



Integrated Resource Plan 2024



Submitted to the
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Volume II: Attachment A

Montana-Dakota Utilities Co.
2024 Integrated Resource Plan

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Attachment A



MONTANA-DAKOTA
UTILITIES CO.

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In the Community to Serve®

**MONTANA-DAKOTA UTILITIES CO.
ELECTRIC LOAD FORECAST
2024–2043**

Prepared by
Montana-Dakota Utilities Co.
Electric System Operations & Planning Department

December 31, 2023

TABLE OF CONTENTS

| | |
|---|-----------|
| EXECUTIVE SUMMARY | 1 |
| INTEGRATED SYSTEM..... | 1 |
| ECONOMETRIC OVERVIEW..... | 1 |
| INTEGRATED SYSTEM..... | 6 |
| 1. Forecast Methodology - Sales | 8 |
| 1.1. Residential | 9 |
| 1.2. Small Commercial & Industrial | 10 |
| 1.3. Large Commercial & Industrial | 12 |
| 1.3.1. General LC&I | 13 |
| 1.4. Street Lighting | 14 |
| 1.5. Miscellaneous | 14 |
| 2. Forecast Methodology – Peak Demand..... | 15 |
| 3. Forecast Results – Sales and Demand..... | 18 |
| 3.1. Demand-Side Management (DSM) Reductions | 18 |
| 3.2. Losses | 19 |
| 3.3. Final Energy Requirements Forecast | 19 |
| 4. Forecast Uncertainty..... | 29 |
| 4.1. Effect of Temperature on Peak Demand | 29 |
| 4.2. High-Growth and Low-Growth Scenario Forecasts | 31 |
| 5. Allocations..... | 34 |
| 5.1. Sales and Customer Allocations by Month | 34 |
| 5.2. Peak Demand Allocations by State | 34 |
| 5.3. Peak Demand Allocations by Month | 35 |
| 5.4. Annual Energy and Seasonal Peak Demand by State | 37 |
| 5.5. Sales Forecasts by Sector | 37 |
| | |
| Appendix A – Integrated System Historical Data | |
| Appendix B – Integrated System Historical & Forecasted Exogenous Variables | |
| Appendix C – Integrated System Forecast Results | |
| Appendix D – Monthly Forecasts – Montana (2024-2033) | |
| Appendix E – Monthly Forecasts – North Dakota (2024-2033) | |
| Appendix F – Monthly Forecasts – South Dakota (2024-2033) | |
| Appendix G – Monthly Forecasts – Integrated System (2024-2033) | |

Executive Summary

This report presents the 2024-2043 forecasts of Montana-Dakota Utilities Co.'s (Montana-Dakota) electric energy requirements and peak demands for the Integrated System of Montana, North Dakota, and South Dakota and for the Wyoming System. The forecasts are prepared by the Electric System Operations & Planning Department. An econometric methodology of forecasting is generally used as the starting point for Montana-Dakota's load forecasts.

INTEGRATED SYSTEM

Total annual energy for the Integrated System is projected to grow at an average rate of 0.42% per year for the next five years and at an average rate of 0.55% per year through 2043. Integrated System summer peak demand is projected to grow at an average rate of 0.64% per year for the next five years and an average rate of 0.69% per year through 2043 prior to any reductions due to demand response programs. Integrated System winter peak demand is projected to grow at an average rate of 0.43% per year for the next five years and an average rate of 0.56% per year through 2043.

As described in Montana-Dakota's 2021 Integrated Resource Plans (IRPs) filed with the North Dakota and Montana Public Service Commissions, Montana-Dakota has established a Demand-Side Management (DSM) goal of achieving an overall reduction of 0.34 percent of annual energy sales over the 20-year planning horizon of the IRPs using new and existing energy efficiency programs. Additionally, Montana-Dakota will pursue a demand response portfolio that includes the Commercial Demand Response program, which was launched in June 2012, as well as the continued promotion of the Company's current Interruptible Demand Response program. The effects of the demand-side management (DSM) programs that will be implemented in the Integrated System to achieve these goals are reflected in the sales and demand forecasts.

Econometric Overview

Montana-Dakota uses econometric modeling as the starting point for its forecasts. The econometric models are developed using the statistical software package SAS®. In order to capture the unusual activity experienced as a result of the Bakken oil field, other forecasting methods and analyses also enter into the forecasting process for the Integrated System resulting in a combined analysis approach to the forecast.

An econometric model is a set of equations that expresses electricity use as a function of underlying factors such as income, price of electricity and alternate fuels, and weather.

The strengths of econometric forecasting models include:

- Econometric models explicitly measure the effects of underlying causes of trends and patterns.
- Econometric models provide statistical evaluation of forecast uncertainty.
- Econometric models utilize economic and demographic information that is easily understood.
- Econometric models can be readily re-estimated.

The econometric method combines economics theory and statistical techniques to produce a system of simultaneous equations. The method starts with estimating causal relationships between electric energy consumption (the dependent variable) and factors influencing electricity use (the independent variables). The relationship is estimated by applying regression analysis or other more sophisticated methods to time-series data. Once the relationships are established, inserting forecasts of the independent variables into the equation yields projections of the dependent variable.

A number of demographic and econometric variables were tested for fit in the process of developing both the Integrated System and Wyoming System forecasts. Various combinations of variables were tested for statistical significance when evaluating the data to be used in each equation. The following is a list of variables that were available for both the historical time period being analyzed and the forecasted time period:

Residential price of electricity
Small Commercial & Industrial price of electricity
Large Commercial & Industrial price of electricity
Residential price of alternate fuel (natural gas)
Commercial price of alternate fuel (natural gas)
Total Personal Income
Heating Degree Days (HDD) for Bismarck, ND; Aberdeen, SD; and Sheridan, WY
Cooling Degree Days (CDD) for Bismarck, ND; Aberdeen, SD; and Sheridan, WY
Number of Households
Employment by Sector
Total Retail Sales
Temperature at the time of peak for Bismarck, ND; Williston, ND; and
Miles City, MT; for the Integrated System forecast and for Sheridan, WY for
the Wyoming System forecast

The variables used in each resulting equation are noted in the narrative that follows for each sales sector forecast. The forecast process begins by estimating the full models and then removing variables for which the estimated coefficient

either has the wrong sign or is not statistically significantly different from zero (using a p-value of 0.10).

Prior to the forecast developed in 2012, forecasts for the Integrated System had always been developed on a total Integrated System basis followed by allocations to the states of Montana, North Dakota, and South Dakota. The forecast published in this report is now the eleventh consecutive year in which the forecasts were developed for each sales sector on a state-by-state basis rather than an Integrated System basis.

Data Sources

At the time this analysis was begun for the Integrated System (June 2023) and the Wyoming System (September 2023), the most recent year for which a complete set of weather and actual monthly sales by sector was available was 2022.

The data used in the development of the forecast that are available in-house include Montana-Dakota's rate projections, historical sales, energy, demand, losses, natural gas and electricity prices, and number of customers or bills.

In addition to the data available in-house, most of the economic and demographic data are obtained from Woods & Poole Economics, Inc. (W&P) of Washington, D.C. by county. The W&P data are apportioned and adjusted to represent the data for the Montana-Dakota service territory. Other data sources include the National Oceanic and Atmospheric Administration (NOAA), U.S. Census Bureau, and others.

The forecasts for the Integrated System and the Wyoming System are developed annually. Likewise, the W&P data by county are available annually from the regional model developed by W&P. W&P revises the regional model from one year to the next to reflect new computational techniques and new sources of regional economic and demographic information. Each year, W&P produces new projections based on an updated historical database and revised assumptions. Therefore, the data provided by W&P captures the economic conditions in place at the time that the W&P forecasts are produced.

While national economic conditions can change quite quickly, data from W&P is provided once per year and therefore may not reflect the most current economic climate. For Montana-Dakota's service territory, this is not always a concern since this area is somewhat isolated from factors affecting the rest of the country; economic trends felt nationally usually take a year or two or more before their impact reaches this area. For example, while the 2008 economic downturn was felt by the majority of the country, Montana-Dakota's service territory was enjoying a robust agricultural sector, intense oil field drilling activity, and

increased energy usage resulting from high oil prices. However, the impacts that occurred in 2020, related to COVID-19, were felt nationwide.

Here is an excerpt from the U.S. Bureau of Labor Statists (BLS) in their March 1, 2024, press release titled Regional and State Unemployment, 2023 Annual Average Summary: “In 2023, annual average unemployment rates decreased in 6 states, increased in 2 states, and were little changed in 42 states and the District of Columbia, the U.S. Bureau of Labor Statistics reported today. Employment-population ratios increased in 10 states and were little changed in 40 states and the District. The U.S. jobless rate was unchanged over the year at 3.6 percent, while the national employment-population ratio rose by 0.3 percentage point to 60.3 percent.” According to BLS, Montana’s unemployment rate was at 2.9%, North Dakota’s unemployment was at 1.9%, South Dakota’s unemployment rate was at 2.0% and Wyoming’s unemployment rate was at 2.9%; all below the national rate of 3.6%.

The forecasts for the Integrated System and the Wyoming System in this publication reflect growth seen up through 2022.

Degree days are used to estimate how hot or cold the climate is and how much energy may be needed to keep buildings cool or warm. Heating degree days, HDDs, are calculated by subtracting the mean daily temperature from 65°F and summing only positive values over a given period of time, while cooling degree days, CDDs, are calculated by subtracting 65°F from the mean daily temperature and summing only positive values over a given period of time.

The HDD and CDD numbers used are annual values and the change in magnitude from one year to another is more relevant for representing warmer or cooler than normal weather in the analysis than the actual values. Since the forecasts are developed for each sales sector on a state-by-state basis rather than an Integrated System basis, HDDs and CDDs for sites in North Dakota, South Dakota, and Montana were considered for representation of degree days in Montana-Dakota’s electric service territory in each state.

Bismarck and Mandan, ND account for approximately one-third of Montana-Dakota’s Integrated System electric sales annually. Therefore, Bismarck HDDs and CDDs were used to represent Montana-Dakota’s service territory in North Dakota. There are no NOAA National Climatic Data Center (NCDC) stations with local climatological data available in Montana that are in Montana-Dakota’s electric service territory. It was decided that Bismarck HDDs and CDDs values would best represent the Montana-Dakota service territory in Montana as well.

There are also no NOAA NCDC stations in South Dakota that are in Montana-Dakota’s electric service territory. After reviewing available data, it was decided that Aberdeen, SD HDDs and CDDs would be used to represent Montana-Dakota’s service territory in South Dakota.

For the Wyoming System, HDDs and CDDs are from NOAA for Sheridan, WY.

Historical personal income per household is calculated to be total personal income divided by the number of households for those counties in which Montana-Dakota provides electric utility service. Historical personal income is available from the W&P data which come from the U.S. Department of Commerce. Historical households are also from the U.S. Department of Commerce. Forecasted personal income and number of households are projections provided by W&P.

Historical company data used in the development of the forecasts are included in Appendix A for the Integrated System and Appendix H for the Wyoming System. Appendices A-1 through A-4 list annual sales by customer class for Montana, North Dakota, South Dakota, and the Integrated System for the years 1966-2023, respectively. Appendix A-5 lists the seasonal peaks and load factors of the Integrated System for the years 1975-2023. Appendix A-6 lists demand by state at the time of the system peak for the summer and winter seasons for the years 1975-2023. Similar information can be found in Appendix H for the Wyoming System.

Appendix B contains historical and forecasted values for the exogenous variables for the Integrated System and Appendix I contains the corresponding data for the Wyoming System.

Integrated System

Overview

From 2006-2011, econometric equations were used to develop long-range (20-year) electric load forecasts for Montana-Dakota's Integrated System, which is comprised of Montana-Dakota's service territories in Montana, North Dakota, and South Dakota. The total Integrated System sales by sector were then allocated to the individual states.

Beginning in 2012, the forecast was developed for each state individually – Montana, North Dakota, and South Dakota – and the forecasts by state were combined to arrive at the Integrated System forecast in total. The previously used methodology of allocating Integrated System sales to the states was becoming more difficult to accomplish while capturing the shifting percentage of sales in each state. This was a result of the higher growth recently experienced in North Dakota due to the Bakken oil field activity which is also beginning to impact Montana-Dakota's electric sales in Montana.

At the time this analysis was begun (June 2023), the most recent year for which a complete set of weather, prices, monthly sales by sector, and other historical information was available was for year-ending 2022. The equations developed used historical data available through 2022 and were designed to forecast the time period 2024-2043.

Montana-Dakota's Integrated System consists of the counties listed in the table below. These counties are located in eastern Montana, north-central South Dakota, and western and central North Dakota.

Counties by State in Montana-Dakota's Integrated System

| <u>Montana</u> | <u>South Dakota</u> | <u>North Dakota</u> | |
|----------------|---------------------|---------------------|-----------|
| Custer | Campbell | Adams | Logan |
| Daniels | Corson | Bowman | McIntosh |
| Dawson | Edmunds | Burke | McKenzie |
| Fallon | Faulk | Burleigh | Mercer |
| Prairie | Harding | Dickey | Morton |
| Richland | McPherson | Divide | Mountrail |
| Roosevelt | Perkins | Dunn | Oliver |
| Rosebud | Potter | Emmons | Renville |
| Sheridan | Walworth | Golden Valley | Slope |
| Wibaux | | Grant | Stark |
| | | Hettinger | Williams |
| | | Kidder | |

Montana-Dakota also provides electric service to a small part of Brown County of South Dakota. However, Brown County is excluded from the database because it includes the town of Aberdeen which is not served by Montana-Dakota, but which comprises the majority of the population for the county. Including Brown County would reflect too much of the economic activity that occurs in Aberdeen.

