	7,500	6,178	5,210	4,795	5,545	6,712	8,207	9,495	10,995	95,034
Other Sales to Public Authority	4,688	4,045	4,912	4,564	4,152	5,454	6,175	7,015	6,315	5,291	4,186	4,765	61,562
Interdepartmental	400	307	471	252	327	353	410	1,237	1,209	524	342	303	6,133
Total Retail	2,448,658	2,082,488	2,385,200	2,068,326	2,221,323	2,439,563	2,785,155	2,722,671	2,285,368	2,223,423	2,170,985	2,365,230	28,198,389

Number of Customers

	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25	2025 Year
Residential without Space Heat	1,180,079	1,180,919	1,181,777	1,182,616	1,183,461	1,184,325	1,185,199	1,186,082	1,186,967	1,187,866	1,188,766	1,189,657	1,184,810
Residential with Space Heat	43,967	44,013	44,059	44,105	44,152	44,199	44,246	44,293	44,341	44,388	44,436	44,483	44,224
Small Commercial & Industrial	139,028	139,099	139,171	139,242	139,314	139,385	139,457	139,529	139,601	139,672	139,744	139,816	139,422
Large Commercial & Industrial	495	495	495	495	495	495	495	495	495	495	495	495	495
Public Street & Highway Lighting	5,935	5,943	5,951	5,959	5,967	5,975	5,982	5,990	5,998	6,006	6,013	6,021	5,978
Other Sales to Public Authority	1,445	1,445	1,444	1,444	1,444	1,444	1,444	1,444	1,443	1,443	1,443	1,443	1,444
Interdepartmental	5	5	5	5	5	5	5	5	5	5	5	5	5
Total Retail	1,370,954	1,371,919	1,372,902	1,373,866	1,374,838	1,375,828	1,376,828	1,377,838	1,378,850	1,379,875	1,380,902	1,381,920	1,376,377

Xcel Energy - Minnesota State
Test Year Sales and Customers Forecast by Customer Class

Weather Normalized Calendar Month Sales (MWh)

	Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26	2026 Year
Residential without Space Heat	743,756	603,709	626,732	533,436	576,830	747,866	911,642	860,632	634,783	585,469	600,006	724,859	8,149,721
Residential with Space Heat	68,587	51,061	42,361	28,500	26,442	24,064	28,476	26,201	21,820	28,182	44,295	60,586	450,575
Small Commercial & Industrial	1,023,341	855,163	1,067,576	893,866	990,306	1,025,913	1,123,472	1,078,187	935,558	929,460	916,596	952,739	11,792,176
Large Commercial & Industrial	581,079	545,366	620,360	583,928	599,936	613,456	693,439	727,876	663,953	653,663	581,078	598,265	7,462,399
Public Street & Highway Lighting	11,747	9,579	9,248	7,559	6,237	5,268	4,853	5,603	6,770	8,264	9,552	11,052	95,732
Other Sales to Public Authority	4,655	3,969	4,891	4,310	4,326	5,380	5,918	7,165	6,267	5,242	4,143	4,702	60,966
Interdepartmental	400	307	471	252	327	353	410	1,237	1,209	524	342	303	6,133
Total Retail	2,433,565	2,069,154	2,371,639	2,051,851	2,204,402	2,422,299	2,768,209	2,706,900	2,270,360	2,210,805	2,156,013	2,352,507	28,017,703

Number of Customers

	Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26	2026 Year
Residential without Space Heat	1,190,538	1,191,407	1,192,283	1,193,152	1,194,022	1,194,886	1,195,740	1,196,583	1,197,421	1,198,256	1,199,085	1,199,920	1,195,274
Residential with Space Heat	44,531	44,578	44,626	44,673	44,721	44,768	44,816	44,863	44,911	44,958	45,006	45,053	44,792
Small Commercial & Industrial	139,887	139,957	140,028	140,099	140,170	140,241	140,312	140,383	140,454	140,525	140,596	140,667	140,277
Large Commercial & Industrial	494	494	494	494	494	494	494	494	494	494	494	494	494
Public Street & Highway Lighting	6,029	6,037	6,044	6,052	6,060	6,067	6,075	6,082	6,089	6,097	6,104	6,112	6,071
Other Sales to Public Authority	1,443	1,443	1,443	1,442	1,442	1,442	1,442	1,442	1,442	1,442	1,442	1,442	1,442
Interdepartmental	5	5	5	5	5	5	5	5	5	5	5	5	5
Total Retail	1,382,927	1,383,921	1,384,923	1,385,917	1,386,914	1,387,903	1,388,884	1,389,852	1,390,816	1,391,777	1,392,732	1,393,693	1,388,355

Report Annual Energy Outlook 2021
Scenario ref2021 Reference case
Release Date February 3, 2021

4. Residential Sector Key Indicators and Consumption

(quadrillion Btu, unless otherwise noted)

Key Indicators and Consumption	2020	2021	2022	2023	2024	2025	2026	2021-2026 Avg
Key Indicators								
Households (millions)								
Total	**123.38**	**124.47**	**125.55**	**126.61**	**127.65**	**128.73**	**129.81**	
Delivered Energy Consumption by Fuel								
Purchased Electricity								
Space Heating	0.65	0.70	0.71	0.70	0.70	0.69	0.69	
per HH	0.00526	0.00561	0.00562	0.00553	0.00546	0.00539	0.00531	-1.1%
Space Cooling	0.81	0.77	0.86	0.87	0.89	0.90	0.92	
per HH	0.00653	0.00616	0.00686	0.00690	0.00695	0.00701	0.00706	2.8%
Water Heating	0.61	0.61	0.61	0.61	0.61	0.62	0.62	
per HH	0.00492	0.00490	0.00488	0.00484	0.00482	0.00478	0.00474	-0.7%
Refrigeration	0.30	0.30	0.29	0.29	0.29	0.29	0.29	
per HH	0.00241	0.00237	0.00234	0.00231	0.00228	0.00225	0.00222	-1.3%
Cooking	0.06	0.06	0.06	0.06	0.06	0.06	0.06	
per HH	0.00045	0.00044	0.00044	0.00044	0.00044	0.00044	0.00044	-0.3%
Clothes Dryers	0.22	0.22	0.22	0.23	0.23	0.23	0.24	
per HH	0.00175	0.00177	0.00178	0.00179	0.00181	0.00182	0.00182	0.6%
Freezers	0.07	0.07	0.07	0.07	0.07	0.07	0.07	
per HH	0.00056	0.00055	0.00055	0.00054	0.00054	0.00053	0.00052	-1.1%
Lighting	0.21	0.20	0.20	0.20	0.20	0.20	0.20	
per HH	0.00171	0.00164	0.00161	0.00159	0.00158	0.00155	0.00153	-1.4%
Clothes Washers 1/	0.04	0.04	0.04	0.04	0.04	0.04	0.04	
per HH	0.00030	0.00030	0.00030	0.00030	0.00030	0.00030	0.00030	0.1%
Dishwashers 1/	0.03	0.03	0.03	0.03	0.03	0.03	0.03	
per HH	0.00022	0.00022	0.00022	0.00022	0.00022	0.00022	0.00022	0.6%
Televisions and Related Equipment 2/	0.21	0.21	0.20	0.20	0.20	0.20	0.20	
per HH	0.00169	0.00165	0.00161	0.00158	0.00156	0.00154	0.00153	-1.5%
Computers and Related Equipment 3/	0.09	0.08	0.08	0.08	0.08	0.08	0.07	
per HH	0.00070	0.00067	0.00065	0.00063	0.00061	0.00059	0.00057	-3.3%
Furnace Fans and Boiler Circulation Pumps	0.08	0.08	0.08	0.09	0.09	0.09	0.09	
per HH	0.00063	0.00068	0.00068	0.00067	0.00067	0.00067	0.00067	-0.3%
Other Uses 4/	1.78	1.82	1.73	1.75	1.76	1.77	1.79	
per HH	0.01444	0.01461	0.01380	0.01380	0.01378	0.01377	0.01382	-1.1%
Delivered Energy	**5.13**	**5.18**	**5.19**	**5.21**	**5.23**	**5.26**	**5.29**	
per HH	0.04159	0.04158	0.04134	0.04115	0.04100	0.04085	0.04075	-0.4%

1/ Does not include water heating portion of load.

2/ Includes televisions, set-top boxes, home theater systems, DVD and Blu-ray players, and video game consoles.

3/ Includes desktop and laptop computers, monitors, and networking equipment.

4/ Includes electric and electronic devices, heating elements, and motors not listed above. Electric vehicles are included in the transportation sector.

Btu = British thermal unit.

- - = Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: 2020: U.S. Energy Information Administration (EIA), Short-Term Energy Outlook, October 2020 and EIA, AEO2021 National Energy Modeling System run ref2021-d113020a. Projections: EIA, AEO2021 National Energy Modeling System run ref2021-d113020a.

Report Annual Energy Outlook 2021
Scenario ref2021 Reference case
Release Date February 3, 2021

5. Commercial Sector Key Indicators and Consumption

(quadrillion Btu, unless otherwise noted)

Key Indicators and Consumption	2020	2021	2022	2023	2024	2025	2026	2021-2026 Avg
Key Indicators								
Total Floorspace (billion square feet)								
Total	**93.6**	**94.5**	**95.3**	**96.3**	**97.2**	**98.2**	**99.2**	
Delivered Energy Consumption by Fuel								
Purchased Electricity								
Space Heating 1/	0.11	0.12	0.11	0.11	0.11	0.11	0.11	
Per SqFt	0.0012	0.0012	0.0012	0.0012	0.0012	0.0011	0.0011	-1.7%
Space Cooling 1/	0.53	0.50	0.54	0.54	0.55	0.55	0.55	
Per SqFt	0.0057	0.0053	0.0057	0.0057	0.0056	0.0056	0.0056	1.1%
Water Heating 1/	0.03	0.02	0.02	0.02	0.02	0.02	0.02	
Per SqFt	0.0003	0.0003	0.0003	0.0003	0.0002	0.0002	0.0002	-2.2%
Ventilation	0.51	0.50	0.50	0.50	0.49	0.49	0.48	
Per SqFt	0.0054	0.0053	0.0052	0.0051	0.0051	0.0050	0.0049	-1.7%
Cooking	0.08	0.08	0.08	0.08	0.08	0.08	0.08	
Per SqFt	0.0009	0.0009	0.0009	0.0009	0.0009	0.0008	0.0008	-1.3%
Lighting	0.53	0.52	0.50	0.49	0.48	0.48	0.47	
Per SqFt	0.0057	0.0055	0.0053	0.0051	0.0050	0.0048	0.0047	-2.9%
Refrigeration	0.65	0.65	0.64	0.64	0.64	0.64	0.64	
Per SqFt	0.0070	0.0069	0.0068	0.0067	0.0066	0.0065	0.0065	-1.2%
Computing	0.33	0.33	0.32	0.32	0.32	0.32	0.32	
Per SqFt	0.0035	0.0034	0.0034	0.0033	0.0033	0.0032	0.0032	-1.6%
Office Equipment	0.44	0.46	0.47	0.49	0.51	0.53	0.54	
Per SqFt	0.0046	0.0048	0.0050	0.0051	0.0053	0.0054	0.0055	2.7%
Other Uses 2/	1.21	1.32	1.39	1.46	1.53	1.61	1.62	
Per SqFt	0.0130	0.0140	0.0146	0.0152	0.0158	0.0163	0.0163	3.1%
Delivered Energy	**4.42**	**4.50**	**4.60**	**4.67**	**4.75**	**4.83**	**4.85**	
Per SqFt	0.0473	0.0476	0.0482	0.0485	0.0489	0.0492	0.0489	0.5%

1/ Includes fuel consumption for district services.

2/ Includes (but is not limited to) miscellaneous uses such as transformers, medical imaging and other medical equipment, elevators, escalators, off-road electric vehicles, laboratory fume hoods, laundry equipment, coffee brewers, and water services.

Btu = British thermal unit.

- - = Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: 2020: U.S. Energy Information Administration (EIA), Short-Term Energy Outlook, October 2020 and EIA, AEO2021 National Energy Modeling System run ref2021-d113020a. Projections: EIA, AEO2021 National Energy Modeling System run ref2021-d113020a.

Exogenous Adjustments to the Forecast

Continuing Historical DSM Adjustment, MWh

	Residential without Space Heat	Residential with Space Heat	Small C&I	Large C&I	Total
2022	-773,941	-37,063	-2,866,484	-1,687,697	-5,365,185
2023	-665,281	-31,860	-2,790,033	-1,642,684	-5,129,857
2024	-556,611	-26,656	-2,691,861	-1,584,884	-4,860,011
2025	-447,959	-21,452	-2,472,174	-1,455,539	-4,397,124
2026	-339,298	-16,249	-2,252,392	-1,326,138	-3,934,077
Jan-22	-64,004	-3,065	-240,356	-141,514	-448,940
Feb-22	-52,520	-2,515	-219,660	-129,329	-404,024
Mar-22	-58,515	-2,802	-235,756	-138,806	-435,879
Apr-22	-54,503	-2,610	-223,703	-131,709	-412,526
May-22	-50,729	-2,429	-238,126	-140,201	-431,485
Jun-22	-75,318	-3,607	-225,572	-132,810	-437,307
Jul-22	-82,693	-3,960	-245,393	-144,480	-476,526
Aug-22	-83,756	-4,011	-255,308	-150,317	-493,392
Sep-22	-71,155	-3,408	-238,280	-140,292	-453,135
Oct-22	-58,669	-2,810	-254,424	-149,797	-465,699
Nov-22	-57,578	-2,757	-245,822	-144,732	-450,890
Dec-22	-64,500	-3,089	-244,083	-143,709	-455,381
Jan-23	-55,018	-2,635	-233,945	-137,740	-429,338
Feb-23	-45,147	-2,162	-213,802	-125,880	-386,990
Mar-23	-50,300	-2,409	-229,468	-135,104	-417,281
Apr-23	-46,851	-2,244	-217,737	-128,197	-395,028
May-23	-43,606	-2,088	-231,775	-136,462	-413,932
Jun-23	-64,744	-3,101	-219,555	-129,267	-416,666
Jul-23	-71,083	-3,404	-238,847	-140,626	-453,960
Aug-23	-71,997	-3,448	-248,498	-146,308	-470,252
Sep-23	-61,164	-2,929	-231,926	-136,551	-432,570
Oct-23	-50,431	-2,415	-247,639	-145,802	-446,288
Nov-23	-49,494	-2,370	-239,266	-140,873	-432,004
Dec-23	-55,444	-2,655	-237,574	-139,876	-435,549
Jan-24	-45,920	-2,199	-225,091	-132,527	-405,738
Feb-24	-39,026	-1,869	-213,057	-125,441	-379,393
Mar-24	-41,982	-2,010	-220,783	-129,990	-394,766
Apr-24	-39,103	-1,873	-209,500	-123,347	-373,823
May-24	-36,395	-1,743	-223,007	-131,300	-392,445
Jun-24	-54,037	-2,588	-211,281	-124,396	-392,301
Jul-24	-59,329	-2,841	-229,855	-135,332	-427,357
Aug-24	-60,091	-2,878	-239,111	-140,781	-442,862
Sep-24	-51,050	-2,445	-223,141	-131,379	-408,015
Oct-24	-42,092	-2,016	-238,252	-140,275	-422,635
Nov-24	-41,310	-1,978	-230,196	-135,532	-409,017
Dec-24	-46,275	-2,216	-228,585	-134,584	-411,660
Jan-25	-37,045	-1,774	-207,287	-122,044	-368,150
Feb-25	-30,399	-1,456	-189,439	-111,536	-332,829
Mar-25	-33,869	-1,622	-203,320	-119,708	-358,519
Apr-25	-31,546	-1,511	-192,929	-113,591	-339,576
May-25	-29,362	-1,406	-205,368	-120,914	-357,051
Jun-25	-43,594	-2,088	-194,570	-114,557	-354,808
Jul-25	-47,863	-2,292	-211,674	-124,627	-386,457
Aug-25	-48,479	-2,322	-220,198	-129,646	-400,644
Sep-25	-41,185	-1,972	-205,491	-120,987	-369,635
Oct-25	-33,958	-1,626	-219,406	-129,180	-384,170
Nov-25	-33,327	-1,596	-211,988	-124,812	-371,722
Dec-25	-37,332	-1,788	-210,504	-123,938	-373,562
Jan-26	-28,059	-1,344	-188,859	-111,194	-329,456
Feb-26	-23,025	-1,103	-172,597	-101,620	-298,344
Mar-26	-25,653	-1,228	-185,244	-109,066	-321,192
Apr-26	-23,894	-1,144	-175,777	-103,492	-304,308
May-26	-22,239	-1,065	-187,110	-110,165	-320,579
Jun-26	-33,020	-1,581	-177,272	-104,372	-316,246
Jul-26	-36,253	-1,736	-192,857	-113,548	-344,393
Aug-26	-36,719	-1,758	-200,622	-118,120	-357,220
Sep-26	-31,195	-1,494	-187,223	-110,231	-330,142
Oct-26	-25,721	-1,232	-199,900	-117,695	-344,548
Nov-26	-25,243	-1,209	-193,142	-113,716	-333,309
Dec-26	-28,277	-1,354	-191,790	-112,920	-334,341

Future DSM Adjustment, MWh

	Residential without Space Heat	Residential with Space Heat	Small C&I	Large C&I
2022	-405,758	-19,431	-543,676	-320,100
2023	-584,293	-27,981	-835,225	-491,755
2024	-791,688	-37,913	-1,152,257	-678,413
2025	-1,004,131	-48,087	-1,464,988	-862,539
2026	-1,219,910	-58,420	-1,795,074	-1,056,884
Jan-22	-33,556	-1,607	-45,586	-26,840
Feb-22	-27,535	-1,319	-41,661	-24,529
Mar-22	-30,678	-1,469	-44,714	-26,326
Apr-22	-28,575	-1,368	-42,429	-24,981
May-22	-26,596	-1,274	-45,164	-26,591
Jun-22	-39,488	-1,891	-42,789	-25,193
Jul-22	-43,354	-2,076	-46,551	-27,408
Aug-22	-43,911	-2,103	-48,426	-28,512
Sep-22	-37,305	-1,786	-45,191	-26,607
Oct-22	-30,759	-1,473	-48,251	-28,409
Nov-22	-30,187	-1,446	-46,620	-27,448
Dec-22	-33,816	-1,619	-46,294	-27,256
Jan-23	-48,320	-2,314	-70,032	-41,233
Feb-23	-39,651	-1,899	-64,002	-37,682
Mar-23	-44,177	-2,116	-68,692	-40,443
Apr-23	-41,147	-1,971	-65,181	-38,377
May-23	-38,298	-1,834	-69,384	-40,851
Jun-23	-56,862	-2,723	-65,735	-38,703
Jul-23	-62,430	-2,990	-71,514	-42,105
Aug-23	-63,233	-3,028	-74,394	-43,801
Sep-23	-53,719	-2,573	-69,425	-40,875
Oct-23	-44,292	-2,121	-74,127	-43,643
Nov-23	-43,469	-2,082	-71,620	-42,168
Dec-23	-48,695	-2,332	-71,119	-41,873
Jan-24	-65,313	-3,128	-96,351	-56,728
Feb-24	-55,509	-2,658	-91,199	-53,695
Mar-24	-59,712	-2,860	-94,507	-55,643
Apr-24	-55,618	-2,663	-89,677	-52,799
May-24	-51,766	-2,479	-95,459	-56,203
Jun-24	-76,859	-3,681	-90,440	-53,248
Jul-24	-84,385	-4,041	-98,390	-57,929
Aug-24	-85,470	-4,093	-102,352	-60,262
Sep-24	-72,610	-3,477	-95,516	-56,237
Oct-24	-59,869	-2,867	-101,984	-60,045
Nov-24	-58,756	-2,814	-98,536	-58,015
Dec-24	-65,820	-3,152	-97,846	-57,609
Jan-25	-83,041	-3,977	-122,836	-72,322
Feb-25	-68,141	-3,263	-112,260	-66,095
Mar-25	-75,919	-3,636	-120,485	-70,938
Apr-25	-70,713	-3,386	-114,328	-67,313
May-25	-65,817	-3,152	-121,699	-71,653
Jun-25	-97,720	-4,680	-115,300	-67,885
Jul-25	-107,288	-5,138	-125,437	-73,853
Aug-25	-108,668	-5,204	-130,488	-76,827
Sep-25	-92,318	-4,421	-121,772	-71,696
Oct-25	-76,118	-3,645	-130,018	-76,551
Nov-25	-74,704	-3,577	-125,622	-73,962
Dec-25	-83,684	-4,008	-124,743	-73,445
Jan-26	-100,885	-4,831	-150,513	-88,618
Feb-26	-82,784	-3,964	-137,554	-80,987
Mar-26	-92,234	-4,417	-147,633	-86,922
Apr-26	-85,909	-4,114	-140,088	-82,479
May-26	-79,960	-3,829	-149,120	-87,797
Jun-26	-118,719	-5,685	-141,279	-83,181
Jul-26	-130,344	-6,242	-153,700	-90,494
Aug-26	-132,020	-6,322	-159,889	-94,137
Sep-26	-112,156	-5,371	-149,210	-87,850
Oct-26	-92,475	-4,429	-159,313	-93,799
Nov-26	-90,757	-4,346	-153,927	-90,627
Dec-26	-101,667	-4,869	-152,849	-89,993

Exogenous Adjustments to the Forecast

DSM Overachievement Adjustment, MWh

Total		Residential without Space Heat	Residential with Space Heat	Small C&I	Large C&I	Total
-1,288,965	2022	-65,765	-3,450	-58,025	-34,262	-161,502
-1,939,254	2023	-65,765	-3,450	-58,025	-34,262	-161,502
-2,660,270	2024	-65,765	-3,450	-58,025	-34,262	-161,502
-3,379,744	2025	-65,765	-3,450	-58,025	-34,262	-161,502
-4,130,289	2026	-65,765	-3,450	-58,025	-34,262	-161,502
-107,589	Jan-22	-5,234	-395	-4,875	-2,742	-13,246
-95,043	Feb-22	-4,191	-308	-4,313	-2,468	-11,279
-103,187	Mar-22	-4,900	-323	-4,767	-2,817	-12,807
-97,352	Apr-22	-4,457	-214	-4,197	-2,710	-11,578
-99,625	May-22	-4,412	-172	-4,850	-2,904	-12,338
-109,361	Jun-22	-6,495	-311	-4,623	-2,722	-14,151
-119,389	Jul-22	-7,131	-341	-5,029	-2,961	-15,463
-122,951	Aug-22	-7,223	-346	-5,233	-3,081	-15,882
-110,890	Sep-22	-6,136	-294	-4,884	-2,875	-14,189
-108,892	Oct-22	-5,059	-242	-5,214	-3,070	-13,586
-105,701	Nov-22	-4,965	-238	-5,038	-2,966	-13,207
-108,985	Dec-22	-5,562	-266	-5,002	-2,945	-13,776
-161,899	Jan-23	-5,234	-395	-4,875	-2,742	-13,246
-143,234	Feb-23	-4,191	-308	-4,313	-2,468	-11,279
-155,427	Mar-23	-4,900	-323	-4,767	-2,817	-12,807
-146,676	Apr-23	-4,457	-214	-4,197	-2,710	-11,578
-150,367	May-23	-4,412	-172	-4,850	-2,904	-12,338
-164,024	Jun-23	-6,495	-311	-4,623	-2,722	-14,151
-179,040	Jul-23	-7,131	-341	-5,029	-2,961	-15,463
-184,456	Aug-23	-7,223	-346	-5,233	-3,081	-15,882
-166,592	Sep-23	-6,136	-294	-4,884	-2,875	-14,189
-164,183	Oct-23	-5,059	-242	-5,214	-3,070	-13,586
-159,339	Nov-23	-4,965	-238	-5,038	-2,966	-13,207
-164,018	Dec-23	-5,562	-266	-5,002	-2,945	-13,776
-221,520	Jan-24	-5,234	-395	-4,875	-2,742	-13,246
-203,062	Feb-24	-4,191	-308	-4,313	-2,468	-11,279
-212,721	Mar-24	-4,900	-323	-4,767	-2,817	-12,807
-200,757	Apr-24	-4,457	-214	-4,197	-2,710	-11,578
-205,907	May-24	-4,412	-172	-4,850	-2,904	-12,338
-224,227	Jun-24	-6,495	-311	-4,623	-2,722	-14,151
-244,745	Jul-24	-7,131	-341	-5,029	-2,961	-15,463
-252,177	Aug-24	-7,223	-346	-5,233	-3,081	-15,882
-227,841	Sep-24	-6,136	-294	-4,884	-2,875	-14,189
-224,765	Oct-24	-5,059	-242	-5,214	-3,070	-13,586
-218,121	Nov-24	-4,965	-238	-5,038	-2,966	-13,207
-224,426	Dec-24	-5,562	-266	-5,002	-2,945	-13,776
-282,176	Jan-25	-5,234	-395	-4,875	-2,742	-13,246
-249,759	Feb-25	-4,191	-308	-4,313	-2,468	-11,279
-270,978	Mar-25	-4,900	-323	-4,767	-2,817	-12,807
-255,740	Apr-25	-4,457	-214	-4,197	-2,710	-11,578
-262,320	May-25	-4,412	-172	-4,850	-2,904	-12,338
-285,585	Jun-25	-6,495	-311	-4,623	-2,722	-14,151
-311,716	Jul-25	-7,131	-341	-5,029	-2,961	-15,463
-321,186	Aug-25	-7,223	-346	-5,233	-3,081	-15,882
-290,207	Sep-25	-6,136	-294	-4,884	-2,875	-14,189
-286,332	Oct-25	-5,059	-242	-5,214	-3,070	-13,586
-277,865	Nov-25	-4,965	-238	-5,038	-2,966	-13,207
-285,879	Dec-25	-5,562	-266	-5,002	-2,945	-13,776
-344,848	Jan-26	-5,234	-395	-4,875	-2,742	-13,246
-305,290	Feb-26	-4,191	-308	-4,313	-2,468	-11,279
-331,205	Mar-26	-4,900	-323	-4,767	-2,817	-12,807
-312,591	Apr-26	-4,457	-214	-4,197	-2,710	-11,578
-320,707	May-26	-4,412	-172	-4,850	-2,904	-12,338
-348,865	Jun-26	-6,495	-311	-4,623	-2,722	-14,151
-380,779	Jul-26	-7,131	-341	-5,029	-2,961	-15,463
-392,368	Aug-26	-7,223	-346	-5,233	-3,081	-15,882
-354,587	Sep-26	-6,136	-294	-4,884	-2,875	-14,189
-350,016	Oct-26	-5,059	-242	-5,214	-3,070	-13,586
-339,657	Nov-26	-4,965	-238	-5,038	-2,966	-13,207
-349,378	Dec-26	-5,562	-266	-5,002	-2,945	-13,776

Reduction for Integrated Volt-Var Optimization (IVVO), MWh

	Residential without Space Heat	Residential with Space Heat	Small C&I	Large C&I	Total
2022	0	0	0	0	0
2023	0	0	0	0	0
2024	-1,068	-53	-1,677	-724	-3,522
2025	-2,610	-129	-4,098	-1,769	-8,606
2026	-5,126	-254	-8,050	-3,475	-16,905
Jan-22	0	0	0	0	0
Feb-22	0	0	0	0	0
Mar-22	0	0	0	0	0
Apr-22	0	0	0	0	0
May-22	0	0	0	0	0
Jun-22	0	0	0	0	0
Jul-22	0	0	0	0	0
Aug-22	0	0	0	0	0
Sep-22	0	0	0	0	0
Oct-22	0	0	0	0	0
Nov-22	0	0	0	0	0
Dec-22	0	0	0	0	0
Jan-23	0	0	0	0	0
Feb-23	0	0	0	0	0
Mar-23	0	0	0	0	0
Apr-23	0	0	0	0	0
May-23	0	0	0	0	0
Jun-23	0	0	0	0	0
Jul-23	0	0	0	0	0
Aug-23	0	0	0	0	0
Sep-23	0	0	0	0	0
Oct-23	0	0	0	0	0
Nov-23	0	0	0	0	0
Dec-23	0	0	0	0	0
Jan-24	-98	-5	-154	-66	-323
Feb-24	-81	-4	-127	-55	-267
Mar-24	-92	-5	-145	-62	-304
Apr-24	-82	-4	-129	-56	-271
May-24	-79	-4	-124	-53	-260
Jun-24	-84	-4	-131	-57	-276
Jul-24	-103	-5	-162	-70	-340
Aug-24	-106	-5	-167	-72	-350
Sep-24	-94	-5	-147	-63	-309
Oct-24	-88	-4	-138	-60	-290
Nov-24	-73	-4	-114	-49	-240
Dec-24	-89	-4	-140	-60	-294
Jan-25	-239	-12	-375	-162	-788
Feb-25	-198	-10	-310	-134	-652
Mar-25	-225	-11	-353	-153	-742
Apr-25	-201	-10	-315	-136	-662
May-25	-193	-10	-302	-130	-635
Jun-25	-204	-10	-321	-138	-673
Jul-25	-252	-12	-395	-171	-830
Aug-25	-259	-13	-407	-176	-855
Sep-25	-229	-11	-359	-155	-754
Oct-25	-215	-11	-338	-146	-710
Nov-25	-178	-9	-279	-120	-586
Dec-25	-218	-11	-342	-148	-718
Jan-26	-470	-23	-738	-318	-1,549
Feb-26	-388	-19	-610	-263	-1,281
Mar-26	-442	-22	-694	-300	-1,458
Apr-26	-394	-20	-619	-267	-1,300
May-26	-378	-19	-594	-256	-1,247
Jun-26	-401	-20	-630	-272	-1,322
Jul-26	-495	-25	-777	-335	-1,631
Aug-26	-509	-25	-800	-345	-1,680
Sep-26	-449	-22	-706	-305	-1,482
Oct-26	-423	-21	-664	-286	-1,394
Nov-26	-349	-17	-548	-237	-1,151
Dec-26	-428	-21	-671	-290	-1,410

Exogenous Adjustments to the Forecast

Reduction for Behind-the-Meter Solar Generation, MWh

	Residential without Space Heat	Residential with Space Heat	Small C&I	Large C&I	Total
2022	-55,089	-3,387	-65,223	-4,332	-128,031
2023	-66,736	-4,196	-70,871	-4,833	-146,637
2024	-78,908	-5,043	-77,194	-5,396	-166,541
2025	-95,047	-6,166	-84,237	-6,023	-191,474
2026	-116,400	-7,651	-92,104	-6,725	-222,880
Jan-22	-3,210	-194	-4,082	-202	-7,689
Feb-22	-3,750	-228	-4,702	-277	-8,956
Mar-22	-4,471	-272	-5,537	-377	-10,658
Apr-22	-5,089	-311	-6,220	-459	-12,079
May-22	-5,551	-340	-6,700	-516	-13,106
Jun-22	-5,727	-352	-6,824	-530	-13,432
Jul-22	-5,645	-348	-6,640	-506	-13,138
Aug-22	-5,153	-318	-5,982	-425	-11,879
Sep-22	-4,648	-288	-5,322	-344	-10,602
Oct-22	-4,162	-258	-4,701	-269	-9,390
Nov-22	-3,813	-237	-4,246	-213	-8,508
Dec-22	-3,871	-241	-4,268	-214	-8,594
Jan-23	-4,039	-252	-4,428	-233	-8,951
Feb-23	-4,680	-292	-5,100	-312	-10,384
Mar-23	-5,543	-347	-6,007	-419	-12,316
Apr-23	-6,266	-393	-6,751	-506	-13,915
May-23	-6,790	-426	-7,276	-567	-15,059
Jun-23	-6,960	-437	-7,415	-582	-15,395
Jul-23	-6,816	-429	-7,220	-558	-15,023
Aug-23	-6,182	-390	-6,508	-472	-13,551
Sep-23	-5,537	-350	-5,792	-386	-12,065
Oct-23	-4,924	-311	-5,117	-306	-10,658
Nov-23	-4,476	-283	-4,621	-246	-9,626
Dec-23	-4,523	-287	-4,637	-247	-9,693
Jan-24	-4,811	-305	-4,896	-277	-10,289
Feb-24	-5,583	-355	-5,639	-362	-11,939
Mar-24	-6,525	-415	-6,545	-467	-13,951
Apr-24	-7,381	-470	-7,351	-560	-15,762
May-24	-8,002	-510	-7,914	-624	-17,050
Jun-24	-8,202	-524	-8,055	-639	-17,420
Jul-24	-8,035	-514	-7,834	-611	-16,994
Aug-24	-7,292	-467	-7,056	-520	-15,335
Sep-24	-6,539	-420	-6,278	-429	-13,665
Oct-24	-5,825	-374	-5,548	-343	-12,090
Nov-24	-5,312	-341	-5,018	-281	-10,951
Dec-24	-5,402	-348	-5,060	-285	-11,094
Jan-25	-5,667	-365	-5,264	-307	-11,603
Feb-25	-6,591	-425	-6,066	-398	-13,481
Mar-25	-7,828	-505	-7,146	-521	-15,999
Apr-25	-8,870	-574	-8,029	-620	-18,094
May-25	-9,633	-624	-8,649	-690	-19,596
Jun-25	-9,894	-642	-8,809	-706	-20,051
Jul-25	-9,710	-631	-8,572	-678	-19,591
Aug-25	-8,828	-574	-7,725	-580	-17,707
Sep-25	-7,930	-516	-6,875	-482	-15,803
Oct-25	-7,074	-461	-6,077	-391	-14,002
Nov-25	-6,458	-421	-5,494	-324	-12,696
Dec-25	-6,564	-428	-5,531	-327	-12,850
Jan-26	-6,884	-450	-5,745	-350	-13,429
Feb-26	-8,017	-524	-6,621	-448	-15,610
Mar-26	-9,534	-624	-7,801	-579	-18,539
Apr-26	-10,821	-709	-8,770	-686	-20,986
May-26	-11,771	-773	-9,452	-761	-22,756
Jun-26	-12,112	-796	-9,632	-780	-23,320
Jul-26	-11,906	-784	-9,379	-750	-22,818
Aug-26	-10,841	-714	-8,455	-645	-20,656
Sep-26	-9,752	-643	-7,527	-541	-18,463
Oct-26	-8,710	-575	-6,655	-442	-16,382
Nov-26	-7,959	-525	-6,015	-370	-14,869
Dec-26	-8,092	-535	-6,051	-373	-15,051

Exogenous Adjustments to the Forecast

Electric Vehicle Charging, MWh

	Residential without Space Heat	Residential with Space Heat	Small C&I	Large C&I	Total
2022	39,393	1,447	3,136	11,999	55,975
2023	76,815	2,847	6,339	17,472	103,473
2024	123,010	4,574	11,151	27,583	166,318
2025	166,888	6,230	16,891	43,957	233,965
2026	209,871	7,865	23,745	68,918	310,400
Jan-22	1,822	66	136	323	2,348
Feb-22	2,088	76	159	446	2,769
Mar-22	2,354	86	182	569	3,190
Apr-22	2,619	96	205	692	3,612
May-22	2,885	106	227	815	4,033
Jun-22	3,150	116	250	938	4,454
Jul-22	3,416	126	273	1,061	4,875
Aug-22	3,681	135	295	1,184	5,296
Sep-22	3,947	145	318	1,307	5,718
Oct-22	4,212	155	341	1,430	6,139
Nov-22	4,477	165	363	1,553	6,560
Dec-22	4,743	175	386	1,677	6,981
Jan-23	4,998	185	408	1,643	7,234
Feb-23	5,253	194	430	1,609	7,486
Mar-23	5,508	204	452	1,575	7,739
Apr-23	5,764	213	474	1,541	7,991
May-23	6,019	223	496	1,507	8,244
Jun-23	6,274	232	518	1,473	8,496
Jul-23	6,529	242	539	1,439	8,749
Aug-23	6,784	251	561	1,405	9,002
Sep-23	7,039	261	583	1,371	9,254
Oct-23	7,294	271	604	1,338	9,507
Nov-23	7,549	280	626	1,304	9,759
Dec-23	7,804	290	648	1,270	10,012
Jan-24	8,181	304	691	1,428	10,604
Feb-24	8,557	318	735	1,586	11,196
Mar-24	8,934	332	778	1,744	11,788
Apr-24	9,310	346	822	1,902	12,380
May-24	9,686	360	865	2,061	12,972
Jun-24	10,063	374	908	2,219	13,564
Jul-24	10,439	388	951	2,377	14,156
Aug-24	10,815	402	994	2,536	14,748
Sep-24	11,192	416	1,037	2,695	15,340
Oct-24	11,568	431	1,080	2,853	15,932
Nov-24	11,944	445	1,123	3,012	16,524
Dec-24	12,321	459	1,166	3,171	17,116
Jan-25	12,565	468	1,203	3,246	17,482
Feb-25	12,809	477	1,240	3,322	17,849
Mar-25	13,053	487	1,277	3,398	18,215
Apr-25	13,297	496	1,315	3,474	18,581
May-25	13,541	505	1,352	3,550	18,948
Jun-25	13,785	514	1,389	3,625	19,314
Jul-25	14,029	524	1,426	3,701	19,680
Aug-25	14,273	533	1,463	3,777	20,047
Sep-25	14,518	542	1,500	3,853	20,413
Oct-25	14,762	552	1,538	3,928	20,779
Nov-25	15,006	561	1,575	4,004	21,146
Dec-25	15,250	570	1,612	4,080	21,512
Jan-26	15,594	583	1,669	4,335	22,182
Feb-26	15,939	596	1,725	4,592	22,852
Mar-26	16,283	609	1,782	4,847	23,522
Apr-26	16,628	623	1,838	5,103	24,192
May-26	16,973	636	1,894	5,359	24,862
Jun-26	17,317	649	1,951	5,615	25,532
Jul-26	17,662	662	2,007	5,871	26,202
Aug-26	18,006	675	2,064	6,127	26,872
Sep-26	18,351	688	2,120	6,383	27,541
Oct-26	18,695	701	2,176	6,639	28,211
Nov-26	19,039	715	2,232	6,895	28,881
Dec-26	19,384	728	2,288	7,151	29,551

Exogenous Adjustments to the Forecast

Adjustments for New Load Additions and Reductions, MWh

	Customer A	Customer B	Customer C	Customer D	Customer E	Customer F	Customer G	Customer H	Customer I	Customer J	Customer K	Customer L	Total
	[PROTECTED DATA BEGINS												
2022													
2023													
2024													
2025													
2026													
Jan-22													
Feb-22													
Mar-22													
Apr-22													
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Jul-26													
Aug-26													
Sep-26													
Oct-26													
Nov-26													
Dec-26													**PROTECTED DATA ENDS]**

Xcel Energy Minnesota Residential without Space Heat
Test Year 2022-2026 MWh Electric Sales

Variable	Coefficient	StdErr	T-Stat	P-Value	Definition
CYPNR_MN	2,884.7	397.1	7.265	0.00%	Real Personal Income per Capita, Minnesota, millions 2012$, Bureau of Economic Analysis
BillDaysCellnet21	13,976.8	625.3	22.353	0.00%	Average number of billing days per month
Dec2016	-40,314.4	14,884.8	-2.708	0.73%	Binary variable December 2016=1, otherwise=0
H65_bill_RX_MN_Jan	0.000146	0.000004	34.160	0.00%	Heating Degree Days*Number Residential without Space Heat Customers, January
H65_bill_RX_MN_Feb	0.000106	0.000004	25.479	0.00%	Heating Degree Days*Number Residential without Space Heat Customers, February
H65_bill_RX_MN_Mar	0.000093	0.000005	20.104	0.00%	Heating Degree Days*Number Residential without Space Heat Customers, March
H65_bill_RX_MN_Apr	0.000060	0.000007	8.572	0.00%	Heating Degree Days*Number Residential without Space Heat Customers, April
H65_bill_RX_MN_Oct	0.000070	0.000023	2.986	0.32%	Heating Degree Days*Number Residential without Space Heat Customers, October
H65_bill_RX_MN_Nov	0.000067	0.000009	7.191	0.00%	Heating Degree Days*Number Residential without Space Heat Customers, November
H65_bill_RX_MN_Dec	0.000118	0.000005	21.819	0.00%	Heating Degree Days*Number Residential without Space Heat Customers, December
T65_bill_RX_MN_May	0.001691	0.000836	2.024	4.42%	THI Degree Days*Number Residential without Space Heat Customers, May
T65_bill_RX_MN_Jun	0.001932	0.000086	22.498	0.00%	THI Degree Days*Number Residential without Space Heat Customers, June
T65_bill_RX_MN_Jul	0.001975	0.000034	58.380	0.00%	THI Degree Days*Number Residential without Space Heat Customers, July
T65_bill_RX_MN_Aug	0.002061	0.000032	64.480	0.00%	THI Degree Days*Number Residential without Space Heat Customers, August
T65_bill_RX_MN_Sep	0.002257	0.000063	36.030	0.00%	THI Degree Days*Number Residential without Space Heat Customers, September
T65_bill_RX_MN_Oct	0.001886	0.000211	8.939	0.00%	THI Degree Days*Number Residential without Space Heat Customers, October
Sep2013	-54,584.4	16,700.0	-3.269	0.13%	Binary variable September 2013=1, otherwise=0
PostOct08	24,444.5	5,179.5	4.719	0.00%	Binary variable beginning November 2008=1, otherwise=0

Residential_Forecast_M					
N_3	23,612.3	8,289.1	2.849	0.49%	Google Mobility Data - Residential Index to account for COVID-19 pandemic impacts
AR(1)	0.4898	0.0628	7.804	0.00%	First order autoregressive correction term

Dependent Variable					Definition
SLS_Reswo_MN					Minnesota Demand Side Management adjusted Billed Sales (MWh) for the Residential without Space Heat customer class.