The same is true for Ward County in North Dakota. Montana-Dakota provides electric service to a small part of Ward County. However, Ward County is excluded from the database because it includes the town of Minot which does not receive electric service from Montana-Dakota, but which comprises the majority of the population for the county. Including Ward County would reflect too much of the economic activity that occurs in Minot.

1. Forecast Methodology – Sales

The Montana, North Dakota, and South Dakota sales forecasts are disaggregated into five sales sectors:

- Residential sector.
- Small Commercial & Industrial (SC&I) sector. This sector consists of those commercial and industrial customers whose monthly peak demand averages less than 50 kilowatts over a year's time.
- Large Commercial & Industrial (LC&I) sector. This sector consists of those commercial and industrial customers whose monthly peak demand averages more than 50 kilowatts over a year's time.
- Street Lighting. This sector consists of energy for public street and highway lighting.
- Miscellaneous. This sector includes energy for sales to other public authorities, interdepartmental sales, and company use.

The LC&I sector was further broken down into four end-use categories which were forecasted individually. The remainder of the LC&I sales fall into a fifth category: General LC&I sales. The end-uses forecasted individually were as follows:

- North Dakota
 - Marathon (Tesoro) Corporation's Refinery sales
 - North American Coal Corporation's Coyote Creek Mine sales
 - Sabin Metal Corporation's sales
- Montana
 - Montana Oil Field sales

Econometric equations were tried initially in the development of the forecasted sales for the three primary customer categories by state – residential, SC&I, and General LC&I – while sales forecasts for the street lighting and miscellaneous sectors were developed primarily using current sales levels or simple linear regression. The final models used for each of the primary customer categories were a combination of econometrics and judgment. The sales forecasts for the five LC&I end-uses were developed using a combination of regressions and information available from Montana-Dakota's field personnel regarding these large customers.

The development of the sales forecasts for each of the five sales sectors is explained below.

1.1 Residential

The residential sales forecast is derived by developing a forecast of residential use per customer and a forecast of number of residential customers. The product of these becomes the baseline residential sales forecast. Adjustments were added to the annual forecasts in anticipation of load due to Electric Vehicle charging starting in 2024.

RESIDENTIAL USE PER CUSTOMER

Higher electricity prices and lower income may result in less electricity use, while higher alternate fuel prices as well as colder than normal winters (more heating degree days) and hotter than normal summers (more cooling degree days) may result in more electricity consumption. Historical and forecasted values for these variables are available and were tested for statistical significance when developing the residential econometric equations for each state in previous years. The historical values for these variables are given in Appendix B.

The econometric process used in previous years allowed residential use per customer to depend on variables such as the residential price of electricity, alternate fuel prices for residential customers (natural gas), personal income per household, heating degree days, cooling degree days, number of households, and year. This year the final residential use per customer models for Montana, North Dakota and South Dakota will hold use per customer flat for the entire forecast period making average customer counts the primary driver for residential sales growth.

NUMBER OF RESIDENTIAL CUSTOMERS

The model initially developed for the number of customers (bills) for each state is as follows:

$$\ln(res_bills_t) = a + b^{hhld} \times \ln(hholds_t) + e_t$$

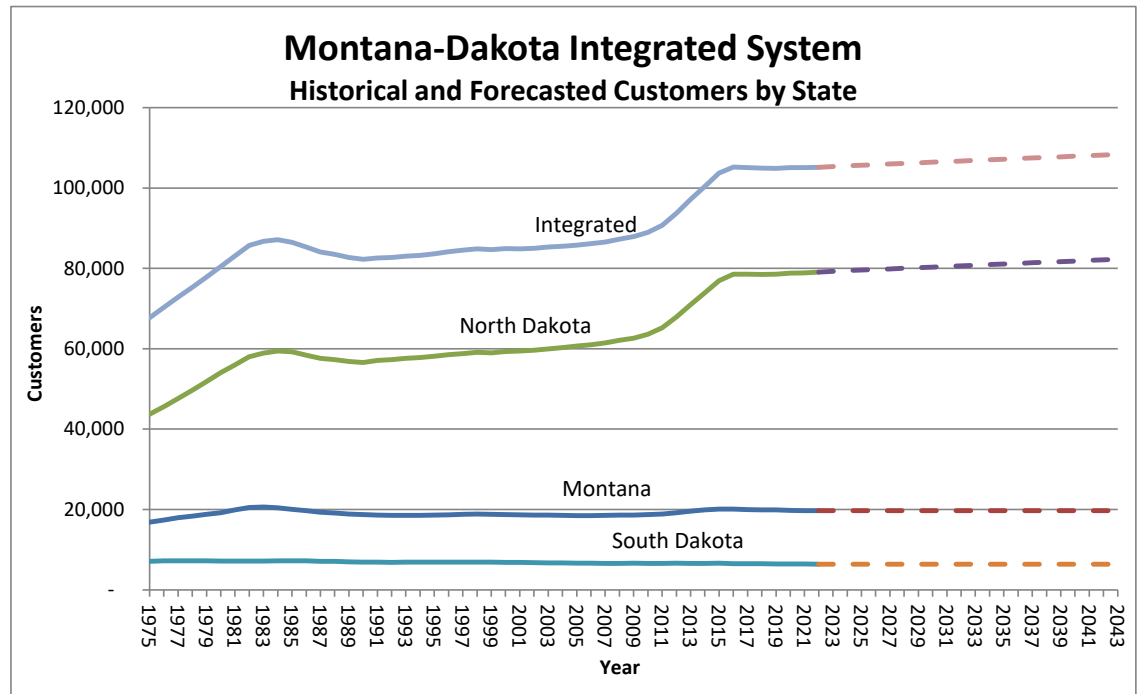
In this equation, a and b are estimated parameters; e_t is the error term, the dependent variable is the natural log of the number of bills and the explanatory variable is the natural log of the number of households.

The forecast for number of customers by state was initially developed as described above. However, adjustments were made to the residential customer forecasts for all states.

In North Dakota, growth in residential customers for 2024 through 2025 was set based on experienced residential customer growth trends. In the following years, residential customer growth was allowed to continue at the rate set in 2025.

For Montana and South Dakota, customer growth for 2024 and beyond was set to the approximate residential customer growth currently experienced.

Historical and forecasted customers (bills) by state and in total are plotted on the following chart while the values are given in Appendix B-6.



1.2 Small Commercial & Industrial

Small commercial & industrial (SC&I) sales could potentially depend on variables such as the SC&I price of electricity, alternate fuel prices for SC&I customers (natural gas), employment, heating degree days, cooling degree days, and year. Higher electricity prices may result in less electricity use, while higher alternate fuel prices and higher employment as well as colder than normal winters (more heating degree days) and hotter than normal summers (more cooling degree days) may result in more electricity consumption. Historical and forecasted values for these variables are available and were tested for statistical significance in developing the SC&I econometric equations by state. The historical and forecasted values for these variables are given in Appendix B.

In contrast to the residential sales forecast which uses two models for each state to project residential sales (a use per residential customer model and a residential customer number model), a single model for each state is used to forecast small commercial & industrial (SC&I) sales. The final models by state are as follows:

North Dakota:

$$\ln(\text{sci_kwh}_t) = a + b^{Emp} \times \ln(\text{emp_no_farm_mining}_t) + e_t$$

where:

- ln = natural logarithm;
- sci_kwh_t = small comm & industrial sales; and
- emp_no_farm_mining_t = total employment, excluding farm and mining.

In this equation, *a* and *b* are estimated parameters; *e_t* is the error term.

Montana:

$$\ln(\text{sci_kwh}_t) = a + b^{Emp} \times \ln(\text{emp_no_farm_mining}_t) + b^{Yr} \times \text{year} + e_t$$

where:

- ln = natural logarithm;
- sci_kwh_t = small commercial & industrial sales;
- emp_no_farm_mining_t = total employment, excluding farm and mining; and
- year_t = year (1998-2022), which serves as a time trend variable.

In this equation, *a* and *b* are estimated parameters; *e_t* is the error term.

South Dakota:

$$\ln(\text{sci_kwh}_t) = a + b^{HDD} \times HDD_t + b^{Yr} \times \text{year} + e_t$$

where:

- ln = natural logarithm;
- sci_kwh_t = small commercial & industrial sales;
- HDD_t = heating degree days; and
- year_t = year (1998-2022), which serves as a time trend variable.

In this equation, a and b are estimated parameters; e_t is the error term.

The Personal Consumption Expenditure Deflator, whose values are given on Appendix B-5, was used to place small commercial and industrial electricity prices and firm natural gas prices into real dollar terms.

Employment numbers are available from W&P for the historical time period from the U.S. Department of Commerce, Bureau of Economic Analysis. Employment projections for the counties served by Montana-Dakota are made by W&P. However, due to the activity anticipated by our districts in North Dakota and Montana, adjustments were made to what was projected by W&P.

Since residential customer number forecasts had been developed for North Dakota and Montana, it was decided that a relationship between residential customer numbers and employment should be established in order that the SC&I sales forecast would correspond to the residential customer number forecast and the growth in employment and residential customers would then be directly correlated. Regressions were run on 25-year ratios of historical employment (total employment less farming and mining) to residential customers. The forecasted ratio produced from this regression was applied to the adjusted residential customer forecasts for both North Dakota and Montana to arrive at the adjusted employment forecasts for each state. Historical employment as well as employment as forecasted by W&P and as adjusted is given on Appendix B-7.

1.3 Large Commercial & Industrial

The sales forecasts for four LC&I end-uses (Marathon (Tesoro) Refineries, North American Coal, Sabin Metals, and Montana Oil Fields) were developed using information available from Montana-Dakota's field personnel regarding these large customers.

1.3.1 General LC&I

General LC&I sales (sales to all other LC&I customers that are not one of the above end-uses) could depend on variables such as the LC&I price of electricity, alternate fuel prices for LC&I customers (natural gas), heating degree days, cooling degree days, employment, and year. Higher electricity prices can result in less electricity use, while higher alternate fuel prices and higher employment as well as colder than normal winters (more heating degree days) and hotter than normal summers (more cooling degree days) could result in more electricity consumption. Historical and forecasted values for these variables are available and were tested for statistical significance in developing the General LC&I econometric equations by state.

As with SC&I sales, General LC&I sales are forecasted using a single model. The forecast process began in each state by estimating the full models and then removing variables for which the estimated coefficient either has the wrong sign or is not statistically significant. The Personal Consumption Expenditure Deflator, whose values are given on Appendix B-5, was used to place large commercial and industrial electricity prices and firm natural gas prices into real dollar terms.

The final models for Montana, North Dakota, and South Dakota were identical with the only statistically significant variable being the time-trend variable.

The final model for all three states is as follows:

$$\ln(lci_kwh_t) = a + b^{yr} \times year_t + e_t$$

where:

| | |
|--------------|--|
| \ln | = natural logarithm; |
| lci_kwh_t | = large commercial & industrial sales; |
| $year_t$ | = year (1998-2022), which serves as a time trend variable. |

In this equation, a and b are estimated parameters; e_t is the error term.

After the General LC&I sales are projected by state using the equation developed as outlined above, adjustments are made to the projected sales in the appropriate state to reflect load growth that is due to any changes expected for existing customers or additional new General LC&I customers that may have been added in 2023 and beyond. Information regarding the specific LC&I customers that come online is provided by Montana-Dakota's field personnel who have contact with and closely monitor these customers. There were no adjustments in 2023, for South Dakota. However, there were adjustments made to both North Dakota and Montana's General LC&I modeled forecasts due to expected and announced customer reductions beginning in 2024.

An adjustment was added to all three state's annual forecasts in anticipation of load due to Electric Vehicle charging, starting in 2024.

1.4 Street Lighting

The sales forecast for the street lighting sector (public street and highway lighting) for all states, Montana, North Dakota, and South Dakota, started with their actual 2022 levels and then are held constant for the remainder of the forecast.

1.5 Miscellaneous

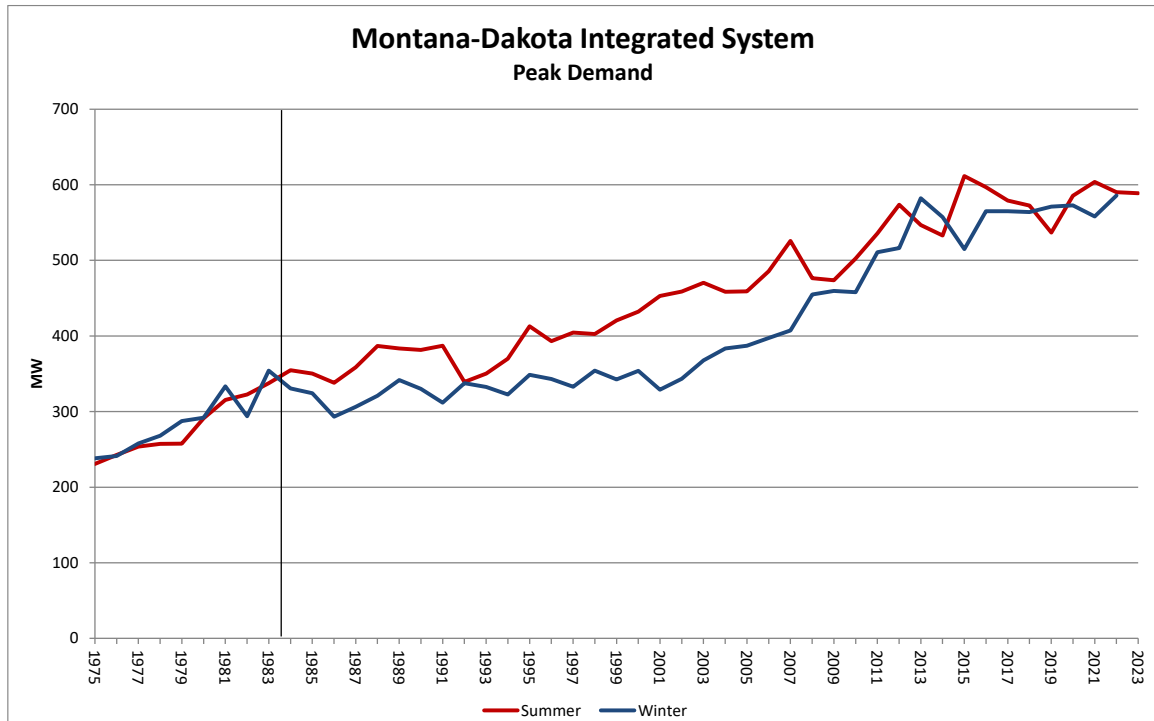
The miscellaneous sales sector is made up of sales for the following three end-uses:

1. Interdepartmental Sales – gas utility use of electricity
2. Other Public Sales – sales to government authorities which includes municipal pumping and some city sales (these sales are served under special contracts that are applicable only to public authorities)
3. Company Use - Montana-Dakota offices

The sales forecast for the miscellaneous sector for all states, Montana, North Dakota, and South Dakota, started with their actual 2022 levels and then are held constant for the remainder of the forecast.

2. Forecast Methodology – Peak Demand

Integrated System historical peak demand is shown on the chart below.



Montana-Dakota was a winter peaking utility prior to 1984. From about 1973 to 1983, the spread between the winter and summer peaks began to narrow and in 1984 Montana-Dakota became a summer peaking utility. From Montana-Dakota's Residential Energy Use Surveys and other available information, it is known that air conditioning has become more prevalent over time and air conditioning load has driven much of the increase in summer peak demand. Recently, the winter peak has been growing at a faster rate again due to the addition of more space heating load and unseasonably cooler summers. The gap between winter and summer seasonal peaks has narrowed once more with an occasional winter peak being higher than summer for years 2013, 2014 and 2019.

The Integrated System peak demand forecast is developed on a total system basis; it is not disaggregated by state or by sector. The summer peak demand forecast was developed using an econometric model. Peak day/hour temperature, annual cooling degree days, total system sales for the year including losses (annual requirements), and a time-trend variable (year) were tested as the independent variables in the econometric model.

For peak day temperature, Montana-Dakota has available the historical hourly temperatures for three major load centers: Bismarck, ND; Williston, ND; and Miles City, MT. Weighted average temperatures for Bismarck (70%), Miles City (15%) and Williston (15%) at the time of the system peak were used as the peak day temperature. This weighting method has been tested and used in the past in the company's short-term demand forecast as well as in other informal in-house analyses. The inclusion of cooling degree days in the model is based on the fact that Montana-Dakota is a summer peaking utility and that hotter summers create more hot days on which high peaks may be set and may also serve as a proxy for heat buildup leading up to the peak.

Because of the nature of the econometric models, the historical summer peak demand data were adjusted to reflect customer load interruptions due to Interruptible Rate 38/39 and/or forced distribution outages that occurred at the time of the summer peak. The historical summer peak value thus represents the peak as it would have occurred had there not been any interruptions. Interruptions to the load for customers served on Large Power Demand Response Rate 38 and/or Interruptible Large Power Service Rate 39 typically occur at the time of the system peak. Also, a forced distribution outage occurred at the time of the summer peak in 2002 and voltage reductions were implemented at the time of the summer peaks in 2006 and 2007.

The summer peak demand model is as follows:

$$\begin{aligned}
 peak_load_t &= a + b^{PTemp} \times peak_temp_t \\
 &+ b^{Sales} \times system_kwh_t \\
 &+ b^{yr} \times year_t + e_t
 \end{aligned}$$

where:

| | |
|-------------------------|--|
| peak_load _t | = summer peak demand; |
| peak_temp _t | = weighted average temp at time of summer peak; |
| system_kwh _t | = annual energy requirements; and |
| year _t | = year (1988-2022), which serves as a time trend variable. |

In this equation, *a* and the *b*'s are estimated parameters; *e_t* is the error term.

The winter peak demand forecast is developed in a manner similar to the summer peak demand forecast except that HDDs were tested for statistical significance in the model rather than CDDs. It was found that HDDs are not statistically significant. The historical period of 30 years was used in developing the winter peak demand model: 1993-2022.

For the winter peak demand forecast, additional variables were tested to see if they play a statistically significant role in the determination of the winter peak. The variables tested were the number of minutes of daylight on the day of the winter peak and the number of days between the winter peak and the winter solstice.

The winter peak demand model is as follows:

$$peak_load_t = a + b^{PTemp} \times peak_temp_t \\ + b^{Sales} \times system_kwh_t + e_t$$

where:

| | |
|-------------------------|---|
| peak_load _t | = winter peak demand; |
| peak_temp _t | = weighted average temp at time of winter peak; and |
| system_kwh _t | = annual energy requirements. |

In this equation, *a* and the *b*'s are estimated parameters; *e_t* is the error term.

3. Forecast Results – Sales and Demand

The forecast methodology for both sales and demand as described in Sections 1 and 2 above results in the initial sales forecasts by sales class for each state and the initial demand forecast. Reductions to the sales forecasts by class and by state and to the demand forecast are made to reflect Demand-Side Management programs that are being implemented. Once these reductions are reflected in the sales forecasts, the total of the sales forecasts by class are adjusted by the loss factor to arrive at the final forecast of energy requirements.

3.1 Demand-Side Management (DSM) Reductions

As reflected in the 2021 Integrated Resource Plans (IRP) filed with the North Dakota and Montana Public Service Commissions, Montana-Dakota has included reductions for both energy efficiency and demand response levels over the 20-year planning period of the IRPs. The specific programs used to attain the goals may change over the planning period but will include both energy efficiency and demand response programs that are deemed cost effective.

Energy efficiency programs focus on energy reductions (kWh) and will have some reduction in peak demand (kW). Demand response programs focus on peak demand reductions and may be called upon during peaking conditions and system emergencies. The forecasted reductions based on the expected energy efficiency and demand response programs for energy and peak demand are reflected in the forecast and those amounts are summarized below:

- DSM Energy savings
 - 0.37 percent of annual sales for 2024 through 2042, achieved by growing from 0.18% of total sales in 2023, to 0.43% of total sales by 2030 through 2042, for an overall savings of 0.37% for the 20-year forecast horizon.
- Peak Demand savings
 - Demand Response programs of 59.0 MW for 2024, to 60.0 MW by 2025 through 2042 for the commercial sales sector.
 - Energy Efficiency programs of 0.59 MW in 2024 and 0.68 MW by 2042.

The forecasted reduction in energy and peak demand resulting from the above programs is reflected in the forecast.

3.2 Losses

The sales forecasts reflect the energy delivered to Montana-Dakota's customers' meters. The total amount of electricity generated at the power plants to meet Montana-Dakota's customers' energy needs is greater than what is delivered to the meters and is called the 'Total Energy Requirements.' The difference between the sales and energy requirements reflects the losses that occur within the transmission and distribution system.

The annual energy losses percentage, defined as a fraction of the total annual energy requirements, has varied from year to year. Therefore, these loss percentages are averaged over a ten-year time period. The average value for the past ten years is 8.147%. Using this value for all future years for each state, the total energy requirements are calculated for each year during the study period.

3.3 Final Energy Requirements Forecast

The forecasted sales and system peak demand are first adjusted to reflect the effects of the DSM programs that are being implemented as explained in Section 3.1 and then adjusted for losses as outlined in Section 3.2 to calculate the total energy requirements and peak demand forecast. This is the amount of energy and capacity that needs to be generated or purchased to meet Montana-Dakota's customers' energy needs.

The final forecast results are presented on the following several pages. A table summarizing the Integrated System energy requirements and seasonal peak demand is given first, followed by a graph with historical and forecasted seasonal peak demand and energy requirements. A table summarizing historical and forecasted sales by sales sector for Montana, North Dakota, South Dakota, and the Integrated System in total is given next, followed by a graph of the Integrated System data. A table detailing the historical and forecasted residential sales, customers, and use per customer by state is given next. The last page of this section is a similar table for the Integrated System in total.

Refer to Appendices C-1 through C-4 for graphs of the historical and forecasted sales by sector.

Montana-Dakota Utilities Co.
Historical and Forecasted Energy and Demand
Integrated System
Reflecting Demand-Side Management Programs from 2021 IRP
Calendar Month Basis

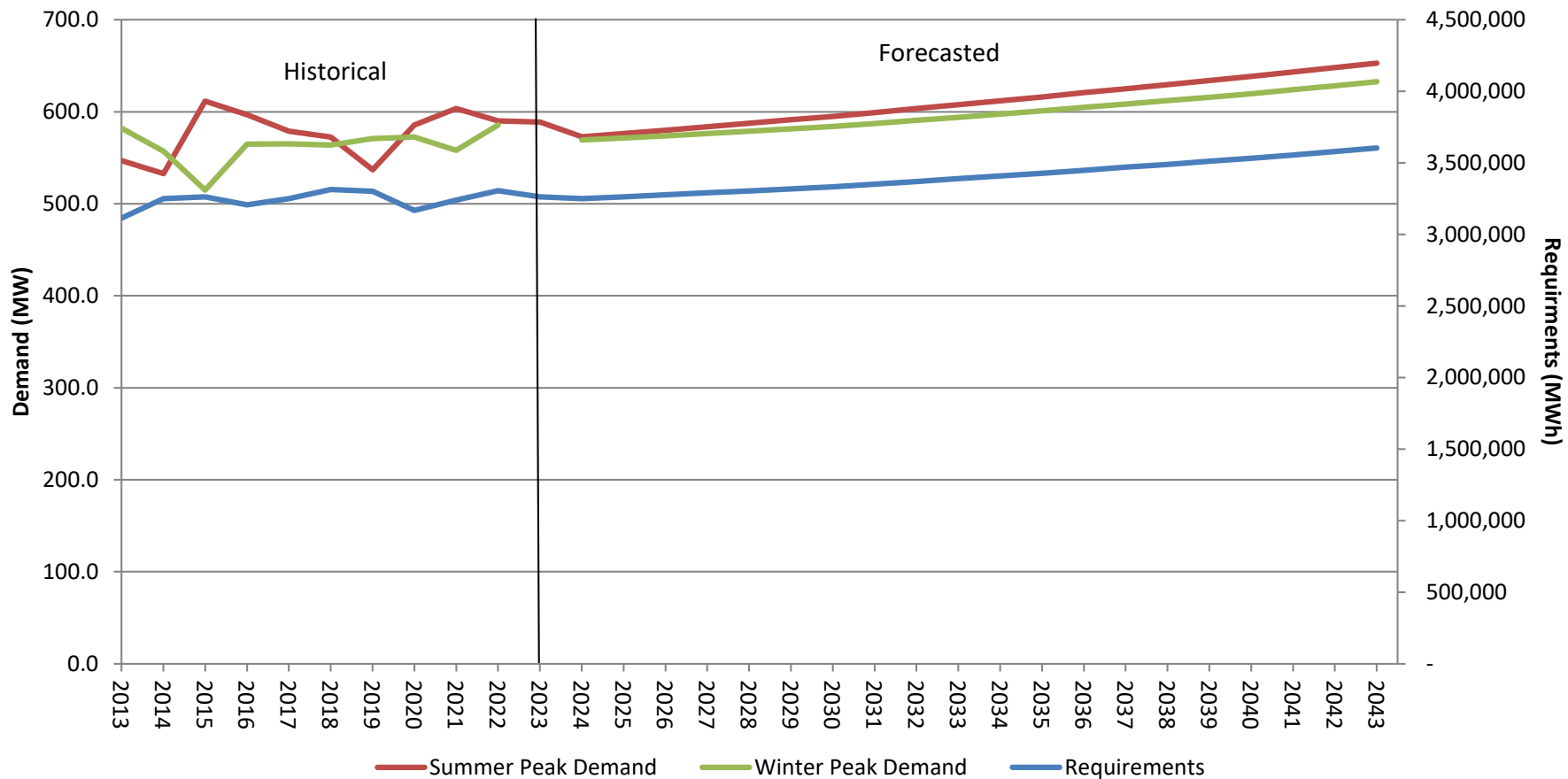
| Year | Total Energy Requirements (net of DSM and EE) | | Summer Peak - MW | | | | Winter Peak 2/ | | | | Demand Response | |
|------|--|----------|-------------------------|--------------------|-----------------|----------|-------------------------|--------------------|-------------------|----------|--------------------|--------------------|
| | MWh | % Change | Total Demand | Energy | Demand | % Change | Total Demand | Energy | Demand | % Change | Rate 38/39 | Commercial |
| | | | Before any DSM or EE | Efficiency (EE) | Net of EE 1/ | | Before any DSM or EE | Efficiency (EE) | Net of EE 1/ | | Interrupt Loads | Demand Response |
| 2013 | 3,115,064 | | | | 546.9 | | | | 582.1 | | | |
| 2014 | 3,250,683 | 4.35% | | | 533.0 | -2.54% | | | 557.2 | -4.28% | | |
| 2015 | 3,263,271 | 0.39% | | | 611.5 | 14.73% | | | 514.9 | -7.59% | | |
| 2016 | 3,206,737 | -1.73% | | | 596.8 | -2.40% | | | 564.9 | 9.71% | | |
| 2017 | 3,251,539 | 1.40% | | | 579.1 | -2.97% | | | 565.1 | 0.03% | | |
| 2018 | 3,313,387 | 1.90% | | | 572.4 | -1.16% | | | 563.8 | -0.22% | | |
| 2019 | 3,301,537 | -0.36% | | | 536.9 | -6.20% | | | 571.1 | 1.29% | | |
| 2020 | 3,169,086 | -4.01% | | | 585.6 | 9.07% | | | 572.7 | 0.28% | | |
| 2021 | 3,240,600 | 2.26% | | | 603.7 | 3.09% | | | 558.0 | -2.57% | | |
| 2022 | 3,305,682 | 2.01% | | | 590.2 | -2.24% | | | 585.7 | 4.96% | | |
| 2023 | 3,263,461 | -1.28% | | | 588.8 | -0.24% | | | Not yet available | | | |
| 2024 | 3,251,040 | -0.38% | 573.4 | 0.6 | 572.8 | -2.72% | 569.8 | 0.6 | 569.2 | | 20.0 | 39.0 |
| 2025 | 3,262,875 | 0.36% | 576.9 | 0.6 | 576.3 | 0.61% | 572.0 | 0.6 | 571.4 | 0.39% | 20.0 | 40.0 |
| 2026 | 3,276,381 | 0.41% | 580.6 | 0.6 | 580.0 | 0.64% | 574.4 | 0.6 | 573.8 | 0.42% | 20.0 | 40.0 |
| 2027 | 3,291,338 | 0.46% | 584.5 | 0.6 | 583.9 | 0.67% | 577.1 | 0.6 | 576.5 | 0.47% | 20.0 | 40.0 |
| 2028 | 3,304,290 | 0.39% | 588.1 | 0.6 | 587.5 | 0.62% | 579.4 | 0.6 | 578.8 | 0.40% | 20.0 | 40.0 |
| 2029 | 3,319,364 | 0.46% | 591.9 | 0.6 | 591.3 | 0.65% | 582.1 | 0.6 | 581.5 | 0.47% | 20.0 | 40.0 |
| 2030 | 3,333,013 | 0.41% | 595.6 | 0.6 | 595.0 | 0.62% | 584.5 | 0.6 | 583.9 | 0.41% | 20.0 | 40.0 |
| 2031 | 3,351,640 | 0.56% | 599.9 | 0.6 | 599.3 | 0.72% | 587.9 | 0.6 | 587.3 | 0.58% | 20.0 | 40.0 |
| 2032 | 3,370,689 | 0.57% | 604.1 | 0.6 | 603.5 | 0.70% | 591.3 | 0.6 | 590.7 | 0.58% | 20.0 | 40.0 |
| 2033 | 3,389,765 | 0.57% | 608.4 | 0.6 | 607.8 | 0.71% | 594.7 | 0.6 | 594.1 | 0.57% | 20.0 | 40.0 |
| 2034 | 3,408,922 | 0.57% | 612.7 | 0.6 | 612.1 | 0.71% | 598.2 | 0.6 | 597.6 | 0.59% | 20.0 | 40.0 |
| 2035 | 3,428,151 | 0.56% | 616.9 | 0.7 | 616.2 | 0.68% | 601.6 | 0.6 | 601.0 | 0.57% | 20.0 | 40.0 |
| 2036 | 3,448,941 | 0.61% | 621.4 | 0.7 | 620.7 | 0.73% | 605.4 | 0.6 | 604.8 | 0.63% | 20.0 | 40.0 |
| 2037 | 3,469,787 | 0.60% | 625.8 | 0.7 | 625.1 | 0.71% | 609.1 | 0.6 | 608.5 | 0.61% | 20.0 | 40.0 |
| 2038 | 3,490,230 | 0.59% | 630.3 | 0.7 | 629.6 | 0.72% | 612.8 | 0.6 | 612.2 | 0.61% | 20.0 | 40.0 |
| 2039 | 3,511,186 | 0.60% | 634.7 | 0.7 | 634.0 | 0.70% | 616.5 | 0.6 | 615.9 | 0.60% | 20.0 | 40.0 |
| 2040 | 3,532,235 | 0.60% | 639.2 | 0.7 | 638.5 | 0.71% | 620.3 | 0.6 | 619.7 | 0.62% | 20.0 | 40.0 |
| 2041 | 3,556,134 | 0.68% | 644.0 | 0.7 | 643.3 | 0.75% | 624.6 | 0.6 | 624.0 | 0.69% | 20.0 | 40.0 |
| 2042 | 3,580,110 | 0.67% | 648.7 | 0.7 | 648.0 | 0.73% | 628.9 | 0.6 | 628.3 | 0.69% | 20.0 | 40.0 |
| 2043 | 3,604,271 | 0.67% | 653.5 | 0.7 | 652.8 | 0.74% | 633.3 | 0.6 | 632.7 | 0.70% | 20.0 | 40.0 |