Xcel Energy Minnesota Residential without Space Heat
Test Year 2022-2026 MWh Electric Sales

Model Statistics		
Iterations		13
Adjusted Observations		220
Deg. of Freedom for Error		200
R-Squared		0.987
Adjusted R-Squared		0.986
AIC		19.472
BIC		19.780
F-Statistic	#NA	
Prob (F-Statistic)	#NA	
Log-Likelihood		-2,434.04
Model Sum of Squares		4,010,223,271,202.76
Sum of Squared Errors		52,462,463,639.23
Mean Squared Error		262,312,318.20
Std. Error of Regression		16,196.06
Mean Abs. Dev. (MAD)		11,996.61
Mean Abs. % Err. (MAPE)		1.61%
Durbin-Watson Statistic		2.026
Durbin-H Statistic	#NA	
Ljung-Box Statistic		29.19
Prob (Ljung-Box)		0.2130
Skewness		-0.009
Kurtosis		3.172
Jarque-Bera		0.275
Prob (Jarque-Bera)		0.8717

Forecast Statistics	
Forecast Observations	0
Mean Abs. Dev. (MAD)	0.00
Mean Abs. % Err. (MAPE)	0.00%
Avg. Forecast Error	0.00
Mean % Error	0.00%
Root Mean-Square Error	0.00
Theil's Inequality Coefficient	0.0000
-- Bias Proportion	0.00%
-- Variance Proportion	0.00%
-- Covariance Proportion	0.00%

Xcel Energy Minnesota Residential without Space Heat
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2003	1	762,313.154				
2003	2	666,883.554	681,014.357	-14,130.803	-2.12%	-0.872
2003	3	622,637.263	644,259.280	-21,622.018	-3.47%	-1.335
2003	4	561,137.361	569,505.468	-8,368.107	-1.49%	-0.517
2003	5	533,569.076	541,873.118	-8,304.042	-1.56%	-0.513
2003	6	583,808.452	591,719.617	-7,911.164	-1.36%	-0.488
2003	7	817,122.392	805,310.149	11,812.243	1.45%	0.729
2003	8	878,445.446	883,342.881	-4,897.435	-0.56%	-0.302
2003	9	851,805.593	855,814.398	-4,008.805	-0.47%	-0.248
2003	10	577,454.524	591,541.788	-14,087.264	-2.44%	-0.870
2003	11	578,742.878	576,202.710	2,540.168	0.44%	0.157
2003	12	726,448.041	725,291.126	1,156.915	0.16%	0.071
2004	1	783,505.213	810,342.482	-26,837.269	-3.43%	-1.657
2004	2	687,774.696	695,752.801	-7,978.105	-1.16%	-0.493
2004	3	609,144.393	626,191.764	-17,047.371	-2.80%	-1.053
2004	4	570,284.935	580,793.093	-10,508.159	-1.84%	-0.649
2004	5	532,382.660	541,556.170	-9,173.510	-1.72%	-0.566
2004	6	611,528.920	605,985.939	5,542.981	0.91%	0.342
2004	7	740,696.986	748,926.861	-8,229.875	-1.11%	-0.508
2004	8	758,784.600	753,781.859	5,002.742	0.66%	0.309
2004	9	704,564.541	714,951.924	-10,387.383	-1.47%	-0.641
2004	10	619,575.857	608,424.092	11,151.765	1.80%	0.689
2004	11	590,835.346	588,076.345	2,759.001	0.47%	0.170
2004	12	732,597.571	723,539.185	9,058.386	1.24%	0.559
2005	1	834,010.752	842,030.003	-8,019.251	-0.96%	-0.495
2005	2	623,689.616	648,808.758	-25,119.141	-4.03%	-1.551
2005	3	645,799.903	666,073.410	-20,273.507	-3.14%	-1.252
2005	4	603,804.722	576,857.157	26,947.565	4.46%	1.664
2005	5	532,312.324	551,153.736	-18,841.412	-3.54%	-1.163
2005	6	692,135.173	692,282.298	-147.125	-0.02%	-0.009
2005	7	922,377.535	900,559.842	21,817.693	2.37%	1.347
2005	8	1,040,829.930	1,024,230.067	16,599.863	1.59%	1.025
2005	9	752,346.158	748,772.371	3,573.787	0.48%	0.221
2005	10	624,893.328	632,795.429	-7,902.101	-1.26%	-0.488
2005	11	568,795.041	565,830.405	2,964.637	0.52%	0.183
2005	12	719,268.285	709,170.649	10,097.635	1.40%	0.623
2006	1	789,389.024	794,163.130	-4,774.106	-0.60%	-0.295
2006	2	623,062.690	645,468.349	-22,405.660	-3.60%	-1.383
2006	3	688,383.151	689,077.236	-694.084	-0.10%	-0.043
2006	4	552,152.675	543,905.204	8,247.471	1.49%	0.509
2006	5	551,574.634	585,002.308	-33,427.674	-6.06%	-2.064

Xcel Energy Minnesota Residential without Space Heat
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2006	6	782,271.861	752,630.019	29,641.842	3.79%	1.830
2006	7	868,474.787	852,846.329	15,628.458	1.80%	0.965
2006	8	1,100,250.072	1,112,663.950	-12,413.878	-1.13%	-0.766
2006	9	702,139.977	671,313.160	30,826.817	4.39%	1.903
2006	10	615,872.133	620,144.068	-4,271.935	-0.69%	-0.264
2006	11	597,142.014	587,937.136	9,204.878	1.54%	0.568
2006	12	675,724.638	667,805.463	7,919.175	1.17%	0.489
2007	1	838,177.966	822,383.842	15,794.124	1.88%	0.975
2007	2	696,182.500	702,251.538	-6,069.038	-0.87%	-0.375
2007	3	686,994.562	683,635.533	3,359.029	0.49%	0.207
2007	4	586,900.933	587,509.752	-608.819	-0.10%	-0.038
2007	5	583,646.487	591,458.951	-7,812.464	-1.34%	-0.482
2007	6	708,726.979	708,919.702	-192.723	-0.03%	-0.012
2007	7	917,039.075	888,102.870	28,936.205	3.16%	1.787
2007	8	1,026,588.165	1,017,788.793	8,799.373	0.86%	0.543
2007	9	731,757.166	742,883.281	-11,126.115	-1.52%	-0.687
2007	10	692,207.462	684,966.292	7,241.170	1.05%	0.447
2007	11	593,815.348	579,633.364	14,181.984	2.39%	0.876
2007	12	707,590.220	701,004.782	6,585.437	0.93%	0.407
2008	1	859,522.898	877,019.587	-17,496.690	-2.04%	-1.080
2008	2	730,845.491	713,639.694	17,205.797	2.35%	1.062
2008	3	661,207.147	665,648.918	-4,441.770	-0.67%	-0.274
2008	4	644,532.783	637,734.168	6,798.615	1.05%	0.420
2008	5	553,970.002	554,783.075	-813.073	-0.15%	-0.050
2008	6	593,165.808	594,993.957	-1,828.149	-0.31%	-0.113
2008	7	837,692.666	834,993.854	2,698.812	0.32%	0.167
2008	8	847,184.246	865,289.284	-18,105.037	-2.14%	-1.118
2008	9	779,396.681	762,428.913	16,967.768	2.18%	1.048
2008	10	633,252.299	639,520.257	-6,267.958	-0.99%	-0.387
2008	11	528,423.722	546,115.551	-17,691.829	-3.35%	-1.092
2008	12	774,457.007	772,410.668	2,046.339	0.26%	0.126
2009	1	870,833.264	886,673.410	-15,840.146	-1.82%	-0.978
2009	2	696,388.464	694,352.785	2,035.679	0.29%	0.126
2009	3	696,385.331	702,643.927	-6,258.596	-0.90%	-0.386
2009	4	610,909.609	620,514.796	-9,605.187	-1.57%	-0.593
2009	5	531,377.916	552,605.727	-21,227.810	-3.99%	-1.311
2009	6	640,104.329	649,476.696	-9,372.367	-1.46%	-0.579
2009	7	802,769.964	797,811.544	4,958.420	0.62%	0.306
2009	8	744,158.002	734,965.207	9,192.795	1.24%	0.568
2009	9	727,274.871	730,696.203	-3,421.332	-0.47%	-0.211
2009	10	666,729.648	657,748.976	8,980.672	1.35%	0.554

Xcel Energy Minnesota Residential without Space Heat
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2009	11	565,887.305	571,999.624	-6,112.319	-1.08%	-0.377
2009	12	760,250.962	745,130.257	15,120.704	1.99%	0.934
2010	1	833,171.652	849,127.639	-15,955.987	-1.92%	-0.985
2010	2	684,945.013	689,572.509	-4,627.496	-0.68%	-0.286
2010	3	713,887.971	715,212.315	-1,324.344	-0.19%	-0.082
2010	4	583,565.212	611,887.126	-28,321.913	-4.85%	-1.749
2010	5	538,200.518	542,025.856	-3,825.338	-0.71%	-0.236
2010	6	746,776.303	718,527.469	28,248.834	3.78%	1.744
2010	7	908,499.997	937,031.448	-28,531.451	-3.14%	-1.762
2010	8	1,040,201.497	1,083,690.641	-43,489.144	-4.18%	-2.685
2010	9	814,626.030	807,928.143	6,697.887	0.82%	0.414
2010	10	584,113.673	587,178.605	-3,064.931	-0.52%	-0.189
2010	11	583,724.223	588,504.562	-4,780.339	-0.82%	-0.295
2010	12	760,449.372	747,305.195	13,144.178	1.73%	0.812
2011	1	865,260.639	882,178.645	-16,918.006	-1.96%	-1.045
2011	2	708,580.417	702,797.288	5,783.129	0.82%	0.357
2011	3	737,987.368	740,606.521	-2,619.153	-0.35%	-0.162
2011	4	598,918.015	602,915.392	-3,997.377	-0.67%	-0.247
2011	5	606,141.097	593,115.064	13,026.033	2.15%	0.804
2011	6	715,238.419	729,721.074	-14,482.655	-2.02%	-0.894
2011	7	930,028.441	953,583.495	-23,555.053	-2.53%	-1.454
2011	8	1,081,007.113	1,119,554.921	-38,547.808	-3.57%	-2.380
2011	9	801,092.085	812,301.907	-11,209.822	-1.40%	-0.692
2011	10	614,340.413	613,773.577	566.836	0.09%	0.035
2011	11	597,486.385	590,264.543	7,221.842	1.21%	0.446
2011	12	719,168.042	717,482.553	1,685.489	0.23%	0.104
2012	1	817,774.088	821,343.252	-3,569.163	-0.44%	-0.220
2012	2	703,661.149	707,747.916	-4,086.767	-0.58%	-0.252
2012	3	677,334.596	681,342.024	-4,007.427	-0.59%	-0.247
2012	4	573,612.919	594,893.477	-21,280.558	-3.71%	-1.314
2012	5	624,773.961	607,872.332	16,901.629	2.71%	1.044
2012	6	749,615.613	732,000.287	17,615.327	2.35%	1.088
2012	7	1,108,074.645	1,103,853.544	4,221.101	0.38%	0.261
2012	8	1,047,715.102	1,043,291.708	4,423.394	0.42%	0.273
2012	9	764,699.603	761,826.604	2,872.999	0.38%	0.177
2012	10	657,696.053	663,953.513	-6,257.460	-0.95%	-0.386
2012	11	616,839.438	614,507.330	2,332.108	0.38%	0.144
2012	12	696,882.136	694,105.108	2,777.028	0.40%	0.171
2013	1	897,309.113	895,440.980	1,868.133	0.21%	0.115
2013	2	712,053.814	710,775.259	1,278.554	0.18%	0.079
2013	3	695,333.860	671,272.638	24,061.222	3.46%	1.486

Xcel Energy Minnesota Residential without Space Heat
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2013	4	710,553.934	693,560.986	16,992.948	2.39%	1.049
2013	5	634,295.088	619,721.015	14,574.073	2.30%	0.900
2013	6	626,344.998	659,662.883	-33,317.884	-5.32%	-2.057
2013	7	988,655.470	1,005,943.568	-17,288.098	-1.75%	-1.067
2013	8	885,504.263	867,751.283	17,752.980	2.00%	1.096
2013	9	926,451.620	925,610.021	841.599	0.09%	0.052
2013	10	690,452.332	688,734.214	1,718.118	0.25%	0.106
2013	11	592,231.957	584,358.672	7,873.284	1.33%	0.486
2013	12	776,896.631	771,357.984	5,538.647	0.71%	0.342
2014	1	955,891.269	951,366.699	4,524.570	0.47%	0.279
2014	2	749,885.000	725,555.523	24,329.478	3.24%	1.502
2014	3	768,192.536	755,177.071	13,015.466	1.69%	0.804
2014	4	665,501.833	667,951.562	-2,449.730	-0.37%	-0.151
2014	5	599,644.053	590,818.258	8,825.796	1.47%	0.545
2014	6	715,675.014	715,349.361	325.653	0.05%	0.020
2014	7	891,015.699	871,421.533	19,594.166	2.20%	1.210
2014	8	900,568.040	903,031.000	-2,462.960	-0.27%	-0.152
2014	9	833,632.036	838,946.456	-5,314.420	-0.64%	-0.328
2014	10	660,466.246	668,236.220	-7,769.973	-1.18%	-0.480
2014	11	559,100.841	564,258.352	-5,157.511	-0.92%	-0.318
2014	12	811,179.989	800,846.061	10,333.928	1.27%	0.638
2015	1	866,110.939	875,727.545	-9,616.606	-1.11%	-0.594
2015	2	693,643.094	693,175.120	467.974	0.07%	0.029
2015	3	762,729.796	756,131.359	6,598.437	0.87%	0.407
2015	4	629,064.222	649,724.439	-20,660.217	-3.28%	-1.276
2015	5	555,345.036	564,185.020	-8,839.985	-1.59%	-0.546
2015	6	693,627.394	698,246.658	-4,619.264	-0.67%	-0.285
2015	7	923,648.668	894,370.646	29,278.021	3.17%	1.808
2015	8	970,916.141	960,195.922	10,720.219	1.10%	0.662
2015	9	862,250.322	892,156.653	-29,906.331	-3.47%	-1.847
2015	10	681,477.959	684,476.401	-2,998.442	-0.44%	-0.185
2015	11	569,372.579	575,735.627	-6,363.047	-1.12%	-0.393
2015	12	755,389.540	749,719.001	5,670.539	0.75%	0.350
2016	1	823,022.414	830,632.883	-7,610.469	-0.92%	-0.470
2016	2	735,413.645	719,851.101	15,562.544	2.12%	0.961
2016	3	741,983.393	745,889.021	-3,905.628	-0.53%	-0.241
2016	4	619,770.821	627,878.474	-8,107.653	-1.31%	-0.501
2016	5	592,834.051	592,661.232	172.819	0.03%	0.011
2016	6	772,710.312	759,141.233	13,569.080	1.76%	0.838
2016	7	916,717.264	895,628.256	21,089.008	2.30%	1.302
2016	8	1,124,450.987	1,126,389.948	-1,938.962	-0.17%	-0.120

Xcel Energy Minnesota Residential without Space Heat
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2016	9	863,216.875	828,321.889	34,894.985	4.04%	2.155
2016	10	651,656.007	648,306.484	3,349.524	0.51%	0.207
2016	11	607,811.545	616,598.310	-8,786.765	-1.45%	-0.543
2016	12	711,213.249	699,926.359	11,286.889	1.59%	0.697
2017	1	914,622.728	891,580.641	23,042.087	2.52%	1.423
2017	2	692,678.504	690,299.900	2,378.604	0.34%	0.147
2017	3	739,625.511	758,803.573	-19,178.061	-2.59%	-1.184
2017	4	606,347.029	601,340.061	5,006.968	0.83%	0.309
2017	5	614,354.560	614,488.603	-134.042	-0.02%	-0.008
2017	6	779,871.997	762,157.386	17,714.611	2.27%	1.094
2017	7	881,811.023	870,088.106	11,722.916	1.33%	0.724
2017	8	988,231.220	942,321.740	45,909.480	4.65%	2.835
2017	9	772,575.211	767,410.667	5,164.544	0.67%	0.319
2017	10	725,627.042	743,648.894	-18,021.852	-2.48%	-1.113
2017	11	640,117.653	627,675.069	12,442.584	1.94%	0.768
2017	12	718,590.166	748,618.954	-30,028.788	-4.18%	-1.854
2018	1	940,667.708	906,431.004	34,236.704	3.64%	2.114
2018	2	726,726.245	722,189.746	4,536.499	0.62%	0.280
2018	3	758,586.139	757,990.769	595.371	0.08%	0.037
2018	4	666,841.913	660,584.804	6,257.109	0.94%	0.386
2018	5	641,588.229	643,381.202	-1,792.974	-0.28%	-0.111
2018	6	835,754.201	869,202.484	-33,448.283	-4.00%	-2.065
2018	7	1,036,009.624	1,054,194.829	-18,185.204	-1.76%	-1.123
2018	8	1,052,036.321	1,053,281.855	-1,245.535	-0.12%	-0.077
2018	9	857,061.603	871,249.959	-14,188.356	-1.66%	-0.876
2018	10	737,614.267	716,975.057	20,639.210	2.80%	1.274
2018	11	641,377.386	645,160.045	-3,782.659	-0.59%	-0.234
2018	12	739,130.268	770,145.649	-31,015.381	-4.20%	-1.915
2019	1	872,608.650	849,027.597	23,581.054	2.70%	1.456
2019	2	753,038.850	741,454.811	11,584.039	1.54%	0.715
2019	3	778,092.294	766,015.429	12,076.865	1.55%	0.746
2019	4	677,146.308	676,209.411	936.897	0.14%	0.058
2019	5	618,697.800	622,494.484	-3,796.684	-0.61%	-0.234
2019	6	672,677.877	660,804.781	11,873.096	1.77%	0.733
2019	7	974,108.793	1,005,394.091	-31,285.298	-3.21%	-1.932
2019	8	1,017,574.475	980,790.038	36,784.437	3.61%	2.271
2019	9	750,610.735	750,852.654	-241.919	-0.03%	-0.015
2019	10	759,890.830	747,491.948	12,398.882	1.63%	0.766
2019	11	602,747.254	619,582.104	-16,834.850	-2.79%	-1.039
2019	12	773,718.033	803,268.633	-29,550.600	-3.82%	-1.825
2020	1	873,671.606	853,332.302	20,339.304	2.33%	1.256

Xcel Energy Minnesota Residential without Space Heat
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2020	2	693,774.800	706,717.957	-12,943.157	-1.87%	-0.799
2020	3	733,398.532	745,168.269	-11,769.737	-1.60%	-0.727
2020	4	688,488.548	664,855.262	23,633.286	3.43%	1.459
2020	5	609,640.349	602,647.073	6,993.276	1.15%	0.432
2020	6	828,722.489	818,800.638	9,921.851	1.20%	0.613
2020	7	1,146,986.299	1,128,358.599	18,627.700	1.62%	1.150
2020	8	1,032,355.973	994,074.829	38,281.143	3.71%	2.364
2020	9	908,564.674	904,133.476	4,431.197	0.49%	0.274
2020	10	687,875.683	706,822.909	-18,947.226	-2.75%	-1.170
2020	11	626,100.129	637,551.998	-11,451.868	-1.83%	-0.707
2020	12	803,441.721	815,475.684	-12,033.963	-1.50%	-0.743
2021	1	874,100.942	877,647.501	-3,546.559	-0.41%	-0.219
2021	2	751,114.838	766,257.698	-15,142.860	-2.02%	-0.935
2021	3	823,429.135	807,722.172	15,706.964	1.91%	0.970
2021	4	662,583.136	690,252.049	-27,668.914	-4.18%	-1.708
2021	5	611,384.256	599,844.497	11,539.759	1.89%	0.713
2021	6		776,211.285			
2021	7		990,215.614			
2021	8		1,052,861.575			
2021	9		872,047.310			
2021	10		680,762.157			
2021	11		645,247.732			
2021	12		810,936.030			
2022	1		884,305.773			
2022	2		735,099.828			
2022	3		807,999.865			
2022	4		659,676.278			
2022	5		621,145.332			
2022	6		772,926.333			
2022	7		952,662.681			
2022	8		1,090,498.355			
2022	9		869,070.212			
2022	10		676,818.109			
2022	11		644,310.082			
2022	12		808,920.828			
2023	1		881,705.171			
2023	2		733,700.090			
2023	3		803,934.521			
2023	4		637,249.406			
2023	5		641,095.113			
2023	6		775,216.813			

Xcel Energy Minnesota Residential without Space Heat
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2023	7		961,230.131			
2023	8		1,090,591.689			
2023	9		845,318.682			
2023	10		703,915.018			
2023	11		649,469.615			
2023	12		815,844.880			
2024	1		881,704.770			
2024	2		767,806.799			
2024	3		755,133.857			
2024	4		686,255.630			
2024	5		645,558.459			
2024	6		723,824.310			
2024	7		1,034,436.365			
2024	8		1,057,093.854			
2024	9		857,818.097			
2024	10		728,521.308			
2024	11		647,727.375			
2024	12		829,369.385			
2025	1		891,279.013			
2025	2		746,864.736			
2025	3		813,223.995			
2025	4		687,701.915			
2025	5		605,379.884			
2025	6		782,908.082			
2025	7		1,005,450.093			
2025	8		1,070,738.584			
2025	9		885,622.019			
2025	10		688,914.921			
2025	11		653,483.060			
2025	12		822,737.383			
2026	1		899,541.326			
2026	2		748,151.158			
2026	3		821,142.944			
2026	4		670,391.282			
2026	5		631,174.415			
2026	6		787,558.841			
2026	7		975,326.911			
2026	8		1,116,917.108			
2026	9		890,008.135			
2026	10		692,437.201			
2026	11		659,540.385			

Xcel Energy Minnesota Residential without Space Heat
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2026	12		827,948.028			

Xcel Energy Minnesota Residential with Space Heat
Test Year 2022-2026 MWh Electric Sales

Variable	Coefficient	StdErr	T-Stat	P-Value	Definition
NR_MSP	5.193	0.139	37.276	0.00%	Total population, Minneapolis-St. Paul-Bloomington, MN-WI, thousands, U.S. Census Bureau
H65_bill_RH_MN_Jan	0.000868	0.000012	70.036	0.00%	Heating Degree Days*Number Residential Space Heating Customers, January
H65_bill_RH_MN_Feb	0.000787	0.000014	56.671	0.00%	Heating Degree Days*Number Residential Space Heating Customers, February
H65_bill_RH_MN_Mar	0.000791	0.000015	52.940	0.00%	Heating Degree Days*Number Residential Space Heating Customers, March
H65_bill_RH_MN_Apr	0.000735	0.000025	29.784	0.00%	Heating Degree Days*Number Residential Space Heating Customers, April
H65_bill_RH_MN_May	0.000638	0.000046	13.816	0.00%	Heating Degree Days*Number Residential Space Heating Customers, May
H65_bill_RH_MN_Oct	0.000582	0.000062	9.387	0.00%	Heating Degree Days*Number Residential Space Heating Customers, October
H65_bill_RH_MN_Nov	0.000597	0.000030	20.010	0.00%	Heating Degree Days*Number Residential Space Heating Customers, November
H65_bill_RH_MN_Dec	0.000774	0.000017	46.665	0.00%	Heating Degree Days*Number Residential Space Heating Customers, December
T65_bill_RH_MN_Jun	0.002452	0.000276	8.900	0.00%	THI Degree Days*Number Residential Space Heating Customers, June
T65_bill_RH_MN_Jul	0.001598	0.000108	14.822	0.00%	THI Degree Days*Number Residential Space Heating Customers, July
T65_bill_RH_MN_Aug	0.001654	0.000100	16.532	0.00%	THI Degree Days*Number Residential Space Heating Customers, August
T65_bill_RH_MN_Sep	0.001810	0.000181	9.985	0.00%	THI Degree Days*Number Residential Space Heating Customers, September
Dec2016	-4405.480	1420.578	-3.101	0.22%	Binary variable December 2016 = 1, otherwise = 0
AR(1)	0.410	0.064	6.420	0.00%	First order autoregressive correction term

Dependent Variable					Definition
SLS_ResSH_MN					Minnesota Demand Side Management adjusted Billed Sales (MWh) for the Residential with Space Heat customer class.

Xcel Energy Minnesota Residential with Space Heat
Test Year 2022-2026 MWh Electric Sales

Model Statistics	
Iterations	9
Adjusted Observations	220
Deg. of Freedom for Error	205
R-Squared	0.988
Adjusted R-Squared	0.987
AIC	14.689
BIC	14.920
F-Statistic	#NA
Prob (F-Statistic)	#NA
Log-Likelihood	-1,912.95
Model Sum of Squares	37,604,945,938.03
Sum of Squared Errors	459,773,519.62
Mean Squared Error	2,242,797.66
Std. Error of Regression	1,497.60
Mean Abs. Dev. (MAD)	1,138.18
Mean Abs. % Err. (MAPE)	3.63%
Durbin-Watson Statistic	2.105
Durbin-H Statistic	#NA
Ljung-Box Statistic	100.26
Prob (Ljung-Box)	0.0000
Skewness	-0.281
Kurtosis	3.411
Jarque-Bera	4.441
Prob (Jarque-Bera)	0.1086

Forecast Statistics	
Forecast Observations	0
Mean Abs. Dev. (MAD)	0.00
Mean Abs. % Err. (MAPE)	0.00%
Avg. Forecast Error	0.00
Mean % Error	0.00%
Root Mean-Square Error	0.00
Theil's Inequality Coefficient	0.0000
-- Bias Proportion	0.00%
-- Variance Proportion	0.00%
-- Covariance Proportion	0.00%

Xcel Energy Minnesota Residential with Space Heat
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2003	1	52,806.118				
2003	2	53,422.804	50,695.790	2,727.014	5.10%	1.821
2003	3	46,443.838	46,748.043	-304.205	-0.65%	-0.203
2003	4	32,257.902	31,345.540	912.362	2.83%	0.609
2003	5	23,005.470	22,978.301	27.169	0.12%	0.018
2003	6	18,979.117	18,221.169	757.948	3.99%	0.506
2003	7	22,178.275	22,614.598	-436.323	-1.97%	-0.291
2003	8	23,052.974	23,977.871	-924.898	-4.01%	-0.618
2003	9	22,190.469	22,731.144	-540.675	-2.44%	-0.361
2003	10	20,303.921	20,936.983	-633.062	-3.12%	-0.423
2003	11	29,652.838	27,484.118	2,168.720	7.31%	1.448
2003	12	45,551.093	42,866.647	2,684.446	5.89%	1.793
2004	1	54,920.560	54,601.182	319.378	0.58%	0.213
2004	2	53,867.811	52,028.967	1,838.844	3.41%	1.228
2004	3	39,605.166	40,450.350	-845.183	-2.13%	-0.564
2004	4	30,565.561	30,439.487	126.074	0.41%	0.084
2004	5	21,822.159	22,807.023	-984.864	-4.51%	-0.658
2004	6	20,058.774	18,048.981	2,009.793	10.02%	1.342
2004	7	20,684.870	21,531.268	-846.398	-4.09%	-0.565
2004	8	20,437.326	21,238.589	-801.264	-3.92%	-0.535
2004	9	19,556.794	19,651.961	-95.166	-0.49%	-0.064
2004	10	20,312.127	20,165.683	146.444	0.72%	0.098
2004	11	26,470.511	26,069.951	400.560	1.51%	0.267
2004	12	42,705.652	40,640.950	2,064.702	4.83%	1.379
2005	1	59,464.070	57,610.176	1,853.894	3.12%	1.238
2005	2	40,994.675	43,436.887	-2,442.212	-5.96%	-1.631
2005	3	43,809.948	43,372.148	437.799	1.00%	0.292
2005	4	31,003.719	29,312.027	1,691.692	5.46%	1.130
2005	5	24,838.788	24,414.300	424.487	1.71%	0.283
2005	6	21,734.353	21,267.908	466.445	2.15%	0.311
2005	7	23,043.128	25,138.692	-2,095.564	-9.09%	-1.399
2005	8	25,683.646	25,435.996	247.651	0.96%	0.165
2005	9	19,695.129	20,394.402	-699.273	-3.55%	-0.467
2005	10	19,125.809	19,730.204	-604.395	-3.16%	-0.404
2005	11	24,647.023	25,414.513	-767.490	-3.11%	-0.512
2005	12	43,431.836	42,388.267	1,043.570	2.40%	0.697
2006	1	48,454.382	48,340.280	114.102	0.24%	0.076
2006	2	40,579.038	41,431.696	-852.658	-2.10%	-0.569
2006	3	45,411.815	43,858.657	1,553.159	3.42%	1.037
2006	4	27,117.067	29,275.655	-2,158.588	-7.96%	-1.441
2006	5	21,239.252	21,191.513	47.738	0.22%	0.032

Xcel Energy Minnesota Residential with Space Heat
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2006	6	22,207.343	23,022.358	-815.014	-3.67%	-0.544
2006	7	22,219.382	23,057.034	-837.652	-3.77%	-0.559
2006	8	26,440.371	27,577.150	-1,136.779	-4.30%	-0.759
2006	9	18,749.761	19,040.667	-290.906	-1.55%	-0.194
2006	10	21,792.571	22,541.525	-748.955	-3.44%	-0.500
2006	11	29,115.824	28,571.061	544.764	1.87%	0.364
2006	12	37,587.694	38,230.920	-643.226	-1.71%	-0.430
2007	1	50,424.657	48,207.288	2,217.369	4.40%	1.481
2007	2	50,521.874	50,849.985	-328.111	-0.65%	-0.219
2007	3	44,441.788	43,844.561	597.228	1.34%	0.399
2007	4	30,537.769	31,092.244	-554.474	-1.82%	-0.370
2007	5	21,619.136	21,451.025	168.111	0.78%	0.112
2007	6	19,669.668	22,108.608	-2,438.940	-12.40%	-1.629
2007	7	22,908.897	23,100.895	-191.998	-0.84%	-0.128
2007	8	24,956.502	25,605.758	-649.255	-2.60%	-0.434
2007	9	18,949.056	21,070.727	-2,121.670	-11.20%	-1.417
2007	10	20,284.784	19,582.040	702.744	3.46%	0.469
2007	11	25,677.634	26,589.713	-912.080	-3.55%	-0.609
2007	12	42,250.918	42,867.971	-617.053	-1.46%	-0.412
2008	1	56,643.738	56,997.787	-354.049	-0.63%	-0.236
2008	2	53,317.306	51,154.342	2,162.964	4.06%	1.444
2008	3	44,752.634	46,600.948	-1,848.314	-4.13%	-1.234
2008	4	36,271.511	35,323.144	948.367	2.61%	0.633
2008	5	24,107.828	25,288.179	-1,180.351	-4.90%	-0.788
2008	6	18,903.416	17,726.019	1,177.397	6.23%	0.786
2008	7	21,711.003	23,001.243	-1,290.240	-5.94%	-0.862
2008	8	21,156.301	24,102.903	-2,946.603	-13.93%	-1.968
2008	9	20,160.378	19,858.590	301.788	1.50%	0.202
2008	10	19,970.166	21,269.833	-1,299.667	-6.51%	-0.868
2008	11	23,398.644	25,280.103	-1,881.460	-8.04%	-1.256
2008	12	46,869.744	45,832.908	1,036.836	2.21%	0.692
2009	1	61,309.384	61,925.698	-616.314	-1.01%	-0.412
2009	2	50,255.926	49,214.840	1,041.086	2.07%	0.695
2009	3	46,506.580	45,851.722	654.859	1.41%	0.437
2009	4	33,553.643	33,740.724	-187.081	-0.56%	-0.125
2009	5	21,361.340	22,928.937	-1,567.597	-7.34%	-1.047
2009	6	20,408.379	18,867.807	1,540.572	7.55%	1.029
2009	7	21,866.733	22,326.207	-459.474	-2.10%	-0.307
2009	8	19,711.648	21,127.771	-1,416.122	-7.18%	-0.946
2009	9	19,602.106	20,050.822	-448.716	-2.29%	-0.300
2009	10	23,765.242	23,536.884	228.358	0.96%	0.152