1/ Historical demand reported is system actual demand.

2/ Winter Peak is for Nov-Dec of current year and Jan-Apr of following year.

Montana-Dakota Integrated System

Energy Requirements and Summer and Winter Season Peak Demand



Montana-Dakota Utilities Co.
Historical and Forecasted Annual Sales by Sector
Montana
Billing Month Basis
Reflecting Demand-Side Programs

| YEAR | <u>Residential /*</u> | | <u>Small C&I</u> | | <u>Large C&I /*</u> | | <u>Street Lighting</u> | | <u>Miscellaneous</u> | | <u>Total Sales</u> | |
|--|-----------------------|----------|----------------------|----------|-------------------------|----------|------------------------|----------|----------------------|----------|--------------------|----------|
| | Sales (MWh) | % Change | Sales (MWh) | % Change | Sales (MWh) | % Change | Sales (MWh) | % Change | Sales (MWh) | % Change | Sales (MWh) | % Change |
| 2013 | 194,907 | | 128,003 | | 438,918 | | 7,028 | | 7,742 | | 776,598 | |
| 2014 | 200,088 | 2.66% | 137,799 | 7.65% | 451,686 | 2.91% | 7,108 | 1.13% | 7,901 | 2.05% | 804,582 | 3.60% |
| 2015 | 191,420 | -4.33% | 135,202 | -1.88% | 473,740 | 4.88% | 7,103 | -0.07% | 7,991 | 1.14% | 815,456 | 1.35% |
| 2016 | 184,296 | -3.72% | 131,690 | -2.60% | 474,495 | 0.16% | 7,102 | -0.01% | 7,517 | -5.93% | 805,101 | -1.27% |
| 2017 | 188,743 | 2.41% | 133,595 | 1.45% | 469,138 | -1.13% | 7,035 | -0.94% | 7,409 | -1.44% | 805,919 | 0.10% |
| 2018 | 192,080 | 1.77% | 138,485 | 3.66% | 469,653 | 0.11% | 4,451 | -36.73% | 6,303 | -14.93% | 810,972 | 0.63% |
| 2019 | 185,319 | -3.52% | 133,950 | -3.27% | 455,960 | -2.92% | 3,049 | -31.51% | 6,171 | -2.09% | 784,449 | -3.27% |
| 2020 | 184,785 | -0.29% | 125,023 | -6.66% | 421,234 | -7.62% | 3,077 | 0.93% | 6,424 | 4.10% | 740,543 | -5.60% |
| 2021 | 184,910 | 0.07% | 129,676 | 3.72% | 421,853 | 0.15% | 2,942 | -4.39% | 7,253 | 12.90% | 746,634 | 0.82% |
| 2022 | 191,158 | 3.38% | 131,236 | 1.20% | 424,604 | 0.65% | 2,913 | -0.99% | 7,304 | 0.70% | 757,215 | 1.42% |
| 2023 | 186,681 | -2.34% | 127,409 | -2.92% | 403,535 | -4.96% | 2,623 | -9.96% | 6,962 | -4.68% | 727,210 | -3.96% |
| 2024 | 187,067 | 0.21% | 132,310 | 3.85% | 410,786 | 1.80% | 2,913 | 11.06% | 7,304 | 4.91% | 740,380 | 1.81% |
| 2025 | 187,747 | 0.36% | 132,981 | 0.51% | 411,697 | 0.22% | 2,913 | 0.00% | 7,304 | 0.00% | 742,642 | 0.31% |
| 2026 | 188,001 | 0.14% | 133,655 | 0.51% | 413,049 | 0.33% | 2,913 | 0.00% | 7,304 | 0.00% | 744,922 | 0.31% |
| 2027 | 188,255 | 0.14% | 134,333 | 0.51% | 414,416 | 0.33% | 2,913 | 0.00% | 7,304 | 0.00% | 747,221 | 0.31% |
| 2028 | 188,509 | 0.13% | 134,872 | 0.40% | 415,399 | 0.24% | 2,913 | 0.00% | 7,304 | 0.00% | 748,998 | 0.24% |
| 2029 | 188,763 | 0.13% | 135,554 | 0.51% | 416,765 | 0.33% | 2,913 | 0.00% | 7,304 | 0.00% | 751,300 | 0.31% |
| 2030 | 189,021 | 0.14% | 136,240 | 0.51% | 418,151 | 0.33% | 2,913 | 0.00% | 7,304 | 0.00% | 753,629 | 0.31% |
| 2031 | 189,532 | 0.27% | 136,929 | 0.51% | 419,412 | 0.30% | 2,913 | 0.00% | 7,304 | 0.00% | 756,089 | 0.33% |
| 2032 | 190,042 | 0.27% | 137,621 | 0.51% | 420,824 | 0.34% | 2,913 | 0.00% | 7,304 | 0.00% | 758,704 | 0.35% |
| 2033 | 190,552 | 0.27% | 138,316 | 0.51% | 422,237 | 0.34% | 2,913 | 0.00% | 7,304 | 0.00% | 761,322 | 0.35% |
| 2034 | 191,062 | 0.27% | 139,015 | 0.51% | 423,665 | 0.34% | 2,913 | 0.00% | 7,304 | 0.00% | 763,959 | 0.35% |
| 2035 | 191,567 | 0.26% | 139,718 | 0.51% | 425,108 | 0.34% | 2,913 | 0.00% | 7,304 | 0.00% | 766,609 | 0.35% |
| 2036 | 192,136 | 0.30% | 140,423 | 0.51% | 426,582 | 0.35% | 2,913 | 0.00% | 7,304 | 0.00% | 769,358 | 0.36% |
| 2037 | 192,704 | 0.30% | 141,133 | 0.51% | 428,061 | 0.35% | 2,913 | 0.00% | 7,304 | 0.00% | 772,114 | 0.36% |
| 2038 | 193,272 | 0.29% | 141,845 | 0.50% | 429,374 | 0.31% | 2,913 | 0.00% | 7,304 | 0.00% | 774,709 | 0.34% |
| 2039 | 193,841 | 0.29% | 142,561 | 0.50% | 430,867 | 0.35% | 2,913 | 0.00% | 7,304 | 0.00% | 777,486 | 0.36% |
| 2040 | 194,409 | 0.29% | 143,281 | 0.50% | 432,384 | 0.35% | 2,913 | 0.00% | 7,304 | 0.00% | 780,291 | 0.36% |
| 2041 | 194,996 | 0.30% | 144,004 | 0.50% | 433,910 | 0.35% | 2,913 | 0.00% | 7,304 | 0.00% | 783,127 | 0.36% |
| 2042 | 195,583 | 0.30% | 144,731 | 0.50% | 435,453 | 0.36% | 2,913 | 0.00% | 7,304 | 0.00% | 785,984 | 0.36% |
| 2043 | 196,170 | 0.30% | 145,470 | 0.51% | 437,018 | 0.36% | 2,913 | 0.00% | 7,304 | 0.00% | 788,874 | 0.37% |
| 2013-2023 Average Yearly Growth (10 Years History) | | -0.47% | | -0.40% | | -1.16% | | -11.67% | | -1.47% | | -0.93% |
| 2018-2023 Average Yearly Growth (5 Years History) | | | | -1.25% | | -2.74% | | -7.76% | | 3.27% | | -1.82% |
| 2024-2029 Average Yearly Growth (5 Years) | | 0.17% | | 0.48% | | 0.29% | | 0.00% | | 0.00% | | 0.29% |
| 2024-2034 Average Yearly Growth (10 Years) | | 0.19% | | 0.49% | | 0.31% | | 0.00% | | 0.00% | | 0.31% |
| 2024-2043 Average Yearly Growth (19 Years) | | 0.25% | | 0.50% | | 0.33% | | 0.00% | | 0.00% | | 0.34% |

/* Electric Vehicle charging for both Residential and Large C&I Sales has been included to begin in 2024.

Montana-Dakota Utilities Co.
Historical and Forecasted Annual Sales by Sector
North Dakota
Billing Month Basis
Reflecting Demand-Side Programs

| YEAR | <u>Residential /*</u> | | <u>Small C&I</u> | | <u>Large C&I /*</u> | | <u>Street Lighting</u> | | <u>Miscellaneous</u> | | <u>Total Sales</u> | |
|--|-----------------------|----------|----------------------|----------|-------------------------|----------|------------------------|----------|----------------------|----------|--------------------|----------|
| | Sales (MWh) | % Change | Sales (MWh) | % Change | Sales (MWh) | % Change | Sales (MWh) | % Change | Sales (MWh) | % Change | Sales (MWh) | % Change |
| 2013 | 774,916 | | 559,839 | | 516,813 | | 19,895 | | 47,406 | | 1,918,869 | |
| 2014 | 812,654 | 4.87% | 609,044 | 8.79% | 579,346 | 12.10% | 20,015 | 0.60% | 50,790 | 7.14% | 2,071,849 | 7.97% |
| 2015 | 784,977 | -3.41% | 614,126 | 0.83% | 603,879 | 4.23% | 20,313 | 1.49% | 50,730 | -0.12% | 2,074,025 | 0.10% |
| 2016 | 746,374 | -4.92% | 599,694 | -2.35% | 617,934 | 2.33% | 20,387 | 0.36% | 49,560 | -2.31% | 2,033,949 | -1.93% |
| 2017 | 754,400 | 1.08% | 585,174 | -2.42% | 638,719 | 3.36% | 20,042 | -1.69% | 59,021 | 19.09% | 2,057,356 | 1.15% |
| 2018 | 799,661 | 6.00% | 565,692 | -3.33% | 690,345 | 8.08% | 19,569 | -2.36% | 58,278 | -1.26% | 2,133,545 | 3.70% |
| 2019 | 784,808 | -1.86% | 573,956 | 1.46% | 675,579 | -2.14% | 16,733 | -14.49% | 56,260 | -3.46% | 2,107,336 | -1.23% |
| 2020 | 779,619 | -0.66% | 552,682 | -3.71% | 652,236 | -3.46% | 13,957 | -16.59% | 55,728 | -0.95% | 2,054,222 | -2.52% |
| 2021 | 759,330 | -2.60% | 530,068 | -4.09% | 716,278 | 9.82% | 13,753 | -1.46% | 55,962 | 0.42% | 2,075,392 | 1.03% |
| 2022 | 800,682 | 5.45% | 539,523 | 1.78% | 721,796 | 0.77% | 13,651 | -0.74% | 56,012 | 0.09% | 2,131,664 | 2.71% |
| 2023 | 791,662 | -1.13% | 575,891 | 6.74% | 732,336 | 1.46% | 13,401 | -1.83% | 55,502 | -0.91% | 2,168,792 | 1.74% |
| 2024 | 794,164 | 0.32% | 543,850 | -5.56% | 716,088 | -2.22% | 13,651 | 1.87% | 56,012 | 0.92% | 2,123,765 | -2.08% |
| 2025 | 796,040 | 0.24% | 546,565 | 0.50% | 719,503 | 0.48% | 13,651 | 0.00% | 56,012 | 0.00% | 2,131,772 | 0.38% |
| 2026 | 800,407 | 0.55% | 548,723 | 0.39% | 722,225 | 0.38% | 13,651 | 0.00% | 56,012 | 0.00% | 2,141,019 | 0.43% |
| 2027 | 804,775 | 0.55% | 551,457 | 0.50% | 725,698 | 0.48% | 13,651 | 0.00% | 56,012 | 0.00% | 2,151,593 | 0.49% |
| 2028 | 809,141 | 0.54% | 553,616 | 0.39% | 728,482 | 0.38% | 13,651 | 0.00% | 56,012 | 0.00% | 2,160,902 | 0.43% |
| 2029 | 813,508 | 0.54% | 556,367 | 0.50% | 732,020 | 0.49% | 13,651 | 0.00% | 56,012 | 0.00% | 2,171,558 | 0.49% |
| 2030 | 817,876 | 0.54% | 558,525 | 0.39% | 734,802 | 0.38% | 13,651 | 0.00% | 56,012 | 0.00% | 2,180,866 | 0.43% |
| 2031 | 825,232 | 0.90% | 561,294 | 0.50% | 738,186 | 0.46% | 13,651 | 0.00% | 56,012 | 0.00% | 2,194,375 | 0.62% |
| 2032 | 832,590 | 0.89% | 564,077 | 0.50% | 741,753 | 0.48% | 13,651 | 0.00% | 56,012 | 0.00% | 2,208,082 | 0.62% |
| 2033 | 839,946 | 0.88% | 566,873 | 0.50% | 745,337 | 0.48% | 13,651 | 0.00% | 56,012 | 0.00% | 2,221,820 | 0.62% |
| 2034 | 847,304 | 0.88% | 569,683 | 0.50% | 748,955 | 0.49% | 13,651 | 0.00% | 56,012 | 0.00% | 2,235,605 | 0.62% |
| 2035 | 854,660 | 0.87% | 572,508 | 0.50% | 752,603 | 0.49% | 13,651 | 0.00% | 56,012 | 0.00% | 2,249,433 | 0.62% |
| 2036 | 863,190 | 1.00% | 575,346 | 0.50% | 756,286 | 0.49% | 13,651 | 0.00% | 56,012 | 0.00% | 2,264,485 | 0.67% |
| 2037 | 871,719 | 0.99% | 578,198 | 0.50% | 759,997 | 0.49% | 13,651 | 0.00% | 56,012 | 0.00% | 2,279,577 | 0.67% |
| 2038 | 880,249 | 0.98% | 581,064 | 0.50% | 763,503 | 0.46% | 13,651 | 0.00% | 56,012 | 0.00% | 2,294,479 | 0.65% |
| 2039 | 888,778 | 0.97% | 583,945 | 0.50% | 767,250 | 0.49% | 13,651 | 0.00% | 56,012 | 0.00% | 2,309,636 | 0.66% |
| 2040 | 897,307 | 0.96% | 586,840 | 0.50% | 771,032 | 0.49% | 13,651 | 0.00% | 56,012 | 0.00% | 2,324,842 | 0.66% |
| 2041 | 908,182 | 1.21% | 589,749 | 0.50% | 774,835 | 0.49% | 13,651 | 0.00% | 56,012 | 0.00% | 2,342,429 | 0.76% |
| 2042 | 919,056 | 1.20% | 592,671 | 0.50% | 778,666 | 0.49% | 13,651 | 0.00% | 56,012 | 0.00% | 2,360,057 | 0.75% |
| 2043 | 929,931 | 1.18% | 595,664 | 0.51% | 782,549 | 0.50% | 13,651 | 0.00% | 56,012 | 0.00% | 2,377,808 | 0.75% |
| 2013-2023 Average Yearly Growth (10 Years History) | | | | | | | | | | | | |
| 2018-2023 Average Yearly Growth (5 Years History) | | | | | | | | | | | | |
| 2024-2029 Average Yearly Growth (5 Years) | | | | | | | | | | | | |
| 2024-2034 Average Yearly Growth (10 Years) | | | | | | | | | | | | |
| 2024-2043 Average Yearly Growth (19 Years) | | | | | | | | | | | | |

/* Electric Vehicle charging for both Residential and Large C&I Sales has been included to begin in 2024.

Montana-Dakota Utilities Co.
Historical and Forecasted Annual Sales by Sector
South Dakota
Billing Month Basis
Reflecting Demand-Side Programs

| YEAR | <u>Residential /*</u> | | <u>Small C&I</u> | | <u>Large C&I /*</u> | | <u>Street Lighting</u> | | <u>Miscellaneous</u> | | <u>Total Sales</u> | |
|---|-----------------------|----------|----------------------|----------|-------------------------|----------|------------------------|----------|----------------------|----------|--------------------|----------|
| | Sales (MWh) | % Change | Sales (MWh) | % Change | Sales (MWh) | % Change | Sales (MWh) | % Change | Sales (MWh) | % Change | Sales (MWh) | % Change |
| 2013 | 74,265 | | 37,118 | | 36,338 | | 2,661 | | 1,866 | | 152,248 | |
| 2014 | 75,462 | 1.61% | 38,045 | 2.50% | 37,507 | 3.22% | 2,651 | -0.38% | 1,753 | -6.06% | 155,418 | 2.08% |
| 2015 | 69,743 | -7.58% | 35,995 | -5.39% | 37,084 | -1.13% | 2,568 | -3.13% | 1,730 | -1.31% | 147,120 | -5.34% |
| 2016 | 67,301 | -3.50% | 35,799 | -0.54% | 35,875 | -3.26% | 2,517 | -1.99% | 1,703 | -1.56% | 143,195 | -2.67% |
| 2017 | 67,065 | -0.35% | 37,186 | 3.87% | 35,546 | -0.92% | 2,487 | -1.18% | 1,752 | 2.88% | 144,037 | 0.59% |
| 2018 | 72,030 | 7.40% | 39,185 | 5.38% | 36,289 | 2.09% | 2,461 | -1.05% | 1,732 | -1.14% | 151,697 | 5.32% |
| 2019 | 70,773 | -1.75% | 38,738 | -1.14% | 35,995 | -0.81% | 2,397 | -2.59% | 1,851 | 6.88% | 149,754 | -1.28% |
| 2020 | 68,270 | -3.54% | 36,426 | -5.97% | 35,841 | -0.43% | 1,556 | -35.10% | 1,682 | -9.14% | 143,774 | -3.99% |
| 2021 | 66,631 | -2.40% | 35,305 | -3.08% | 34,051 | -4.99% | 1,185 | -23.84% | 1,799 | 6.96% | 138,971 | -3.34% |
| 2022 | 69,482 | 4.28% | 36,811 | 4.26% | 34,054 | 0.01% | 1,208 | 1.95% | 2,005 | 11.45% | 143,560 | 3.30% |
| 2023 | 67,904 | -2.27% | 36,335 | -1.29% | 34,074 | 0.06% | 1,199 | -0.75% | 1,832 | -8.63% | 141,344 | -1.54% |
| 2024 | 67,080 | -1.21% | 36,731 | 1.09% | 34,961 | 2.60% | 1,208 | 0.75% | 2,005 | 9.44% | 141,984 | 0.45% |
| 2025 | 67,114 | 0.05% | 36,934 | 0.55% | 35,399 | 1.25% | 1,208 | 0.00% | 2,005 | 0.00% | 142,660 | 0.48% |
| 2026 | 67,375 | 0.39% | 37,138 | 0.55% | 35,896 | 1.40% | 1,208 | 0.00% | 2,005 | 0.00% | 143,622 | 0.67% |
| 2027 | 67,637 | 0.39% | 37,343 | 0.55% | 36,386 | 1.37% | 1,208 | 0.00% | 2,005 | 0.00% | 144,579 | 0.67% |
| 2028 | 67,898 | 0.39% | 37,511 | 0.45% | 36,848 | 1.27% | 1,208 | 0.00% | 2,005 | 0.00% | 145,469 | 0.62% |
| 2029 | 68,159 | 0.38% | 37,718 | 0.55% | 37,360 | 1.39% | 1,208 | 0.00% | 2,005 | 0.00% | 146,450 | 0.67% |
| 2030 | 68,420 | 0.38% | 37,926 | 0.55% | 37,874 | 1.38% | 1,208 | 0.00% | 2,005 | 0.00% | 147,433 | 0.67% |
| 2031 | 68,953 | 0.78% | 38,136 | 0.55% | 38,386 | 1.35% | 1,208 | 0.00% | 2,005 | 0.00% | 148,688 | 0.85% |
| 2032 | 69,486 | 0.77% | 38,346 | 0.55% | 38,934 | 1.43% | 1,208 | 0.00% | 2,005 | 0.00% | 149,980 | 0.87% |
| 2033 | 70,019 | 0.77% | 38,558 | 0.55% | 39,473 | 1.38% | 1,208 | 0.00% | 2,005 | 0.00% | 151,263 | 0.86% |
| 2034 | 70,552 | 0.76% | 38,771 | 0.55% | 40,019 | 1.38% | 1,208 | 0.00% | 2,005 | 0.00% | 152,556 | 0.85% |
| 2035 | 71,085 | 0.76% | 38,985 | 0.55% | 40,573 | 1.38% | 1,208 | 0.00% | 2,005 | 0.00% | 153,857 | 0.85% |
| 2036 | 71,725 | 0.90% | 39,201 | 0.55% | 41,142 | 1.40% | 1,208 | 0.00% | 2,005 | 0.00% | 155,281 | 0.93% |
| 2037 | 72,365 | 0.89% | 39,417 | 0.55% | 41,713 | 1.39% | 1,208 | 0.00% | 2,005 | 0.00% | 156,708 | 0.92% |
| 2038 | 73,004 | 0.88% | 39,635 | 0.55% | 42,262 | 1.32% | 1,208 | 0.00% | 2,005 | 0.00% | 158,114 | 0.90% |
| 2039 | 73,644 | 0.88% | 39,854 | 0.55% | 42,847 | 1.38% | 1,208 | 0.00% | 2,005 | 0.00% | 159,557 | 0.91% |
| 2040 | 74,284 | 0.87% | 40,074 | 0.55% | 43,439 | 1.38% | 1,208 | 0.00% | 2,005 | 0.00% | 161,010 | 0.91% |
| 2041 | 75,136 | 1.15% | 40,295 | 0.55% | 44,041 | 1.38% | 1,208 | 0.00% | 2,005 | 0.00% | 162,685 | 1.04% |
| 2042 | 75,989 | 1.14% | 40,517 | 0.55% | 44,651 | 1.39% | 1,208 | 0.00% | 2,005 | 0.00% | 164,370 | 1.04% |
| 2043 | 76,842 | 1.12% | 40,742 | 0.55% | 45,272 | 1.39% | 1,208 | 0.00% | 2,005 | 0.00% | 166,069 | 1.03% |
| 2013-2023 Average Yearly Growth (10 Years History) | | -0.75% | | -0.20% | | -0.86% | | -9.06% | | 0.54% | | -0.74% |
| 2018-2023 Average Yearly Growth (5 Years History) | | -1.06% | | -1.59% | | -1.51% | | -15.57% | | 1.69% | | -1.46% |
| 2024-2029 Average Yearly Growth (5 Years) | | 0.34% | | 0.53% | | 1.34% | | 0.00% | | 0.00% | | 0.63% |
| 2024-2034 Average Yearly Growth (10 Years) | | 0.51% | | 0.54% | | 1.36% | | 0.00% | | 0.00% | | 0.72% |
| 2024-2043 Average Yearly Growth (19 Years) | | 0.73% | | 0.55% | | 1.37% | | 0.00% | | 0.00% | | 0.84% |

/* Electric Vehicle charging for both Residential and Large C&I Sales has been included to begin in 2024.