Xcel Energy Minnesota Residential with Space Heat
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2009	11	25,516.924	27,216.543	-1,699.619	-6.66%	-1.135
2009	12	43,195.666	41,591.499	1,604.168	3.71%	1.071
2010	1	57,191.191	58,911.001	-1,719.809	-3.01%	-1.148
2010	2	47,202.152	47,647.603	-445.451	-0.94%	-0.297
2010	3	45,254.537	44,360.698	893.839	1.98%	0.597
2010	4	27,263.295	27,932.251	-668.956	-2.45%	-0.447
2010	5	20,083.786	22,682.426	-2,598.640	-12.94%	-1.735
2010	6	23,454.029	20,597.406	2,856.623	12.18%	1.907
2010	7	24,411.840	25,936.038	-1,524.198	-6.24%	-1.018
2010	8	26,382.614	28,416.512	-2,033.897	-7.71%	-1.358
2010	9	21,644.452	22,101.111	-456.659	-2.11%	-0.305
2010	10	18,900.485	20,711.963	-1,811.479	-9.58%	-1.210
2010	11	25,627.463	26,016.219	-388.756	-1.52%	-0.260
2010	12	48,344.815	46,067.998	2,276.817	4.71%	1.520
2011	1	60,449.867	61,103.218	-653.351	-1.08%	-0.436
2011	2	51,339.778	50,431.264	908.514	1.77%	0.607
2011	3	50,227.395	49,408.151	819.244	1.63%	0.547
2011	4	32,945.480	34,420.124	-1,474.644	-4.48%	-0.985
2011	5	28,357.217	26,033.300	2,323.917	8.20%	1.552
2011	6	22,474.765	22,525.585	-50.820	-0.23%	-0.034
2011	7	25,052.792	26,537.289	-1,484.497	-5.93%	-0.991
2011	8	27,858.679	29,354.830	-1,496.151	-5.37%	-0.999
2011	9	22,200.543	22,534.649	-334.106	-1.50%	-0.223
2011	10	19,958.110	20,873.911	-915.801	-4.59%	-0.612
2011	11	27,070.738	27,175.383	-104.644	-0.39%	-0.070
2011	12	41,289.488	40,936.248	353.240	0.86%	0.236
2012	1	50,417.823	50,851.101	-433.278	-0.86%	-0.289
2012	2	46,434.044	46,170.642	263.401	0.57%	0.176
2012	3	39,540.250	39,768.413	-228.163	-0.58%	-0.152
2012	4	24,295.376	26,778.432	-2,483.056	-10.22%	-1.658
2012	5	23,084.533	22,604.630	479.903	2.08%	0.320
2012	6	21,625.183	22,585.416	-960.233	-4.44%	-0.641
2012	7	29,208.369	29,068.307	140.062	0.48%	0.094
2012	8	27,168.666	27,514.543	-345.877	-1.27%	-0.231
2012	9	21,647.072	22,354.148	-707.076	-3.27%	-0.472
2012	10	23,050.199	23,782.731	-732.532	-3.18%	-0.489
2012	11	29,848.598	29,560.288	288.310	0.97%	0.193
2012	12	40,531.058	40,532.542	-1.484	0.00%	-0.001
2013	1	61,306.897	60,781.425	525.472	0.86%	0.351
2013	2	52,458.692	51,781.819	676.873	1.29%	0.452
2013	3	45,968.858	47,228.018	-1,259.160	-2.74%	-0.841

Xcel Energy Minnesota Residential with Space Heat
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2013	4	44,957.197	41,904.281	3,052.917	6.79%	2.039
2013	5	30,469.017	28,831.601	1,637.416	5.37%	1.093
2013	6	20,841.454	21,829.355	-987.900	-4.74%	-0.660
2013	7	27,901.043	27,650.053	250.990	0.90%	0.168
2013	8	24,975.165	24,890.702	84.464	0.34%	0.056
2013	9	26,505.296	27,676.700	-1,171.404	-4.42%	-0.782
2013	10	22,773.570	21,890.562	883.009	3.88%	0.590
2013	11	30,749.966	30,431.279	318.687	1.04%	0.213
2013	12	51,477.816	50,279.538	1,198.278	2.33%	0.800
2014	1	73,128.828	71,435.297	1,693.531	2.32%	1.131
2014	2	57,506.273	57,826.732	-320.459	-0.56%	-0.214
2014	3	57,839.984	56,459.359	1,380.626	2.39%	0.922
2014	4	40,818.344	39,847.677	970.667	2.38%	0.648
2014	5	28,599.552	28,633.067	-33.515	-0.12%	-0.022
2014	6	23,312.840	22,613.005	699.835	3.00%	0.467
2014	7	26,169.364	24,603.595	1,565.769	5.98%	1.046
2014	8	26,201.298	26,410.630	-209.332	-0.80%	-0.140
2014	9	25,224.606	24,003.332	1,221.274	4.84%	0.815
2014	10	23,865.957	25,196.233	-1,330.276	-5.57%	-0.888
2014	11	28,977.611	29,749.428	-771.817	-2.66%	-0.515
2014	12	54,477.050	52,257.181	2,219.869	4.07%	1.482
2015	1	61,030.087	62,222.269	-1,192.183	-1.95%	-0.796
2015	2	50,574.409	50,319.259	255.150	0.50%	0.170
2015	3	55,142.143	54,592.298	549.845	1.00%	0.367
2015	4	34,825.515	34,528.571	296.944	0.85%	0.198
2015	5	23,110.850	24,615.685	-1,504.835	-6.51%	-1.005
2015	6	23,675.637	21,022.365	2,653.272	11.21%	1.772
2015	7	27,340.089	26,011.569	1,328.520	4.86%	0.887
2015	8	28,194.327	28,047.991	146.336	0.52%	0.098
2015	9	25,903.552	25,604.886	298.667	1.15%	0.199
2015	10	22,832.990	23,008.285	-175.295	-0.77%	-0.117
2015	11	24,972.481	26,889.202	-1,916.721	-7.68%	-1.280
2015	12	42,639.115	42,415.510	223.605	0.52%	0.149
2016	1	54,502.117	57,242.657	-2,740.540	-5.03%	-1.830
2016	2	52,804.570	50,867.920	1,936.649	3.67%	1.293
2016	3	46,676.192	46,221.668	454.523	0.97%	0.304
2016	4	33,130.199	34,636.770	-1,506.571	-4.55%	-1.006
2016	5	25,229.712	24,961.876	267.836	1.06%	0.179
2016	6	25,064.287	23,771.325	1,292.962	5.16%	0.863
2016	7	26,721.324	26,645.190	76.134	0.28%	0.051
2016	8	32,263.658	30,800.701	1,462.958	4.53%	0.977

Xcel Energy Minnesota Residential with Space Heat
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2016	9	26,225.894	24,695.348	1,530.545	5.84%	1.022
2016	10	22,678.425	23,277.286	-598.860	-2.64%	-0.400
2016	11	26,400.657	27,549.293	-1,148.636	-4.35%	-0.767
2016	12	41,345.170	40,721.844	623.326	1.51%	0.416
2017	1	65,493.022	63,974.262	1,518.760	2.32%	1.014
2017	2	46,605.312	47,264.156	-658.844	-1.41%	-0.440
2017	3	48,102.951	47,822.628	280.324	0.58%	0.187
2017	4	32,590.059	33,513.025	-922.966	-2.83%	-0.616
2017	5	27,513.757	26,258.364	1,255.394	4.56%	0.838
2017	6	25,781.609	24,490.649	1,290.960	5.01%	0.862
2017	7	26,710.824	26,369.281	341.543	1.28%	0.228
2017	8	29,745.439	26,769.136	2,976.303	10.01%	1.987
2017	9	24,753.473	24,001.322	752.151	3.04%	0.502
2017	10	24,505.973	23,746.963	759.011	3.10%	0.507
2017	11	34,080.358	33,849.941	230.417	0.68%	0.154
2017	12	43,734.014	47,064.952	-3,330.937	-7.62%	-2.224
2018	1	71,201.246	69,417.539	1,783.707	2.51%	1.191
2018	2	54,431.279	55,012.129	-580.849	-1.07%	-0.388
2018	3	52,359.597	52,857.922	-498.326	-0.95%	-0.333
2018	4	42,890.182	43,496.023	-605.841	-1.41%	-0.405
2018	5	29,893.639	26,672.458	3,221.181	10.78%	2.151
2018	6	26,068.331	30,344.575	-4,276.245	-16.40%	-2.855
2018	7	30,647.431	29,286.859	1,360.572	4.44%	0.909
2018	8	31,860.757	29,970.552	1,890.205	5.93%	1.262
2018	9	26,892.267	27,482.410	-590.142	-2.19%	-0.394
2018	10	28,850.092	27,293.276	1,556.816	5.40%	1.040
2018	11	35,961.265	35,722.482	238.782	0.66%	0.159
2018	12	48,631.765	51,782.793	-3,151.028	-6.48%	-2.104
2019	1	61,242.518	59,689.950	1,552.568	2.54%	1.037
2019	2	59,412.090	60,746.023	-1,333.933	-2.25%	-0.891
2019	3	58,618.376	60,166.845	-1,548.469	-2.64%	-1.034
2019	4	40,022.126	39,105.555	916.572	2.29%	0.612
2019	5	30,331.234	29,022.226	1,309.007	4.32%	0.874
2019	6	24,109.617	22,396.741	1,712.876	7.10%	1.144
2019	7	30,507.504	29,500.706	1,006.798	3.30%	0.672
2019	8	31,470.295	29,594.166	1,876.129	5.96%	1.253
2019	9	24,420.746	23,891.454	529.293	2.17%	0.353
2019	10	29,017.766	25,928.802	3,088.964	10.65%	2.063
2019	11	37,857.423	36,736.889	1,120.534	2.96%	0.748
2019	12	50,952.434	54,972.696	-4,020.262	-7.89%	-2.684
2020	1	62,578.451	62,031.457	546.994	0.87%	0.365

Xcel Energy Minnesota Residential with Space Heat
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2020	2	51,041.241	53,163.987	-2,122.746	-4.16%	-1.417
2020	3	50,037.649	51,403.721	-1,366.072	-2.73%	-0.912
2020	4	39,179.692	38,750.868	428.824	1.09%	0.286
2020	5	27,277.501	28,181.813	-904.312	-3.32%	-0.604
2020	6	27,904.500	24,779.930	3,124.571	11.20%	2.086
2020	7	34,209.397	32,470.574	1,738.822	5.08%	1.161
2020	8	31,721.433	29,887.701	1,833.732	5.78%	1.224
2020	9	28,966.380	26,901.078	2,065.303	7.13%	1.379
2020	10	26,867.602	28,045.940	-1,178.338	-4.39%	-0.787
2020	11	34,021.692	34,160.990	-139.298	-0.41%	-0.093
2020	12	47,872.855	50,420.831	-2,547.976	-5.32%	-1.701
2021	1	57,431.060	62,586.990	-5,155.930	-8.98%	-3.443
2021	2	55,075.617	57,981.267	-2,905.650	-5.28%	-1.940
2021	3	56,788.465	56,475.899	312.567	0.55%	0.209
2021	4	36,064.987	36,474.504	-409.517	-1.14%	-0.273
2021	5	27,732.423	28,459.023	-726.600	-2.62%	-0.485
2021	6		24,151.204			
2021	7		29,336.948			
2021	8		31,027.342			
2021	9		26,151.035			
2021	10		25,696.619			
2021	11		34,430.487			
2021	12		56,355.062			
2022	1		71,152.211			
2022	2		61,442.718			
2022	3		63,246.608			
2022	4		41,081.207			
2022	5		28,943.082			
2022	6		25,070.368			
2022	7		29,548.917			
2022	8		32,234.142			
2022	9		26,497.985			
2022	10		26,210.072			
2022	11		35,308.803			
2022	12		57,910.231			
2023	1		72,779.158			
2023	2		62,692.490			
2023	3		64,079.033			
2023	4		40,721.300			
2023	5		29,818.368			
2023	6		25,380.977			

Xcel Energy Minnesota Residential with Space Heat
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2023	7		29,946.156			
2023	8		32,446.014			
2023	9		26,458.269			
2023	10		26,671.722			
2023	11		35,794.765			
2023	12		58,765.216			
2024	1		73,107.785			
2024	2		65,586.896			
2024	3		60,714.758			
2024	4		43,554.711			
2024	5		29,793.577			
2024	6		24,823.285			
2024	7		31,003.618			
2024	8		32,127.005			
2024	9		26,815.925			
2024	10		27,242.410			
2024	11		35,989.554			
2024	12		60,166.951			
2025	1		74,030.371			
2025	2		64,264.617			
2025	3		65,638.741			
2025	4		43,411.292			
2025	5		29,132.196			
2025	6		25,584.277			
2025	7		30,856.962			
2025	8		32,526.885			
2025	9		27,200.625			
2025	10		26,676.199			
2025	11		36,010.664			
2025	12		59,409.779			
2026	1		75,103.641			
2026	2		64,645.218			
2026	3		66,459.291			
2026	4		42,870.248			
2026	5		29,988.080			
2026	6		25,880.329			
2026	7		30,591.909			
2026	8		33,406.663			
2026	9		27,361.846			
2026	10		27,051.032			
2026	11		36,588.561			

Xcel Energy Minnesota Residential with Space Heat
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2026	12		60,257.186			

Xcel Energy Minnesota Small Commercial and Industrial
Test Year 2022-2026 MWh Electric Sales

Variable	Coefficient	StdErr	T-Stat	P-Value	Definition
EE_MN	146.5	15.2	9.618	0.00%	Total Non-Farm Employment, Minnesota, thousands, Bureau of Labor Statistics
BillDaysCellnet21	21,903.7	1,354.7	16.169	0.00%	Average number of billing days per month
H65_bill_SmCI_MN_Jan	0.000445	0.000051	8.752	0.00%	Heating Degree Days * Number of Small C&I customers, January
H65_bill_SmCI_MN_Feb	0.000287	0.000049	5.858	0.00%	Heating Degree Days * Number of Small C&I customers, February
H65_bill_SmCI_MN_Mar	0.000488	0.000052	9.374	0.00%	Heating Degree Days * Number of Small C&I customers, March
H65_bill_SmCI_MN_Dec	0.000237	0.000059	4.041	0.01%	Heating Degree Days * Number of Small C&I customers, December
T65_bill_SmCI_MN_Jun	0.009632	0.001055	9.131	0.00%	THI Degree Days * Number of Small C&I customers, June
T65_bill_SmCI_MN_Jul	0.009200	0.000413	22.280	0.00%	THI Degree Days * Number of Small C&I customers, July
T65_bill_SmCI_MN_Aug	0.010362	0.000380	27.233	0.00%	THI Degree Days * Number of Small C&I customers, August
T65_bill_SmCI_MN_Sep	0.012959	0.000662	19.579	0.00%	THI Degree Days * Number of Small C&I customers, September
T65_bill_SmCI_MN_Oct	0.021785	0.002452	8.884	0.00%	THI Degree Days * Number of Small C&I customers, October
Mar2005	-116,493.5	31,261.9	-3.726	0.03%	Binary variable March 2005=1, otherwise=0
May2006	-126,330.5	30,215.6	-4.181	0.00%	Binary variable May 2006=1, otherwise=0
Feb2005	-259,430.8	31,297.7	-8.289	0.00%	Binary variable February 2005=1, otherwise=0
PostCRS2005	148,414.1	9,384.1	15.816	0.00%	Binary variable to account for billing system change starting in February 2005=1, otherwise=0
Post2012	35,719.3	6,553.8	5.450	0.00%	Binary variable starting in January 2012=1, otherwise=0
Post2018	-2,016.8	750.9	-2.686	0.78%	Limited interval trend variable starting in June 2018=1 through December 2019=19 and onward, otherwise=0
GMD_Workplace_Forecast_MN	1,514.2	477.8	3.169	0.18%	Google Mobility Data - Workplace Index to account for COVID-19 pandemic impacts
AR(1)	0.234	0.069	3.379	0.09%	First order autoregressive correction term

Dependent Variable					Definition
SLS_SmCI_MN					Minnesota Demand Side Management adjusted Billed Sales (MWh) for the Small Commercial and Industrial customer class.

Xcel Energy Minnesota Small Commercial and Industrial
Test Year 2022-2026 MWh Electric Sales

Model Statistics		
Iterations		13
Adjusted Observations		220
Deg. of Freedom for Error		201
R-Squared		0.945
Adjusted R-Squared		0.941
AIC		20.735
BIC		21.028
F-Statistic	#NA	
Prob (F-Statistic)	#NA	
Log-Likelihood		-2,574.01
Model Sum of Squares		3,248,615,521,785.97
Sum of Squared Errors		187,280,528,170.22
Mean Squared Error		931,743,921.24
Std. Error of Regression		30,524.48
Mean Abs. Dev. (MAD)		23,102.77
Mean Abs. % Err. (MAPE)		1.79%
Durbin-Watson Statistic		2.071
Durbin-H Statistic	#NA	
Ljung-Box Statistic		31.74
Prob (Ljung-Box)		0.1335
Skewness		0.174
Kurtosis		3.202
Jarque-Bera		1.483
Prob (Jarque-Bera)		0.4764

Forecast Statistics	
Forecast Observations	0
Mean Abs. Dev. (MAD)	0.00
Mean Abs. % Err. (MAPE)	0.00%
Avg. Forecast Error	0.00
Mean % Error	0.00%
Root Mean-Square Error	0.00
Theil's Inequality Coefficient	0.0000
-- Bias Proportion	0.00%
-- Variance Proportion	0.00%
-- Covariance Proportion	0.00%

Xcel Energy Minnesota Small Commercial and Industrial
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2003	1	1,133,204.440				
2003	2	1,075,196.775	1,071,421.583	3,775.192	0.35%	0.124
2003	3	1,045,755.827	1,108,523.577	-62,767.750	-6.00%	-2.056
2003	4	1,018,150.183	1,030,667.150	-12,516.966	-1.23%	-0.410
2003	5	1,036,152.867	1,048,785.183	-12,632.316	-1.22%	-0.414
2003	6	1,088,504.503	1,084,096.127	4,408.376	0.40%	0.144
2003	7	1,208,568.108	1,203,043.727	5,524.381	0.46%	0.181
2003	8	1,229,897.660	1,241,080.232	-11,182.573	-0.91%	-0.366
2003	9	1,252,918.982	1,264,039.881	-11,120.899	-0.89%	-0.364
2003	10	1,074,500.940	1,076,985.226	-2,484.286	-0.23%	-0.081
2003	11	1,061,528.427	1,031,093.637	30,434.790	2.87%	0.997
2003	12	1,141,192.688	1,147,888.824	-6,696.136	-0.59%	-0.219
2004	1	1,150,618.508	1,191,060.645	-40,442.137	-3.51%	-1.325
2004	2	1,097,355.277	1,078,909.460	18,445.816	1.68%	0.604
2004	3	1,058,925.426	1,095,685.761	-36,760.335	-3.47%	-1.204
2004	4	1,066,903.886	1,047,723.058	19,180.827	1.80%	0.628
2004	5	1,040,526.110	1,048,045.721	-7,519.611	-0.72%	-0.246
2004	6	1,126,636.619	1,099,783.472	26,853.147	2.38%	0.880
2004	7	1,191,117.820	1,174,635.338	16,482.482	1.38%	0.540
2004	8	1,195,640.596	1,174,952.656	20,687.940	1.73%	0.678
2004	9	1,200,463.042	1,175,163.562	25,299.480	2.11%	0.829
2004	10	1,122,223.071	1,119,903.201	2,319.870	0.21%	0.076
2004	11	1,073,975.807	1,044,892.805	29,083.001	2.71%	0.953
2004	12	1,159,952.438	1,147,983.137	11,969.301	1.03%	0.392
2005	1	1,220,211.053	1,210,736.702	9,474.351	0.78%	0.310
2005	2	939,700.683	940,096.621	-395.938	-0.04%	-0.013
2005	3	1,176,830.568	1,178,522.904	-1,692.337	-0.14%	-0.055
2005	4	1,205,225.561	1,212,459.017	-7,233.456	-0.60%	-0.237
2005	5	1,238,143.314	1,191,503.230	46,640.084	3.77%	1.528
2005	6	1,352,472.073	1,331,078.775	21,393.297	1.58%	0.701
2005	7	1,380,435.563	1,395,707.726	-15,272.162	-1.11%	-0.500
2005	8	1,479,431.917	1,513,139.998	-33,708.081	-2.28%	-1.104
2005	9	1,361,839.506	1,331,040.350	30,799.156	2.26%	1.009
2005	10	1,357,000.824	1,292,562.312	64,438.513	4.75%	2.111
2005	11	1,158,990.805	1,190,195.907	-31,205.102	-2.69%	-1.022
2005	12	1,221,581.729	1,255,758.202	-34,176.473	-2.80%	-1.120
2006	1	1,302,989.456	1,338,141.145	-35,151.690	-2.70%	-1.152
2006	2	1,123,491.525	1,194,018.745	-70,527.220	-6.28%	-2.311
2006	3	1,248,412.371	1,310,251.978	-61,839.607	-4.95%	-2.026
2006	4	1,133,357.940	1,130,979.180	2,378.759	0.21%	0.078
2006	5	1,117,110.832	1,115,556.055	1,554.777	0.14%	0.051

Xcel Energy Minnesota Small Commercial and Industrial
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2006	6	1,370,464.504	1,363,819.009	6,645.495	0.48%	0.218
2006	7	1,429,164.891	1,362,350.545	66,814.346	4.68%	2.189
2006	8	1,502,944.867	1,583,315.668	-80,370.801	-5.35%	-2.633
2006	9	1,353,347.436	1,265,525.444	87,821.992	6.49%	2.877
2006	10	1,247,059.117	1,265,052.943	-17,993.826	-1.44%	-0.589
2006	11	1,145,619.087	1,177,573.979	-31,954.891	-2.79%	-1.047
2006	12	1,196,892.761	1,210,716.119	-13,823.358	-1.15%	-0.453
2007	1	1,351,898.173	1,378,692.495	-26,794.322	-1.98%	-0.878
2007	2	1,204,780.240	1,212,069.846	-7,289.606	-0.61%	-0.239
2007	3	1,307,704.984	1,295,790.825	11,914.158	0.91%	0.390
2007	4	1,131,991.635	1,194,302.943	-62,311.308	-5.50%	-2.041
2007	5	1,217,667.463	1,224,230.400	-6,562.937	-0.54%	-0.215
2007	6	1,299,045.282	1,307,552.535	-8,507.253	-0.65%	-0.279
2007	7	1,418,284.651	1,403,928.111	14,356.540	1.01%	0.470
2007	8	1,515,623.340	1,512,695.138	2,928.203	0.19%	0.096
2007	9	1,262,441.829	1,306,036.594	-43,594.765	-3.45%	-1.428
2007	10	1,360,010.327	1,364,445.462	-4,435.135	-0.33%	-0.145
2007	11	1,135,032.326	1,178,463.670	-43,431.344	-3.83%	-1.423
2007	12	1,226,694.506	1,217,937.915	8,756.591	0.71%	0.287
2008	1	1,356,098.181	1,400,918.697	-44,820.516	-3.31%	-1.468
2008	2	1,234,884.700	1,242,760.200	-7,875.500	-0.64%	-0.258
2008	3	1,213,592.087	1,251,391.980	-37,799.893	-3.11%	-1.238
2008	4	1,249,206.990	1,240,010.480	9,196.510	0.74%	0.301
2008	5	1,165,669.282	1,201,333.401	-35,664.120	-3.06%	-1.168
2008	6	1,251,809.843	1,233,532.067	18,277.776	1.46%	0.599
2008	7	1,419,119.701	1,396,642.579	22,477.121	1.58%	0.736
2008	8	1,397,936.426	1,375,098.943	22,837.483	1.63%	0.748
2008	9	1,429,400.135	1,391,348.181	38,051.954	2.66%	1.247
2008	10	1,297,248.397	1,308,959.284	-11,710.887	-0.90%	-0.384
2008	11	1,091,507.730	1,102,189.143	-10,681.413	-0.98%	-0.350
2008	12	1,313,527.429	1,303,062.304	10,465.125	0.80%	0.343
2009	1	1,361,277.168	1,368,206.565	-6,929.397	-0.51%	-0.227
2009	2	1,210,747.800	1,205,963.433	4,784.367	0.40%	0.157
2009	3	1,304,456.787	1,293,262.908	11,193.879	0.86%	0.367
2009	4	1,183,303.046	1,206,408.537	-23,105.491	-1.95%	-0.757
2009	5	1,163,769.496	1,159,413.304	4,356.192	0.37%	0.143
2009	6	1,316,448.488	1,274,973.949	41,474.539	3.15%	1.359
2009	7	1,425,084.745	1,363,467.535	61,617.211	4.32%	2.019
2009	8	1,359,235.649	1,301,442.607	57,793.042	4.25%	1.893
2009	9	1,329,938.989	1,321,445.087	8,493.903	0.64%	0.278
2009	10	1,281,954.145	1,278,760.655	3,193.490	0.25%	0.105

Xcel Energy Minnesota Small Commercial and Industrial
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2009	11	1,119,661.293	1,122,935.659	-3,274.365	-0.29%	-0.107
2009	12	1,282,725.862	1,280,492.346	2,233.516	0.17%	0.073
2010	1	1,348,909.841	1,314,904.477	34,005.364	2.52%	1.114
2010	2	1,181,756.503	1,203,655.626	-21,899.122	-1.85%	-0.717
2010	3	1,312,038.585	1,308,778.988	3,259.597	0.25%	0.107
2010	4	1,203,633.666	1,207,927.898	-4,294.232	-0.36%	-0.141
2010	5	1,107,769.964	1,147,004.409	-39,234.446	-3.54%	-1.285
2010	6	1,393,140.685	1,303,718.750	89,421.935	6.42%	2.930
2010	7	1,427,078.036	1,415,248.688	11,829.348	0.83%	0.388
2010	8	1,516,631.199	1,524,920.120	-8,288.921	-0.55%	-0.272
2010	9	1,382,036.969	1,375,462.328	6,574.641	0.48%	0.215
2010	10	1,218,128.547	1,195,950.435	22,178.112	1.82%	0.727
2010	11	1,175,678.573	1,164,034.836	11,643.737	0.99%	0.381
2010	12	1,258,552.836	1,259,635.727	-1,082.891	-0.09%	-0.035
2011	1	1,405,633.623	1,356,345.099	49,288.524	3.51%	1.615
2011	2	1,193,628.463	1,214,549.472	-20,921.009	-1.75%	-0.685
2011	3	1,311,952.693	1,323,386.711	-11,434.018	-0.87%	-0.375
2011	4	1,146,265.342	1,157,606.270	-11,340.928	-0.99%	-0.372
2011	5	1,233,233.632	1,207,165.310	26,068.323	2.11%	0.854
2011	6	1,318,465.446	1,318,170.910	294.536	0.02%	0.010
2011	7	1,366,665.373	1,414,899.117	-48,233.744	-3.53%	-1.580
2011	8	1,595,285.670	1,540,927.920	54,357.750	3.41%	1.781
2011	9	1,398,059.610	1,394,539.321	3,520.289	0.25%	0.115
2011	10	1,271,330.605	1,252,107.006	19,223.600	1.51%	0.630
2011	11	1,154,290.184	1,172,967.178	-18,676.994	-1.62%	-0.612
2011	12	1,231,928.649	1,245,468.260	-13,539.611	-1.10%	-0.444
2012	1	1,358,827.154	1,374,040.136	-15,212.983	-1.12%	-0.498
2012	2	1,245,357.984	1,263,931.383	-18,573.399	-1.49%	-0.608
2012	3	1,283,787.037	1,306,448.707	-22,661.670	-1.77%	-0.742
2012	4	1,196,159.184	1,214,043.466	-17,884.282	-1.50%	-0.586
2012	5	1,248,119.470	1,261,342.065	-13,222.595	-1.06%	-0.433
2012	6	1,337,971.254	1,331,072.435	6,898.819	0.52%	0.226
2012	7	1,512,167.903	1,537,865.226	-25,697.323	-1.70%	-0.842
2012	8	1,578,254.608	1,538,951.850	39,302.758	2.49%	1.288
2012	9	1,337,413.826	1,340,997.323	-3,583.497	-0.27%	-0.117
2012	10	1,345,017.266	1,315,314.909	29,702.356	2.21%	0.973
2012	11	1,204,496.824	1,221,430.361	-16,933.536	-1.41%	-0.555
2012	12	1,265,485.223	1,253,041.735	12,443.488	0.98%	0.408
2013	1	1,397,710.446	1,437,393.362	-39,682.916	-2.84%	-1.300
2013	2	1,229,558.532	1,244,064.380	-14,505.849	-1.18%	-0.475
2013	3	1,300,205.602	1,269,625.133	30,580.469	2.35%	1.002

Xcel Energy Minnesota Small Commercial and Industrial
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2013	4	1,281,024.809	1,301,164.178	-20,139.369	-1.57%	-0.660
2013	5	1,290,931.256	1,263,787.243	27,144.013	2.10%	0.889
2013	6	1,231,780.150	1,278,379.949	-46,599.799	-3.78%	-1.527
2013	7	1,506,321.131	1,509,678.015	-3,356.884	-0.22%	-0.110
2013	8	1,464,566.270	1,435,520.639	29,045.631	1.98%	0.952
2013	9	1,478,212.236	1,518,541.841	-40,329.605	-2.73%	-1.321
2013	10	1,373,728.996	1,366,145.599	7,583.398	0.55%	0.248
2013	11	1,225,633.306	1,176,301.405	49,331.901	4.03%	1.616
2013	12	1,313,056.042	1,328,864.355	-15,808.313	-1.20%	-0.518
2014	1	1,483,189.400	1,458,118.374	25,071.026	1.69%	0.821
2014	2	1,286,757.681	1,250,791.159	35,966.522	2.80%	1.178
2014	3	1,385,178.128	1,363,069.857	22,108.271	1.60%	0.724
2014	4	1,261,034.433	1,276,067.910	-15,033.477	-1.19%	-0.493
2014	5	1,241,391.898	1,241,414.553	-22.655	0.00%	-0.001
2014	6	1,404,072.046	1,333,858.531	70,213.515	5.00%	2.300
2014	7	1,457,889.451	1,455,223.649	2,665.802	0.18%	0.087
2014	8	1,455,414.760	1,434,423.752	20,991.008	1.44%	0.688
2014	9	1,485,196.101	1,440,104.773	45,091.329	3.04%	1.477
2014	10	1,354,392.838	1,345,592.421	8,800.418	0.65%	0.288
2014	11	1,194,465.860	1,156,510.052	37,955.809	3.18%	1.243
2014	12	1,399,873.359	1,369,763.256	30,110.103	2.15%	0.986
2015	1	1,427,584.973	1,418,168.711	9,416.262	0.66%	0.308
2015	2	1,263,016.183	1,245,155.307	17,860.876	1.41%	0.585
2015	3	1,402,537.711	1,388,548.049	13,989.663	1.00%	0.458
2015	4	1,260,782.458	1,280,062.243	-19,279.785	-1.53%	-0.632
2015	5	1,213,561.293	1,216,674.270	-3,112.978	-0.26%	-0.102
2015	6	1,361,642.921	1,353,718.171	7,924.750	0.58%	0.260
2015	7	1,479,241.087	1,462,815.046	16,426.042	1.11%	0.538
2015	8	1,508,364.848	1,472,362.528	36,002.320	2.39%	1.179
2015	9	1,450,247.916	1,474,074.181	-23,826.264	-1.64%	-0.781
2015	10	1,390,106.583	1,374,418.698	15,687.885	1.13%	0.514
2015	11	1,223,236.131	1,195,804.566	27,431.565	2.24%	0.899
2015	12	1,336,785.417	1,357,326.082	-20,540.665	-1.54%	-0.673
2016	1	1,359,176.888	1,372,166.603	-12,989.715	-0.96%	-0.426
2016	2	1,330,806.873	1,279,357.867	51,449.006	3.87%	1.685
2016	3	1,371,412.938	1,405,699.964	-34,287.025	-2.50%	-1.123
2016	4	1,192,698.578	1,245,534.506	-52,835.928	-4.43%	-1.731
2016	5	1,266,886.701	1,240,946.174	25,940.527	2.05%	0.850
2016	6	1,376,226.483	1,396,572.818	-20,346.335	-1.48%	-0.667
2016	7	1,428,630.688	1,415,692.794	12,937.894	0.91%	0.424
2016	8	1,591,978.430	1,614,060.847	-22,082.417	-1.39%	-0.723

Xcel Energy Minnesota Small Commercial and Industrial
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2016	9	1,461,450.592	1,426,551.921	34,898.671	2.39%	1.143
2016	10	1,336,109.886	1,300,151.609	35,958.278	2.69%	1.178
2016	11	1,211,729.126	1,244,345.743	-32,616.616	-2.69%	-1.069
2016	12	1,322,533.707	1,312,021.259	10,512.449	0.79%	0.344
2017	1	1,432,607.872	1,429,503.753	3,104.120	0.22%	0.102
2017	2	1,234,765.454	1,245,457.610	-10,692.156	-0.87%	-0.350
2017	3	1,382,094.442	1,406,780.826	-24,686.384	-1.79%	-0.809
2017	4	1,177,716.178	1,221,047.734	-43,331.556	-3.68%	-1.420
2017	5	1,263,215.132	1,280,585.488	-17,370.357	-1.38%	-0.569
2017	6	1,383,947.041	1,391,373.860	-7,426.818	-0.54%	-0.243
2017	7	1,437,950.357	1,405,681.556	32,268.801	2.24%	1.057
2017	8	1,502,226.169	1,511,872.587	-9,646.419	-0.64%	-0.316
2017	9	1,371,934.141	1,359,786.613	12,147.528	0.89%	0.398
2017	10	1,372,790.927	1,435,959.939	-63,169.012	-4.60%	-2.069
2017	11	1,229,244.307	1,227,170.602	2,073.705	0.17%	0.068
2017	12	1,297,642.802	1,317,469.727	-19,826.925	-1.53%	-0.650
2018	1	1,465,665.693	1,437,115.335	28,550.359	1.95%	0.935
2018	2	1,281,679.949	1,265,015.351	16,664.599	1.30%	0.546
2018	3	1,372,183.732	1,396,710.896	-24,527.165	-1.79%	-0.804
2018	4	1,242,508.364	1,258,645.432	-16,137.068	-1.30%	-0.529
2018	5	1,276,666.852	1,289,568.068	-12,901.215	-1.01%	-0.423
2018	6	1,395,274.663	1,435,305.169	-40,030.507	-2.87%	-1.311
2018	7	1,515,011.901	1,531,286.633	-16,274.732	-1.07%	-0.533
2018	8	1,531,546.428	1,573,779.895	-42,233.467	-2.76%	-1.384
2018	9	1,401,179.079	1,419,329.311	-18,150.232	-1.30%	-0.595
2018	10	1,394,109.447	1,395,732.335	-1,622.888	-0.12%	-0.053
2018	11	1,214,822.064	1,232,975.266	-18,153.202	-1.49%	-0.595
2018	12	1,353,688.115	1,311,766.827	41,921.288	3.10%	1.373
2019	1	1,383,302.367	1,413,233.178	-29,930.811	-2.16%	-0.981
2019	2	1,230,206.935	1,246,877.844	-16,670.909	-1.36%	-0.546
2019	3	1,400,641.950	1,353,553.866	47,088.084	3.36%	1.543
2019	4	1,261,385.237	1,284,309.840	-22,924.602	-1.82%	-0.751
2019	5	1,244,162.865	1,271,862.856	-27,699.991	-2.23%	-0.907
2019	6	1,263,921.575	1,268,636.525	-4,714.949	-0.37%	-0.154
2019	7	1,474,451.005	1,497,731.385	-23,280.379	-1.58%	-0.763
2019	8	1,484,988.378	1,487,460.063	-2,471.685	-0.17%	-0.081
2019	9	1,341,536.522	1,329,499.551	12,036.971	0.90%	0.394
2019	10	1,400,913.581	1,412,807.318	-11,893.736	-0.85%	-0.390
2019	11	1,183,562.560	1,166,324.874	17,237.686	1.46%	0.565
2019	12	1,316,253.411	1,346,966.079	-30,712.668	-2.33%	-1.006
2020	1	1,415,022.338	1,378,678.474	36,343.864	2.57%	1.191