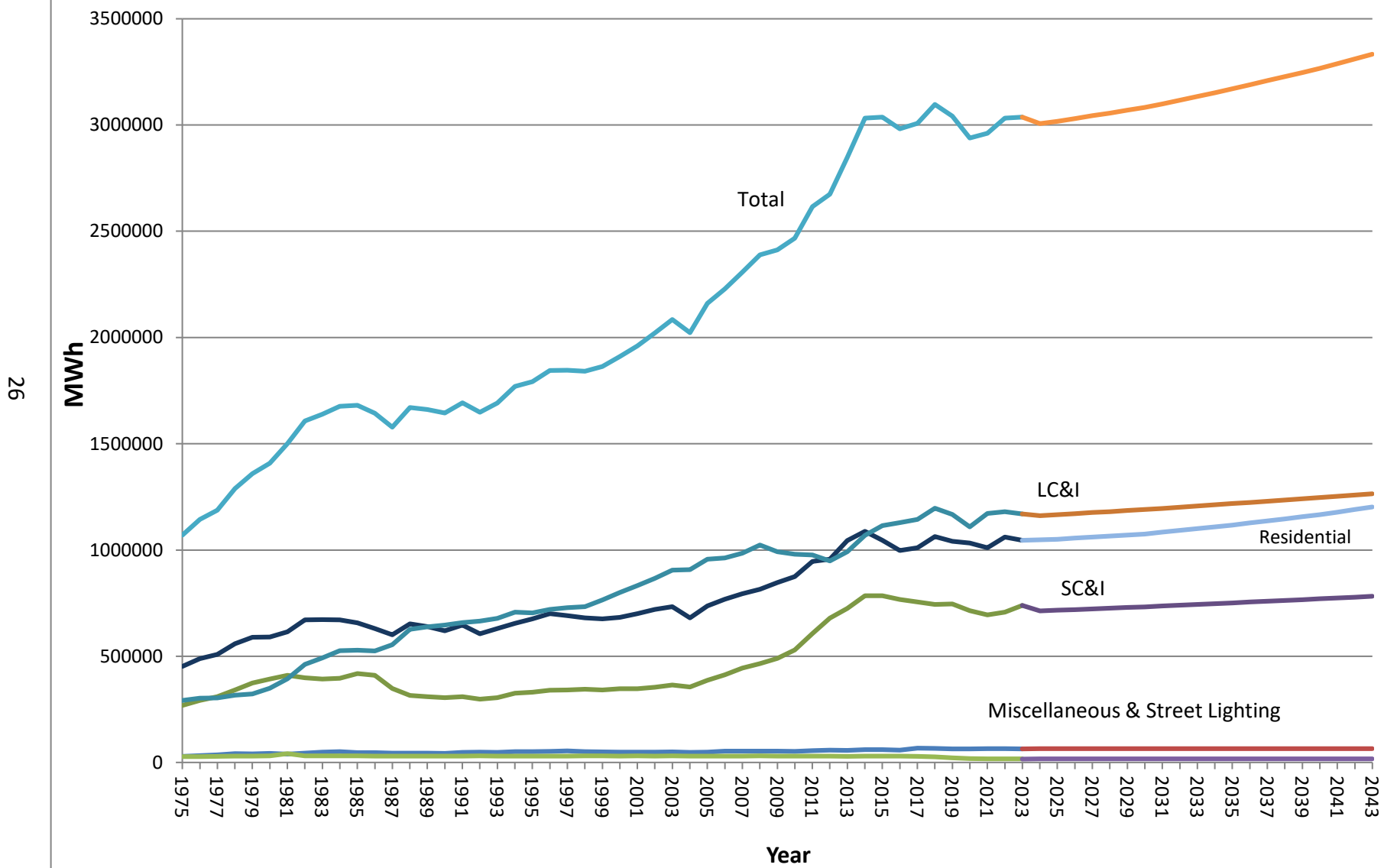
Montana-Dakota Utilities Co.
Historical and Forecasted Annual Sales by Sector
Integrated System
Billing Month Basis
Reflecting Demand-Side Programs

| YEAR | <u>Residential /*</u> | | <u>Small C&I</u> | | <u>Large C&I /*</u> | | <u>Street Lighting</u> | | <u>Miscellaneous</u> | | <u>Total Sales</u> | | <u>Total Energy Requirements</u> | |
|--|-----------------------|----------|----------------------|----------|-------------------------|----------|------------------------|----------|----------------------|----------|--------------------|----------|----------------------------------|----------|
| | Sales (MWh) | % Change | Sales (MWh) | % Change | Sales (MWh) | % Change | Sales (MWh) | % Change | Sales (MWh) | % Change | Sales (MWh) | % Change | MWh | % Change |
| 2013 | 1,044,088 | | 724,960 | | 992,069 | | 29,584 | | 57,014 | | 2,847,715 | | 3,115,064 | |
| 2014 | 1,088,204 | 4.23% | 784,888 | 8.27% | 1,068,540 | 7.71% | 29,774 | 0.64% | 60,444 | 6.02% | 3,031,849 | 6.47% | 3,250,683 | 4.35% |
| 2015 | 1,046,140 | -3.87% | 785,323 | 0.06% | 1,114,703 | 4.32% | 29,984 | 0.71% | 60,451 | 0.01% | 3,036,601 | 0.16% | 3,263,271 | 0.39% |
| 2016 | 997,971 | -4.60% | 767,183 | -2.31% | 1,128,304 | 1.22% | 30,006 | 0.07% | 58,780 | -2.76% | 2,982,244 | -1.79% | 3,206,737 | -1.73% |
| 2017 | 1,010,208 | 1.23% | 755,955 | -1.46% | 1,143,403 | 1.34% | 29,564 | -1.47% | 68,182 | 15.99% | 3,007,312 | 0.84% | 3,251,539 | 1.40% |
| 2018 | 1,063,771 | 5.30% | 743,362 | -1.67% | 1,196,287 | 4.63% | 26,481 | -10.43% | 66,313 | -2.74% | 3,096,214 | 2.96% | 3,313,387 | 1.90% |
| 2019 | 1,040,900 | -2.15% | 746,645 | 0.44% | 1,167,534 | -2.40% | 22,179 | -16.25% | 64,282 | -3.06% | 3,041,539 | -1.77% | 3,301,537 | -0.36% |
| 2020 | 1,032,674 | -0.79% | 714,131 | -4.35% | 1,109,311 | -4.99% | 18,590 | -16.18% | 63,834 | -0.70% | 2,938,540 | -3.39% | 3,169,086 | -4.01% |
| 2021 | 1,010,871 | -2.11% | 695,050 | -2.67% | 1,172,183 | 5.67% | 17,880 | -3.82% | 65,014 | 1.85% | 2,960,997 | 0.76% | 3,240,600 | 2.26% |
| 2022 | 1,061,322 | 4.99% | 707,570 | 1.80% | 1,180,454 | 0.71% | 17,772 | -0.60% | 65,321 | 0.47% | 3,032,439 | 2.41% | 3,305,682 | 2.01% |
| 2023 | 1,046,247 | -1.42% | 739,635 | 4.53% | 1,169,945 | -0.89% | 17,223 | -3.09% | 64,296 | -1.57% | 3,037,346 | 0.16% | 3,263,461 | -1.28% |
| 2024 | 1,048,311 | 0.20% | 712,890 | -3.62% | 1,161,835 | -0.69% | 17,772 | 3.19% | 65,321 | 1.59% | 3,006,130 | -1.03% | 3,251,039 | -0.38% |
| 2025 | 1,050,902 | 0.25% | 716,480 | 0.50% | 1,166,599 | 0.41% | 17,772 | 0.00% | 65,321 | 0.00% | 3,017,074 | 0.36% | 3,262,875 | 0.36% |
| 2026 | 1,055,784 | 0.46% | 719,516 | 0.42% | 1,171,170 | 0.39% | 17,772 | 0.00% | 65,321 | 0.00% | 3,029,563 | 0.41% | 3,276,381 | 0.41% |
| 2027 | 1,060,666 | 0.46% | 723,133 | 0.50% | 1,176,501 | 0.46% | 17,772 | 0.00% | 65,321 | 0.00% | 3,043,393 | 0.46% | 3,291,338 | 0.46% |
| 2028 | 1,065,548 | 0.46% | 725,999 | 0.40% | 1,180,729 | 0.36% | 17,772 | 0.00% | 65,321 | 0.00% | 3,055,369 | 0.39% | 3,304,290 | 0.39% |
| 2029 | 1,070,430 | 0.46% | 729,640 | 0.50% | 1,186,145 | 0.46% | 17,772 | 0.00% | 65,321 | 0.00% | 3,069,307 | 0.46% | 3,319,364 | 0.46% |
| 2030 | 1,075,317 | 0.46% | 732,691 | 0.42% | 1,190,827 | 0.39% | 17,772 | 0.00% | 65,321 | 0.00% | 3,081,928 | 0.41% | 3,333,013 | 0.41% |
| 2031 | 1,083,717 | 0.78% | 736,358 | 0.50% | 1,195,984 | 0.43% | 17,772 | 0.00% | 65,321 | 0.00% | 3,099,152 | 0.56% | 3,351,640 | 0.56% |
| 2032 | 1,092,117 | 0.78% | 740,044 | 0.50% | 1,201,512 | 0.46% | 17,772 | 0.00% | 65,321 | 0.00% | 3,116,766 | 0.57% | 3,370,689 | 0.57% |
| 2033 | 1,100,517 | 0.77% | 743,748 | 0.50% | 1,207,047 | 0.46% | 17,772 | 0.00% | 65,321 | 0.00% | 3,134,405 | 0.57% | 3,389,765 | 0.57% |
| 2034 | 1,108,918 | 0.76% | 747,470 | 0.50% | 1,212,638 | 0.46% | 17,772 | 0.00% | 65,321 | 0.00% | 3,152,119 | 0.57% | 3,408,922 | 0.57% |
| 2035 | 1,117,313 | 0.76% | 751,210 | 0.50% | 1,218,283 | 0.47% | 17,772 | 0.00% | 65,321 | 0.00% | 3,169,900 | 0.56% | 3,428,151 | 0.56% |
| 2036 | 1,127,051 | 0.87% | 754,970 | 0.50% | 1,224,010 | 0.47% | 17,772 | 0.00% | 65,321 | 0.00% | 3,189,123 | 0.61% | 3,448,941 | 0.61% |
| 2037 | 1,136,788 | 0.86% | 758,748 | 0.50% | 1,229,770 | 0.47% | 17,772 | 0.00% | 65,321 | 0.00% | 3,208,399 | 0.60% | 3,469,787 | 0.60% |
| 2038 | 1,146,526 | 0.86% | 762,544 | 0.50% | 1,235,139 | 0.44% | 17,772 | 0.00% | 65,321 | 0.00% | 3,227,302 | 0.59% | 3,490,230 | 0.59% |
| 2039 | 1,156,263 | 0.85% | 766,360 | 0.50% | 1,240,963 | 0.47% | 17,772 | 0.00% | 65,321 | 0.00% | 3,246,679 | 0.60% | 3,511,186 | 0.60% |
| 2040 | 1,166,000 | 0.84% | 770,194 | 0.50% | 1,246,855 | 0.47% | 17,772 | 0.00% | 65,321 | 0.00% | 3,266,142 | 0.60% | 3,532,235 | 0.60% |
| 2041 | 1,178,315 | 1.06% | 774,048 | 0.50% | 1,252,785 | 0.48% | 17,772 | 0.00% | 65,321 | 0.00% | 3,288,241 | 0.68% | 3,556,134 | 0.68% |
| 2042 | 1,190,629 | 1.05% | 777,920 | 0.50% | 1,258,770 | 0.48% | 17,772 | 0.00% | 65,321 | 0.00% | 3,310,411 | 0.67% | 3,580,110 | 0.67% |
| 2043 | 1,202,943 | 1.03% | 781,876 | 0.51% | 1,264,839 | 0.48% | 17,772 | 0.00% | 65,321 | 0.00% | 3,332,751 | 0.67% | 3,604,271 | 0.67% |
| 2013-2023 Average Yearly Growth (10 Years History) | | -0.09% | | -0.76% | | 1.24% | | -6.65% | | 1.13% | | 0.21% | | 0.25% |
| 2018-2023 Average Yearly Growth (5 Years History) | | -0.13% | | -0.61% | | -0.07% | | -7.83% | | -0.25% | | -0.28% | | -0.14% |
| 2024-2029 Average Yearly Growth (5 Years) | | 0.43% | | 0.46% | | 0.41% | | 0.00% | | 0.00% | | 0.42% | | 0.42% |
| 2024-2034 Average Yearly Growth (10 Years) | | 0.56% | | 0.47% | | 0.43% | | 0.00% | | 0.00% | | 0.47% | | 0.47% |
| 2024-2043 Average Yearly Growth (19 Years) | | 0.74% | | 0.49% | | 0.45% | | 0.00% | | 0.00% | | 0.55% | | 0.55% |

/* Electric Vehicle charging for both Residential and Large C&I Sales has been included to begin in 2024.

Montana-Dakota Integrated System

Historical and Forecasted Sales by Class



Montana-Dakota Utilities Co.
Historical and Forecasted
Residential Sales, Customers, and Use per Customer
Reflecting EE and DR Reductions

| North Dakota | | | | | | |
|--|-------------------|-------------|--------------|----------------------|---------------------------------|-------------|
| Year | Sales /* (MWh) | % Change | Avg Custs | Cust No Inc/(Dec) | Avg Use Per Cust (kWh/Yr) | % Change |
| 2012 | 700,451 | | 67,888 | | 10,318 | |
| 2013 | 774,916 | 10.63% | 70,949 | 3,061 | 10,922 | 5.86% |
| 2014 | 812,654 | 4.87% | 73,909 | 2,960 | 10,995 | 0.67% |
| 2015 | 784,977 | -3.41% | 76,894 | 2,985 | 10,209 | -7.16% |
| 2016 | 746,374 | -4.92% | 78,553 | 1,659 | 9,502 | -6.93% |
| 2017 | 754,400 | 1.08% | 78,564 | 11 | 9,602 | 1.06% |
| 2018 | 799,661 | 6.00% | 78,510 | (54) | 10,185 | 6.07% |
| 2019 | 784,808 | -1.86% | 78,567 | 57 | 9,989 | -1.93% |
| 2020 | 779,619 | -0.66% | 78,812 | 245 | 9,892 | -0.97% |
| 2021 | 759,330 | -2.60% | 78,896 | 84 | 9,624 | -2.71% |
| 2022 | 800,682 | 5.45% | 79,076 | 180 | 10,125 | 5.21% |
| 2023 | 789,578 | -1.39% | 79,251 | 175 | 9,963 | -1.60% |
| 2024 | 791,321 | 0.22% | 79,426 | 175 | 9,963 | 0.00% |
| 2025 | 792,816 | 0.19% | 79,576 | 150 | 9,963 | 0.00% |
| 2026 | 794,310 | 0.19% | 79,726 | 150 | 9,963 | 0.00% |
| 2027 | 795,805 | 0.19% | 79,876 | 150 | 9,963 | 0.00% |
| 2028 | 797,299 | 0.19% | 80,026 | 150 | 9,963 | 0.00% |
| 2029 | 798,793 | 0.19% | 80,176 | 150 | 9,963 | 0.00% |
| 2030 | 800,288 | 0.19% | 80,326 | 150 | 9,963 | 0.00% |
| 2031 | 801,782 | 0.19% | 80,476 | 150 | 9,963 | 0.00% |
| 2032 | 803,277 | 0.19% | 80,626 | 150 | 9,963 | 0.00% |
| 2033 | 804,771 | 0.19% | 80,776 | 150 | 9,963 | 0.00% |
| 2034 | 806,266 | 0.19% | 80,926 | 150 | 9,963 | 0.00% |
| 2035 | 807,760 | 0.19% | 81,076 | 150 | 9,963 | 0.00% |
| 2036 | 809,255 | 0.19% | 81,226 | 150 | 9,963 | 0.00% |
| 2037 | 810,749 | 0.18% | 81,376 | 150 | 9,963 | 0.00% |
| 2038 | 812,244 | 0.18% | 81,526 | 150 | 9,963 | 0.00% |
| 2039 | 813,738 | 0.18% | 81,676 | 150 | 9,963 | 0.00% |
| 2040 | 815,232 | 0.18% | 81,826 | 150 | 9,963 | 0.00% |
| 2041 | 816,727 | 0.18% | 81,976 | 150 | 9,963 | 0.00% |
| 2042 | 818,221 | 0.18% | 82,126 | 150 | 9,963 | 0.00% |
| 2043 | 819,716 | 0.18% | 82,276 | 250 | 9,963 | 0.00% |
| | Sales | | Custs | | Use/Cust | |
| 2012-2022 Average Yearly Growth (10 Years History) | 0.48% | | 1.30% | | -0.81% | |
| 2017-2022 Average Yearly Growth (5 Years History) | 0.39% | | 0.14% | | 0.24% | |
| 2023-2028 Average Yearly Growth (5 Years) | 0.19% | | 0.19% | | 0.00% | |
| 2023-2033 Average Yearly Growth (10 Years) | 0.19% | | 0.19% | | 0.00% | |
| 2023-2043 Average Yearly Growth (20 Years) | 0.19% | | 0.19% | | 0.00% | |

| South Dakota | | | | | | |
|--|-------------------|-------------|--------------|----------------------|---------------------------------|-------------|
| Year | Sales /* (MWh) | % Change | Avg Custs | Cust No Inc/(Dec) | Avg Use Per Cust (kWh/Yr) | % Change |
| 2012 | 69,097 | | 6,616 | | 10,444 | |
| 2013 | 74,265 | 7.48% | 6,590 | (26) | 11,269 | 7.90% |
| 2014 | 75,462 | 1.61% | 6,580 | (10) | 11,468 | 1.77% |
| 2015 | 69,743 | -7.58% | 6,662 | 82 | 10,469 | -8.72% |
| 2016 | 67,301 | -3.50% | 6,546 | (116) | 10,281 | -1.79% |
| 2017 | 67,065 | -0.35% | 6,533 | (13) | 10,266 | -0.15% |
| 2018 | 72,030 | 7.40% | 6,496 | (37) | 11,088 | 8.02% |
| 2019 | 70,773 | -1.75% | 6,442 | (54) | 10,986 | -0.92% |
| 2020 | 68,270 | -3.54% | 6,441 | (1) | 10,599 | -3.52% |
| 2021 | 66,631 | -2.40% | 6,423 | (18) | 10,374 | -2.13% |
| 2022 | 69,482 | 4.28% | 6,398 | (25) | 10,860 | 4.69% |
| 2023 | 66,821 | -3.83% | 6,398 | - | 10,444 | -3.83% |
| 2024 | 66,821 | 0.00% | 6,398 | - | 10,444 | 0.00% |
| 2025 | 66,821 | 0.00% | 6,398 | - | 10,444 | 0.00% |
| 2026 | 66,821 | 0.00% | 6,398 | - | 10,444 | 0.00% |
| 2027 | 66,821 | 0.00% | 6,398 | - | 10,444 | 0.00% |
| 2028 | 66,821 | 0.00% | 6,398 | - | 10,444 | 0.00% |
| 2029 | 66,821 | 0.00% | 6,398 | - | 10,444 | 0.00% |
| 2030 | 66,821 | 0.00% | 6,398 | - | 10,444 | 0.00% |
| 2031 | 66,821 | 0.00% | 6,398 | - | 10,444 | 0.00% |
| 2032 | 66,821 | 0.00% | 6,398 | - | 10,444 | 0.00% |
| 2033 | 66,821 | 0.00% | 6,398 | - | 10,444 | 0.00% |
| 2034 | 66,821 | 0.00% | 6,398 | - | 10,444 | 0.00% |
| 2035 | 66,821 | 0.00% | 6,398 | - | 10,444 | 0.00% |
| 2036 | 66,821 | 0.00% | 6,398 | - | 10,444 | 0.00% |
| 2037 | 66,821 | 0.00% | 6,398 | - | 10,444 | 0.00% |
| 2038 | 66,821 | 0.00% | 6,398 | - | 10,444 | 0.00% |
| 2039 | 66,821 | 0.00% | 6,398 | - | 10,444 | 0.00% |
| 2040 | 66,821 | 0.00% | 6,398 | - | 10,444 | 0.00% |
| 2041 | 66,821 | 0.00% | 6,398 | - | 10,444 | 0.00% |
| 2042 | 66,821 | 0.00% | 6,398 | - | 10,444 | 0.00% |
| 2043 | 66,821 | 0.00% | 6,398 | - | 10,444 | 0.00% |
| | Sales | | Custs | | Use/Cust | |
| 2012-2022 Average Yearly Growth (10 Years History) | -0.55% | | -0.37% | | -0.18% | |
| 2017-2022 Average Yearly Growth (5 Years History) | -0.26% | | -0.39% | | 0.13% | |
| 2023-2028 Average Yearly Growth (5 Years) | 0.000% | | 0.00% | | 0.00% | |
| 2023-2033 Average Yearly Growth (10 Years) | 0.000% | | 0.00% | | 0.00% | |
| 2023-2043 Average Yearly Growth (20 Years) | 0.00% | | 0.00% | | 0.00% | |

| Montana | | | | | | |
|--|-------------------|-------------|--------------|----------------------|---------------------------------|-------------|
| Year | Sales /* (MWh) | % Change | Avg Custs | Cust No Inc/(Dec) | Avg Use Per Cust (kWh/Yr) | % Change |
| 2012 | 187,635 | | 19,191 | | 9,777 | |
| 2013 | 194,907 | 3.88% | 19,616 | 425 | 9,936 | 1.63% |
| 2014 | 200,088 | 2.66% | 19,918 | 302 | 10,046 | 1.10% |
| 2015 | 191,420 | -4.33% | 20,135 | 217 | 9,507 | -5.36% |
| 2016 | 184,296 | -3.72% | 20,128 | (7) | 9,156 | -3.69% |
| 2017 | 188,743 | 2.41% | 19,981 | (147) | 9,446 | 3.17% |
| 2018 | 192,080 | 1.77% | 19,911 | (70) | 9,647 | 2.13% |
| 2019 | 185,319 | -3.52% | 19,896 | (15) | 9,314 | -3.45% |
| 2020 | 184,785 | -0.29% | 19,798 | (98) | 9,334 | 0.21% |
| 2021 | 184,910 | 0.07% | 19,746 | (53) | 9,365 | 0.33% |
| 2022 | 191,158 | 3.38% | 19,695 | (51) | 9,706 | 3.64% |
| 2023 | 186,571 | -2.40% | 19,695 | - | 9,473 | -2.40% |
| 2024 | 186,571 | 0.00% | 19,695 | - | 9,473 | 0.00% |
| 2025 | 186,571 | 0.00% | 19,695 | - | 9,473 | 0.00% |
| 2026 | 186,571 | 0.00% | 19,695 | - | 9,473 | 0.00% |
| 2027 | 186,571 | 0.00% | 19,695 | - | 9,473 | 0.00% |
| 2028 | 186,571 | 0.00% | 19,695 | - | 9,473 | 0.00% |
| 2029 | 186,571 | 0.00% | 19,695 | - | 9,473 | 0.00% |
| 2030 | 186,571 | 0.00% | 19,695 | - | 9,473 | 0.00% |
| 2031 | 186,571 | 0.00% | 19,695 | - | 9,473 | 0.00% |
| 2032 | 186,571 | 0.00% | 19,695 | - | 9,473 | 0.00% |
| 2033 | 186,571 | 0.00% | 19,695 | - | 9,473 | 0.00% |
| 2034 | 186,571 | 0.00% | 19,695 | - | 9,473 | 0.00% |
| 2035 | 186,571 | 0.00% | 19,695 | - | 9,473 | 0.00% |
| 2036 | 186,571 | 0.00% | 19,695 | - | 9,473 | 0.00% |
| 2037 | 186,571 | 0.00% | 19,695 | - | 9,473 | 0.00% |
| 2038 | 186,571 | 0.00% | 19,695 | - | 9,473 | 0.00% |
| 2039 | 186,571 | 0.00% | 19,695 | - | 9,473 | 0.00% |
| 2040 | 186,571 | 0.00% | 19,695 | - | 9,473 | 0.00% |
| 2041 | 186,571 | 0.00% | 19,695 | - | 9,473 | 0.00% |
| 2042 | 186,571 | 0.00% | 19,695 | - | 9,473 | 0.00% |
| 2043 | 186,571 | 0.00% | 19,695 | - | 9,473 | 0.00% |
| | Sales | | Custs | | Use/Cust | |
| 2012-2022 Average Yearly Growth (10 Years History) | -0.34% | | 0.09% | | -0.44% | |
| 2017-2022 Average Yearly Growth (5 Years History) | -0.15% | | -0.29% | | 0.14% | |
| 2023-2028 Average Yearly Growth (5 Years) | 0.00% | | 0.00% | | 0.00% | |
| 2023-2033 Average Yearly Growth (10 Years) | 0.00% | | 0.00% | | 0.00% | |
| 2023-2043 Average Yearly Growth (20 Years) | 0.00% | | 0.00% | | 0.00% | |

/* Forecasted Sales = (Ave Custs x Avg Use Per Cust); AC Cycling program has been cancelled.

/* Electric Vehicle charging is not included in this Residential base forecast.

Montana-Dakota Utilities Co.
Historical and Forecasted
Residential Sales, Customers, and Use per Customer
Integrated System with DSM Reductions

| <u>Year</u> | <u>Sales /*</u> <u>(MWh)</u> | <u>%</u> <u>Change</u> | <u>Avg Custs</u> | <u>Cust No</u> <u>Inc/(Dec)</u> | <u>Avg Use</u> <u>Per Cust</u> <u>(kWh/Yr)</u> | <u>%</u> <u>Change</u> |
|-------------|---------------------------------|---------------------------|------------------|------------------------------------|--|---------------------------|
| 2012 | 957,183 | | 93,695 | | 10,216 | |
| 2013 | 1,044,088 | 9.08% | 97,155 | 3,460 | 10,747 | 5.19% |
| 2014 | 1,088,204 | 4.23% | 100,407 | 3,252 | 10,838 | 0.85% |
| 2015 | 1,046,140 | -3.87% | 103,691 | 3,284 | 10,089 | -6.91% |
| 2016 | 997,971 | -4.60% | 105,227 | 1,536 | 9,484 | -6.00% |
| 2017 | 1,010,208 | 1.23% | 105,078 | (149) | 9,614 | 1.37% |
| 2018 | 1,063,771 | 5.30% | 104,917 | (161) | 10,139 | 5.46% |
| 2019 | 1,040,900 | -2.15% | 104,905 | (12) | 9,922 | -2.14% |
| 2020 | 1,032,674 | -0.79% | 105,051 | 146 | 9,830 | -0.93% |
| 2021 | 1,010,871 | -2.11% | 105,065 | 14 | 9,621 | -2.12% |
| 2022 | 1,061,322 | 4.99% | 105,169 | 105 | 10,092 | 4.89% |
| 2023 | 1,042,970 | -1.73% | 105,344 | 175 | 9,901 | -1.89% |
| 2024 | 1,044,713 | 0.17% | 105,519 | 175 | 9,901 | 0.00% |
| 2025 | 1,046,208 | 0.14% | 105,669 | 150 | 9,901 | 0.00% |
| 2026 | 1,047,702 | 0.14% | 105,819 | 150 | 9,901 | 0.00% |
| 2027 | 1,049,197 | 0.14% | 105,969 | 150 | 9,901 | 0.00% |
| 2028 | 1,050,691 | 0.14% | 106,119 | 150 | 9,901 | 0.00% |
| 2029 | 1,052,185 | 0.14% | 106,269 | 150 | 9,901 | 0.00% |
| 2030 | 1,053,680 | 0.14% | 106,419 | 150 | 9,901 | 0.00% |
| 2031 | 1,055,174 | 0.14% | 106,569 | 150 | 9,901 | 0.00% |
| 2032 | 1,056,669 | 0.14% | 106,719 | 150 | 9,901 | 0.00% |
| 2033 | 1,058,163 | 0.14% | 106,869 | 150 | 9,901 | 0.00% |
| 2034 | 1,059,658 | 0.14% | 107,019 | 150 | 9,902 | 0.00% |
| 2035 | 1,061,152 | 0.14% | 107,169 | 150 | 9,902 | 0.00% |
| 2036 | 1,062,647 | 0.14% | 107,319 | 150 | 9,902 | 0.00% |
| 2037 | 1,064,141 | 0.14% | 107,469 | 150 | 9,902 | 0.00% |
| 2038 | 1,065,636 | 0.14% | 107,619 | 150 | 9,902 | 0.00% |
| 2039 | 1,067,130 | 0.14% | 107,769 | 150 | 9,902 | 0.00% |
| 2040 | 1,068,624 | 0.14% | 107,919 | 150 | 9,902 | 0.00% |
| 2041 | 1,070,119 | 0.14% | 108,069 | 150 | 9,902 | 0.00% |
| 2042 | 1,071,613 | 0.14% | 108,219 | 150 | 9,902 | 0.00% |
| 2043 | 1,073,108 | 0.14% | 108,369 | 150 | 9,902 | 0.00% |