Xcel Energy Minnesota Small Commercial and Industrial
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2020	2	1,226,401.841	1,231,820.957	-5,419.116	-0.44%	-0.178
2020	3	1,342,274.865	1,302,419.527	39,855.337	2.97%	1.306
2020	4	1,115,525.519	1,154,986.156	-39,460.637	-3.54%	-1.293
2020	5	1,037,031.932	1,074,110.839	-37,078.907	-3.58%	-1.215
2020	6	1,210,237.167	1,260,997.840	-50,760.672	-4.19%	-1.663
2020	7	1,411,301.792	1,427,631.042	-16,329.250	-1.16%	-0.535
2020	8	1,392,632.796	1,352,027.259	40,605.537	2.92%	1.330
2020	9	1,323,441.655	1,339,253.806	-15,812.151	-1.19%	-0.518
2020	10	1,238,431.735	1,213,291.883	25,139.852	2.03%	0.824
2020	11	1,139,809.380	1,088,122.945	51,686.435	4.53%	1.693
2020	12	1,268,716.755	1,252,701.451	16,015.304	1.26%	0.525
2021	1	1,300,107.901	1,278,490.252	21,617.650	1.66%	0.708
2021	2	1,163,185.044	1,161,133.418	2,051.626	0.18%	0.067
2021	3	1,339,468.421	1,320,539.709	18,928.712	1.41%	0.620
2021	4	1,182,052.653	1,191,862.436	-9,809.783	-0.83%	-0.321
2021	5	1,126,550.444	1,132,368.235	-5,817.790	-0.52%	-0.191
2021	6		1,301,907.676			
2021	7		1,398,198.503			
2021	8		1,463,677.035			
2021	9		1,374,595.779			
2021	10		1,252,865.599			
2021	11		1,170,878.475			
2021	12		1,297,991.318			
2022	1		1,335,328.769			
2022	2		1,200,633.171			
2022	3		1,379,688.503			
2022	4		1,207,012.820			
2022	5		1,211,102.551			
2022	6		1,341,605.837			
2022	7		1,395,514.980			
2022	8		1,537,488.054			
2022	9		1,401,910.858			
2022	10		1,274,258.454			
2022	11		1,191,394.238			
2022	12		1,312,960.321			
2023	1		1,346,362.056			
2023	2		1,210,692.349			
2023	3		1,383,045.636			
2023	4		1,182,816.411			
2023	5		1,247,804.786			
2023	6		1,347,192.803			

Xcel Energy Minnesota Small Commercial and Industrial
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2023	7		1,405,497.584			
2023	8		1,539,252.607			
2023	9		1,371,024.133			
2023	10		1,313,922.714			
2023	11		1,197,476.386			
2023	12		1,319,558.230			
2024	1		1,345,023.480			
2024	2		1,250,869.890			
2024	3		1,315,998.182			
2024	4		1,249,110.837			
2024	5		1,251,485.446			
2024	6		1,279,463.265			
2024	7		1,487,886.662			
2024	8		1,500,502.945			
2024	9		1,382,184.167			
2024	10		1,347,675.073			
2024	11		1,192,474.922			
2024	12		1,332,120.535			
2025	1		1,354,080.822			
2025	2		1,222,567.271			
2025	3		1,390,197.945			
2025	4		1,249,641.405			
2025	5		1,189,307.048			
2025	6		1,356,030.760			
2025	7		1,449,455.514			
2025	8		1,510,635.897			
2025	9		1,415,076.326			
2025	10		1,286,233.969			
2025	11		1,198,613.626			
2025	12		1,323,546.772			
2026	1		1,358,986.461			
2026	2		1,220,179.270			
2026	3		1,396,905.482			
2026	4		1,221,141.703			
2026	5		1,224,388.927			
2026	6		1,356,100.966			
2026	7		1,412,313.982			
2026	8		1,555,405.025			
2026	9		1,417,139.620			
2026	10		1,286,479.143			
2026	11		1,201,901.700			

Xcel Energy Minnesota Small Commercial and Industrial
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2026	12		1,324,090.877			

Xcel Energy Minnesota Large Commercial and Industrial
Test Year 2022-2026 MWh Electric Sales

Variable	Coefficient	StdErr	T-Stat	P-Value	Definition
IPMFG_MN	3,446.1	342.7	10.056	0.00%	Industrial production index, Minnesota, 2012 = 100, IHS Markit
PostCRS	-33,960.8	9,190.1	-3.695	0.03%	Binary variable to account for billing system change; February 2005 to May 2007=1, otherwise=0
Feb2005	-324,916.6	29,423.0	-11.043	0.00%	Binary variable February 2005=1, otherwise=0
Mar2005	-411,989.6	30,616.1	-13.457	0.00%	Binary variable March 2005=1, otherwise=0
Apr2005	-359,796.7	30,466.6	-11.810	0.00%	Binary variable April 2005=1, otherwise=0
May2005	309,020.4	30,091.2	10.269	0.00%	Binary variable May 2005=1, otherwise=0
Jun2005	179,550.1	28,374.4	6.328	0.00%	Binary variable June 2005=1, otherwise=0
Aug2005	60,607.2	26,631.4	2.276	2.39%	Binary variable August 2005=1, otherwise=0
Feb2006	-129,087.4	27,995.4	-4.611	0.00%	Binary variable February 2006=1, otherwise=0
Oct2004	-139,852.4	26,354.2	-5.307	0.00%	Binary variable October 2004=1, otherwise=0
Nov2007	-102,951.1	26,290.8	-3.916	0.01%	Binary variable Nov 2007=1, otherwise=0
Mar2006	134,674.6	28,072.7	4.797	0.00%	Binary variable March 2006=1, otherwise=0
BillDaysCellnet21	14,344.4	1,007.5	14.238	0.00%	Average number of billing days per month
Feb	28,093.4	9,180.2	3.060	0.25%	Binary variable February=1, otherwise=0
Mar	22,179.7	9,181.7	2.416	1.66%	Binary variable March=1, otherwise=0
Apr	16,038.9	9,575.5	1.675	9.56%	Binary variable April=1, otherwise=0
May	24,964.7	9,689.4	2.576	1.07%	Binary variable May=1, otherwise=0
Jun	51,528.7	9,649.5	5.340	0.00%	Binary variable June=1, otherwise=0
Jul	97,367.8	9,591.1	10.152	0.00%	Binary variable July=1, otherwise=0
Aug	130,396.6	9,745.7	13.380	0.00%	Binary variable August=1, otherwise=0
Sep	108,326.3	9,800.2	11.054	0.00%	Binary variable September=1, otherwise=0
Oct	60,123.2	9,556.8	6.291	0.00%	Binary variable October=1, otherwise=0
Nov	38,588.9	10,341.3	3.732	0.03%	Binary variable November=1, otherwise=0
Dec	16,230.1	7,891.1	2.057	4.10%	Binary variable December=1, otherwise=0
PostJan18	-52,369.6	7,327.5	-7.147	0.00%	Binary variable beginning February 2018=1, otherwise=0
AR(1)	0.338	0.069	4.895	0.00%	First order autoregressive correction term

Dependent Variable					Definition
SLS_LgCI_MN					Minnesota Demand Side Management adjusted Billed Sales (MWh) for the Large Commercial and Industrial customer class.

Xcel Energy Minnesota Residential without Space Heat
Test Year 2022-2026 MWh Electric Sales

Model Statistics		
Iterations		11
Adjusted Observations		220
Deg. of Freedom for Error		194
R-Squared		0.904
Adjusted R-Squared		0.891
AIC		20.519
BIC		20.920
F-Statistic	#NA	
Prob (F-Statistic)	#NA	
Log-Likelihood		-2,543.25
Model Sum of Squares		1,327,165,650,091.89
Sum of Squared Errors		141,594,896,389.52
Mean Squared Error		729,870,599.95
Std. Error of Regression		27,016.12
Mean Abs. Dev. (MAD)		19,336.19
Mean Abs. % Err. (MAPE)		2.39%
Durbin-Watson Statistic		2.142
Durbin-H Statistic	#NA	
Ljung-Box Statistic		59.93
Prob (Ljung-Box)		0.0001
Skewness		0.649
Kurtosis		3.442
Jarque-Bera		17.238
Prob (Jarque-Bera)		0.0002

Forecast Statistics	
Forecast Observations	0
Mean Abs. Dev. (MAD)	0.00
Mean Abs. % Err. (MAPE)	0.00%
Avg. Forecast Error	0.00
Mean % Error	0.00%
Root Mean-Square Error	0.00
Theil's Inequality Coefficient	0.0000
-- Bias Proportion	0.00%
-- Variance Proportion	0.00%
-- Covariance Proportion	0.00%

Xcel Energy Minnesota Residential without Space Heat
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2003	1	800,273.692				
2003	2	753,022.192	755,501.221	-2,479.029	-0.33%	-0.092
2003	3	705,857.532	743,548.040	-37,690.508	-5.34%	-1.395
2003	4	794,219.769	729,921.465	64,298.304	8.10%	2.380
2003	5	794,461.726	774,773.155	19,688.571	2.48%	0.729
2003	6	786,164.121	801,351.250	-15,187.129	-1.93%	-0.562
2003	7	863,449.207	833,976.444	29,472.763	3.41%	1.091
2003	8	857,771.464	862,823.140	-5,051.676	-0.59%	-0.187
2003	9	856,956.287	851,043.740	5,912.547	0.69%	0.219
2003	10	795,710.947	788,059.191	7,651.756	0.96%	0.283
2003	11	756,631.382	766,722.190	-10,090.808	-1.33%	-0.374
2003	12	786,894.508	788,838.477	-1,943.970	-0.25%	-0.072
2004	1	743,555.363	776,476.747	-32,921.384	-4.43%	-1.219
2004	2	808,574.279	745,492.654	63,081.625	7.80%	2.335
2004	3	717,979.849	768,200.889	-50,221.040	-6.99%	-1.859
2004	4	780,978.730	748,153.287	32,825.443	4.20%	1.215
2004	5	779,736.615	768,969.831	10,766.784	1.38%	0.399
2004	6	871,316.589	810,855.153	60,461.436	6.94%	2.238
2004	7	873,782.288	869,832.000	3,950.289	0.45%	0.146
2004	8	847,126.941	877,822.936	-30,695.995	-3.62%	-1.136
2004	9	892,621.747	854,742.189	37,879.558	4.24%	1.402
2004	10	696,179.478	675,090.517	21,088.962	3.03%	0.781
2004	11	856,305.779	793,992.777	62,313.002	7.28%	2.307
2004	12	785,605.485	831,801.121	-46,195.636	-5.88%	-1.710
2005	1	859,426.280	792,182.503	67,243.777	7.82%	2.489
2005	2	419,021.453	418,929.293	92.159	0.02%	0.003
2005	3	358,009.614	357,737.304	272.310	0.08%	0.010
2005	4	393,397.993	392,593.381	804.612	0.20%	0.030
2005	5	1,059,191.999	1,056,814.557	2,377.441	0.22%	0.088
2005	6	997,835.522	990,810.733	7,024.789	0.70%	0.260
2005	7	837,725.236	816,968.611	20,756.626	2.48%	0.768
2005	8	954,752.433	962,177.901	-7,425.469	-0.78%	-0.275
2005	9	824,535.719	846,476.261	-21,940.542	-2.66%	-0.812
2005	10	846,654.539	779,146.041	67,508.499	7.97%	2.499
2005	11	751,664.267	769,651.291	-17,987.024	-2.39%	-0.666
2005	12	761,667.448	761,349.574	317.873	0.04%	0.012
2006	1	786,195.536	779,673.752	6,521.784	0.83%	0.241
2006	2	606,996.458	607,688.696	-692.238	-0.11%	-0.026
2006	3	921,648.901	923,694.304	-2,045.404	-0.22%	-0.076
2006	4	706,612.042	712,655.736	-6,043.694	-0.86%	-0.224
2006	5	774,819.067	783,221.460	-8,402.393	-1.08%	-0.311

Xcel Energy Minnesota Residential without Space Heat
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2006	6	791,601.537	814,685.474	-23,083.937	-2.92%	-0.854
2006	7	818,727.788	816,284.653	2,443.136	0.30%	0.090
2006	8	895,837.505	900,642.686	-4,805.181	-0.54%	-0.178
2006	9	813,339.343	833,873.284	-20,533.941	-2.52%	-0.760
2006	10	814,552.957	807,470.288	7,082.668	0.87%	0.262
2006	11	741,816.174	758,479.087	-16,662.913	-2.25%	-0.617
2006	12	721,320.644	739,694.644	-18,374.000	-2.55%	-0.680
2007	1	785,403.004	803,179.147	-17,776.143	-2.26%	-0.658
2007	2	735,276.644	735,887.216	-610.572	-0.08%	-0.023
2007	3	804,584.165	777,390.442	27,193.723	3.38%	1.007
2007	4	747,360.135	761,530.416	-14,170.281	-1.90%	-0.525
2007	5	827,616.483	792,538.167	35,078.316	4.24%	1.298
2007	6	851,947.484	857,875.613	-5,928.128	-0.70%	-0.219
2007	7	887,809.214	896,829.330	-9,020.116	-1.02%	-0.334
2007	8	958,616.970	947,272.520	11,344.450	1.18%	0.420
2007	9	857,099.990	867,847.226	-10,747.236	-1.25%	-0.398
2007	10	900,448.138	880,982.376	19,465.762	2.16%	0.721
2007	11	722,097.817	711,564.229	10,533.588	1.46%	0.390
2007	12	830,371.874	799,247.558	31,124.316	3.75%	1.152
2008	1	852,797.880	866,203.941	-13,406.061	-1.57%	-0.496
2008	2	776,637.251	807,574.554	-30,937.303	-3.98%	-1.145
2008	3	839,968.279	776,589.365	63,378.914	7.55%	2.346
2008	4	828,234.092	844,183.838	-15,949.746	-1.93%	-0.590
2008	5	767,142.642	802,620.726	-35,478.084	-4.62%	-1.313
2008	6	860,088.712	828,867.605	31,221.107	3.63%	1.156
2008	7	914,299.756	909,288.760	5,010.995	0.55%	0.185
2008	8	890,822.678	879,376.377	11,446.300	1.28%	0.424
2008	9	936,555.696	912,316.726	24,238.969	2.59%	0.897
2008	10	864,646.046	861,814.437	2,831.608	0.33%	0.105
2008	11	727,177.566	729,906.634	-2,729.068	-0.38%	-0.101
2008	12	826,559.200	805,858.792	20,700.408	2.50%	0.766
2009	1	774,942.419	791,816.877	-16,874.458	-2.18%	-0.625
2009	2	742,382.678	731,896.039	10,486.639	1.41%	0.388
2009	3	748,961.063	768,560.073	-19,599.010	-2.62%	-0.725
2009	4	754,608.003	742,534.610	12,073.393	1.60%	0.447
2009	5	710,924.305	730,674.079	-19,749.774	-2.78%	-0.731
2009	6	784,646.481	800,453.809	-15,807.328	-2.01%	-0.585
2009	7	847,739.866	847,695.073	44.793	0.01%	0.002
2009	8	842,109.412	850,850.306	-8,740.894	-1.04%	-0.324
2009	9	844,855.780	843,053.066	1,802.714	0.21%	0.067
2009	10	808,612.523	808,098.984	513.539	0.06%	0.019

Xcel Energy Minnesota Residential without Space Heat
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2009	11	721,395.681	728,322.119	-6,926.438	-0.96%	-0.256
2009	12	766,808.404	788,969.233	-22,160.830	-2.89%	-0.820
2010	1	752,226.619	753,071.330	-844.711	-0.11%	-0.031
2010	2	752,792.688	738,485.498	14,307.190	1.90%	0.530
2010	3	774,877.704	802,792.632	-27,914.928	-3.60%	-1.033
2010	4	767,029.121	766,740.327	288.794	0.04%	0.011
2010	5	756,377.956	744,767.825	11,610.131	1.53%	0.430
2010	6	862,658.292	839,463.534	23,194.758	2.69%	0.859
2010	7	868,455.340	868,888.706	-433.366	-0.05%	-0.016
2010	8	961,551.112	904,376.741	57,174.372	5.95%	2.116
2010	9	887,371.428	892,871.058	-5,499.630	-0.62%	-0.204
2010	10	780,807.101	817,005.925	-36,198.824	-4.64%	-1.340
2010	11	780,039.761	762,761.679	17,278.081	2.22%	0.640
2010	12	799,203.563	792,663.651	6,539.912	0.82%	0.242
2011	1	842,518.103	807,009.594	35,508.509	4.21%	1.314
2011	2	753,526.428	773,920.957	-20,394.530	-2.71%	-0.755
2011	3	811,581.959	812,239.774	-657.815	-0.08%	-0.024
2011	4	763,802.039	753,206.740	10,595.299	1.39%	0.392
2011	5	786,800.634	798,854.241	-12,053.607	-1.53%	-0.446
2011	6	842,355.467	842,605.867	-250.400	-0.03%	-0.009
2011	7	889,867.499	865,239.535	24,627.964	2.77%	0.912
2011	8	955,751.267	925,264.277	30,486.989	3.19%	1.128
2011	9	900,888.646	897,678.775	3,209.871	0.36%	0.119
2011	10	802,974.075	830,022.364	-27,048.289	-3.37%	-1.001
2011	11	780,370.050	779,672.643	697.407	0.09%	0.026
2011	12	798,898.086	796,452.469	2,445.617	0.31%	0.091
2012	1	807,860.276	817,969.443	-10,109.167	-1.25%	-0.374
2012	2	771,628.675	789,920.364	-18,291.689	-2.37%	-0.677
2012	3	804,104.396	800,258.617	3,845.779	0.48%	0.142
2012	4	789,793.403	777,437.403	12,355.999	1.56%	0.457
2012	5	828,036.214	821,768.498	6,267.715	0.76%	0.232
2012	6	840,426.857	838,735.310	1,691.547	0.20%	0.063
2012	7	907,296.297	884,609.100	22,687.196	2.50%	0.840
2012	8	968,898.963	945,014.003	23,884.960	2.47%	0.884
2012	9	851,902.228	862,676.337	-10,774.110	-1.26%	-0.399
2012	10	835,902.779	870,526.643	-34,623.864	-4.14%	-1.282
2012	11	810,731.370	783,928.208	26,803.163	3.31%	0.992
2012	12	767,474.951	786,636.168	-19,161.217	-2.50%	-0.709
2013	1	820,265.942	837,782.097	-17,516.155	-2.14%	-0.648
2013	2	745,970.183	770,251.027	-24,280.844	-3.25%	-0.899
2013	3	796,478.520	760,842.948	35,635.571	4.47%	1.319

Xcel Energy Minnesota Residential without Space Heat
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2013	4	835,002.639	834,416.144	586.495	0.07%	0.022
2013	5	799,668.273	819,266.463	-19,598.190	-2.45%	-0.725
2013	6	812,910.593	811,656.638	1,253.955	0.15%	0.046
2013	7	888,552.680	903,723.990	-15,171.309	-1.71%	-0.562
2013	8	913,514.966	913,896.816	-381.850	-0.04%	-0.014
2013	9	860,555.025	874,102.964	-13,547.939	-1.57%	-0.501
2013	10	886,192.500	865,549.021	20,643.480	2.33%	0.764
2013	11	771,095.119	773,742.877	-2,647.758	-0.34%	-0.098
2013	12	808,521.846	813,170.947	-4,649.100	-0.58%	-0.172
2014	1	808,560.717	841,793.887	-33,233.170	-4.11%	-1.230
2014	2	788,164.202	753,478.660	34,685.542	4.40%	1.284
2014	3	817,759.023	814,228.280	3,530.743	0.43%	0.131
2014	4	777,496.655	811,710.662	-34,214.007	-4.40%	-1.266
2014	5	754,873.617	790,878.063	-36,004.445	-4.77%	-1.333
2014	6	817,115.904	828,564.473	-11,448.569	-1.40%	-0.424
2014	7	869,949.482	901,495.602	-31,546.119	-3.63%	-1.168
2014	8	855,238.254	893,827.250	-38,588.997	-4.51%	-1.428
2014	9	929,458.470	887,965.352	41,493.118	4.46%	1.536
2014	10	850,871.853	884,315.313	-33,443.459	-3.93%	-1.238
2014	11	755,030.201	747,437.711	7,592.491	1.01%	0.281
2014	12	842,088.707	841,469.495	619.213	0.07%	0.023
2015	1	814,983.765	827,249.368	-12,265.604	-1.51%	-0.454
2015	2	775,860.953	767,321.433	8,539.520	1.10%	0.316
2015	3	839,571.913	832,185.030	7,386.882	0.88%	0.273
2015	4	805,245.802	813,480.883	-8,235.081	-1.02%	-0.305
2015	5	781,222.841	780,332.802	890.039	0.11%	0.033
2015	6	856,568.339	863,605.241	-7,036.902	-0.82%	-0.260
2015	7	886,602.429	907,850.729	-21,248.300	-2.40%	-0.787
2015	8	899,842.809	898,352.878	1,489.931	0.17%	0.055
2015	9	883,578.142	895,094.289	-11,516.147	-1.30%	-0.426
2015	10	878,689.015	851,987.967	26,701.047	3.04%	0.988
2015	11	775,850.377	781,104.303	-5,253.926	-0.68%	-0.194
2015	12	830,052.041	835,229.423	-5,177.382	-0.62%	-0.192
2016	1	783,961.323	800,907.491	-16,946.168	-2.16%	-0.627
2016	2	790,949.865	783,822.272	7,127.593	0.90%	0.264
2016	3	829,796.027	844,565.672	-14,769.646	-1.78%	-0.547
2016	4	739,747.589	781,320.137	-41,572.548	-5.62%	-1.539
2016	5	826,564.726	780,787.253	45,777.473	5.54%	1.694
2016	6	829,049.640	870,560.865	-41,511.225	-5.01%	-1.537
2016	7	855,820.405	854,382.325	1,438.080	0.17%	0.053
2016	8	951,928.864	941,790.209	10,138.655	1.07%	0.375

Xcel Energy Minnesota Residential without Space Heat
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2016	9	911,567.974	899,152.518	12,415.456	1.36%	0.460
2016	10	813,468.501	841,185.748	-27,717.247	-3.41%	-1.026
2016	11	793,111.480	790,469.313	2,642.167	0.33%	0.098
2016	12	825,309.414	807,602.195	17,707.218	2.15%	0.655
2017	1	841,682.906	833,373.111	8,309.795	0.99%	0.308
2017	2	754,283.672	773,306.480	-19,022.808	-2.52%	-0.704
2017	3	821,717.706	846,833.029	-25,115.324	-3.06%	-0.930
2017	4	767,559.860	762,475.774	5,084.087	0.66%	0.188
2017	5	832,335.519	823,020.641	9,314.878	1.12%	0.345
2017	6	851,402.370	868,729.185	-17,326.816	-2.04%	-0.641
2017	7	853,101.258	866,532.244	-13,430.986	-1.57%	-0.497
2017	8	902,890.932	941,183.102	-38,292.170	-4.24%	-1.417
2017	9	857,637.232	866,657.672	-9,020.441	-1.05%	-0.334
2017	10	877,377.173	853,472.547	23,904.627	2.72%	0.885
2017	11	789,421.426	811,364.303	-21,942.877	-2.78%	-0.812
2017	12	800,777.266	808,230.533	-7,453.267	-0.93%	-0.276
2018	1	839,454.714	775,787.250	63,667.464	7.58%	2.357
2018	2	785,558.658	741,729.264	43,829.394	5.58%	1.622
2018	3	812,311.679	804,957.386	7,354.293	0.91%	0.272
2018	4	789,636.723	755,530.966	34,105.757	4.32%	1.262
2018	5	822,252.688	790,636.255	31,616.433	3.85%	1.170
2018	6	854,966.914	814,983.802	39,983.112	4.68%	1.480
2018	7	904,371.625	867,010.924	37,360.700	4.13%	1.383
2018	8	960,012.864	922,398.418	37,614.446	3.92%	1.392
2018	9	851,706.491	837,442.584	14,263.906	1.67%	0.528
2018	10	881,091.471	848,139.024	32,952.446	3.74%	1.220
2018	11	746,222.063	776,805.357	-30,583.293	-4.10%	-1.132
2018	12	831,533.130	763,566.248	67,966.882	8.17%	2.516
2019	1	817,161.322	803,896.442	13,264.880	1.62%	0.491
2019	2	709,112.783	738,436.263	-29,323.480	-4.14%	-1.085
2019	3	838,377.800	759,541.630	78,836.170	9.40%	2.918
2019	4	797,112.803	791,129.214	5,983.589	0.75%	0.221
2019	5	793,356.643	786,030.479	7,326.163	0.92%	0.271
2019	6	773,476.985	783,119.195	-9,642.210	-1.25%	-0.357
2019	7	832,823.610	864,262.317	-31,438.707	-3.77%	-1.164
2019	8	849,841.586	869,205.630	-19,364.044	-2.28%	-0.717
2019	9	841,132.257	825,910.963	15,221.294	1.81%	0.563
2019	10	797,115.429	831,892.387	-34,776.958	-4.36%	-1.287
2019	11	705,898.755	716,071.959	-10,173.205	-1.44%	-0.377
2019	12	794,076.794	786,329.975	7,746.819	0.98%	0.287
2020	1	773,350.415	774,623.914	-1,273.499	-0.16%	-0.047

Xcel Energy Minnesota Residential without Space Heat
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2020	2	707,705.243	719,368.575	-11,663.332	-1.65%	-0.432
2020	3	760,211.655	760,418.798	-207.143	-0.03%	-0.008
2020	4	689,864.123	728,331.735	-38,467.611	-5.58%	-1.424
2020	5	653,375.782	673,401.787	-20,026.005	-3.07%	-0.741
2020	6	749,354.662	766,960.804	-17,606.142	-2.35%	-0.652
2020	7	799,041.695	824,539.670	-25,497.974	-3.19%	-0.944
2020	8	797,826.285	828,043.379	-30,217.094	-3.79%	-1.118
2020	9	767,579.877	820,387.881	-52,808.004	-6.88%	-1.955
2020	10	738,636.915	775,026.571	-36,389.656	-4.93%	-1.347
2020	11	696,048.242	698,479.148	-2,430.906	-0.35%	-0.090
2020	12	744,079.568	772,856.897	-28,777.329	-3.87%	-1.065
2021	1	719,612.760	737,193.562	-17,580.802	-2.44%	-0.651
2021	2	681,861.588	706,315.401	-24,453.812	-3.59%	-0.905
2021	3	736,413.856	785,627.349	-49,213.493	-6.68%	-1.822
2021	4	718,861.311	739,209.894	-20,348.584	-2.83%	-0.753
2021	5	687,977.810	717,378.608	-29,400.798	-4.27%	-1.088
2021	6		806,651.578			
2021	7		840,964.624			
2021	8		886,797.008			
2021	9		861,214.684			
2021	10		803,300.967			
2021	11		767,026.161			
2021	12		803,187.507			
2022	1		778,508.519			
2022	2		742,131.961			
2022	3		827,341.353			
2022	4		766,146.194			
2022	5		778,077.901			
2022	6		841,965.845			
2022	7		846,575.995			
2022	8		926,491.531			
2022	9		878,091.520			
2022	10		817,220.011			
2022	11		778,918.899			
2022	12		811,724.409			
2023	1		785,084.173			
2023	2		748,805.199			
2023	3		831,740.868			
2023	4		752,562.548			
2023	5		804,572.164			
2023	6		847,599.964			

Xcel Energy Minnesota Residential without Space Heat
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2023	7		854,574.291			
2023	8		932,072.549			
2023	9		865,748.002			
2023	10		845,012.656			
2023	11		788,787.010			
2023	12		821,909.306			
2024	1		790,804.386			
2024	2		780,115.678			
2024	3		799,670.779			
2024	4		803,288.236			
2024	5		814,458.496			
2024	6		816,618.744			
2024	7		905,677.585			
2024	8		921,133.212			
2024	9		878,046.581			
2024	10		873,035.413			
2024	11		793,599.124			
2024	12		837,596.535			
2025	1		804,388.457			
2025	2		771,104.579			
2025	3		850,685.606			
2025	4		811,868.934			
2025	5		781,971.199			
2025	6		870,101.962			
2025	7		892,807.370			
2025	8		933,440.547			
2025	9		904,635.738			
2025	10		844,233.556			
2025	11		805,718.704			
2025	12		840,759.265			
2026	1		814,987.946			
2026	2		777,528.687			
2026	3		862,316.596			
2026	4		800,701.057			
2026	5		812,212.757			
2026	6		876,149.625			
2026	7		880,808.743			
2026	8		960,773.260			
2026	9		912,708.846			
2026	10		852,172.937			
2026	11		814,207.425			

Xcel Energy Minnesota Residential without Space Heat
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2026	12		847,091.072			

Xcel Energy Minnesota Public Street and Highway Lighting
Test Year 2022-2026 MWh Electric Sales

Variable	Coefficient	StdErr	T-Stat	P-Value	Definition
CONST	6,720.3	1,691.609	3.973	0.01%	Constant term
NR_MSP	2.374	0.501	4.734	0.00%	Total population, Minneapolis-St. Paul-Bloomington, MN-WI, thousands, U.S. Census Bureau
Jan	747.0	266.511	2.803	0.56%	Binary variable January=1, otherwise=0
Feb	-1,426.0	266.485	-5.351	0.00%	Binary variable February=1, otherwise=0
Mar	-1,762.5	262.990	-6.702	0.00%	Binary variable March=1, otherwise=0
Apr	-3,455.8	262.986	-13.141	0.00%	Binary variable April=1, otherwise=0
May	-4,783.2	262.984	-18.188	0.00%	Binary variable May=1, otherwise=0
Jun	-5,756.5	266.527	-21.598	0.00%	Binary variable June=1, otherwise=0
Jul	-6,176.3	266.513	-23.175	0.00%	Binary variable July=1, otherwise=0
Aug	-5,431.2	266.502	-20.380	0.00%	Binary variable August=1, otherwise=0
Sep	-4,268.6	266.493	-16.018	0.00%	Binary variable September=1, otherwise=0
Oct	-2,779.1	266.486	-10.429	0.00%	Binary variable October=1, otherwise=0
Nov	-1,495.5	270.412	-5.530	0.00%	Binary variable November=1, otherwise=0
Nov2004	7,646.2	827.989	9.235	0.00%	Binary variable November 2004=1, otherwise=0
Feb2005	-9,423.8	825.851	-11.411	0.00%	Binary variable February 2005=1, otherwise=0
Jan2008	-2,533.0	822.432	-3.080	0.24%	Binary variable January 2008=1, otherwise=0
MN_SL_LED_SALES_CONV	-93.599	4.901	-19.099	0.00%	Minnesota Street Light LED Conversion trend starting in October 2015=1

Dependent Variable					Definition
SLS_PS_MN					Minnesota Billed Sales (MWh) for the Public Street and Highway Lighting customer class

Xcel Energy Minnesota Public Street and Highway Lighting
Test Year 2022-2026 MWh Electric Sales

Model Statistics	
Iterations	1
Adjusted Observations	221
Deg. of Freedom for Error	204
R-Squared	0.922
Adjusted R-Squared	0.916
AIC	13.442
BIC	13.703
F-Statistic	151.579
Prob (F-Statistic)	0.0000
Log-Likelihood	-1,781.89
Model Sum of Squares	1,549,996,927.39
Sum of Squared Errors	130,377,274.14
Mean Squared Error	639,104.28
Std. Error of Regression	799.44
Mean Abs. Dev. (MAD)	567.45
Mean Abs. % Err. (MAPE)	5.45%
Durbin-Watson Statistic	1.857
Durbin-H Statistic	#NA
Ljung-Box Statistic	92.98
Prob (Ljung-Box)	0.0000
Skewness	0.086
Kurtosis	4.609
Jarque-Bera	24.118
Prob (Jarque-Bera)	0.0000

Forecast Statistics	
Forecast Observations	0
Mean Abs. Dev. (MAD)	0.00
Mean Abs. % Err. (MAPE)	0.00%
Avg. Forecast Error	0.00
Mean % Error	0.00%
Root Mean-Square Error	0.00
Theil's Inequality Coefficient	0.0000
-- Bias Proportion	0.00%
-- Variance Proportion	0.00%
-- Covariance Proportion	0.00%

Xcel Energy Minnesota Public Street and Highway Lighting
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2003	1	14,130.173	14,906.677	-776.504	-5.50%	-0.971
2003	2	11,741.449	12,739.062	-997.613	-8.50%	-1.248
2003	3	11,438.222	12,407.895	-969.673	-8.48%	-1.213
2003	4	9,358.255	10,719.967	-1,361.712	-14.55%	-1.703
2003	5	8,490.886	9,397.917	-907.031	-10.68%	-1.135
2003	6	7,684.099	8,430.330	-746.231	-9.71%	-0.933
2003	7	8,041.661	8,016.120	25.541	0.32%	0.032
2003	8	9,000.419	8,766.843	233.576	2.60%	0.292
2003	9	10,233.576	9,935.062	298.514	2.92%	0.373
2003	10	12,010.000	11,430.223	579.777	4.83%	0.725
2003	11	12,967.554	12,719.505	248.049	1.91%	0.310
2003	12	14,379.136	14,220.606	158.530	1.10%	0.198
2004	1	13,936.753	14,973.288	-1,036.535	-7.44%	-1.297
2004	2	11,637.595	12,805.926	-1,168.331	-10.04%	-1.461
2004	3	11,300.361	12,475.010	-1,174.649	-10.39%	-1.469
2004	4	9,404.632	10,787.334	-1,382.702	-14.70%	-1.730
2004	5	8,677.116	9,465.536	-788.420	-9.09%	-0.986
2004	6	7,824.804	8,497.683	-672.879	-8.60%	-0.842
2004	7	8,233.303	8,083.207	150.096	1.82%	0.188
2004	8	9,894.535	8,833.663	1,060.872	10.72%	1.327
2004	9	10,377.777	10,001.617	376.160	3.62%	0.471
2004	10	12,416.486	11,496.512	919.974	7.41%	1.151
2004	11	20,431.777	20,431.777	0.000	0.00%	0.000
2004	12	15,643.359	14,286.363	1,356.996	8.67%	1.697
2005	1	15,364.313	15,038.779	325.534	2.12%	0.407
2005	2	3,447.332	3,447.332	0.000	0.00%	0.000
2005	3	12,810.801	12,539.969	270.832	2.11%	0.339
2005	4	12,228.550	10,852.026	1,376.524	11.26%	1.722
2005	5	11,027.582	9,529.963	1,497.619	13.58%	1.873
2005	6	8,421.651	8,563.727	-142.076	-1.69%	-0.178
2005	7	8,984.609	8,150.868	833.741	9.28%	1.043
2005	8	8,515.000	8,902.942	-387.942	-4.56%	-0.485
2005	9	11,674.154	10,072.513	1,601.641	13.72%	2.003
2005	10	12,521.207	11,569.025	952.182	7.60%	1.191
2005	11	14,163.571	12,859.658	1,303.913	9.21%	1.631
2005	12	17,416.000	14,362.111	3,053.889	17.53%	3.820
2006	1	14,951.194	15,116.144	-164.950	-1.10%	-0.206
2006	2	12,736.202	12,950.133	-213.931	-1.68%	-0.268
2006	3	12,057.903	12,620.569	-562.666	-4.67%	-0.704
2006	4	10,432.392	10,934.244	-501.852	-4.81%	-0.628
2006	5	9,571.105	9,613.797	-42.692	-0.45%	-0.053

Xcel Energy Minnesota Public Street and Highway Lighting
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2006	6	8,424.684	8,647.546	-222.862	-2.65%	-0.279
2006	7	7,846.324	8,234.673	-388.349	-4.95%	-0.486
2006	8	9,283.720	8,986.732	296.988	3.20%	0.371
2006	9	8,474.070	10,156.288	-1,682.218	-19.85%	-2.104
2006	10	12,482.630	11,652.785	829.845	6.65%	1.038
2006	11	12,441.272	12,943.404	-502.132	-4.04%	-0.628
2006	12	13,186.709	14,445.842	-1,259.133	-9.55%	-1.575
2007	1	16,356.598	15,199.860	1,156.738	7.07%	1.447
2007	2	13,423.656	13,033.834	389.822	2.90%	0.488
2007	3	12,307.567	12,704.255	-396.688	-3.22%	-0.496
2007	4	10,953.823	11,017.915	-64.092	-0.59%	-0.080
2007	5	9,369.852	9,697.454	-327.602	-3.50%	-0.410
2007	6	8,380.592	8,730.489	-349.897	-4.18%	-0.438
2007	7	7,213.106	8,316.903	-1,103.797	-15.30%	-1.381
2007	8	9,333.251	9,068.248	265.003	2.84%	0.331
2007	9	9,608.703	10,237.091	-628.388	-6.54%	-0.786
2007	10	11,784.029	11,732.875	51.154	0.43%	0.064
2007	11	12,624.320	13,022.780	-398.460	-3.16%	-0.498
2007	12	14,052.441	14,524.504	-472.063	-3.36%	-0.590
2008	1	12,744.834	12,744.834	0.000	0.00%	0.000
2008	2	15,000.458	13,111.070	1,889.388	12.60%	2.363
2008	3	12,347.249	12,780.777	-433.528	-3.51%	-0.542
2008	4	11,534.268	11,093.724	440.544	3.82%	0.551
2008	5	9,279.552	9,772.549	-492.997	-5.31%	-0.617
2008	6	8,478.678	8,805.114	-326.436	-3.85%	-0.408
2008	7	8,428.808	8,391.056	37.752	0.45%	0.047
2008	8	8,543.196	9,141.930	-598.734	-7.01%	-0.749
2008	9	10,349.830	10,310.301	39.529	0.38%	0.049
2008	10	11,356.243	11,805.613	-449.370	-3.96%	-0.562
2008	11	13,675.623	13,095.047	580.576	4.25%	0.726
2008	12	14,537.045	14,596.300	-59.255	-0.41%	-0.074
2009	1	15,571.747	15,349.134	222.613	1.43%	0.278
2009	2	13,446.434	13,181.923	264.511	1.97%	0.331
2009	3	12,867.049	12,851.159	15.890	0.12%	0.020
2009	4	11,300.037	11,163.635	136.402	1.21%	0.171
2009	5	9,171.835	9,841.989	-670.154	-7.31%	-0.838
2009	6	9,069.958	8,873.609	196.349	2.16%	0.246
2009	7	8,376.211	8,458.607	-82.396	-0.98%	-0.103
2009	8	9,130.649	9,208.537	-77.888	-0.85%	-0.097
2009	9	10,039.388	10,375.964	-336.577	-3.35%	-0.421
2009	10	11,614.636	11,870.333	-255.696	-2.20%	-0.320

Xcel Energy Minnesota Public Street and Highway Lighting
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2009	11	13,067.008	13,158.822	-91.814	-0.70%	-0.115
2009	12	14,081.914	14,659.132	-577.218	-4.10%	-0.722
2010	1	15,338.939	15,411.021	-72.082	-0.47%	-0.090
2010	2	13,650.728	13,242.866	407.862	2.99%	0.510
2010	3	13,157.800	12,911.426	246.374	1.87%	0.308
2010	4	11,145.884	11,223.224	-77.340	-0.69%	-0.097
2010	5	9,367.104	9,900.901	-533.797	-5.70%	-0.668
2010	6	9,261.745	8,934.327	327.418	3.54%	0.410
2010	7	8,515.440	8,521.130	-5.690	-0.07%	-0.007
2010	8	9,222.895	9,272.866	-49.971	-0.54%	-0.063
2010	9	10,524.006	10,442.099	81.907	0.78%	0.102
2010	10	11,529.161	11,938.272	-409.111	-3.55%	-0.512
2010	11	13,660.172	13,228.567	431.605	3.16%	0.540
2010	12	14,563.826	14,730.682	-166.856	-1.15%	-0.209
2011	1	16,659.503	15,484.377	1,175.126	7.05%	1.470
2011	2	13,917.525	13,318.027	599.498	4.31%	0.750
2011	3	13,396.475	12,988.125	408.350	3.05%	0.511
2011	4	10,945.257	11,301.462	-356.205	-3.25%	-0.446
2011	5	10,340.652	9,980.677	359.975	3.48%	0.450
2011	6	9,174.966	9,013.925	161.041	1.76%	0.201
2011	7	8,433.935	8,600.550	-166.615	-1.98%	-0.208
2011	8	9,035.347	9,352.107	-316.760	-3.51%	-0.396
2011	9	10,744.304	10,521.161	223.143	2.08%	0.279
2011	10	12,240.792	12,017.156	223.636	1.83%	0.280
2011	11	13,574.427	13,307.273	267.154	1.97%	0.334
2011	12	14,678.359	14,809.209	-130.850	-0.89%	-0.164
2012	1	16,580.110	15,562.726	1,017.384	6.14%	1.273
2012	2	14,411.054	13,396.198	1,014.856	7.04%	1.269
2012	3	13,074.207	13,066.117	8.090	0.06%	0.010
2012	4	10,427.767	11,379.275	-951.508	-9.12%	-1.190
2012	5	11,062.085	10,058.312	1,003.773	9.07%	1.256
2012	6	9,363.310	9,092.032	271.278	2.90%	0.339
2012	7	8,695.308	8,679.129	16.179	0.19%	0.020
2012	8	9,252.646	9,431.158	-178.512	-1.93%	-0.223
2012	9	10,168.695	10,600.685	-431.990	-4.25%	-0.540
2012	10	12,308.153	12,097.152	211.002	1.71%	0.264
2012	11	13,817.235	13,387.741	429.494	3.11%	0.537
2012	12	15,567.053	14,890.149	676.904	4.35%	0.847
2013	1	16,549.207	15,644.138	905.069	5.47%	1.132
2013	2	13,955.081	13,478.082	476.999	3.42%	0.597
2013	3	13,021.471	13,148.474	-127.003	-0.98%	-0.159

Xcel Energy Minnesota Public Street and Highway Lighting
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2013	4	12,519.360	11,462.104	1,057.256	8.44%	1.322
2013	5	10,118.515	10,141.613	-23.098	-0.23%	-0.029
2013	6	8,646.034	9,175.415	-529.381	-6.12%	-0.662
2013	7	9,127.534	8,762.595	364.939	4.00%	0.456
2013	8	9,372.200	9,514.706	-142.506	-1.52%	-0.178
2013	9	10,808.983	10,684.315	124.668	1.15%	0.156
2013	10	12,165.510	12,180.865	-15.355	-0.13%	-0.019
2013	11	13,009.232	13,471.536	-462.304	-3.55%	-0.578
2013	12	16,128.016	14,974.027	1,153.989	7.16%	1.443
2014	1	16,352.786	15,728.098	624.688	3.82%	0.781
2014	2	13,616.320	13,562.125	54.195	0.40%	0.068
2014	3	13,821.730	13,232.599	589.131	4.26%	0.737
2014	4	11,656.308	11,546.312	109.996	0.94%	0.138
2014	5	9,889.429	10,225.903	-336.474	-3.40%	-0.421
2014	6	9,339.286	9,258.171	81.115	0.87%	0.101
2014	7	8,663.165	8,843.817	-180.652	-2.09%	-0.226
2014	8	8,675.595	9,594.394	-918.799	-10.59%	-1.149
2014	9	11,152.734	10,762.469	390.265	3.50%	0.488
2014	10	11,555.383	12,257.485	-702.102	-6.08%	-0.878
2014	11	13,014.621	13,546.622	-532.001	-4.09%	-0.665
2014	12	15,829.741	15,047.579	782.162	4.94%	0.978
2015	1	16,482.912	15,800.116	682.796	4.14%	0.854
2015	2	11,496.875	13,632.608	-2,135.733	-18.58%	-2.672
2015	3	15,733.859	13,301.548	2,432.311	15.46%	3.043
2015	4	11,154.162	11,613.727	-459.565	-4.12%	-0.575
2015	5	9,435.186	10,291.785	-856.599	-9.08%	-1.071
2015	6	9,111.068	9,325.530	-214.463	-2.35%	-0.268
2015	7	7,204.286	8,912.654	-1,708.368	-23.71%	-2.137
2015	8	9,311.540	9,664.709	-353.169	-3.79%	-0.442
2015	9	9,324.745	10,834.261	-1,509.516	-16.19%	-1.888
2015	10	11,390.250	12,237.155	-846.905	-7.44%	-1.059
2015	11	13,499.924	13,434.171	65.753	0.49%	0.082
2015	12	14,394.565	14,843.006	-448.441	-3.12%	-0.561
2016	1	14,650.339	15,503.422	-853.083	-5.82%	-1.067
2016	2	14,144.707	13,243.793	900.914	6.37%	1.127
2016	3	12,933.262	12,820.611	112.651	0.87%	0.141
2016	4	12,014.829	11,040.668	974.161	8.11%	1.219
2016	5	9,663.735	9,626.604	37.131	0.38%	0.046
2016	6	8,123.513	8,567.198	-443.685	-5.46%	-0.555
2016	7	7,466.378	8,061.169	-594.791	-7.97%	-0.744
2016	8	8,608.049	8,720.072	-112.023	-1.30%	-0.140

Xcel Energy Minnesota Public Street and Highway Lighting
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2016	9	9,359.722	9,796.472	-436.750	-4.67%	-0.546
2016	10	12,318.745	11,199.813	1,118.932	9.08%	1.400
2016	11	11,135.323	12,397.276	-1,261.953	-11.33%	-1.579
2016	12	14,446.592	13,806.558	640.034	4.43%	0.801
2017	1	13,098.081	14,467.421	-1,369.340	-10.45%	-1.713
2017	2	12,601.604	12,208.239	393.365	3.12%	0.492
2017	3	11,764.222	11,785.504	-21.282	-0.18%	-0.027
2017	4	10,550.959	10,006.008	544.951	5.16%	0.682
2017	5	8,467.403	8,592.391	-124.988	-1.48%	-0.156
2017	6	7,371.780	7,532.283	-160.503	-2.18%	-0.201
2017	7	7,418.926	7,025.552	393.374	5.30%	0.492
2017	8	8,372.924	7,683.754	689.170	8.23%	0.862
2017	9	8,022.765	8,759.453	-736.687	-9.18%	-0.922
2017	10	10,346.889	10,162.092	184.797	1.79%	0.231
2017	11	12,094.584	11,358.853	735.731	6.08%	0.920
2017	12	9,956.722	12,767.434	-2,810.712	-28.23%	-3.516
2018	1	13,779.984	13,427.595	352.389	2.56%	0.441
2018	2	11,176.442	11,167.711	8.731	0.08%	0.011
2018	3	10,704.689	10,744.275	-39.586	-0.37%	-0.050
2018	4	9,268.339	8,964.078	304.261	3.28%	0.381
2018	5	8,152.152	7,549.759	602.393	7.39%	0.754
2018	6	7,413.874	6,488.493	925.381	12.48%	1.158
2018	7	6,031.206	5,980.605	50.601	0.84%	0.063
2018	8	6,455.817	6,637.649	-181.832	-2.82%	-0.227
2018	9	9,392.491	7,712.190	1,680.301	17.89%	2.102
2018	10	7,659.050	9,113.672	-1,454.622	-18.99%	-1.820
2018	11	10,647.452	10,309.275	338.177	3.18%	0.423
2018	12	11,935.055	11,716.698	218.357	1.83%	0.273
2019	1	10,598.487	12,375.701	-1,777.215	-16.77%	-2.223
2019	2	9,601.362	10,114.660	-513.298	-5.35%	-0.642
2019	3	9,590.813	9,690.067	-99.254	-1.03%	-0.124
2019	4	7,996.076	7,908.711	87.365	1.09%	0.109
2019	5	6,793.752	6,493.235	300.517	4.42%	0.376
2019	6	6,132.001	5,477.122	654.879	10.68%	0.819
2019	7	5,870.406	5,014.387	856.020	14.58%	1.071
2019	8	6,126.542	5,716.583	409.959	6.69%	0.513
2019	9	6,783.498	6,836.438	-52.940	-0.78%	-0.066
2019	10	8,209.800	8,283.233	-73.433	-0.89%	-0.092
2019	11	8,697.925	9,524.150	-826.225	-9.50%	-1.034
2019	12	10,028.065	10,976.336	-948.271	-9.46%	-1.186
2020	1	10,979.808	11,703.503	-723.695	-6.59%	-0.905

Xcel Energy Minnesota Public Street and Highway Lighting
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2020	2	9,625.356	9,510.625	114.731	1.19%	0.144
2020	3	8,929.917	9,152.969	-223.052	-2.50%	-0.279
2020	4	7,949.946	7,438.552	511.394	6.43%	0.640
2020	5	6,499.909	6,090.014	409.895	6.31%	0.513
2020	6	6,287.044	5,096.094	1,190.950	18.94%	1.490
2020	7	6,157.969	4,655.553	1,502.416	24.40%	1.879
2020	8	5,742.511	5,379.944	362.567	6.31%	0.454
2020	9	7,520.902	6,521.963	998.939	13.28%	1.250
2020	10	7,126.218	7,990.922	-864.704	-12.13%	-1.082
2020	11	8,928.441	9,254.004	-325.563	-3.65%	-0.407
2020	12	9,561.075	10,729.135	-1,168.060	-12.22%	-1.461
2021	1	11,790.311	11,479.247	311.064	2.64%	0.389
2021	2	7,823.347	9,309.314	-1,485.967	-18.99%	-1.859
2021	3	8,939.876	8,976.122	-36.246	-0.41%	-0.045
2021	4	6,898.290	7,286.168	-387.878	-5.62%	-0.485
2021	5	6,854.644	5,962.094	892.550	13.02%	1.116
2021	6		4,992.513			
2021	7		4,576.310			
2021	8		5,325.039			
2021	9		6,491.561			
2021	10		7,985.024			
2021	11		9,272.608			
2021	12		10,772.331			
2022	1		11,523.634			
2022	2		9,354.893			
2022	3		9,022.763			
2022	4		7,333.873			
2022	5		6,010.861			
2022	6		5,042.208			
2022	7		4,626.933			
2022	8		5,376.590			
2022	9		6,543.871			
2022	10		8,038.092			
2022	11		9,326.436			
2022	12		10,826.033			
2023	1		11,577.209			
2023	2		9,408.342			
2023	3		9,075.996			
2023	4		7,386.889			
2023	5		6,063.660			
2023	6		5,094.911			

Xcel Energy Minnesota Public Street and Highway Lighting
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2023	7		4,679.540			
2023	8		5,429.101			
2023	9		6,596.260			
2023	10		8,090.360			
2023	11		9,378.581			
2023	12		10,878.706			
2024	1		11,630.412			
2024	2		9,462.073			
2024	3		9,130.271			
2024	4		7,441.708			
2024	5		6,119.024			
2024	6		5,150.633			
2024	7		4,735.621			
2024	8		5,485.541			
2024	9		6,653.025			
2024	10		8,147.449			
2024	11		9,435.996			
2024	12		10,936.409			
2025	1		11,688.403			
2025	2		9,520.352			
2025	3		9,188.746			
2025	4		7,500.378			
2025	5		6,177.889			
2025	6		5,209.590			
2025	7		4,794.668			
2025	8		5,544.678			
2025	9		6,712.166			
2025	10		8,206.595			
2025	11		9,495.146			
2025	12		10,995.495			
2026	1		11,747.423			
2026	2		9,579.308			
2026	3		9,247.620			
2026	4		7,559.172			
2026	5		6,236.602			
2026	6		5,268.052			
2026	7		4,852.880			
2026	8		5,602.639			
2026	9		6,769.875			
2026	10		8,264.052			
2026	11		9,552.350			

Xcel Energy Minnesota Public Street and Highway Lighting
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2026	12		11,052.434			

Xcel Energy Minnesota Other Public Authority
Test Year 2022-2026 MWh Electric Sales

Variable	Coefficient	StdErr	T-Stat	P-Value	Definition
Jun	679.321	186.885	3.635	0.04%	Binary variable June=1, otherwise=0
Jul	1,650.554	200.857	8.218	0.00%	Binary variable July=1, otherwise=0
Aug	2,424.292	206.562	11.736	0.00%	Binary variable August=1, otherwise=0
Sep	1,805.470	200.752	8.994	0.00%	Binary variable September=1, otherwise=0
Oct	918.440	186.629	4.921	0.00%	Binary variable October=1, otherwise=0
AfterApr2011	-677.972	255.679	-2.652	0.87%	Binary variable after April 2011=1, otherwise=0
BillDaysCellnet21	147.636	19.590	7.536	0.00%	Average number of billing days per month
Trend03	-10.910	2.534	-4.306	0.00%	Linear trend variable
CGMP_MSP	0.0129	0.003	3.887	0.01%	Real Gross Metro Product, Minneapolis-St. Paul-Bloomington MN-WI MSA, millions 2012$, Bureau of Economic Analysis
Aug2005	3,750.828	529.112	7.089	0.00%	Binary variable August 2005=1, otherwise=0
Jun2007	-2,575.893	525.580	-4.901	0.00%	Binary variable June 2007=1, otherwise=0
AR(1)	0.365	0.066	5.564	0.00%	First order autoregressive correction term
SAR(1)	0.210	0.064	3.299	0.12%	First order seasonal autoregressive correction term

Dependent Variable					Definition
SLS_OS_MN					Minnesota Billed Sales (MWh) for the Other Public Authority customer class.

Xcel Energy Minnesota Other Public Authority
Test Year 2022-2026 MWh Electric Sales

Model Statistics	
Iterations	12
Adjusted Observations	208
Deg. of Freedom for Error	195
R-Squared	0.851
Adjusted R-Squared	0.842
AIC	12.781
BIC	12.990
F-Statistic	#NA
Prob (F-Statistic)	#NA
Log-Likelihood	-1,611.41
Model Sum of Squares	371,943,274.21
Sum of Squared Errors	65,269,323.94
Mean Squared Error	334,714.48
Std. Error of Regression	578.55
Mean Abs. Dev. (MAD)	423.63
Mean Abs. % Err. (MAPE)	6.72%
Durbin-Watson Statistic	2.034
Durbin-H Statistic	#NA
Ljung-Box Statistic	24.84
Prob (Ljung-Box)	0.4147
Skewness	0.077
Kurtosis	4.518
Jarque-Bera	20.176
Prob (Jarque-Bera)	0.0000

Forecast Statistics	
Forecast Observations	0
Mean Abs. Dev. (MAD)	0.00
Mean Abs. % Err. (MAPE)	0.00%
Avg. Forecast Error	0.00
Mean % Error	0.00%
Root Mean-Square Error	0.00
Theil's Inequality Coefficient	0.0000
-- Bias Proportion	0.00%
-- Variance Proportion	0.00%
-- Covariance Proportion	0.00%

Xcel Energy Minnesota Other Public Authority
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2003	1	8,131.741				
2003	2	7,565.238				
2003	3	7,596.538				
2003	4	7,373.155				
2003	5	7,694.953				
2003	6	8,742.137				
2003	7	9,685.084				
2003	8	11,036.375				
2003	9	12,647.811				
2003	10	9,401.905				
2003	11	7,214.798				
2003	12	7,399.860				
2004	1	7,690.406				
2004	2	7,307.352	6,983.899	323.453	4.43%	0.559
2004	3	6,791.094	7,014.656	-223.562	-3.29%	-0.386
2004	4	7,085.952	6,905.117	180.835	2.55%	0.313
2004	5	7,072.641	6,956.705	115.936	1.64%	0.200
2004	6	7,920.725	7,859.232	61.493	0.78%	0.106
2004	7	8,920.784	8,753.412	167.372	1.88%	0.289
2004	8	9,573.011	9,575.138	-2.127	-0.02%	-0.004
2004	9	9,268.337	9,493.227	-224.890	-2.43%	-0.389
2004	10	7,598.835	7,951.632	-352.797	-4.64%	-0.610
2004	11	6,764.148	6,689.876	74.272	1.10%	0.128
2004	12	6,819.425	7,186.400	-366.975	-5.38%	-0.634
2005	1	8,420.477	7,179.823	1,240.654	14.73%	2.144
2005	2	4,627.197	6,994.365	-2,367.168	-51.16%	-4.092
2005	3	5,863.526	6,207.035	-343.509	-5.86%	-0.594
2005	4	7,170.119	6,471.044	699.075	9.75%	1.208
2005	5	6,460.286	6,830.165	-369.879	-5.73%	-0.639
2005	6	8,866.131	7,688.058	1,178.073	13.29%	2.036
2005	7	7,631.150	8,739.031	-1,107.881	-14.52%	-1.915
2005	8	13,506.000	13,091.964	414.036	3.07%	0.716
2005	9	9,096.472	8,775.983	320.489	3.52%	0.554
2005	10	7,494.998	7,671.381	-176.383	-2.35%	-0.305
2005	11	7,910.924	6,421.469	1,489.455	18.83%	2.574
2005	12	6,242.000	7,213.164	-971.164	-15.56%	-1.679
2006	1	7,351.950	7,175.886	176.064	2.39%	0.304
2006	2	6,325.673	5,926.573	399.100	6.31%	0.690
2006	3	7,203.564	6,842.384	361.180	5.01%	0.624
2006	4	5,904.076	6,452.653	-548.577	-9.29%	-0.948
2006	5	7,135.962	6,659.800	476.162	6.67%	0.823

Xcel Energy Minnesota Other Public Authority
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2006	6	8,599.104	7,910.212	688.892	8.01%	1.191
2006	7	10,140.943	8,246.991	1,893.952	18.68%	3.274
2006	8	11,333.722	10,130.317	1,203.405	10.62%	2.080
2006	9	8,437.982	9,022.105	-584.123	-6.92%	-1.010
2006	10	7,496.316	7,604.533	-108.217	-1.44%	-0.187
2006	11	6,039.233	6,558.122	-518.889	-8.59%	-0.897
2006	12	6,130.232	6,031.800	98.432	1.61%	0.170
2007	1	7,358.124	7,175.032	183.092	2.49%	0.316
2007	2	5,716.821	6,211.053	-494.232	-8.65%	-0.854
2007	3	7,458.776	6,465.637	993.139	13.32%	1.717
2007	4	7,645.313	6,574.110	1,071.203	14.01%	1.852
2007	5	7,181.252	7,209.379	-28.127	-0.39%	-0.049
2007	6	5,260.303	5,039.448	220.855	4.20%	0.382
2007	7	9,945.786	8,778.008	1,167.778	11.74%	2.018
2007	8	11,180.911	10,092.188	1,088.723	9.74%	1.882
2007	9	7,291.552	8,527.968	-1,236.416	-16.96%	-2.137
2007	10	7,869.178	7,435.304	433.874	5.51%	0.750
2007	11	5,479.928	6,232.931	-753.003	-13.74%	-1.302
2007	12	6,230.586	5,983.259	247.327	3.97%	0.427
2008	1	6,348.694	7,091.845	-743.151	-11.71%	-1.285
2008	2	6,513.434	5,914.706	598.728	9.19%	1.035
2008	3	6,108.036	6,434.314	-326.278	-5.34%	-0.564
2008	4	5,890.511	6,796.374	-905.863	-15.38%	-1.566
2008	5	6,194.260	6,010.830	183.430	2.96%	0.317
2008	6	6,088.780	7,163.521	-1,074.741	-17.65%	-1.858
2008	7	7,958.535	8,224.773	-266.238	-3.35%	-0.460
2008	8	9,516.255	8,636.063	880.192	9.25%	1.521
2008	9	9,459.255	8,521.497	937.758	9.91%	1.621
2008	10	7,150.092	7,942.898	-792.806	-11.09%	-1.370
2008	11	4,165.246	5,215.804	-1,050.558	-25.22%	-1.816
2008	12	5,932.340	6,153.091	-220.751	-3.72%	-0.382
2009	1	5,904.093	6,204.107	-300.014	-5.08%	-0.519
2009	2	5,201.949	5,685.034	-483.085	-9.29%	-0.835
2009	3	5,767.891	5,986.847	-218.956	-3.80%	-0.378
2009	4	5,908.611	5,828.208	80.403	1.36%	0.139
2009	5	5,704.346	5,832.691	-128.345	-2.25%	-0.222
2009	6	8,225.208	6,782.499	1,442.709	17.54%	2.494
2009	7	8,752.395	8,458.887	293.508	3.35%	0.507
2009	8	8,769.913	8,915.102	-145.189	-1.66%	-0.251
2009	9	7,268.484	8,197.479	-928.995	-12.78%	-1.606
2009	10	7,547.472	6,735.731	811.741	10.76%	1.403

Xcel Energy Minnesota Other Public Authority
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2009	11	5,375.916	5,479.914	-103.998	-1.93%	-0.180
2009	12	5,763.485	6,316.627	-553.142	-9.60%	-0.956
2010	1	5,772.109	5,920.135	-148.026	-2.56%	-0.256
2010	2	5,755.410	5,475.615	279.795	4.86%	0.484
2010	3	6,184.276	6,306.193	-121.917	-1.97%	-0.211
2010	4	5,525.995	6,054.317	-528.322	-9.56%	-0.913
2010	5	5,426.347	5,480.084	-53.737	-0.99%	-0.093
2010	6	7,254.918	7,175.410	79.508	1.10%	0.137
2010	7	6,712.465	7,895.931	-1,183.466	-17.63%	-2.046
2010	8	7,545.071	8,234.317	-689.246	-9.14%	-1.191
2010	9	7,368.481	7,357.100	11.381	0.15%	0.020
2010	10	5,963.574	6,837.313	-873.739	-14.65%	-1.510
2010	11	5,700.973	5,387.646	313.327	5.50%	0.542
2010	12	5,801.809	6,011.265	-209.456	-3.61%	-0.362
2011	1	6,454.082	6,257.548	196.533	3.05%	0.340
2011	2	5,272.893	5,719.804	-446.911	-8.48%	-0.772
2011	3	6,154.114	6,110.031	44.083	0.72%	0.076
2011	4	5,746.992	5,572.820	174.172	3.03%	0.301
2011	5	6,021.028	5,384.979	636.049	10.56%	1.099
2011	6	5,907.685	6,585.028	-677.343	-11.47%	-1.171
2011	7	6,754.495	6,595.719	158.776	2.35%	0.274
2011	8	7,283.789	7,678.193	-394.404	-5.41%	-0.682
2011	9	7,233.142	6,894.566	338.576	4.68%	0.585
2011	10	6,967.809	5,998.229	969.580	13.92%	1.676
2011	11	5,379.389	5,378.650	0.739	0.01%	0.001
2011	12	5,033.012	5,416.173	-383.161	-7.61%	-0.662
2012	1	5,328.588	5,617.076	-288.488	-5.41%	-0.499
2012	2	4,799.214	4,924.017	-124.803	-2.60%	-0.216
2012	3	4,706.284	5,213.597	-507.313	-10.78%	-0.877
2012	4	4,329.705	4,870.108	-540.403	-12.48%	-0.934
2012	5	5,209.702	5,239.630	-29.928	-0.57%	-0.052
2012	6	5,846.341	5,774.788	71.553	1.22%	0.124
2012	7	7,385.460	6,891.264	494.196	6.69%	0.854
2012	8	8,270.228	7,981.352	288.876	3.49%	0.499
2012	9	7,529.852	6,835.619	694.233	9.22%	1.200
2012	10	7,577.162	6,923.097	654.065	8.63%	1.131
2012	11	4,906.583	5,372.466	-465.883	-9.50%	-0.805
2012	12	4,933.062	4,909.121	23.941	0.49%	0.041
2013	1	5,283.695	5,716.787	-433.092	-8.20%	-0.749
2013	2	4,781.849	4,602.302	179.547	3.75%	0.310
2013	3	5,317.398	4,702.646	614.752	11.56%	1.063

Xcel Energy Minnesota Other Public Authority
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2013	4	5,150.923	5,514.566	-363.643	-7.06%	-0.629
2013	5	5,130.985	5,163.078	-32.093	-0.63%	-0.055
2013	6	4,904.890	5,620.795	-715.905	-14.60%	-1.237
2013	7	6,046.994	6,908.789	-861.795	-14.25%	-1.490
2013	8	7,778.826	7,337.054	441.772	5.68%	0.764
2013	9	8,177.335	7,030.201	1,147.134	14.03%	1.983
2013	10	7,444.261	7,045.303	398.958	5.36%	0.690
2013	11	4,646.212	4,917.977	-271.765	-5.85%	-0.470
2013	12	4,815.782	5,292.459	-476.677	-9.90%	-0.824
2014	1	5,725.575	5,498.231	227.344	3.97%	0.393
2014	2	4,878.774	4,688.926	189.848	3.89%	0.328
2014	3	5,722.949	5,334.102	388.847	6.79%	0.672
2014	4	4,938.672	5,330.004	-391.332	-7.92%	-0.676
2014	5	4,913.665	4,945.044	-31.379	-0.64%	-0.054
2014	6	5,353.353	5,691.880	-338.527	-6.32%	-0.585
2014	7	6,065.070	6,715.228	-650.158	-10.72%	-1.124
2014	8	6,762.896	7,202.229	-439.333	-6.50%	-0.759
2014	9	7,185.102	7,055.673	129.429	1.80%	0.224
2014	10	5,790.667	6,500.281	-709.614	-12.25%	-1.227
2014	11	4,266.707	4,101.582	165.125	3.87%	0.285
2014	12	5,118.007	5,349.013	-231.006	-4.51%	-0.399
2015	1	5,334.107	5,401.811	-67.704	-1.27%	-0.117
2015	2	4,742.561	4,634.322	108.239	2.28%	0.187
2015	3	5,260.980	5,451.467	-190.487	-3.62%	-0.329
2015	4	4,513.529	5,038.429	-524.900	-11.63%	-0.907
2015	5	4,493.071	4,524.920	-31.849	-0.71%	-0.055
2015	6	5,246.943	5,804.924	-557.981	-10.63%	-0.964
2015	7	5,604.304	6,530.314	-926.010	-16.52%	-1.601
2015	8	6,096.284	6,791.257	-694.973	-11.40%	-1.201
2015	9	5,778.208	6,498.818	-720.610	-12.47%	-1.246
2015	10	5,501.789	5,540.648	-38.859	-0.71%	-0.067
2015	11	4,447.896	4,325.027	122.869	2.76%	0.212
2015	12	4,754.576	5,263.435	-508.859	-10.70%	-0.880
2016	1	4,817.852	4,954.062	-136.210	-2.83%	-0.235
2016	2	4,763.762	4,654.245	109.517	2.30%	0.189
2016	3	4,990.215	5,360.572	-370.356	-7.42%	-0.640
2016	4	4,079.878	4,570.868	-490.990	-12.03%	-0.849
2016	5	4,512.549	4,572.538	-59.989	-1.33%	-0.104
2016	6	5,549.931	5,660.573	-110.642	-1.99%	-0.191
2016	7	6,155.566	6,108.682	46.884	0.76%	0.081
2016	8	7,319.483	7,457.568	-138.085	-1.89%	-0.239

Xcel Energy Minnesota Other Public Authority
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2016	9	6,068.792	6,552.620	-483.828	-7.97%	-0.836
2016	10	6,032.744	5,498.065	534.679	8.86%	0.924
2016	11	4,658.790	4,823.926	-165.136	-3.54%	-0.285
2016	12	4,941.420	4,909.807	31.613	0.64%	0.055
2017	1	5,844.830	5,332.353	512.477	8.77%	0.886
2017	2	4,802.086	4,686.868	115.218	2.40%	0.199
2017	3	5,366.487	5,412.656	-46.169	-0.86%	-0.080
2017	4	4,287.606	4,466.409	-178.803	-4.17%	-0.309
2017	5	5,051.383	4,889.125	162.258	3.21%	0.280
2017	6	5,207.232	5,804.711	-597.479	-11.47%	-1.033
2017	7	7,047.789	6,123.007	924.782	13.12%	1.598
2017	8	7,200.588	7,779.025	-578.437	-8.03%	-1.000
2017	9	6,014.405	6,245.416	-231.011	-3.84%	-0.399
2017	10	5,955.508	5,830.215	125.293	2.10%	0.217
2017	11	5,108.229	4,615.669	492.560	9.64%	0.851
2017	12	5,054.872	5,099.528	-44.656	-0.88%	-0.077
2018	1	5,845.377	5,449.663	395.714	6.77%	0.684
2018	2	4,975.638	4,647.553	328.085	6.59%	0.567
2018	3	5,450.393	5,282.559	167.834	3.08%	0.290
2018	4	4,732.832	4,833.994	-101.162	-2.14%	-0.175
2018	5	5,132.489	4,997.769	134.720	2.62%	0.233
2018	6	6,003.245	5,532.083	471.162	7.85%	0.814
2018	7	6,689.784	6,928.439	-238.655	-3.57%	-0.413
2018	8	7,145.064	7,484.716	-339.652	-4.75%	-0.587
2018	9	7,239.928	6,069.381	1,170.547	16.17%	2.023
2018	10	6,246.564	6,482.003	-235.439	-3.77%	-0.407
2018	11	5,039.612	4,764.695	274.917	5.46%	0.475
2018	12	5,455.145	5,042.162	412.983	7.57%	0.714
2019	1	5,733.951	5,501.214	232.737	4.06%	0.402
2019	2	5,205.735	4,587.203	618.533	11.88%	1.069
2019	3	5,751.220	5,134.040	617.180	10.73%	1.067
2019	4	5,524.917	5,176.966	347.950	6.30%	0.601
2019	5	5,638.582	5,143.158	495.424	8.79%	0.856
2019	6	5,526.312	5,636.575	-110.263	-2.00%	-0.191
2019	7	6,696.968	6,768.550	-71.581	-1.07%	-0.124
2019	8	6,643.220	7,177.831	-534.611	-8.05%	-0.924
2019	9	5,943.208	6,430.367	-487.159	-8.20%	-0.842
2019	10	5,460.610	5,762.564	-301.954	-5.53%	-0.522
2019	11	4,624.437	4,113.250	511.187	11.05%	0.884
2019	12	5,115.141	5,354.146	-239.005	-4.67%	-0.413
2020	1	5,846.626	5,149.591	697.035	11.92%	1.205

Xcel Energy Minnesota Other Public Authority
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2020	2	4,953.043	4,641.919	311.124	6.28%	0.538
2020	3	5,258.631	5,189.601	69.030	1.31%	0.119
2020	4	4,936.395	4,776.426	159.969	3.24%	0.277
2020	5	4,505.390	4,308.213	197.177	4.38%	0.341
2020	6	5,499.482	5,526.157	-26.675	-0.49%	-0.046
2020	7	6,617.522	6,446.137	171.385	2.59%	0.296
2020	8	6,493.370	6,819.093	-325.723	-5.02%	-0.563
2020	9	6,450.211	6,206.154	244.057	3.78%	0.422
2020	10	5,471.192	5,544.801	-73.609	-1.35%	-0.127
2020	11	4,742.432	4,131.732	610.700	12.88%	1.056
2020	12	4,839.878	5,137.946	-298.068	-6.16%	-0.515
2021	1	5,219.884	4,897.252	322.632	6.18%	0.558
2021	2	4,527.930	4,394.520	133.410	2.95%	0.231
2021	3	5,075.774	5,203.270	-127.496	-2.51%	-0.220
2021	4	4,804.255	4,752.391	51.864	1.08%	0.090
2021	5	4,260.903	4,395.963	-135.060	-3.17%	-0.233
2021	6		5,582.694			
2021	7		6,358.390			
2021	8		7,097.040			
2021	9		6,504.915			
2021	10		5,457.702			
2021	11		4,537.042			
2021	12		4,961.839			
2022	1		4,970.672			
2022	2		4,278.392			
2022	3		5,131.838			
2022	4		4,564.050			
2022	5		4,550.084			
2022	6		5,603.575			
2022	7		6,147.574			
2022	8		7,368.278			
2022	9		6,487.460			
2022	10		5,451.637			
2022	11		4,385.681			
2022	12		4,908.821			
2023	1		4,814.322			
2023	2		4,138.285			
2023	3		5,024.373			
2023	4		4,261.745			
2023	5		4,685.089			
2023	6		5,520.809			

Xcel Energy Minnesota Other Public Authority
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2023	7		6,080.472			
2023	8		7,293.475			
2023	9		6,210.783			
2023	10		5,592.317			
2023	11		4,311.800			
2023	12		4,863.585			
2024	1		4,703.263			
2024	2		4,291.396			
2024	3		4,537.688			
2024	4		4,625.947			
2024	5		4,634.948			
2024	6		5,050.094			
2024	7		6,453.465			
2024	8		7,032.204			
2024	9		6,185.253			
2024	10		5,729.737			
2024	11		4,204.238			
2024	12		4,873.941			
2025	1		4,688.469			
2025	2		4,044.876			
2025	3		4,912.252			
2025	4		4,564.155			
2025	5		4,152.382			
2025	6		5,453.651			
2025	7		6,175.141			
2025	8		7,015.197			
2025	9		6,315.239			
2025	10		5,290.579			
2025	11		4,185.697			
2025	12		4,764.516			
2026	1		4,654.895			
2026	2		3,968.548			
2026	3		4,891.253			
2026	4		4,309.635			
2026	5		4,325.507			
2026	6		5,379.792			
2026	7		5,917.518			
2026	8		7,164.593			
2026	9		6,267.151			
2026	10		5,242.054			
2026	11		4,143.448			

Xcel Energy Minnesota Other Public Authority
Test Year 2022-2026 MWh Electric Sales

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2026	12		4,701.798			

Xcel Energy Minnesota Residential without Space Heat
Test Year 2022-2026 Customer Counts

Variable	Coefficient	StdErr	T-Stat	P-Value	Definition
MA12_HH_MN	508.918	1.162	438.101	0.00%	12-month moving average of Total Households, Minnesota, thousands, US Census Bureau
CRS	7569.236	694.470	10.899	0.00%	Binary variable for billing system conversion 2003-Jan 2005=1, otherwise=0
AR(1)	1.532	0.057	27.047	0.00%	First order autoregressive correction term
AR(2)	-0.568	0.057	-9.963	0.00%	Second order autoregressive correction term
SAR(1)	0.358	0.063	5.712	0.00%	First order seasonal autoregressive correction term

Dependent Variable					Definition
CUST_Reswo_MN					Minnesota Residential without Space Heat customer count

Xcel Energy Minnesota Residential without Space Heat
Test Year 2022-2026 Customer Counts

Model Statistics	
Iterations	17
Adjusted Observations	207
Deg. of Freedom for Error	202
R-Squared	0.999
Adjusted R-Squared	0.999
AIC	13.523
BIC	13.603
F-Statistic	#NA
Prob (F-Statistic)	#NA
Log-Likelihood	-1,688.31
Model Sum of Squares	251,345,118,997.14
Sum of Squared Errors	147,153,180.14
Mean Squared Error	728,481.09
Std. Error of Regression	853.51
Mean Abs. Dev. (MAD)	599.28
Mean Abs. % Err. (MAPE)	0.06%
Durbin-Watson Statistic	2.269
Durbin-H Statistic	#NA
Ljung-Box Statistic	61.29
Prob (Ljung-Box)	0.0000
Skewness	-0.593
Kurtosis	6.659
Jarque-Bera	127.616
Prob (Jarque-Bera)	0.0000

Forecast Statistics	
Forecast Observations	0
Mean Abs. Dev. (MAD)	0.00
Mean Abs. % Err. (MAPE)	0.00%
Avg. Forecast Error	0.00
Mean % Error	0.00%
Root Mean-Square Error	0.00
Theil's Inequality Coefficient	0.0000
-- Bias Proportion	0.00%
-- Variance Proportion	0.00%
-- Covariance Proportion	0.00%

Xcel Energy Minnesota Residential without Space Heat
Test Year 2022-2026 Customer Counts

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2003	1	1,003,982.000				
2003	2	1,006,477.000				
2003	3	1,007,632.000				
2003	4	1,008,980.000				
2003	5	1,008,816.000				
2003	6	1,009,652.000				
2003	7	1,010,831.000				
2003	8	1,010,692.000				
2003	9	1,012,355.000				
2003	10	1,013,734.000				
2003	11	1,012,932.000				
2003	12	1,014,896.000				
2004	1	1,018,119.000				
2004	2	1,020,315.000				
2004	3	1,024,677.000	1,021,567.765	3,109.235	0.30%	3.643
2004	4	1,023,633.000	1,027,382.440	-3,749.440	-0.37%	-4.393
2004	5	1,023,368.000	1,022,766.442	601.558	0.06%	0.705
2004	6	1,022,938.000	1,023,640.535	-702.535	-0.07%	-0.823
2004	7	1,023,434.000	1,023,086.209	347.791	0.03%	0.407
2004	8	1,026,214.000	1,023,587.119	2,626.881	0.26%	3.078
2004	9	1,027,101.000	1,028,499.141	-1,398.141	-0.14%	-1.638
2004	10	1,029,674.000	1,027,856.090	1,817.910	0.18%	2.130
2004	11	1,030,685.000	1,030,611.676	73.324	0.01%	0.086
2004	12	1,033,628.000	1,032,146.924	1,481.076	0.14%	1.735
2005	1	1,033,990.000	1,036,018.275	-2,028.275	-0.20%	-2.376
2005	2	1,025,002.000	1,026,773.821	-1,771.821	-0.17%	-2.076
2005	3	1,022,000.000	1,025,431.949	-3,431.949	-0.34%	-4.021
2005	4	1,018,694.000	1,019,342.469	-648.469	-0.06%	-0.760
2005	5	1,017,341.000	1,017,372.084	-31.084	0.00%	-0.036
2005	6	1,014,105.000	1,016,971.009	-2,866.009	-0.28%	-3.358
2005	7	1,011,764.000	1,013,161.974	-1,397.974	-0.14%	-1.638
2005	8	1,013,218.000	1,012,069.319	1,148.681	0.11%	1.346
2005	9	1,013,509.000	1,014,538.266	-1,029.266	-0.10%	-1.206
2005	10	1,016,265.000	1,015,177.624	1,087.376	0.11%	1.274
2005	11	1,018,625.000	1,018,383.300	241.700	0.02%	0.283
2005	12	1,019,653.000	1,021,474.285	-1,821.285	-0.18%	-2.134
2006	1	1,021,680.000	1,020,447.333	1,232.667	0.12%	1.444
2006	2	1,023,467.000	1,022,877.906	589.094	0.06%	0.690
2006	3	1,024,912.000	1,024,258.198	653.802	0.06%	0.766
2006	4	1,025,850.000	1,025,648.211	201.789	0.02%	0.236
2006	5	1,027,215.000	1,026,999.843	215.157	0.02%	0.252

Xcel Energy Minnesota Residential without Space Heat
Test Year 2022-2026 Customer Counts

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2006	6	1,026,388.000	1,027,490.111	-1,102.111	-0.11%	-1.291
2006	7	1,026,530.000	1,026,128.383	401.617	0.04%	0.471
2006	8	1,029,544.000	1,027,980.817	1,563.183	0.15%	1.831
2006	9	1,031,388.000	1,031,365.355	22.645	0.00%	0.027
2006	10	1,034,744.000	1,033,619.704	1,124.296	0.11%	1.317
2006	11	1,036,121.000	1,037,123.472	-1,002.472	-0.10%	-1.175
2006	12	1,037,212.000	1,036,978.695	233.305	0.02%	0.273
2007	1	1,039,940.000	1,038,527.605	1,412.395	0.14%	1.655
2007	2	1,041,148.000	1,041,841.273	-693.273	-0.07%	-0.812
2007	3	1,042,690.000	1,042,109.323	580.677	0.06%	0.680
2007	4	1,043,467.000	1,043,709.222	-242.222	-0.02%	-0.284
2007	5	1,043,404.000	1,044,309.096	-905.096	-0.09%	-1.060
2007	6	1,041,448.000	1,042,962.030	-1,514.030	-0.15%	-1.774
2007	7	1,041,668.000	1,040,813.923	854.077	0.08%	1.001
2007	8	1,042,741.000	1,043,125.972	-384.972	-0.04%	-0.451
2007	9	1,042,952.000	1,043,712.231	-760.231	-0.07%	-0.891
2007	10	1,045,234.000	1,044,262.243	971.757	0.09%	1.139
2007	11	1,045,799.000	1,046,698.481	-899.481	-0.09%	-1.054
2007	12	1,046,598.000	1,046,620.602	-22.602	0.00%	-0.026
2008	1	1,047,649.000	1,048,217.724	-568.724	-0.05%	-0.666
2008	2	1,048,424.000	1,048,568.075	-144.075	-0.01%	-0.169
2008	3	1,049,090.000	1,049,640.171	-550.171	-0.05%	-0.645
2008	4	1,049,496.000	1,049,936.413	-440.413	-0.04%	-0.516
2008	5	1,048,674.000	1,050,083.974	-1,409.974	-0.13%	-1.652
2008	6	1,047,528.000	1,047,986.389	-458.389	-0.04%	-0.537
2008	7	1,047,716.000	1,047,812.326	-96.326	-0.01%	-0.113
2008	8	1,049,594.000	1,048,588.070	1,005.930	0.10%	1.179
2008	9	1,050,599.000	1,050,856.320	-257.320	-0.02%	-0.301
2008	10	1,051,817.000	1,052,211.975	-394.975	-0.04%	-0.463
2008	11	1,052,371.000	1,052,458.829	-87.829	-0.01%	-0.103
2008	12	1,053,353.000	1,053,010.277	342.723	0.03%	0.402
2009	1	1,053,628.000	1,054,203.020	-575.020	-0.05%	-0.674
2009	2	1,054,098.000	1,053,876.067	221.933	0.02%	0.260
2009	3	1,055,007.000	1,054,408.417	598.583	0.06%	0.701
2009	4	1,055,026.000	1,055,409.020	-383.020	-0.04%	-0.449
2009	5	1,053,720.000	1,054,473.506	-753.506	-0.07%	-0.883
2009	6	1,053,488.000	1,052,716.477	771.523	0.07%	0.904
2009	7	1,052,493.000	1,053,651.159	-1,158.159	-0.11%	-1.357
2009	8	1,052,833.000	1,052,617.869	215.131	0.02%	0.252
2009	9	1,052,577.000	1,053,094.181	-517.181	-0.05%	-0.606
2009	10	1,053,864.000	1,052,803.245	1,060.755	0.10%	1.243

Xcel Energy Minnesota Residential without Space Heat
Test Year 2022-2026 Customer Counts

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2009	11	1,054,270.000	1,054,684.977	-414.977	-0.04%	-0.486
2009	12	1,054,905.000	1,054,901.932	3.068	0.00%	0.004
2010	1	1,055,616.000	1,055,351.422	264.578	0.03%	0.310
2010	2	1,056,628.000	1,056,334.984	293.016	0.03%	0.343
2010	3	1,058,391.000	1,057,633.903	757.097	0.07%	0.887
2010	4	1,058,092.000	1,059,401.466	-1,309.466	-0.12%	-1.534
2010	5	1,057,846.000	1,057,689.540	156.460	0.01%	0.183
2010	6	1,057,609.000	1,058,062.124	-453.124	-0.04%	-0.531
2010	7	1,057,335.000	1,057,342.325	-7.325	0.00%	-0.009
2010	8	1,058,130.000	1,057,674.836	455.164	0.04%	0.533
2010	9	1,058,379.000	1,058,567.785	-188.785	-0.02%	-0.221
2010	10	1,059,587.000	1,059,165.137	421.863	0.04%	0.494
2010	11	1,060,949.000	1,060,257.084	691.916	0.07%	0.811
2010	12	1,061,459.000	1,061,922.838	-463.838	-0.04%	-0.543
2011	1	1,062,226.000	1,061,915.181	310.819	0.03%	0.364
2011	2	1,062,713.000	1,062,896.822	-183.822	-0.02%	-0.215
2011	3	1,063,276.000	1,063,438.354	-162.354	-0.02%	-0.190
2011	4	1,063,452.000	1,063,156.355	295.645	0.03%	0.346
2011	5	1,063,018.000	1,063,541.216	-523.216	-0.05%	-0.613
2011	6	1,062,311.000	1,062,816.464	-505.464	-0.05%	-0.592
2011	7	1,062,261.000	1,061,985.357	275.643	0.03%	0.323
2011	8	1,063,631.000	1,062,722.224	908.776	0.09%	1.065
2011	9	1,063,112.000	1,064,471.894	-1,359.894	-0.13%	-1.593
2011	10	1,064,134.000	1,063,384.386	749.614	0.07%	0.878
2011	11	1,064,629.000	1,065,149.426	-520.426	-0.05%	-0.610
2011	12	1,065,320.000	1,065,037.947	282.053	0.03%	0.330
2012	1	1,065,730.000	1,066,118.887	-388.887	-0.04%	-0.456
2012	2	1,066,405.000	1,066,244.969	160.031	0.02%	0.187
2012	3	1,067,202.000	1,067,166.824	35.176	0.00%	0.041
2012	4	1,067,043.000	1,067,891.548	-848.548	-0.08%	-0.994
2012	5	1,066,991.000	1,067,093.234	-102.234	-0.01%	-0.120
2012	6	1,066,314.000	1,067,085.217	-771.217	-0.07%	-0.904
2012	7	1,066,609.000	1,066,361.833	247.167	0.02%	0.290
2012	8	1,067,107.000	1,067,573.425	-466.425	-0.04%	-0.546
2012	9	1,066,833.000	1,067,220.484	-387.484	-0.04%	-0.454
2012	10	1,068,688.000	1,067,445.550	1,242.450	0.12%	1.456
2012	11	1,069,163.000	1,069,950.196	-787.196	-0.07%	-0.922
2012	12	1,069,600.000	1,069,803.414	-203.414	-0.02%	-0.238
2013	1	1,070,545.000	1,070,065.244	479.756	0.04%	0.562
2013	2	1,071,164.000	1,071,414.315	-250.315	-0.02%	-0.293
2013	3	1,071,593.000	1,071,815.285	-222.285	-0.02%	-0.260

Xcel Energy Minnesota Residential without Space Heat
Test Year 2022-2026 Customer Counts

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2013	4	1,072,473.000	1,071,753.434	719.566	0.07%	0.843
2013	5	1,072,390.000	1,073,076.530	-686.530	-0.06%	-0.804
2013	6	1,071,924.000	1,072,243.539	-319.539	-0.03%	-0.374
2013	7	1,072,908.000	1,072,053.652	854.348	0.08%	1.001
2013	8	1,073,926.000	1,073,715.088	210.912	0.02%	0.247
2013	9	1,074,232.000	1,074,415.522	-183.522	-0.02%	-0.215
2013	10	1,075,509.000	1,075,233.990	275.010	0.03%	0.322
2013	11	1,076,452.000	1,076,125.162	326.838	0.03%	0.383
2013	12	1,077,648.000	1,077,130.429	517.571	0.05%	0.606
2014	1	1,078,564.000	1,078,635.513	-71.513	-0.01%	-0.084
2014	2	1,079,061.000	1,079,165.315	-104.315	-0.01%	-0.122
2014	3	1,079,956.000	1,079,426.945	529.055	0.05%	0.620
2014	4	1,080,271.000	1,080,736.126	-465.126	-0.04%	-0.545
2014	5	1,080,714.000	1,080,300.346	413.654	0.04%	0.485
2014	6	1,080,566.000	1,080,889.178	-323.178	-0.03%	-0.379
2014	7	1,081,126.000	1,081,025.806	100.194	0.01%	0.117
2014	8	1,081,570.000	1,081,722.299	-152.299	-0.01%	-0.178
2014	9	1,081,318.000	1,081,861.378	-543.378	-0.05%	-0.637
2014	10	1,082,977.000	1,081,746.665	1,230.335	0.11%	1.441
2014	11	1,083,659.000	1,084,158.226	-499.226	-0.05%	-0.585
2014	12	1,084,975.000	1,084,460.553	514.447	0.05%	0.603
2015	1	1,085,784.000	1,085,982.827	-198.827	-0.02%	-0.233
2015	2	1,086,787.000	1,086,424.555	362.445	0.03%	0.425
2015	3	1,087,599.000	1,087,767.903	-168.903	-0.02%	-0.198
2015	4	1,088,591.000	1,088,198.250	392.750	0.04%	0.460
2015	5	1,088,413.000	1,089,458.871	-1,045.871	-0.10%	-1.225
2015	6	1,088,556.000	1,088,326.822	229.178	0.02%	0.269
2015	7	1,088,077.000	1,089,008.714	-931.714	-0.09%	-1.092
2015	8	1,088,799.000	1,088,002.835	796.165	0.07%	0.933
2015	9	1,089,377.000	1,089,145.636	231.364	0.02%	0.271
2015	10	1,091,082.000	1,090,426.138	655.862	0.06%	0.768
2015	11	1,091,979.000	1,091,972.161	6.839	0.00%	0.008
2015	12	1,092,595.000	1,092,789.867	-194.867	-0.02%	-0.228
2016	1	1,093,369.000	1,092,905.273	463.727	0.04%	0.543
2016	2	1,094,551.000	1,093,896.361	654.639	0.06%	0.767
2016	3	1,095,351.000	1,095,142.192	208.808	0.02%	0.245
2016	4	1,095,831.000	1,095,777.414	53.586	0.00%	0.063
2016	5	1,096,525.000	1,095,580.174	944.826	0.09%	1.107
2016	6	1,096,695.000	1,096,816.816	-121.816	-0.01%	-0.143
2016	7	1,096,548.000	1,096,418.962	129.038	0.01%	0.151
2016	8	1,097,862.000	1,096,672.137	1,189.863	0.11%	1.394

Xcel Energy Minnesota Residential without Space Heat
Test Year 2022-2026 Customer Counts

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2016	9	1,098,165.000	1,098,508.470	-343.470	-0.03%	-0.402
2016	10	1,099,552.000	1,098,695.833	856.167	0.08%	1.003
2016	11	1,100,537.000	1,100,182.955	354.045	0.03%	0.415
2016	12	1,101,823.000	1,101,012.956	810.044	0.07%	0.949
2017	1	1,102,867.000	1,102,581.007	285.993	0.03%	0.335
2017	2	1,103,506.000	1,103,612.039	-106.039	-0.01%	-0.124
2017	3	1,104,673.000	1,103,833.870	839.130	0.08%	0.983
2017	4	1,105,041.000	1,105,274.697	-233.697	-0.02%	-0.274
2017	5	1,105,616.000	1,105,368.644	247.356	0.02%	0.290
2017	6	1,105,961.000	1,105,853.025	107.975	0.01%	0.127
2017	7	1,105,651.000	1,106,093.949	-442.949	-0.04%	-0.519
2017	8	1,106,541.000	1,106,054.684	486.316	0.04%	0.570
2017	9	1,106,823.000	1,106,999.103	-176.103	-0.02%	-0.206
2017	10	1,107,714.000	1,107,572.785	141.215	0.01%	0.165
2017	11	1,108,641.000	1,108,482.020	158.980	0.01%	0.186
2017	12	1,109,346.000	1,109,651.286	-305.286	-0.03%	-0.358
2018	1	1,110,459.000	1,110,128.303	330.697	0.03%	0.387
2018	2	1,111,368.000	1,111,407.116	-39.116	0.00%	-0.046
2018	3	1,112,844.000	1,112,505.724	338.276	0.03%	0.396
2018	4	1,113,827.000	1,113,932.255	-105.255	-0.01%	-0.123
2018	5	1,114,679.000	1,114,903.425	-224.425	-0.02%	-0.263
2018	6	1,114,542.000	1,115,507.869	-965.869	-0.09%	-1.132
2018	7	1,114,657.000	1,114,654.844	2.156	0.00%	0.003
2018	8	1,115,473.000	1,115,490.469	-17.469	0.00%	-0.020
2018	9	1,115,525.000	1,116,245.969	-720.969	-0.06%	-0.845
2018	10	1,117,187.000	1,116,227.567	959.433	0.09%	1.124
2018	11	1,117,863.000	1,118,662.844	-799.844	-0.07%	-0.937
2018	12	1,118,900.000	1,118,696.785	203.215	0.02%	0.238
2019	1	1,119,836.000	1,120,117.476	-281.476	-0.03%	-0.330
2019	2	1,120,611.000	1,120,835.002	-224.002	-0.02%	-0.262
2019	3	1,121,725.000	1,121,759.894	-34.894	0.00%	-0.041
2019	4	1,122,496.000	1,122,764.917	-268.917	-0.02%	-0.315
2019	5	1,122,899.000	1,123,389.560	-490.560	-0.04%	-0.575
2019	6	1,122,778.000	1,123,296.788	-518.788	-0.05%	-0.608
2019	7	1,123,150.000	1,123,196.312	-46.312	0.00%	-0.054
2019	8	1,123,930.000	1,124,060.113	-130.113	-0.01%	-0.152
2019	9	1,124,572.000	1,124,674.531	-102.531	-0.01%	-0.120
2019	10	1,125,385.000	1,125,977.471	-592.471	-0.05%	-0.694
2019	11	1,126,215.000	1,126,229.135	-14.135	0.00%	-0.017
2019	12	1,127,457.000	1,127,061.368	395.632	0.04%	0.464
2020	1	1,128,986.000	1,128,264.845	721.155	0.06%	0.845

Xcel Energy Minnesota Residential without Space Heat
Test Year 2022-2026 Customer Counts

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2020	2	1,129,875.000	1,129,733.012	141.988	0.01%	0.166
2020	3	1,130,816.000	1,130,154.302	661.698	0.06%	0.775
2020	4	1,132,328.000	1,130,707.802	1,620.198	0.14%	1.898
2020	5	1,132,472.000	1,132,216.684	255.316	0.02%	0.299
2020	6	1,133,522.000	1,132,100.270	1,421.730	0.13%	1.666
2020	7	1,134,357.000	1,134,062.658	294.342	0.03%	0.345
2020	8	1,135,408.000	1,134,966.476	441.524	0.04%	0.517
2020	9	1,135,644.000	1,135,713.667	-69.667	-0.01%	-0.082
2020	10	1,137,017.000	1,135,566.673	1,450.327	0.13%	1.699
2020	11	1,137,827.000	1,137,508.109	318.891	0.03%	0.374
2020	12	1,138,814.000	1,138,537.954	276.046	0.02%	0.323
2021	1	1,140,006.000	1,139,813.406	192.594	0.02%	0.226
2021	2	1,141,146.000	1,141,014.558	131.442	0.01%	0.154
2021	3	1,143,176.000	1,142,582.844	593.156	0.05%	0.695
2021	4	1,143,793.000	1,145,541.078	-1,748.078	-0.15%	-2.048
2021	5	1,144,623.000	1,145,056.264	-433.264	-0.04%	-0.508
2021	6		1,145,776.195			
2021	7		1,146,640.632			
2021	8		1,147,237.342			
2021	9		1,147,749.128			
2021	10		1,148,821.047			
2021	11		1,149,809.391			
2021	12		1,150,854.746			
2022	1		1,151,952.373			
2022	2		1,153,000.391			
2022	3		1,154,278.932			
2022	4		1,154,958.448			
2022	5		1,155,618.058			
2022	6		1,156,535.019			
2022	7		1,157,488.280			
2022	8		1,158,483.921			
2022	9		1,159,353.746			
2022	10		1,160,327.834			
2022	11		1,161,174.787			
2022	12		1,161,993.371			
2023	1		1,162,781.266			
2023	2		1,163,501.430			
2023	3		1,164,271.905			
2023	4		1,164,795.119			
2023	5		1,165,278.121			
2023	6		1,165,860.552			

Xcel Energy Minnesota Residential without Space Heat
Test Year 2022-2026 Customer Counts

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2023	7		1,166,462.922			
2023	8		1,167,087.125			
2023	9		1,167,717.469			
2023	10		1,168,436.137			
2023	11		1,169,160.037			
2023	12		1,169,900.471			
2024	1		1,170,656.439			
2024	2		1,171,414.524			
2024	3		1,172,205.984			
2024	4		1,172,924.109			
2024	5		1,173,642.951			
2024	6		1,174,403.775			
2024	7		1,175,178.019			
2024	8		1,175,966.278			
2024	9		1,176,757.620			
2024	10		1,177,581.415			
2024	11		1,178,407.842			
2024	12		1,179,240.637			
2025	1		1,180,079.393			
2025	2		1,180,919.260			
2025	3		1,181,777.477			
2025	4		1,182,615.784			
2025	5		1,183,460.674			
2025	6		1,184,325.079			
2025	7		1,185,198.741			
2025	8		1,186,081.851			
2025	9		1,186,967.280			
2025	10		1,187,865.530			
2025	11		1,188,765.899			
2025	12		1,189,656.694			
2026	1		1,190,537.753			
2026	2		1,191,407.325			
2026	3		1,192,283.163			
2026	4		1,193,151.552			
2026	5		1,194,021.971			
2026	6		1,194,885.921			
2026	7		1,195,739.721			
2026	8		1,196,583.430			
2026	9		1,197,420.915			
2026	10		1,198,255.933			
2026	11		1,199,084.644			

Xcel Energy Minnesota Residential without Space Heat
Test Year 2022-2026 Customer Counts

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2026	12		1,199,919.923			

Xcel Energy Minnesota Residential with Space Heat
Test Year 2022-2026 Customer Counts

Variable	Coefficient	StdErr	T-Stat	P-Value	Definition
CONST	-79402.237	18770.420	-4.230	0.00%	Constant term
MA12_NR_MN	20.558	3.382	6.078	0.00%	12-month moving average of Total Population, Minnesota, thousands, US Census Bureau
Mar2005	825.405	78.804	10.474	0.00%	Binary March 2005=1, otherwise=0
Apr2005	688.467	95.465	7.212	0.00%	Binary April 2005=1, otherwise=0
CRS	1111.731	92.250	12.051	0.00%	Binary variable for billing system conversion 2003-Jan 2005=1, otherwise=0
May2005	243.411	77.983	3.121	0.21%	Binary May 2005=1, otherwise=0
Trend_2020_2021	240.444	29.838	8.058	0.00%	Limited interval trend variable beginning in April 2020 =1 and leveling off in December 2022=21 to account of strong customer growth during this period.
AR(1)	1.162	0.072	16.179	0.00%	First order autoregressive correction term
AR(2)	-0.182	0.072	-2.540	1.18%	Second order autoregressive correction term

Dependent Variable					Definition
CUST_ResSH_MN					Minnesota Residential with Space Heat customer count

Xcel Energy Minnesota Residential with Space Heat
Test Year 2022-2026 Customer Counts

Model Statistics	
Iterations	22
Adjusted Observations	219
Deg. of Freedom for Error	210
R-Squared	0.999
Adjusted R-Squared	0.999
AIC	9.065
BIC	9.205
F-Statistic	34949.003
Prob (F-Statistic)	0.0000
Log-Likelihood	-1,294.41
Model Sum of Squares	2,323,326,683.46
Sum of Squared Errors	1,745,037.64
Mean Squared Error	8,309.70
Std. Error of Regression	91.16
Mean Abs. Dev. (MAD)	63.22
Mean Abs. % Err. (MAPE)	0.20%
Durbin-Watson Statistic	1.960
Durbin-H Statistic	#NA
Ljung-Box Statistic	36.54
Prob (Ljung-Box)	0.0486
Skewness	1.119
Kurtosis	6.222
Jarque-Bera	140.465
Prob (Jarque-Bera)	0.0000

Forecast Statistics	
Forecast Observations	0
Mean Abs. Dev. (MAD)	0.00
Mean Abs. % Err. (MAPE)	0.00%
Avg. Forecast Error	0.00
Mean % Error	0.00%
Root Mean-Square Error	0.00
Theil's Inequality Coefficient	0.0000
-- Bias Proportion	0.00%
-- Variance Proportion	0.00%
-- Covariance Proportion	0.00%

Xcel Energy Minnesota Residential with Space Heat
Test Year 2022-2026 Customer Counts

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2003	1	28,200.000				
2003	2	28,327.000				
2003	3	28,380.000	28,334.923	45.077	0.16%	0.494
2003	4	28,379.000	28,374.435	4.565	0.02%	0.050
2003	5	28,339.000	28,364.646	-25.646	-0.09%	-0.281
2003	6	28,336.000	28,319.494	16.506	0.06%	0.181
2003	7	28,280.000	28,324.393	-44.393	-0.16%	-0.487
2003	8	28,147.000	28,260.986	-113.986	-0.40%	-1.250
2003	9	28,335.000	28,117.740	217.260	0.77%	2.383
2003	10	28,345.000	28,361.461	-16.461	-0.06%	-0.181
2003	11	28,328.000	28,340.027	-12.027	-0.04%	-0.132
2003	12	28,335.000	28,319.566	15.434	0.05%	0.169
2004	1	28,423.000	28,331.896	91.104	0.32%	0.999
2004	2	28,620.000	28,433.979	186.021	0.65%	2.041
2004	3	28,730.000	28,647.989	82.011	0.29%	0.900
2004	4	28,644.000	28,741.104	-97.104	-0.34%	-1.065
2004	5	28,664.000	28,622.292	41.708	0.15%	0.458
2004	6	28,546.000	28,662.008	-116.008	-0.41%	-1.273
2004	7	28,416.000	28,522.156	-106.156	-0.37%	-1.165
2004	8	28,643.000	28,393.432	249.568	0.87%	2.738
2004	9	28,481.000	28,681.686	-200.686	-0.70%	-2.202
2004	10	28,634.000	28,453.075	180.925	0.63%	1.985
2004	11	28,503.000	28,661.150	-158.150	-0.55%	-1.735
2004	12	28,509.000	28,481.992	27.008	0.09%	0.296
2005	1	28,663.000	28,513.619	149.381	0.52%	1.639
2005	2	27,602.000	27,580.577	21.423	0.08%	0.235
2005	3	28,508.000	28,437.779	70.221	0.25%	0.770
2005	4	28,457.000	28,386.097	70.903	0.25%	0.778
2005	5	28,094.000	28,027.074	66.926	0.24%	0.734
2005	6	27,904.000	27,866.251	37.749	0.14%	0.414
2005	7	27,789.000	27,915.926	-126.926	-0.46%	-1.392
2005	8	27,773.000	27,775.160	-2.160	-0.01%	-0.024
2005	9	27,715.000	27,780.062	-65.062	-0.23%	-0.714
2005	10	27,793.000	27,718.207	74.793	0.27%	0.820
2005	11	27,808.000	27,822.039	-14.039	-0.05%	-0.154
2005	12	27,799.000	27,827.990	-28.990	-0.10%	-0.318
2006	1	27,816.000	27,817.538	-1.538	-0.01%	-0.017
2006	2	27,833.000	27,841.692	-8.692	-0.03%	-0.095
2006	3	27,849.000	27,861.154	-12.154	-0.04%	-0.133
2006	4	27,878.000	27,879.489	-1.489	-0.01%	-0.016
2006	5	27,864.000	27,913.145	-49.145	-0.18%	-0.539

Xcel Energy Minnesota Residential with Space Heat
Test Year 2022-2026 Customer Counts

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2006	6	27,802.000	27,892.742	-90.742	-0.33%	-0.995
2006	7	27,773.000	27,824.702	-51.702	-0.19%	-0.567
2006	8	27,888.000	27,803.727	84.273	0.30%	0.924
2006	9	27,976.000	27,944.070	31.930	0.11%	0.350
2006	10	28,073.000	28,026.872	46.128	0.16%	0.506
2006	11	28,100.000	28,125.038	-25.038	-0.09%	-0.275
2006	12	28,125.000	28,140.233	-15.233	-0.05%	-0.167
2007	1	28,221.000	28,165.823	55.177	0.20%	0.605
2007	2	28,224.000	28,274.272	-50.272	-0.18%	-0.551
2007	3	28,281.000	28,261.761	19.239	0.07%	0.211
2007	4	28,290.000	28,328.891	-38.891	-0.14%	-0.427
2007	5	28,261.000	28,330.436	-69.436	-0.25%	-0.762
2007	6	28,180.000	28,296.047	-116.047	-0.41%	-1.273
2007	7	28,139.000	28,208.224	-69.224	-0.25%	-0.759
2007	8	28,171.000	28,176.317	-5.317	-0.02%	-0.058
2007	9	28,164.000	28,221.949	-57.949	-0.21%	-0.636
2007	10	28,222.000	28,208.991	13.009	0.05%	0.143
2007	11	28,286.000	28,278.633	7.367	0.03%	0.081
2007	12	28,296.000	28,343.424	-47.424	-0.17%	-0.520
2008	1	28,344.000	28,344.370	-0.370	0.00%	-0.004
2008	2	28,385.000	28,399.271	-14.271	-0.05%	-0.157
2008	3	28,414.000	28,439.123	-25.123	-0.09%	-0.276
2008	4	28,446.000	28,466.293	-20.293	-0.07%	-0.223
2008	5	28,434.000	28,499.118	-65.118	-0.23%	-0.714
2008	6	28,344.000	28,480.007	-136.007	-0.48%	-1.492
2008	7	28,401.000	28,378.292	22.708	0.08%	0.249
2008	8	28,474.000	28,461.538	12.462	0.04%	0.137
2008	9	28,528.000	28,536.645	-8.645	-0.03%	-0.095
2008	10	28,656.000	28,586.753	69.247	0.24%	0.760
2008	11	28,721.000	28,726.278	-5.278	-0.02%	-0.058
2008	12	28,808.000	28,779.140	28.860	0.10%	0.317
2009	1	28,897.000	28,868.997	28.003	0.10%	0.307
2009	2	28,935.000	28,957.163	-22.163	-0.08%	-0.243
2009	3	28,980.000	28,985.693	-5.693	-0.02%	-0.062
2009	4	28,997.000	29,031.608	-34.608	-0.12%	-0.380
2009	5	28,991.000	29,043.701	-52.701	-0.18%	-0.578
2009	6	28,990.000	29,034.393	-44.393	-0.15%	-0.487
2009	7	28,950.000	29,035.017	-85.017	-0.29%	-0.933
2009	8	29,014.000	28,989.407	24.593	0.08%	0.270
2009	9	29,052.000	29,071.712	-19.712	-0.07%	-0.216
2009	10	29,085.000	29,104.898	-19.898	-0.07%	-0.218

Xcel Energy Minnesota Residential with Space Heat
Test Year 2022-2026 Customer Counts

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2009	11	29,145.000	29,136.988	8.012	0.03%	0.088
2009	12	29,340.000	29,201.347	138.653	0.47%	1.521
2010	1	29,377.000	29,417.647	-40.647	-0.14%	-0.446
2010	2	29,437.000	29,425.822	11.178	0.04%	0.123
2010	3	29,532.000	29,489.092	42.908	0.15%	0.471
2010	4	29,576.000	29,588.893	-12.893	-0.04%	-0.141
2010	5	29,682.000	29,623.058	58.942	0.20%	0.647
2010	6	29,678.000	29,740.162	-62.162	-0.21%	-0.682
2010	7	29,608.000	29,717.904	-109.904	-0.37%	-1.206
2010	8	29,681.000	29,638.965	42.035	0.14%	0.461
2010	9	29,676.000	29,738.188	-62.188	-0.21%	-0.682
2010	10	29,738.000	29,720.811	17.189	0.06%	0.189
2010	11	29,820.000	29,795.471	24.529	0.08%	0.269
2010	12	29,904.000	29,881.210	22.790	0.08%	0.250
2011	1	29,966.000	29,965.653	0.347	0.00%	0.004
2011	2	30,095.000	30,024.187	70.813	0.24%	0.777
2011	3	30,204.000	30,164.910	39.090	0.13%	0.429
2011	4	30,226.000	30,270.181	-44.181	-0.15%	-0.485
2011	5	30,278.000	30,278.022	-0.022	0.00%	0.000
2011	6	30,218.000	30,334.769	-116.769	-0.39%	-1.281
2011	7	30,233.000	30,256.241	-23.241	-0.08%	-0.255
2011	8	30,339.000	30,285.195	53.805	0.18%	0.590
2011	9	30,306.000	30,406.241	-100.241	-0.33%	-1.100
2011	10	30,392.000	30,349.230	42.770	0.14%	0.469
2011	11	30,441.000	30,455.733	-14.733	-0.05%	-0.162
2011	12	30,492.000	30,497.607	-5.607	-0.02%	-0.062
2012	1	30,553.000	30,548.515	4.485	0.01%	0.049
2012	2	30,650.000	30,610.664	39.336	0.13%	0.432
2012	3	30,903.000	30,712.812	190.188	0.62%	2.086
2012	4	30,947.000	30,989.663	-42.663	-0.14%	-0.468
2012	5	31,046.000	30,995.312	50.688	0.16%	0.556
2012	6	31,089.000	31,104.424	-15.424	-0.05%	-0.169
2012	7	31,072.000	31,138.202	-66.202	-0.21%	-0.726
2012	8	31,101.000	31,112.460	-11.460	-0.04%	-0.126
2012	9	31,194.000	31,151.088	42.912	0.14%	0.471
2012	10	31,257.000	31,255.736	1.264	0.00%	0.014
2012	11	31,279.000	31,313.915	-34.915	-0.11%	-0.383
2012	12	31,322.000	31,329.925	-7.925	-0.03%	-0.087
2013	1	31,365.000	31,377.804	-12.804	-0.04%	-0.140
2013	2	31,473.000	31,421.884	51.116	0.16%	0.561
2013	3	31,718.000	31,541.507	176.493	0.56%	1.936

Xcel Energy Minnesota Residential with Space Heat
Test Year 2022-2026 Customer Counts

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2013	4	31,792.000	31,808.518	-16.518	-0.05%	-0.181
2013	5	31,759.000	31,851.964	-92.964	-0.29%	-1.020
2013	6	31,708.000	31,801.375	-93.375	-0.29%	-1.024
2013	7	31,760.000	31,749.463	10.537	0.03%	0.116
2013	8	31,834.000	31,820.502	13.498	0.04%	0.148
2013	9	31,828.000	31,898.387	-70.387	-0.22%	-0.772
2013	10	31,901.000	31,879.324	21.676	0.07%	0.238
2013	11	31,951.000	31,966.591	-15.591	-0.05%	-0.171
2013	12	31,998.000	32,012.781	-14.781	-0.05%	-0.162
2014	1	32,079.000	32,059.666	19.334	0.06%	0.212
2014	2	32,135.000	32,146.604	-11.604	-0.04%	-0.127
2014	3	32,145.000	32,198.318	-53.318	-0.17%	-0.585
2014	4	32,229.000	32,201.128	27.872	0.09%	0.306
2014	5	32,313.000	32,298.281	14.719	0.05%	0.161
2014	6	32,259.000	32,380.943	-121.943	-0.38%	-1.338
2014	7	32,275.000	32,303.432	-28.432	-0.09%	-0.312
2014	8	32,375.000	32,332.314	42.686	0.13%	0.468
2014	9	32,318.000	32,446.058	-128.058	-0.40%	-1.405
2014	10	32,456.000	32,362.098	93.902	0.29%	1.030
2014	11	32,805.000	32,533.222	271.778	0.83%	2.981
2014	12	32,896.000	32,914.057	-18.057	-0.05%	-0.198
2015	1	33,107.000	32,956.755	150.245	0.45%	1.648
2015	2	33,206.000	33,185.749	20.251	0.06%	0.222
2015	3	33,238.000	33,262.783	-24.783	-0.07%	-0.272
2015	4	33,262.000	33,282.303	-20.303	-0.06%	-0.223
2015	5	33,210.000	33,304.684	-94.684	-0.29%	-1.039
2015	6	33,173.000	33,242.568	-69.568	-0.21%	-0.763
2015	7	33,119.000	33,211.289	-92.289	-0.28%	-1.012
2015	8	33,132.000	33,157.560	-25.560	-0.08%	-0.280
2015	9	33,145.000	33,184.797	-39.797	-0.12%	-0.437
2015	10	33,197.000	33,199.887	-2.887	-0.01%	-0.032
2015	11	33,266.000	33,260.320	5.680	0.02%	0.062
2015	12	33,373.000	33,333.446	39.554	0.12%	0.434
2016	1	33,415.000	33,447.665	-32.665	-0.10%	-0.358
2016	2	33,712.000	33,479.482	232.518	0.69%	2.551
2016	3	33,773.000	33,819.427	-46.427	-0.14%	-0.509
2016	4	33,852.000	33,838.850	13.150	0.04%	0.144
2016	5	33,855.000	33,922.102	-67.102	-0.20%	-0.736
2016	6	33,844.000	33,912.741	-68.741	-0.20%	-0.754
2016	7	33,822.000	33,901.125	-79.125	-0.23%	-0.868
2016	8	34,031.000	33,879.279	151.721	0.45%	1.664

Xcel Energy Minnesota Residential with Space Heat
Test Year 2022-2026 Customer Counts

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2016	9	34,011.000	34,127.842	-116.842	-0.34%	-1.282
2016	10	34,015.000	34,068.356	-53.356	-0.16%	-0.585
2016	11	34,037.000	34,078.377	-41.377	-0.12%	-0.454
2016	12	34,108.000	34,104.959	3.041	0.01%	0.033
2017	1	34,142.000	34,185.211	-43.211	-0.13%	-0.474
2017	2	34,175.000	34,213.575	-38.575	-0.11%	-0.423
2017	3	34,239.000	34,247.508	-8.508	-0.02%	-0.093
2017	4	34,240.000	34,317.649	-77.649	-0.23%	-0.852
2017	5	34,271.000	34,308.963	-37.963	-0.11%	-0.416
2017	6	34,418.000	34,345.590	72.410	0.21%	0.794
2017	7	34,693.000	34,511.717	181.283	0.52%	1.989
2017	8	34,690.000	34,805.477	-115.477	-0.33%	-1.267
2017	9	34,635.000	34,752.951	-117.951	-0.34%	-1.294
2017	10	34,775.000	34,690.512	84.488	0.24%	0.927
2017	11	34,862.000	34,864.083	-2.083	-0.01%	-0.023
2017	12	34,913.000	34,940.625	-27.625	-0.08%	-0.303
2018	1	34,976.000	34,984.956	-8.956	-0.03%	-0.098
2018	2	35,081.000	35,049.759	31.241	0.09%	0.343
2018	3	35,174.000	35,161.170	12.830	0.04%	0.141
2018	4	35,187.000	35,250.993	-63.993	-0.18%	-0.702
2018	5	35,148.000	35,250.031	-102.031	-0.29%	-1.119
2018	6	35,099.000	35,202.640	-103.640	-0.30%	-1.137
2018	7	35,176.000	35,153.153	22.847	0.06%	0.251
2018	8	35,164.000	35,251.861	-87.861	-0.25%	-0.964
2018	9	35,137.000	35,224.240	-87.240	-0.25%	-0.957
2018	10	35,273.000	35,195.339	77.661	0.22%	0.852
2018	11	35,326.000	35,358.533	-32.533	-0.09%	-0.357
2018	12	35,430.000	35,395.645	34.355	0.10%	0.377
2019	1	35,639.000	35,507.074	131.926	0.37%	1.447
2019	2	35,767.000	35,731.213	35.787	0.10%	0.393
2019	3	36,017.000	35,842.133	174.867	0.49%	1.918
2019	4	36,040.000	36,109.503	-69.503	-0.19%	-0.762
2019	5	36,204.000	36,090.925	113.075	0.31%	1.240
2019	6	36,181.000	36,277.093	-96.093	-0.27%	-1.054
2019	7	36,165.000	36,220.388	-55.388	-0.15%	-0.608
2019	8	36,190.000	36,205.769	-15.769	-0.04%	-0.173
2019	9	36,294.000	36,237.671	56.329	0.16%	0.618
2019	10	36,349.000	36,353.854	-4.854	-0.01%	-0.053
2019	11	36,454.000	36,398.722	55.278	0.15%	0.606
2019	12	36,595.000	36,509.948	85.052	0.23%	0.933
2020	1	36,793.000	36,653.992	139.008	0.38%	1.525

Xcel Energy Minnesota Residential with Space Heat
Test Year 2022-2026 Customer Counts

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2020	2	36,863.000	36,857.684	5.316	0.01%	0.058
2020	3	37,087.000	36,900.861	186.139	0.50%	2.042
2020	4	37,324.000	37,386.866	-62.866	-0.17%	-0.690
2020	5	37,372.000	37,580.549	-208.549	-0.56%	-2.288
2020	6	37,530.000	37,597.489	-67.489	-0.18%	-0.740
2020	7	37,636.000	37,776.262	-140.262	-0.37%	-1.539
2020	8	38,051.000	37,874.591	176.409	0.46%	1.935
2020	9	38,226.000	38,341.347	-115.347	-0.30%	-1.265
2020	10	38,237.000	38,473.060	-236.060	-0.62%	-2.590
2020	11	38,377.000	38,457.798	-80.798	-0.21%	-0.886
2020	12	38,531.000	38,623.058	-92.058	-0.24%	-1.010
2021	1	38,874.000	38,780.968	93.032	0.24%	1.021
2021	2	39,177.000	39,155.919	21.081	0.05%	0.231
2021	3	39,794.000	39,451.729	342.271	0.86%	3.755
2021	4	40,006.000	39,999.135	6.865	0.02%	0.075
2021	5	40,588.000	40,158.609	429.391	1.06%	4.710
2021	6		40,799.968			
2021	7		40,944.126			
2021	8		41,076.760			
2021	9		41,208.515			
2021	10		41,341.338			
2021	11		41,475.584			
2021	12		41,611.435			
2022	1		41,748.894			
2022	2		41,887.959			
2022	3		42,028.471			
2022	4		42,170.425			
2022	5		42,313.814			
2022	6		42,458.476			
2022	7		42,544.296			
2022	8		42,631.377			
2022	9		42,719.524			
2022	10		42,808.731			
2022	11		42,898.993			
2022	12		42,990.053			
2023	1		43,021.795			
2023	2		43,054.324			
2023	3		43,087.566			
2023	4		43,121.514			
2023	5		43,156.164			
2023	6		43,191.437			

Xcel Energy Minnesota Residential with Space Heat
Test Year 2022-2026 Customer Counts

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2023	7		43,227.328			
2023	8		43,263.834			
2023	9		43,300.919			
2023	10		43,338.579			
2023	11		43,376.809			
2023	12		43,415.577			
2024	1		43,454.880			
2024	2		43,494.712			
2024	3		43,535.087			
2024	4		43,576.000			
2024	5		43,617.448			
2024	6		43,659.426			
2024	7		43,701.932			
2024	8		43,744.961			
2024	9		43,788.470			
2024	10		43,832.457			
2024	11		43,876.918			
2024	12		43,921.811			
2025	1		43,967.132			
2025	2		44,012.878			
2025	3		44,058.944			
2025	4		44,105.326			
2025	5		44,152.021			
2025	6		44,198.910			
2025	7		44,245.990			
2025	8		44,293.259			
2025	9		44,340.618			
2025	10		44,388.066			
2025	11		44,435.599			
2025	12		44,483.139			
2026	1		44,530.683			
2026	2		44,578.230			
2026	3		44,625.758			
2026	4		44,673.266			
2026	5		44,720.751			
2026	6		44,768.234			
2026	7		44,815.712			
2026	8		44,863.185			
2026	9		44,910.647			
2026	10		44,958.098			
2026	11		45,005.535			

Xcel Energy Minnesota Residential with Space Heat
Test Year 2022-2026 Customer Counts

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2026	12		45,052.955			

Xcel Energy Minnesota Public Street and Highway Lighting
Test Year 2022-2026 Customer Counts

Variable	Coefficient	StdErr	T-Stat	P-Value	Definition
CONST	-9115.648	784.076	-11.626	0.00%	Constant term
NR_MSP	3.772	0.232	16.262	0.00%	Total Population, Minneapolis-St. Paul-Bloomington, MN-WI, thousands, US Census Bureau
Nov2004	129.370	22.293	5.803	0.00%	Binary variable for November 2004=1, otherwise=0
Dec2004	170.043	22.293	7.628	0.00%	Binary variable for December 2004=1, otherwise=0
MN_SL_LED_Conv	13.835	1.744	7.932	0.00%	Street Light LED Conversion trend impacting customer counts starting in October 2015=1 and leveling off in December 2022=60.05
AR(1)	0.922	0.024	38.840	0.00%	First order autoregressive correction term

Dependent Variable					Definition
CUST_PS_MN					Minnesota Public Street and Highway Lighting customer count

Xcel Energy Minnesota Public Street and Highway Lighting
Test Year 2022-2026 Customer Counts

Model Statistics	
Iterations	15
Adjusted Observations	220
Deg. of Freedom for Error	214
R-Squared	0.999
Adjusted R-Squared	0.999
AIC	6.570
BIC	6.663
F-Statistic	42784.273
Prob (F-Statistic)	0.0000
Log-Likelihood	-1,028.87
Model Sum of Squares	148,559,067.25
Sum of Squared Errors	148,613.68
Mean Squared Error	694.46
Std. Error of Regression	26.35
Mean Abs. Dev. (MAD)	14.78
Mean Abs. % Err. (MAPE)	0.41%
Durbin-Watson Statistic	1.869
Durbin-H Statistic	#NA
Ljung-Box Statistic	19.68
Prob (Ljung-Box)	0.7149
Skewness	-4.315
Kurtosis	52.049
Jarque-Bera	22735.343
Prob (Jarque-Bera)	0.0000

Forecast Statistics	
Forecast Observations	0
Mean Abs. Dev. (MAD)	0.00
Mean Abs. % Err. (MAPE)	0.00%
Avg. Forecast Error	0.00
Mean % Error	0.00%
Root Mean-Square Error	0.00
Theil's Inequality Coefficient	0.0000
-- Bias Proportion	0.00%
-- Variance Proportion	0.00%
-- Covariance Proportion	0.00%

Xcel Energy Minnesota Public Street and Highway Lighting
Test Year 2022-2026 Customer Counts

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2003	1	2,953.000				
2003	2	2,957.000	2,942.464	14.536	0.49%	0.552
2003	3	2,973.000	2,946.817	26.183	0.88%	0.994
2003	4	2,961.000	2,962.240	-1.240	-0.04%	-0.047
2003	5	2,977.000	2,951.834	25.166	0.85%	0.955
2003	6	2,702.000	2,967.657	-265.657	-9.83%	-10.081
2003	7	2,690.000	2,714.680	-24.680	-0.92%	-0.937
2003	8	2,709.000	2,704.305	4.695	0.17%	0.178
2003	9	2,680.000	2,722.526	-42.526	-1.59%	-1.614
2003	10	2,677.000	2,696.470	-19.470	-0.73%	-0.739
2003	11	2,712.000	2,694.397	17.603	0.65%	0.668
2003	12	2,712.000	2,727.377	-15.377	-0.57%	-0.584
2004	1	2,719.000	2,728.071	-9.071	-0.33%	-0.344
2004	2	2,720.000	2,735.223	-15.223	-0.56%	-0.578
2004	3	2,722.000	2,736.840	-14.840	-0.55%	-0.563
2004	4	2,814.000	2,739.379	74.621	2.65%	2.832
2004	5	2,862.000	2,824.939	37.061	1.29%	1.406
2004	6	2,853.000	2,869.488	-16.488	-0.58%	-0.626
2004	7	2,886.000	2,861.847	24.153	0.84%	0.917
2004	8	2,914.000	2,892.950	21.050	0.72%	0.799
2004	9	2,960.000	2,919.440	40.560	1.37%	1.539
2004	10	2,996.000	2,962.534	33.466	1.12%	1.270
2004	11	3,136.000	3,125.773	10.227	0.33%	0.388
2004	12	3,188.000	3,176.913	11.087	0.35%	0.421
2005	1	3,030.000	3,017.981	12.019	0.40%	0.456
2005	2	3,011.000	3,029.752	-18.752	-0.62%	-0.712
2005	3	3,004.000	3,012.887	-8.887	-0.30%	-0.337
2005	4	3,035.000	3,007.092	27.908	0.92%	1.059
2005	5	3,099.000	3,036.349	62.651	2.02%	2.377
2005	6	3,096.000	3,098.617	-2.617	-0.08%	-0.099
2005	7	3,103.000	3,096.711	6.289	0.20%	0.239
2005	8	3,130.000	3,104.029	25.971	0.83%	0.986
2005	9	3,130.000	3,129.796	0.204	0.01%	0.008
2005	10	3,134.000	3,130.657	3.343	0.11%	0.127
2005	11	3,170.000	3,135.208	34.792	1.10%	1.320
2005	12	3,151.000	3,169.277	-18.277	-0.58%	-0.694
2006	1	3,159.000	3,152.612	6.388	0.20%	0.242
2006	2	3,168.000	3,160.852	7.148	0.23%	0.271
2006	3	3,205.000	3,170.016	34.984	1.09%	1.328
2006	4	3,212.000	3,205.007	6.993	0.22%	0.265
2006	5	3,228.000	3,212.325	15.675	0.49%	0.595

Xcel Energy Minnesota Public Street and Highway Lighting
Test Year 2022-2026 Customer Counts

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2006	6	3,228.000	3,227.922	0.078	0.00%	0.003
2006	7	3,253.000	3,228.781	24.219	0.74%	0.919
2006	8	3,245.000	3,252.701	-7.701	-0.24%	-0.292
2006	9	3,272.000	3,246.181	25.819	0.79%	0.980
2006	10	3,276.000	3,271.946	4.054	0.12%	0.154
2006	11	3,279.000	3,276.495	2.505	0.08%	0.095
2006	12	3,276.000	3,280.122	-4.122	-0.13%	-0.156
2007	1	3,290.000	3,278.214	11.786	0.36%	0.447
2007	2	3,279.000	3,291.987	-12.987	-0.40%	-0.493
2007	3	3,288.000	3,282.700	5.300	0.16%	0.201
2007	4	3,287.000	3,291.861	-4.861	-0.15%	-0.184
2007	5	3,298.000	3,291.798	6.202	0.19%	0.235
2007	6	3,316.000	3,301.670	14.330	0.43%	0.544
2007	7	3,317.000	3,319.045	-2.045	-0.06%	-0.078
2007	8	3,328.000	3,320.739	7.261	0.22%	0.276
2007	9	3,331.000	3,331.657	-0.657	-0.02%	-0.025
2007	10	3,343.000	3,335.196	7.804	0.23%	0.296
2007	11	3,341.000	3,347.036	-6.036	-0.18%	-0.229
2007	12	3,346.000	3,345.963	0.037	0.00%	0.001
2008	1	3,342.000	3,351.346	-9.346	-0.28%	-0.355
2008	2	3,343.000	3,348.428	-5.428	-0.16%	-0.206
2008	3	3,344.000	3,350.122	-6.122	-0.18%	-0.232
2008	4	3,346.000	3,351.815	-5.815	-0.17%	-0.221
2008	5	3,339.000	3,354.432	-15.432	-0.46%	-0.586
2008	6	3,341.000	3,347.997	-6.997	-0.21%	-0.266
2008	7	3,341.000	3,350.555	-9.555	-0.29%	-0.363
2008	8	3,351.000	3,351.268	-0.268	-0.01%	-0.010
2008	9	3,337.000	3,361.206	-24.206	-0.73%	-0.919
2008	10	3,328.000	3,349.005	-21.005	-0.63%	-0.797
2008	11	3,344.000	3,341.416	2.584	0.08%	0.098
2008	12	3,346.000	3,356.888	-10.888	-0.33%	-0.413
2009	1	3,351.000	3,359.446	-8.446	-0.25%	-0.321
2009	2	3,345.000	3,364.772	-19.772	-0.59%	-0.750
2009	3	3,362.000	3,359.950	2.050	0.06%	0.078
2009	4	3,367.000	3,376.345	-9.345	-0.28%	-0.355
2009	5	3,367.000	3,381.671	-14.671	-0.44%	-0.557
2009	6	3,368.000	3,380.884	-12.884	-0.38%	-0.489
2009	7	3,365.000	3,382.403	-17.403	-0.52%	-0.660
2009	8	3,360.000	3,380.232	-20.232	-0.60%	-0.768
2009	9	3,363.000	3,376.217	-13.217	-0.39%	-0.502
2009	10	3,372.000	3,379.581	-7.581	-0.22%	-0.288

Xcel Energy Minnesota Public Street and Highway Lighting
Test Year 2022-2026 Customer Counts

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2009	11	3,383.000	3,388.480	-5.480	-0.16%	-0.208
2009	12	3,381.000	3,399.224	-18.224	-0.54%	-0.692
2010	1	3,382.000	3,397.976	-15.976	-0.47%	-0.606
2010	2	3,392.000	3,399.495	-7.495	-0.22%	-0.284
2010	3	3,405.000	3,409.741	-4.741	-0.14%	-0.180
2010	4	3,423.000	3,422.362	0.638	0.02%	0.024
2010	5	3,480.000	3,439.596	40.404	1.16%	1.533
2010	6	3,488.000	3,495.250	-7.250	-0.21%	-0.275
2010	7	3,492.000	3,503.449	-11.449	-0.33%	-0.434
2010	8	3,533.000	3,507.958	25.042	0.71%	0.950
2010	9	3,541.000	3,546.597	-5.597	-0.16%	-0.212
2010	10	3,571.000	3,554.796	16.204	0.45%	0.615
2010	11	3,585.000	3,583.289	1.711	0.05%	0.065
2010	12	3,616.000	3,597.023	18.977	0.52%	0.720
2011	1	3,589.000	3,626.438	-37.438	-1.04%	-1.421
2011	2	3,610.000	3,602.351	7.649	0.21%	0.290
2011	3	3,619.000	3,622.542	-3.542	-0.10%	-0.134
2011	4	3,619.000	3,631.663	-12.663	-0.35%	-0.481
2011	5	3,639.000	3,632.483	6.517	0.18%	0.247
2011	6	3,644.000	3,651.467	-7.467	-0.20%	-0.283
2011	7	3,658.000	3,656.877	1.123	0.03%	0.043
2011	8	3,659.000	3,670.588	-11.588	-0.32%	-0.440
2011	9	3,699.000	3,672.308	26.692	0.72%	1.013
2011	10	3,719.000	3,710.003	8.997	0.24%	0.341
2011	11	3,755.000	3,729.250	25.750	0.69%	0.977
2011	12	3,768.000	3,763.255	4.745	0.13%	0.180
2012	1	3,779.000	3,776.044	2.956	0.08%	0.112
2012	2	3,767.000	3,786.988	-19.988	-0.53%	-0.758
2012	3	3,786.000	3,776.716	9.284	0.25%	0.352
2012	4	3,773.000	3,795.040	-22.040	-0.58%	-0.836
2012	5	3,780.000	3,783.846	-3.846	-0.10%	-0.146
2012	6	3,789.000	3,791.851	-2.851	-0.08%	-0.108
2012	7	3,807.000	3,801.008	5.992	0.16%	0.227
2012	8	3,825.000	3,818.468	6.532	0.17%	0.248
2012	9	3,848.000	3,835.927	12.073	0.31%	0.458
2012	10	3,887.000	3,857.999	29.001	0.75%	1.100
2012	11	3,910.000	3,894.830	15.170	0.39%	0.576
2012	12	3,917.000	3,916.902	0.098	0.00%	0.004
2013	1	3,953.000	3,924.214	28.786	0.73%	1.092
2013	2	3,956.000	3,958.278	-2.278	-0.06%	-0.086
2013	3	3,963.000	3,961.901	1.099	0.03%	0.042

Xcel Energy Minnesota Public Street and Highway Lighting
Test Year 2022-2026 Customer Counts

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2013	4	3,968.000	3,969.213	-1.213	-0.03%	-0.046
2013	5	3,982.000	3,974.681	7.319	0.18%	0.278
2013	6	3,974.000	3,988.582	-14.582	-0.37%	-0.553
2013	7	3,976.000	3,982.068	-6.068	-0.15%	-0.230
2013	8	3,987.000	3,984.779	2.221	0.06%	0.084
2013	9	3,985.000	3,995.792	-10.792	-0.27%	-0.410
2013	10	4,009.000	3,994.812	14.188	0.35%	0.538
2013	11	4,028.000	4,017.817	10.183	0.25%	0.386
2013	12	4,035.000	4,036.209	-1.209	-0.03%	-0.046
2014	1	4,039.000	4,043.532	-4.532	-0.11%	-0.172
2014	2	4,039.000	4,048.087	-9.087	-0.22%	-0.345
2014	3	4,043.000	4,048.953	-5.953	-0.15%	-0.226
2014	4	4,048.000	4,053.509	-5.509	-0.14%	-0.209
2014	5	4,054.000	4,058.987	-4.987	-0.12%	-0.189
2014	6	4,053.000	4,062.949	-9.949	-0.25%	-0.378
2014	7	4,064.000	4,062.703	1.297	0.03%	0.049
2014	8	4,083.000	4,073.527	9.473	0.23%	0.359
2014	9	4,109.000	4,091.730	17.270	0.42%	0.655
2014	10	4,126.000	4,116.390	9.610	0.23%	0.365
2014	11	4,149.000	4,132.748	16.252	0.39%	0.617
2014	12	4,167.000	4,154.641	12.359	0.30%	0.469
2015	1	4,195.000	4,171.922	23.078	0.55%	0.876
2015	2	4,197.000	4,198.427	-1.427	-0.03%	-0.054
2015	3	4,210.000	4,200.948	9.052	0.22%	0.343
2015	4	4,220.000	4,213.617	6.383	0.15%	0.242
2015	5	4,232.000	4,223.518	8.482	0.20%	0.322
2015	6	4,233.000	4,237.612	-4.612	-0.11%	-0.175
2015	7	4,242.000	4,239.393	2.607	0.06%	0.099
2015	8	4,255.000	4,248.554	6.446	0.15%	0.245
2015	9	4,270.000	4,261.405	8.595	0.20%	0.326
2015	10	4,284.000	4,289.935	-5.935	-0.14%	-0.225
2015	11	4,295.000	4,304.781	-9.781	-0.23%	-0.371
2015	12	4,303.000	4,316.860	-13.860	-0.32%	-0.526
2016	1	4,309.000	4,326.171	-17.171	-0.40%	-0.652
2016	2	4,314.000	4,333.638	-19.638	-0.46%	-0.745
2016	3	4,327.000	4,340.182	-13.182	-0.30%	-0.500
2016	4	4,321.000	4,354.105	-33.105	-0.77%	-1.256
2016	5	4,381.000	4,350.502	30.498	0.70%	1.157
2016	6	4,383.000	4,408.491	-25.491	-0.58%	-0.967
2016	7	4,394.000	4,412.323	-18.323	-0.42%	-0.695
2016	8	4,415.000	4,424.457	-9.457	-0.21%	-0.359

Xcel Energy Minnesota Public Street and Highway Lighting
Test Year 2022-2026 Customer Counts

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2016	9	4,433.000	4,445.815	-12.815	-0.29%	-0.486
2016	10	4,461.000	4,464.406	-3.406	-0.08%	-0.129
2016	11	4,472.000	4,492.221	-20.221	-0.45%	-0.767
2016	12	4,492.000	4,504.355	-12.355	-0.28%	-0.469
2017	1	4,480.000	4,524.791	-44.791	-1.00%	-1.700
2017	2	4,487.000	4,515.708	-28.708	-0.64%	-1.089
2017	3	4,468.000	4,524.152	-56.152	-1.26%	-2.131
2017	4	4,543.000	4,508.613	34.387	0.76%	1.305
2017	5	4,567.000	4,579.783	-12.783	-0.28%	-0.485
2017	6	4,601.000	4,602.793	-1.793	-0.04%	-0.068
2017	7	4,629.000	4,636.057	-7.057	-0.15%	-0.268
2017	8	4,774.000	4,663.786	110.214	2.31%	4.182
2017	9	4,796.000	4,799.440	-3.440	-0.07%	-0.131
2017	10	4,847.000	4,821.634	25.366	0.52%	0.963
2017	11	4,854.000	4,870.579	-16.579	-0.34%	-0.629
2017	12	4,871.000	4,878.937	-7.937	-0.16%	-0.301
2018	1	4,925.000	4,896.519	28.481	0.58%	1.081
2018	2	4,957.000	4,948.231	8.769	0.18%	0.333
2018	3	4,969.000	4,979.650	-10.650	-0.21%	-0.404
2018	4	4,971.000	4,992.619	-21.619	-0.43%	-0.820
2018	5	4,986.000	4,996.365	-10.365	-0.21%	-0.393
2018	6	5,020.000	5,010.262	9.738	0.19%	0.370
2018	7	5,027.000	5,043.383	-16.383	-0.33%	-0.622
2018	8	5,066.000	5,051.598	14.402	0.28%	0.547
2018	9	5,085.000	5,089.331	-4.331	-0.09%	-0.164
2018	10	5,142.000	5,108.615	33.385	0.65%	1.267
2018	11	5,186.000	5,162.952	23.048	0.44%	0.875
2018	12	5,207.000	5,205.297	1.703	0.03%	0.065
2019	1	5,236.000	5,226.426	9.574	0.18%	0.363
2019	2	5,247.000	5,254.935	-7.935	-0.15%	-0.301
2019	3	5,240.000	5,266.839	-26.839	-0.51%	-1.018
2019	4	5,268.000	5,262.140	5.860	0.11%	0.222
2019	5	5,298.000	5,289.726	8.274	0.16%	0.314
2019	6	5,325.000	5,313.081	11.919	0.22%	0.452
2019	7	5,348.000	5,339.274	8.726	0.16%	0.331
2019	8	5,342.000	5,361.776	-19.776	-0.37%	-0.750
2019	9	5,362.000	5,357.784	4.216	0.08%	0.160
2019	10	5,386.000	5,377.539	8.461	0.16%	0.321
2019	11	5,402.000	5,400.984	1.016	0.02%	0.039
2019	12	5,407.000	5,416.175	-9.175	-0.17%	-0.348
2020	1	5,411.000	5,418.567	-7.567	-0.14%	-0.287

Xcel Energy Minnesota Public Street and Highway Lighting
Test Year 2022-2026 Customer Counts

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2020	2	5,415.000	5,423.227	-8.227	-0.15%	-0.312
2020	3	5,415.000	5,425.940	-10.940	-0.20%	-0.415
2020	4	5,440.000	5,426.759	13.241	0.24%	0.502
2020	5	5,442.000	5,450.640	-8.640	-0.16%	-0.328
2020	6	5,444.000	5,453.953	-9.953	-0.18%	-0.378
2020	7	5,454.000	5,456.668	-2.668	-0.05%	-0.101
2020	8	5,465.000	5,466.762	-1.762	-0.03%	-0.067
2020	9	5,470.000	5,477.987	-7.987	-0.15%	-0.303
2020	10	5,510.000	5,483.485	26.515	0.48%	1.006
2020	11	5,540.000	5,521.268	18.732	0.34%	0.711
2020	12	5,568.000	5,550.194	17.806	0.32%	0.676
2021	1	5,566.000	5,573.478	-7.478	-0.13%	-0.284
2021	2	5,584.000	5,572.279	11.721	0.21%	0.445
2021	3	5,581.000	5,589.995	-8.995	-0.16%	-0.341
2021	4	5,589.000	5,587.910	1.090	0.02%	0.041
2021	5	5,595.000	5,595.972	-0.972	-0.02%	-0.037
2021	6		5,602.639			
2021	7		5,610.402			
2021	8		5,618.281			
2021	9		5,626.735			
2021	10		5,635.287			
2021	11		5,643.928			
2021	12		5,653.161			
2022	1		5,661.087			
2022	2		5,669.084			
2022	3		5,677.408			
2022	4		5,685.791			
2022	5		5,694.230			
2022	6		5,702.958			
2022	7		5,711.732			
2022	8		5,720.550			
2022	9		5,729.609			
2022	10		5,738.706			
2022	11		5,747.837			
2022	12		5,756.100			
2023	1		5,762.317			
2023	2		5,768.560			
2023	3		5,774.946			
2023	4		5,781.355			
2023	5		5,787.786			
2023	6		5,794.663			

Xcel Energy Minnesota Public Street and Highway Lighting
Test Year 2022-2026 Customer Counts

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2023	7		5,801.558			
2023	8		5,808.470			
2023	9		5,815.558			
2023	10		5,822.660			
2023	11		5,829.775			
2023	12		5,837.035			
2024	1		5,844.307			
2024	2		5,851.588			
2024	3		5,859.022			
2024	4		5,866.465			
2024	5		5,873.916			
2024	6		5,881.507			
2024	7		5,889.106			
2024	8		5,896.710			
2024	9		5,904.427			
2024	10		5,912.149			
2024	11		5,919.875			
2024	12		5,927.682			
2025	1		5,935.494			
2025	2		5,943.309			
2025	3		5,951.123			
2025	4		5,958.941			
2025	5		5,966.761			
2025	6		5,974.551			
2025	7		5,982.343			
2025	8		5,990.137			
2025	9		5,997.904			
2025	10		6,005.673			
2025	11		6,013.443			
2025	12		6,021.181			
2026	1		6,028.920			
2026	2		6,036.660			
2026	3		6,044.372			
2026	4		6,052.085			
2026	5		6,059.799			
2026	6		6,067.212			
2026	7		6,074.625			
2026	8		6,082.039			
2026	9		6,089.421			
2026	10		6,096.803			
2026	11		6,104.186			

Xcel Energy Minnesota Public Street and Highway Lighting
Test Year 2022-2026 Customer Counts

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2026	12		6,111.515			

Xcel Energy Minnesota Other Public Authority
Test Year 2022-2026 Customer Counts

Variable	Coefficient	StdErr	T-Stat	P-Value	Definition
NR_MN	0.296	0.047	6.338	0.00%	Total Population, Minnesota, thousands, US Census Bureau
Post_Apr_2012	41.192	5.892	6.991	0.00%	Binary variable beginning April 2012=1, otherwise=0
Post_Dec_2013	30.053	5.873	5.117	0.00%	Binary variable beginning December 2013=1, otherwise=0
PostFeb2020	-529.631	5.888	-89.945	0.00%	Binary variable beginning February 2020=1, otherwise=0
AR(1)	0.822	0.067	12.184	0.00%	First order autoregressive correction term
AR(2)	0.173	0.067	2.576	1.07%	Second order autoregressive correction term

Dependent Variable					Definition
CUST_OS_MN					Minnesota Other Public Authority customer count

Xcel Energy Minnesota Other Public Authority
Test Year 2022-2026 Customer Counts

Model Statistics	
Iterations	14
Adjusted Observations	219
Deg. of Freedom for Error	213
R-Squared	0.999
Adjusted R-Squared	0.999
AIC	3.596
BIC	3.688
F-Statistic	#NA
Prob (F-Statistic)	#NA
Log-Likelihood	-698.47
Model Sum of Squares	5,483,249.11
Sum of Squared Errors	7,554.55
Mean Squared Error	35.47
Std. Error of Regression	5.96
Mean Abs. Dev. (MAD)	3.57
Mean Abs. % Err. (MAPE)	0.17%
Durbin-Watson Statistic	2.032
Durbin-H Statistic	#NA
Ljung-Box Statistic	32.90
Prob (Ljung-Box)	0.1063
Skewness	0.613
Kurtosis	16.216
Jarque-Bera	1607.636
Prob (Jarque-Bera)	0.0000

Forecast Statistics	
Forecast Observations	0
Mean Abs. Dev. (MAD)	0.00
Mean Abs. % Err. (MAPE)	0.00%
Avg. Forecast Error	0.00
Mean % Error	0.00%
Root Mean-Square Error	0.00
Theil's Inequality Coefficient	0.0000
-- Bias Proportion	0.00%
-- Variance Proportion	0.00%
-- Covariance Proportion	0.00%

Xcel Energy Minnesota Other Public Authority
Test Year 2022-2026 Customer Counts

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2003	1	2,172.000				
2003	2	2,169.000				
2003	3	2,164.000	2,166.927	-2.927	-0.14%	-0.491
2003	4	2,161.000	2,162.304	-1.304	-0.06%	-0.219
2003	5	2,167.000	2,158.978	8.022	0.37%	1.347
2003	6	2,161.000	2,163.381	-2.381	-0.11%	-0.400
2003	7	2,156.000	2,159.492	-3.492	-0.16%	-0.586
2003	8	2,173.000	2,154.350	18.650	0.86%	3.132
2003	9	2,154.000	2,167.457	-13.457	-0.62%	-2.260
2003	10	2,150.000	2,154.792	-4.792	-0.22%	-0.805
2003	11	2,146.000	2,148.222	-2.222	-0.10%	-0.373
2003	12	2,142.000	2,144.248	-2.248	-0.10%	-0.377
2004	1	2,144.000	2,140.273	3.727	0.17%	0.626
2004	2	2,158.000	2,141.229	16.771	0.78%	2.816
2004	3	2,140.000	2,153.083	-13.083	-0.61%	-2.197
2004	4	2,145.000	2,140.720	4.280	0.20%	0.719
2004	5	2,132.000	2,141.718	-9.718	-0.46%	-1.632
2004	6	2,135.000	2,131.851	3.149	0.15%	0.529
2004	7	2,140.000	2,132.060	7.940	0.37%	1.333
2004	8	2,176.000	2,136.692	39.308	1.81%	6.600
2004	9	2,136.000	2,167.141	-31.141	-1.46%	-5.229
2004	10	2,128.000	2,140.509	-12.509	-0.59%	-2.100
2004	11	2,125.000	2,127.018	-2.018	-0.09%	-0.339
2004	12	2,140.000	2,123.173	16.827	0.79%	2.826
2005	1	2,137.000	2,134.982	2.018	0.09%	0.339
2005	2	2,117.000	2,135.117	-18.117	-0.86%	-3.042
2005	3	2,117.000	2,118.169	-1.169	-0.06%	-0.196
2005	4	2,116.000	2,114.712	1.288	0.06%	0.216
2005	5	2,116.000	2,113.895	2.105	0.10%	0.353
2005	6	2,116.000	2,114.023	1.977	0.09%	0.332
2005	7	2,110.000	2,114.081	-4.081	-0.19%	-0.685
2005	8	2,109.000	2,109.156	-0.156	-0.01%	-0.026
2005	9	2,107.000	2,107.302	-0.302	-0.01%	-0.051
2005	10	2,102.000	2,105.492	-3.492	-0.17%	-0.586
2005	11	2,099.000	2,101.043	-2.043	-0.10%	-0.343
2005	12	2,093.000	2,097.718	-4.718	-0.23%	-0.792
2006	1	2,093.000	2,092.275	0.725	0.03%	0.122
2006	2	2,090.000	2,091.243	-1.243	-0.06%	-0.209
2006	3	2,092.000	2,088.783	3.217	0.15%	0.540
2006	4	2,097.000	2,089.913	7.087	0.34%	1.190
2006	5	2,098.000	2,094.373	3.627	0.17%	0.609

Xcel Energy Minnesota Other Public Authority
Test Year 2022-2026 Customer Counts

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2006	6	2,089.000	2,096.058	-7.058	-0.34%	-1.185
2006	7	2,083.000	2,088.841	-5.841	-0.28%	-0.981
2006	8	2,082.000	2,082.359	-0.359	-0.02%	-0.060
2006	9	2,079.000	2,080.505	-1.505	-0.07%	-0.253
2006	10	2,077.000	2,077.873	-0.873	-0.04%	-0.147
2006	11	2,069.000	2,075.716	-6.716	-0.32%	-1.128
2006	12	2,058.000	2,068.802	-10.802	-0.52%	-1.814
2007	1	2,064.000	2,058.386	5.614	0.27%	0.943
2007	2	2,065.000	2,061.418	3.582	0.17%	0.602
2007	3	2,068.000	2,063.283	4.717	0.23%	0.792
2007	4	2,066.000	2,065.927	0.073	0.00%	0.012
2007	5	2,062.000	2,064.808	-2.808	-0.14%	-0.472
2007	6	2,057.000	2,061.087	-4.087	-0.20%	-0.686
2007	7	2,053.000	2,056.275	-3.275	-0.16%	-0.550
2007	8	2,053.000	2,052.129	0.871	0.04%	0.146
2007	9	2,054.000	2,051.442	2.558	0.12%	0.430
2007	10	2,053.000	2,052.269	0.731	0.04%	0.123
2007	11	2,054.000	2,051.625	2.375	0.12%	0.399
2007	12	2,049.000	2,052.279	-3.279	-0.16%	-0.551
2008	1	2,049.000	2,048.349	0.651	0.03%	0.109
2008	2	2,048.000	2,047.489	0.511	0.02%	0.086
2008	3	2,053.000	2,046.672	6.328	0.31%	1.062
2008	4	2,049.000	2,050.613	-1.613	-0.08%	-0.271
2008	5	2,044.000	2,048.197	-4.197	-0.21%	-0.705
2008	6	2,039.000	2,043.263	-4.263	-0.21%	-0.716
2008	7	2,036.000	2,038.270	-2.270	-0.11%	-0.381
2008	8	2,031.000	2,034.944	-3.944	-0.19%	-0.662
2008	9	2,030.000	2,030.321	-0.321	-0.02%	-0.054
2008	10	2,031.000	2,028.639	2.361	0.12%	0.397
2008	11	2,027.000	2,029.292	-2.292	-0.11%	-0.385
2008	12	2,030.000	2,026.183	3.817	0.19%	0.641
2009	1	2,036.000	2,027.960	8.040	0.39%	1.350
2009	2	2,027.000	2,033.413	-6.413	-0.32%	-1.077
2009	3	2,027.000	2,027.061	-0.061	0.00%	-0.010
2009	4	2,026.000	2,025.508	0.492	0.02%	0.083
2009	5	2,029.000	2,024.691	4.309	0.21%	0.724
2009	6	2,023.000	2,026.892	-3.892	-0.19%	-0.654
2009	7	2,025.000	2,022.469	2.531	0.13%	0.425
2009	8	2,022.000	2,023.078	-1.078	-0.05%	-0.181
2009	9	2,022.000	2,020.963	1.037	0.05%	0.174
2009	10	2,025.000	2,020.447	4.553	0.22%	0.764

Xcel Energy Minnesota Other Public Authority
Test Year 2022-2026 Customer Counts

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2009	11	2,017.000	2,022.916	-5.916	-0.29%	-0.993
2009	12	2,015.000	2,016.866	-1.866	-0.09%	-0.313
2010	1	2,012.000	2,013.843	-1.843	-0.09%	-0.309
2010	2	2,010.000	2,011.035	-1.035	-0.05%	-0.174
2010	3	2,010.000	2,008.820	1.180	0.06%	0.198
2010	4	2,009.000	2,008.468	0.532	0.03%	0.089
2010	5	2,007.000	2,007.650	-0.650	-0.03%	-0.109
2010	6	2,008.000	2,006.026	1.974	0.10%	0.331
2010	7	2,010.000	2,006.539	3.461	0.17%	0.581
2010	8	2,011.000	2,008.360	2.640	0.13%	0.443
2010	9	2,013.000	2,009.533	3.467	0.17%	0.582
2010	10	2,018.000	2,011.354	6.646	0.33%	1.116
2010	11	2,021.000	2,015.813	5.187	0.26%	0.871
2010	12	2,013.000	2,019.148	-6.148	-0.31%	-1.032
2011	1	2,014.000	2,013.098	0.902	0.04%	0.151
2011	2	2,015.000	2,012.540	2.460	0.12%	0.413
2011	3	2,019.000	2,013.540	5.460	0.27%	0.917
2011	4	2,016.000	2,017.004	-1.004	-0.05%	-0.169
2011	5	2,018.000	2,015.236	2.764	0.14%	0.464
2011	6	2,018.000	2,016.246	1.754	0.09%	0.294
2011	7	2,018.000	2,016.576	1.424	0.07%	0.239
2011	8	2,016.000	2,016.580	-0.580	-0.03%	-0.097
2011	9	2,015.000	2,014.941	0.059	0.00%	0.010
2011	10	2,016.000	2,013.777	2.223	0.11%	0.373
2011	11	2,020.000	2,014.430	5.570	0.28%	0.935
2011	12	2,018.000	2,017.893	0.107	0.01%	0.018
2012	1	2,018.000	2,016.946	1.054	0.05%	0.177
2012	2	2,019.000	2,016.604	2.396	0.12%	0.402
2012	3	2,026.000	2,017.430	8.570	0.42%	1.439
2012	4	2,064.000	2,064.551	-0.551	-0.03%	-0.092
2012	5	2,067.000	2,063.143	3.857	0.19%	0.648
2012	6	2,067.000	2,065.216	1.784	0.09%	0.300
2012	7	2,068.000	2,065.767	2.233	0.11%	0.375
2012	8	2,068.000	2,066.593	1.407	0.07%	0.236
2012	9	2,065.000	2,066.771	-1.771	-0.09%	-0.297
2012	10	2,062.000	2,064.311	-2.311	-0.11%	-0.388
2012	11	2,057.000	2,061.332	-4.332	-0.21%	-0.727
2012	12	2,053.000	2,056.709	-3.709	-0.18%	-0.623
2013	1	2,055.000	2,052.562	2.438	0.12%	0.409
2013	2	2,056.000	2,053.518	2.482	0.12%	0.417
2013	3	2,055.000	2,054.691	0.309	0.02%	0.052

Xcel Energy Minnesota Other Public Authority
Test Year 2022-2026 Customer Counts

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2013	4	2,055.000	2,054.047	0.953	0.05%	0.160
2013	5	2,056.000	2,053.879	2.121	0.10%	0.356
2013	6	2,058.000	2,054.723	3.277	0.16%	0.550
2013	7	2,060.000	2,056.548	3.452	0.17%	0.580
2013	8	2,062.000	2,058.542	3.458	0.17%	0.581
2013	9	2,066.000	2,060.536	5.464	0.26%	0.917
2013	10	2,059.000	2,064.174	-5.174	-0.25%	-0.869
2013	11	2,058.000	2,059.120	-1.120	-0.05%	-0.188
2013	12	2,086.000	2,087.145	-1.145	-0.05%	-0.192
2014	1	2,093.000	2,085.290	7.710	0.37%	1.295
2014	2	2,094.000	2,090.691	3.309	0.16%	0.556
2014	3	2,093.000	2,092.729	0.271	0.01%	0.046
2014	4	2,089.000	2,092.085	-3.085	-0.15%	-0.518
2014	5	2,091.000	2,088.631	2.369	0.11%	0.398
2014	6	2,090.000	2,089.424	0.576	0.03%	0.097
2014	7	2,092.000	2,088.924	3.076	0.15%	0.516
2014	8	2,091.000	2,090.399	0.601	0.03%	0.101
2014	9	2,089.000	2,089.927	-0.927	-0.04%	-0.156
2014	10	2,091.000	2,088.115	2.885	0.14%	0.484
2014	11	2,084.000	2,089.416	-5.416	-0.26%	-0.909
2014	12	2,082.000	2,084.015	-2.015	-0.10%	-0.338
2015	1	2,082.000	2,081.164	0.836	0.04%	0.140
2015	2	2,083.000	2,080.822	2.178	0.10%	0.366
2015	3	2,080.000	2,081.648	-1.648	-0.08%	-0.277
2015	4	2,080.000	2,079.360	0.640	0.03%	0.107
2015	5	2,080.000	2,078.845	1.155	0.06%	0.194
2015	6	2,078.000	2,079.096	-1.096	-0.05%	-0.184
2015	7	2,078.000	2,077.501	0.499	0.02%	0.084
2015	8	2,076.000	2,077.160	-1.160	-0.06%	-0.195
2015	9	2,073.000	2,075.522	-2.522	-0.12%	-0.424
2015	10	2,062.000	2,072.717	-10.717	-0.52%	-1.799
2015	11	2,041.000	2,063.165	-22.165	-1.09%	-3.722
2015	12	2,038.000	2,044.012	-6.012	-0.29%	-1.009
2016	1	2,036.000	2,037.918	-1.918	-0.09%	-0.322
2016	2	2,037.000	2,035.761	1.239	0.06%	0.208
2016	3	2,042.000	2,036.242	5.758	0.28%	0.967
2016	4	2,057.000	2,040.529	16.471	0.80%	2.766
2016	5	2,063.000	2,053.724	9.276	0.45%	1.558
2016	6	2,059.000	2,061.318	-2.318	-0.11%	-0.389
2016	7	2,067.000	2,059.087	7.913	0.38%	1.329
2016	8	2,065.000	2,064.973	0.027	0.00%	0.004

Xcel Energy Minnesota Other Public Authority
Test Year 2022-2026 Customer Counts

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2016	9	2,062.000	2,064.720	-2.720	-0.13%	-0.457
2016	10	2,061.000	2,061.915	-0.915	-0.04%	-0.154
2016	11	2,060.000	2,060.580	-0.580	-0.03%	-0.097
2016	12	2,060.000	2,059.591	0.409	0.02%	0.069
2017	1	2,055.000	2,059.424	-4.424	-0.22%	-0.743
2017	2	2,054.000	2,055.321	-1.321	-0.06%	-0.222
2017	3	2,051.000	2,053.640	-2.640	-0.13%	-0.443
2017	4	2,048.000	2,051.008	-3.008	-0.15%	-0.505
2017	5	2,049.000	2,048.029	0.971	0.05%	0.163
2017	6	2,049.000	2,048.228	0.772	0.04%	0.130
2017	7	2,048.000	2,048.387	-0.387	-0.02%	-0.065
2017	8	2,044.000	2,047.571	-3.571	-0.17%	-0.600
2017	9	2,047.000	2,044.116	2.884	0.14%	0.484
2017	10	2,047.000	2,045.894	1.106	0.05%	0.186
2017	11	2,044.000	2,046.419	-2.419	-0.12%	-0.406
2017	12	2,046.000	2,043.959	2.041	0.10%	0.343
2018	1	2,045.000	2,045.088	-0.088	0.00%	-0.015
2018	2	2,042.000	2,044.618	-2.618	-0.13%	-0.440
2018	3	2,043.000	2,041.985	1.015	0.05%	0.170
2018	4	2,041.000	2,042.292	-1.292	-0.06%	-0.217
2018	5	2,039.000	2,040.827	-1.827	-0.09%	-0.307
2018	6	2,036.000	2,038.641	-2.641	-0.13%	-0.444
2018	7	2,042.000	2,035.800	6.200	0.30%	1.041
2018	8	2,041.000	2,040.214	0.786	0.04%	0.132
2018	9	2,043.000	2,040.435	2.565	0.13%	0.431
2018	10	2,041.000	2,041.910	-0.910	-0.04%	-0.153
2018	11	2,036.000	2,040.616	-4.616	-0.23%	-0.775
2018	12	2,034.000	2,036.166	-2.166	-0.11%	-0.364
2019	1	2,035.000	2,033.662	1.338	0.07%	0.225
2019	2	2,034.000	2,034.141	-0.141	-0.01%	-0.024
2019	3	2,037.000	2,033.497	3.503	0.17%	0.588
2019	4	2,037.000	2,035.793	1.207	0.06%	0.203
2019	5	2,035.000	2,036.316	-1.316	-0.06%	-0.221
2019	6	2,035.000	2,034.421	0.579	0.03%	0.097
2019	7	2,031.000	2,034.034	-3.034	-0.15%	-0.509
2019	8	2,033.000	2,030.750	2.250	0.11%	0.378
2019	9	2,032.000	2,031.735	0.265	0.01%	0.044
2019	10	2,029.000	2,031.268	-2.268	-0.11%	-0.381
2019	11	2,028.000	2,028.633	-0.633	-0.03%	-0.106
2019	12	2,023.000	2,027.189	-4.189	-0.21%	-0.703
2020	1	2,020.000	2,022.892	-2.892	-0.14%	-0.486

Xcel Energy Minnesota Other Public Authority
Test Year 2022-2026 Customer Counts

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2020	2	1,490.000	1,489.933	0.067	0.00%	0.011
2020	3	1,489.000	1,488.872	0.128	0.01%	0.021
2020	4	1,485.000	1,487.946	-2.946	-0.20%	-0.495
2020	5	1,483.000	1,484.488	-1.488	-0.10%	-0.250
2020	6	1,483.000	1,482.173	0.827	0.06%	0.139
2020	7	1,478.000	1,481.831	-3.831	-0.26%	-0.643
2020	8	1,476.000	1,477.724	-1.724	-0.12%	-0.289
2020	9	1,478.000	1,475.245	2.755	0.19%	0.463
2020	10	1,469.000	1,476.548	-7.548	-0.51%	-1.267
2020	11	1,468.000	1,469.500	-1.500	-0.10%	-0.252
2020	12	1,466.000	1,467.166	-1.166	-0.08%	-0.196
2021	1	1,463.000	1,465.359	-2.359	-0.16%	-0.396
2021	2	1,461.000	1,462.549	-1.549	-0.11%	-0.260
2021	3	1,463.000	1,460.441	2.559	0.17%	0.430
2021	4	1,462.000	1,461.749	0.251	0.02%	0.042
2021	5	1,462.000	1,461.275	0.725	0.05%	0.122
2021	6		1,461.160			
2021	7		1,460.481			
2021	8		1,459.780			
2021	9		1,459.145			
2021	10		1,458.515			
2021	11		1,457.890			
2021	12		1,457.334			
2022	1		1,456.783			
2022	2		1,456.237			
2022	3		1,455.722			
2022	4		1,455.211			
2022	5		1,454.706			
2022	6		1,454.234			
2022	7		1,453.766			
2022	8		1,453.304			
2022	9		1,452.871			
2022	10		1,452.442			
2022	11		1,452.018			
2022	12		1,451.619			
2023	1		1,451.225			
2023	2		1,450.836			
2023	3		1,450.465			
2023	4		1,450.099			
2023	5		1,449.737			
2023	6		1,449.396			

Xcel Energy Minnesota Other Public Authority
Test Year 2022-2026 Customer Counts

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2023	7		1,449.059			
2023	8		1,448.727			
2023	9		1,448.418			
2023	10		1,448.114			
2023	11		1,447.814			
2023	12		1,447.535			
2024	1		1,447.259			
2024	2		1,446.988			
2024	3		1,446.739			
2024	4		1,446.493			
2024	5		1,446.252			
2024	6		1,446.031			
2024	7		1,445.814			
2024	8		1,445.601			
2024	9		1,445.405			
2024	10		1,445.213			
2024	11		1,445.026			
2024	12		1,444.851			
2025	1		1,444.680			
2025	2		1,444.513			
2025	3		1,444.350			
2025	4		1,444.190			
2025	5		1,444.035			
2025	6		1,443.879			
2025	7		1,443.727			
2025	8		1,443.580			
2025	9		1,443.432			
2025	10		1,443.288			
2025	11		1,443.148			
2025	12		1,443.007			
2026	1		1,442.870			
2026	2		1,442.737			
2026	3		1,442.604			
2026	4		1,442.475			
2026	5		1,442.349			
2026	6		1,442.227			
2026	7		1,442.108			
2026	8		1,441.993			
2026	9		1,441.878			
2026	10		1,441.766			
2026	11		1,441.658			

Xcel Energy Minnesota Other Public Authority
Test Year 2022-2026 Customer Counts

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2026	12		1,441.549			

General High-Level Description of How Billed Customers are Counted	CSS	CRS - Active Service
Active Metered Services	CSS counted customers as they were billed (all accounts “Billed” with current “Revenue Month” revenue). Billed Customer counts were primarily derived from RV931b and RV773 (or variations of these depending on roll-ups, i.e. by Division, etc.). New customers were counted even if they only had a partial bill. Final bills were also counted if invoiced in the same month. If a customer had two load points for the same product, that customer was counted as one customer. If a customer was supplied with more than one product, that customer was counted as a customer of each product (unless on lighting or other period billing).	Count of unique premise, service, utility type, and tariff (rate schedule) having a meter connected for at least one day during the calendar month, having a customer current for at least one service day during the calendar month, for which one or more invoices for a never before billed service period were created during This only counts a service once as billed if it received a bill, regardless of how many physical invoices were generated. Exceptions to Active Metered Service Count where 1 service is counted multiple times by different tariffs (rate schedules). LGINT - if a service is classed by the LGINT tariff found on register number 50, then count that service as 4 active services under tariffs found on registers 50, 51, 79, and 80. RTP - if a service is classed by RTP tariff found on register number 31, then count that service as 3 active services under tariffs found on registers 31, 32, and 41.
Electric Lighting Services. Periodic Billing Contracts, including individual street light and signal devices, as well as the “special C” rates (phone booths, air raid sirens, etc.), whether provided to a government agency or private corporation.	These types of customers, including “Night Watch” (lighting) are not counted as billed customers.	Count unique combinations of distinct tariff classes assigned to each Periodic Billing (PBL) contract. For example, if a contract has multiple street lights (SL) and signal devices (TSL), this contract would count as two customers (one SL and one TSL).

Electric Specific Scenarios	CSS	CRS - Active Service
Service is supplied at more than one site.	Each site counted as separate customer.	No change.
Customer receives gas and electricity at the same address.	Counted as one gas customer and one electric customer.	No change.
Customer begins service prior to the end of the billing period.	Customer is counted.	Service is counted once if occupied by any one or more customer for 1 day during the period.
Customer discontinues service prior to the end of the billing period (creating the account status of final).	Customer is counted.	Service is counted once if occupied by any one or more customer for 1 day during the period

Electric Specific Scenarios	CSS	CRS - Active Service
Customers in apartment houses. For example if an apartment has 50 electric units metered separately.	Each counted as a customer as long as billed separately.	Each metered service still counted as a customer.
Two different types of utility services are used at the same premise. For example if a residence has both a residential and a commercial meter for a business in the basement.	Each counted as separate customer (unless additional service is lighting or periodic billing).	No change.
Same type of utility service for the same premise is metered separately. For example if a customer has an electric meter for the house and an electric meter for the garage at the same address.	One customer counted.	No change.
Same type of utility service for two premises is metered separately. For example if the landlord lives on the first floor and the basement is metered separately.	Two customers counted.	No change.
Customers with electric service in unincorporated areas with a street light (SLUs). For example, three residential customers share one	Not applicable, because even if customers are sharing the street light, one customer pays the utility (and gets reimbursed directly from other customers). And, as discussed above, that customer would not be counted a second time as a “Night Watch” customer.	Counted consistent with CIS
Electric customers with area lights.	As discussed above, that customer would not be counted a second time as a “Night Watch” customer.	.
Phone booths, sprinkler systems, air raid sirens and other types of non-metered accounts.	Not counted as customers.	.
Interdepartmental Sales	Not billed out of CSS so not counted.	.

NSP MN - Electric

Minnesota		Rate	CRS 2_28_05 Production	CSS Counts Jan_05	Adj for Move-in & Move-outs	Adj for Additive Meters	Adj CSS Counts Jan_05	CRS less CSS - Increase (Decrease)	% Diff
	Residential	A00	48	49			49	(1)	-2.04%
	Residential	A01	728,431	737,822	(1,914)	(2,188)	733,720	(5,289)	-0.72%
	Residential	A02	84	83		(2)	81	3	3.70%
	Residential	A03	322,758	323,421	(403)	(18)	323,000	(242)	-0.07%
	Residential	A04	49	48			48	1	2.08%
	Residential	A05	940	942		(5)	937	3	0.32%
	Residential	A06	294	288		(2)	286	8	2.80%
	sub-total		1,052,604	1,062,653	(2,317)	(2,215)	1,058,121	(5,517)	-0.52%
	C&I	A05	33	33			33	-	0.00%
	C&I	A06	75	77			77	(2)	-2.60%
	C&I	A09	103	-		(17)	(17)	120	-705.88%
	C&I	A10	69,465	71,883	(82)	(240)	71,561	(2,096)	-2.93%
	C&I	A11	117	114	(1)		113	4	3.54%
	C&I	A12	4,561	4,578	(1)		4,577	(16)	-0.35%
	C&I	A13	10	11			11	(1)	-9.09%
	C&I	service still coun	35,081	35,887	(26)	(1,561)	34,300	781	2.28%
	C&I	Ea A15	2,847	2,883	(1)	(917)	1,965	882	44.89%
	C&I	A17	1	-			-	1	---
	C&I	A18	5,565	5,623			5,623	(58)	-1.03%
	C&I	A20	39	36		(13)	23	16	69.57%
	C&I	A21	3	3		(8)	(5)	8	-160.00%
	C&I	A23	1,814	1,822		(289)	1,533	281	18.33%
	C&I	A24	339	352		(415)	(63)	402	-638.10%
	C&I	A27	15	15		(5)	10	5	50.00%
	C&I	A38	1	-			-	1	---
	C&I	5558					-	-	---
	C&I	4631					-	-	---
	C&I	W01		6		(6)	-	-	---
	C&I	A60				(6)	(6)	6	-100.00%
	C&I	A61	1	-			-	1	---
	sub-total		120,070	123,323	(111)	(3,477)	119,735	335	0.28%
	Street Lighting	A30	1,410	1,398			1,398	12	0.86%
	Street Lighting	A31	7	7			7	-	0.00%
	Street Lighting	A32	548	540			540	8	1.48%
	Street Lighting	A34	1,038	1,077			1,077	(39)	-3.62%
	Street Lighting	A35	7	7			7	-	0.00%
	Street Lighting	A37	1	1			1	-	0.00%
	sub-total		3,011	3,030	-	-	3,030	(19)	-0.63%
	Other Pub Auth	A40	1,033	1,037			1,037	(4)	-0.39%
	Other Pub Auth	A41	613	620		(9)	611	2	0.33%
	Other Pub Auth	A42	471	477			477	(6)	-1.26%
	Other Pub Auth	A43		3			3	(3)	-100.00%
			2,117	2,137	-	(9)	2,128	(11)	-0.52%
	Res Auto Prot Ltg	A07	11,598	11,590	(19)		11,571	27	0.23%
	C&I Auto Prot Ltg	A07	13,263	13,277			13,277	(14)	-0.11%
			24,861	24,867	(19)	-	24,848	13	0.05%
	Interdep & Co Use	CUSE	198				-	198	---
	Total Minnesota		*1,202,861*	*1,216,010*	*(2,447)*	*(5,701)*	*1,207,862*	*(5,001)*	*-0.41%*

NSP Minnesota Sales by Rate Code, Calendar Month - MWh

Company	State	Class	Rate Schedules	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
				[PROTECTED DATA BEGINS											
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A00												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A01												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A02												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A02_Off												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A03												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A04												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A04_Off												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A05												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A06												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A06_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A01												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A02												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A02_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A03												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A04												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A04_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A05												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A06												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A06_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A07												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A08												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A08_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A72												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A72_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A72_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A74												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A74_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A74_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A80												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A80_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A80_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A81												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A81_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A81_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A82												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A82_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A83												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A83_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A05												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06_P1_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06_P3_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A07												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A09												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A10												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A11												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A12												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A12_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A13												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S_EV												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S_EV_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_T_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_U_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A16												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A18												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A22												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_T_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_U_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S_Int												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S_Int_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P_Int												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P_Int_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T_Int												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T_Int_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A29_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A29_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A87_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A87_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A88_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A88_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A89_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A89_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A90_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A90_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_Google												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_Google_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_T_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_U_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_T_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_U_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S_Int												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S_Int_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P_Int												

NSP Minnesota Sales by Rate Code, Calendar Month - MWh

Company	State	Class	Rate Schedules	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23
				[PROTECTED DATA BEGINS											
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A00												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A01												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A02												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A02_Off												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A03												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A04												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A04_Off												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A05												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A06												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A06_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A01												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A02												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A02_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A03												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A04												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A04_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A05												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A06												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A06_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A07												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A08												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A08_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A72												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A72_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A72_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A74												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A74_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A74_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A80												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A80_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A80_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A81												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A81_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A81_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A82												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A82_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A83												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A83_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A05												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06_P1_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06_P3_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A07												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A09												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A10												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A11												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A12												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A12_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A13												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S_EV												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S_EV_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_T_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_U_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A16												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A18												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A22												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_T_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_U_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S_Int												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S_Int_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P_Int												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P_Int_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T_Int												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T_Int_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A29_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A29_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A87_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A87_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A88_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A88_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A89_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A89_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A90_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A90_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_Google												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_Google_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_T_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_U_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_T_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_U_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S_Int												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S_Int_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P_Int												

NSP Minnesota Sales by Rate Code, Calendar Month - MWh

Company	State	Class	Rate Schedules	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24
				[PROTECTED DATA BEGINS											
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A00												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A01												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A02												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A02_Off												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A03												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A04												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A04_Off												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A05												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A06												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A06_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A01												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A02												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A02_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A03												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A04												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A04_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A05												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A06												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A06_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A07												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A08												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A08_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A72												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A72_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A72_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A74												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A74_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A74_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A80												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A80_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A80_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A81												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A81_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A81_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A82												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A82_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A83												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A83_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A05												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06_P1_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06_P3_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A07												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A09												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A10												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A11												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A12												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A12_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A13												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S_EV												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S_EV_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_T_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_U_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A16												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A18												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A22												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_T_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_U_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S_Int												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S_Int_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P_Int												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P_Int_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T_Int												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T_Int_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A29_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A29_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A87_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A87_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A88_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A88_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A89_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A89_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A90_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A90_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_Google												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_Google_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_T_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_U_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_T_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_U_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S_Int												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S_Int_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P_Int												

NSP Minnesota Sales by Rate Code, Calendar Month - MWh

Company	State	Class	Rate Schedules	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25
				[PROTECTED DATA BEGINS											
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A00												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A01												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A02												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A02_Off												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A03												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A04												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A04_Off												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A05												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A06												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A06_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A01												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A02												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A02_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A03												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A04												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A04_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A05												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A06												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A06_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A07												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A08												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A08_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A72												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A72_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A72_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A74												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A74_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A74_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A80												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A80_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A80_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A81												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A81_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A81_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A82												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A82_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A83												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A83_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A05												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06_P1_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06_P3_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A07												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A09												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A10												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A11												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A12												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A12_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A13												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S_EV												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S_EV_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_T_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_U_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A16												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A18												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A22												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_T_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_U_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S_Int												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S_Int_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P_Int												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P_Int_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T_Int												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T_Int_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A29_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A29_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A87_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A87_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A88_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A88_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A89_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A89_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A90_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A90_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_Google												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_Google_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_T_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_U_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_T_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_U_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S_Int												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S_Int_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P_Int												

NSP Minnesota Sales by Rate Code, Calendar Month - MWh

Company	State	Class	Rate Schedules	Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26
				[PROTECTED DATA BEGINS											
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A00												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A01												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A02												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A02_Off												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A03												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A04												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A04_Off												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A05												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A06												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A06_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A01												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A02												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A02_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A03												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A04												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A04_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A05												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A06												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A06_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A07												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A08												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A08_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A72												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A72_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A72_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A74												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A74_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A74_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A80												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A80_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A80_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A81												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A81_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A81_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A82												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A82_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A83												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A83_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A05												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06_P1_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06_P3_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A07												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A09												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A10												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A11												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A12												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A12_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A13												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S_EV												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S_EV_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_T_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_U_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A16												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A18												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A22												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_T_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_U_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S_Int												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S_Int_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P_Int												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P_Int_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T_Int												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T_Int_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A29_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A29_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A87_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A87_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A88_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A88_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A89_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A89_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A90_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A90_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_Google												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_Google_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_T_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_U_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_T_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_U_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S_Int												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S_Int_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P_Int												

NSP Minnesota Sales by Rate Code, Calendar Month - MWh

Company	State	Class	Rate Schedules	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P_Int_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T_Int												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T_Int_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A62_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A62_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A63_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A63_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A87_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A87_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A88_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A88_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A89_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A89_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A90_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A90_S_Off												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A40												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A41_S												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A41_P												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A42												
NSPM	MN	PSHL	NSPM_MN_E_PSHL												
NSPM	MN	Interdepartmental	NSPM_MN_E_Interdept												

PROTECTED DATA ENDS]

NSP Minnesota Sales by Rate Code, Calendar Month - MWh

Company	State	Class	Rate Schedules	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P_Int_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T_Int												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T_Int_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A62_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A62_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A63_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A63_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A87_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A87_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A88_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A88_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A89_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A89_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A90_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A90_S_Off												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A40												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A41_S												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A41_P												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A42												
NSPM	MN	PSHL	NSPM_MN_E_PSHL												
NSPM	MN	Interdepartmental	NSPM_MN_E_Interdept												

PROTECTED DATA ENDS]

NSP Minnesota Sales by Rate Code, Calendar Month - MWh

Company	State	Class	Rate Schedules	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P_Int_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T_Int												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T_Int_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A62_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A62_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A63_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A63_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A87_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A87_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A88_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A88_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A89_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A89_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A90_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A90_S_Off												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A40												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A41_S												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A41_P												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A42												
NSPM	MN	PSHL	NSPM_MN_E_PSHL												
NSPM	MN	Interdepartmental	NSPM_MN_E_Interdept												

PROTECTED DATA ENDS]

NSP Minnesota Sales by Rate Code, Calendar Month - MWh

Company	State	Class	Rate Schedules	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P_Int_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T_Int												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T_Int_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A62_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A62_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A63_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A63_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A87_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A87_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A88_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A88_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A89_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A89_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A90_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A90_S_Off												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A40												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A41_S												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A41_P												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A42												
NSPM	MN	PSHL	NSPM_MN_E_PSHL												
NSPM	MN	Interdepartmental	NSPM_MN_E_Interdept												

PROTECTED DATA ENDS]

NSP Minnesota Sales by Rate Code, Calendar Month - MWh

Company	State	Class	Rate Schedules	Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P_Int_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T_Int												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T_Int_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A62_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A62_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A63_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A63_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A87_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A87_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A88_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A88_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A89_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A89_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A90_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A90_S_Off												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A40												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A41_S												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A41_P												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A42												
NSPM	MN	PSHL	NSPM_MN_E_PSHL												
NSPM	MN	Interdepartmental	NSPM_MN_E_Interdept												

PROTECTED DATA ENDS]

NSP Minnesota Customer Counts by Rate Code

Company	State	Class	Rate Schedules	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
				[PROTECTED DATA BEGINS											
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A00												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A01												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A02												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A02_Off												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A03												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A04												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A04_Off												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A05												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A06												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A06_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A01												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A02												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A02_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A03												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A04												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A04_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A05												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A06												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A06_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A07												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A08												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A08_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A72												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A72_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A72_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A74												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A74_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A74_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A80												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A80_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A80_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A81												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A81_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A81_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A82												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A82_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A83												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A83_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A05												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06_P1_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06_P3_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A07												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A09												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A10												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A11												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A12												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A12_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A13												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S_EV												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S_EV_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_T_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_U_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A16												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A18												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A22												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_T_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_U_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S_Int												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S_Int_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P_Int												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P_Int_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T_Int												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T_Int_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A29_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A29_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A87_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A87_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A88_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A88_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A89_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A89_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A90_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A90_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_Google												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_Google_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_T_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_U_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_T_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_U_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S_Int												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S_Int_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P_Int												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P_Int_Off												

NSP Minnesota Customer Counts by Rate Code

Company	State	Class	Rate Schedules	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23
				[PROTECTED DATA BEGINS											
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A00												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A01												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A02												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A02_Off												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A03												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A04												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A04_Off												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A05												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A06												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A06_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A01												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A02												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A02_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A03												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A04												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A04_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A05												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A06												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A06_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A07												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A08												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A08_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A72												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A72_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A72_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A74												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A74_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A74_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A80												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A80_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A80_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A81												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A81_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A81_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A82												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A82_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A83												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A83_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A05												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06_P1_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06_P3_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A07												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A09												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A10												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A11												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A12												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A12_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A13												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S_EV												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S_EV_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_T_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_U_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A16												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A18												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A22												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_T_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_U_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S_Int												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S_Int_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P_Int												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P_Int_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T_Int												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T_Int_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A29_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A29_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A87_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A87_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A88_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A88_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A89_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A89_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A90_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A90_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_Google												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_Google_O												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_T_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_U_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_T_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_U_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S_Int												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S_Int_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P_Int												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P_Int_Off												

NSP Minnesota Customer Counts by Rate Code

Company	State	Class	Rate Schedules	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A00	[PROTECTED DATA BEGINS											
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A01												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A02												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A02_Off												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A03												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A04												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A04_Off												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A05												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A06												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A06_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A01												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A02												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A02_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A03												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A04												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A04_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A05												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A06												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A06_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A07												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A08												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A08_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A72												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A72_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A72_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A74												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A74_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A74_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A80												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A80_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A80_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A81												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A81_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A81_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A82												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A82_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A83												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A83_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A05												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06_P1_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06_P3_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A07												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A09												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A10												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A11												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A12												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A12_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A13												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S_EV												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S_EV_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_T_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_U_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A16												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A18												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A22												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_T_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_U_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S_Int												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S_Int_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P_Int												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P_Int_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T_Int												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T_Int_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A29_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A29_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A87_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A87_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A88_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A88_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A89_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A89_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A90_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A90_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_Google												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_Google_O												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_T_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_U_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_T_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_U_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S_Int												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S_Int_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P_Int												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P_Int_Off												

NSP Minnesota Customer Counts by Rate Code

Company	State	Class	Rate Schedules	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25
				[PROTECTED DATA BEGINS											
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A00												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A01												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A02												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A02_Off												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A03												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A04												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A04_Off												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A05												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A06												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A06_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A01												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A02												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A02_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A03												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A04												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A04_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A05												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A06												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A06_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A07												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A08												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A08_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A72												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A72_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A72_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A74												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A74_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A74_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A80												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A80_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A80_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A81												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A81_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A81_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A82												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A82_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A83												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A83_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A05												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06_P1_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06_P3_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A07												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A09												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A10												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A11												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A12												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A12_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A13												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S_EV												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S_EV_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_T_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_U_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A16												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A18												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A22												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_T_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_U_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S_Int												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S_Int_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P_Int												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P_Int_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T_Int												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T_Int_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A29_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A29_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A87_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A87_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A88_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A88_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A89_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A89_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A90_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A90_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_Google												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_Google_O												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_T_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_U_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_T_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_U_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S_Int												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S_Int_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P_Int												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P_Int_Off												

NSP Minnesota Customer Counts by Rate Code

Company	State	Class	Rate Schedules	Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26
				[PROTECTED DATA BEGINS											
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A00												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A01												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A02												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A02_Off												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A03												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A04												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A04_Off												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A05												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A06												
NSPM	MN	Residential w/SH	NSPM_MN_E_RSH_A06_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A01												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A02												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A02_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A03												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A04												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A04_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A05												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A06												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A06_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A07												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A08												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A08_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A72												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A72_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A72_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A74												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A74_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A74_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A80												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A80_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A80_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A81												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A81_Mid												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A81_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A82												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A82_Off												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A83												
NSPM	MN	Residential w/o	NSPM_MN_E_RES_A83_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A05												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06_P1_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06_P3_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A06_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A07												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A09												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A10												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A11												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A12												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A12_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A13												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A14_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S_EV												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_S_EV_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_T_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A15_U_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A16												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A18												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A22												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A23_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_T_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_U												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A24_U_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S_Int												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_S_Int_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P_Int												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_P_Int_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T_Int												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A27_T_Int_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A29_P												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A29_P_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A87_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A87_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A88_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A88_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A89_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A89_S_Off												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A90_S												
NSPM	MN	Small C&I	NSPM_MN_E_SCI_A90_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A14_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_Google												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_Google_O												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_T_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A15_U_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A23_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_T_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_U												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A24_U_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S_Int												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_S_Int_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P_Int												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_P_Int_Off												

NSP Minnesota Customer Counts by Rate Code

Company	State	Class	Rate Schedules	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T_Int												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T_Int_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A62_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A62_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A63_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A63_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A87_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A87_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A88_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A88_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A89_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A89_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A90_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A90_S_Off												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A40												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A41_S												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A41_P												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A42												
NSPM	MN	PSHL	NSPM_MN_E_PSHL												
NSPM	MN	Interdepartmental	NSPM_MN_E_Interdept												

PROTECTED DATA ENDS]

NSP Minnesota Customer Counts by Rate Code

Company	State	Class	Rate Schedules	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T_Int												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T_Int_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A62_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A62_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A63_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A63_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A87_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A87_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A88_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A88_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A89_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A89_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A90_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A90_S_Off												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A40												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A41_S												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A41_P												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A42												
NSPM	MN	PSHL	NSPM_MN_E_PSHL												
NSPM	MN	Interdepartmental	NSPM_MN_E_Interdept												

PROTECTED DATA ENDS]

NSP Minnesota Customer Counts by Rate Code

Company	State	Class	Rate Schedules	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T_Int												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T_Int_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A62_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A62_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A63_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A63_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A87_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A87_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A88_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A88_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A89_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A89_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A90_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A90_S_Off												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A40												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A41_S												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A41_P												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A42												
NSPM	MN	PSHL	NSPM_MN_E_PSHL												
NSPM	MN	Interdepartmental	NSPM_MN_E_Interdept												

PROTECTED DATA ENDS]

NSP Minnesota Customer Counts by Rate Code

Company	State	Class	Rate Schedules	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T_Int												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T_Int_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A62_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A62_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A63_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A63_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A87_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A87_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A88_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A88_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A89_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A89_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A90_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A90_S_Off												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A40												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A41_S												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A41_P												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A42												
NSPM	MN	PSHL	NSPM_MN_E_PSHL												
NSPM	MN	Interdepartmental	NSPM_MN_E_Interdept												

PROTECTED DATA ENDS]

NSP Minnesota Customer Counts by Rate Code

Company	State	Class	Rate Schedules	Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T_Int												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A27_T_Int_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A62_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A62_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A63_P												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A63_P_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A87_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A87_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A88_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A88_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A89_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A89_S_Off												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A90_S												
NSPM	MN	Large C&I	NSPM_MN_E_LCI_A90_S_Off												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A40												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A41_S												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A41_P												
NSPM	MN	OSPA	NSPM_MN_E_OPA_A42												
NSPM	MN	PSHL	NSPM_MN_E_PSHL												
NSPM	MN	Interdepartmental	NSPM_MN_E_Interdept												

PROTECTED DATA ENDS]