| | <u>Sales</u> | <u>Custs</u> | <u>Use/Cust</u> |
|---|--------------|--------------|-----------------|
| 2012-2022 Average Yearly Growth (10 Years History) | 0.26% | 0.96% | -0.69% |
| 2017-2022 Average Yearly Growth (5 Years History) | 0.25% | 0.03% | 0.22% |
| 2023-2028 Average Yearly Growth (5 Years) | 0.15% | 0.15% | 0.00% |
| 2023-2033 Average Yearly Growth (10 Years) | 0.14% | 0.14% | 0.00% |
| 2023-2043 Average Yearly Growth (20 Years) | 0.14% | 0.14% | 0.00% |

/* Electric Vehicle charging is not included in this Residential base forecast.

4. Forecast Uncertainty

Forecasting is a process permeated with uncertainty. The demand and energy projections produced by the econometric process described in the first three sections results in a forecast based solely on the information used as inputs to the equations. For purposes of integrated resource planning, a single forecast does not allow the analysis of risk and uncertainty associated with the input assumptions. Robust resource decisions cannot be made unless uncertainty is considered. That uncertainty can be expressed through peak demand forecasts that reflect temperatures which correspond to higher confidence levels as well as by evaluating high-growth and low-growth scenarios in energy forecasts.

4.1 Effect of Temperature on Peak Demand

The final forecast results given in Section 3 were developed assuming average temperatures at the time of the system peak. However, there are some shortcomings associated with this methodology. First, with an average temperature forecast, actual peak demand would have a 50% probability of being lower than the forecast values and a 50% probability of exceeding forecast values (50/50 forecast). Second, there can be an appearance that peak demand is under forecasted when the actual temperature at the time of system peak exceeds average temperatures.

A study is conducted periodically by Montana-Dakota's System Operations & Planning staff to establish the relationship between summer peak demand and temperature at the time of system peak. As part of the study, the company's historical June, July and August demands and corresponding temperatures at times when the temperatures equaled or exceeded 85°F on Mondays through Thursdays are analyzed. The 2023 study results indicated that each one degree increase in temperature at the time of summer peak would result in an increase of approximately 6.9 MW in summer peak demand.

Since Montana-Dakota does not have actual hourly load available by state or by customer class, this study is conducted on an Integrated System basis, and it is not possible to produce these results by jurisdiction or by customer sector.

Further statistical analysis of temperatures at the time of system peak for the years 1993 through 2022 (prior to 1984 the company was a winter peaking utility) provided the results shown in the following table:

**Temperature Probability at Peak and
Effect on Peak Demand**

| <u>Probability</u> | <u>Weighted Average Temperature</u> | <u>Approximate Increase in Summer Peak Demand (MW)</u> |
|--------------------|---|--|
| 50% | 96.4 | 0.0 |
| 75% | 100.5 | 28.3 |
| 80% | 101.5 | 35.2 |
| 85% | 102.7 | 43.5 |
| 90% | 104.2 | 53.9 |
| 95% | 106.4 | 69.1 |
| 97% | 107.8 | 78.8 |

*/ Using 6.9 MW/Degree F

As the table shows, there is a 90% probability that actual temperatures at the time of the system peak will not exceed 104.2°F. At this temperature, 53.9 MW of capacity, in addition to that which was forecasted, is needed to meet the system peak demand that may occur. This is called the 90/10 forecast and provides a peak demand forecast for extreme weather conditions. It represents a 90% probability that the actual peak demand would not exceed the forecast value and a 10% probability that the actual peak demand would be higher than the forecast value.

The following table summarizes the results of the 50/50 probability and 90/10 probability demand forecasts. The 2024 90/10 forecasted demand is calculated to be the 2024 50/50 forecasted demand plus 53.9 MW as shown in the table above. From that point, the growth rate for the 90/10 forecast scenario is assumed to be the same as that of the 50/50 forecast scenario.

Alternate Summer Peak Demand Forecast Comparison

| <u>Year</u> | <u>Base Forecast</u> <u>(96.4 degrees F)</u> <u>50/50 Forecast</u> <u>(MW)</u> | <u>Growth Rate</u> | <u>Alternate Forecast</u> <u>(104.2 degrees F)</u> <u>90/10 Forecast</u> <u>(MW) */</u> |
|-------------|---|--------------------|--|
| 2024 | 572.8 | | 626.7 |
| 2025 | 576.3 | 0.61% | 630.5 |
| 2026 | 580.0 | 0.64% | 634.5 |
| 2027 | 583.9 | 0.67% | 638.8 |
| 2028 | 587.5 | 0.62% | 642.7 |
| 2029 | 591.3 | 0.65% | 646.9 |
| 2030 | 595.0 | 0.62% | 650.9 |
| 2031 | 599.3 | 0.72% | 655.6 |
| 2032 | 603.5 | 0.70% | 660.2 |
| 2033 | 607.8 | 0.71% | 664.9 |
| 2034 | 612.1 | 0.71% | 669.6 |
| 2035 | 616.3 | 0.69% | 674.2 |
| 2036 | 620.7 | 0.73% | 679.1 |
| 2037 | 625.1 | 0.71% | 683.9 |
| 2038 | 629.6 | 0.72% | 688.8 |
| 2039 | 634.0 | 0.70% | 693.6 |
| 2040 | 638.5 | 0.71% | 698.5 |
| 2041 | 643.3 | 0.75% | 703.7 |
| 2042 | 648.0 | 0.73% | 708.8 |
| 2043 | 652.8 | 0.74% | 714.1 |

*/ The growth rate for the 90/10 Forecast scenario is assumed to be the same as that of the 50/50 Forecast scenario.

4.2 High-Growth and Low-Growth Scenario Forecasts

Another approach to express uncertainty in this forecast was to simulate high-growth and low-growth scenarios which represent the corresponding economic conditions that may occur. These high-growth and low-growth scenario forecasts were developed as follows.

Historical total energy was analyzed in order to find a period of time during which unusually high growth was experienced and a period of time during which unusually low growth was experienced. Based on the historical sales data given on Appendix A-9 and graphed on Appendix A-10, the average growth rate that occurred from 1977 to 1985 (4.4%) was used as the basis for the high growth rate and the average growth rate that occurred from 2013 to 2021 (0.23%) was used as the low growth rate. Both periods consist of eight years of history.

As a result, for the high-growth scenario, an average growth rate of 4.4% per year was assumed to occur during the 20-year forecast horizon. For the low-growth scenario, an average growth rate of 0.23% per year was assumed to occur during the 20-year forecast horizon.

Demand for each scenario was derived by applying the load factors calculated from the base forecast to the high-growth and low-growth scenario forecasted energy.

The results of the high-growth and low-growth scenarios for energy and demand are given below. The following two pages present the graphs of the numeric results.

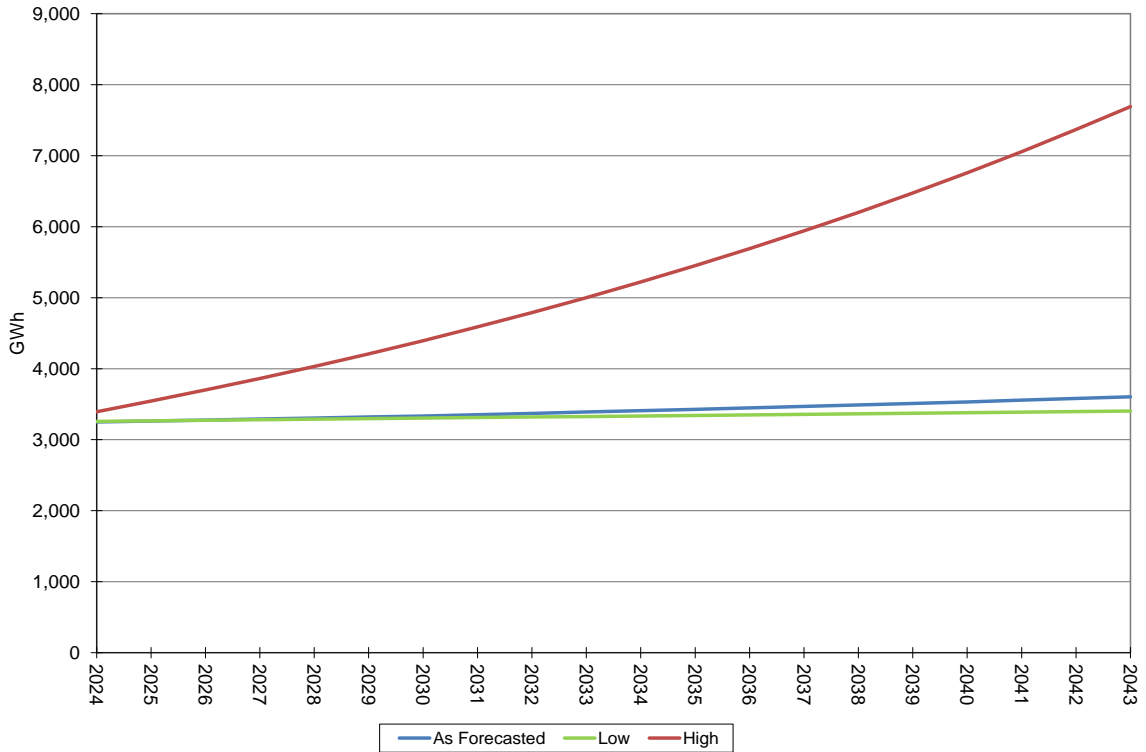
**High-Growth and Low-Growth Scenarios
Total Annual Energy (GWh) and
Summer Peak Demand (MW)**

| | ENERGY | | | DEMAND | | |
|------|-----------------|----------------|---------------|-----------------|-------------|------------|
| | <u>Forecast</u> | <u>HIGH 1/</u> | <u>LOW 2/</u> | <u>Forecast</u> | <u>HIGH</u> | <u>LOW</u> |
| 2024 | 3,251.0 | 3,394.0 | 3,258.5 | 572.8 | 598.0 | 574.1 |
| 2025 | 3,262.9 | 3,543.3 | 3,266.0 | 576.3 | 625.8 | 576.9 |
| 2026 | 3,276.4 | 3,699.2 | 3,273.5 | 580.0 | 654.8 | 579.5 |
| 2027 | 3,291.3 | 3,862.0 | 3,281.0 | 583.9 | 685.1 | 582.1 |
| 2028 | 3,304.3 | 4,031.9 | 3,288.5 | 587.5 | 716.9 | 584.7 |
| 2029 | 3,319.4 | 4,209.3 | 3,296.1 | 591.3 | 749.8 | 587.1 |
| 2030 | 3,333.0 | 4,394.5 | 3,303.7 | 595.0 | 784.5 | 589.7 |
| 2031 | 3,351.6 | 4,587.9 | 3,311.3 | 599.3 | 820.3 | 592.1 |
| 2032 | 3,370.7 | 4,789.8 | 3,318.9 | 603.5 | 857.5 | 594.2 |
| 2033 | 3,389.8 | 5,000.6 | 3,326.5 | 607.8 | 896.6 | 596.4 |
| 2034 | 3,408.9 | 5,220.6 | 3,334.2 | 612.1 | 937.3 | 598.6 |
| 2035 | 3,428.2 | 5,450.3 | 3,341.9 | 616.3 | 979.8 | 600.8 |
| 2036 | 3,448.9 | 5,690.1 | 3,349.6 | 620.7 | 1024.1 | 602.9 |
| 2037 | 3,469.8 | 5,940.5 | 3,357.3 | 625.1 | 1070.3 | 604.9 |
| 2038 | 3,490.2 | 6,201.9 | 3,365.0 | 629.6 | 1118.8 | 607.0 |
| 2039 | 3,511.2 | 6,474.8 | 3,372.7 | 634.0 | 1169.2 | 609.0 |
| 2040 | 3,532.2 | 6,759.7 | 3,380.5 | 638.5 | 1222.0 | 611.1 |
| 2041 | 3,556.1 | 7,057.1 | 3,388.3 | 643.3 | 1276.7 | 613.0 |
| 2042 | 3,580.1 | 7,367.6 | 3,396.1 | 648.0 | 1333.6 | 614.7 |
| 2043 | 3,604.3 | 7,691.8 | 3,403.9 | 652.8 | 1393.2 | 616.5 |

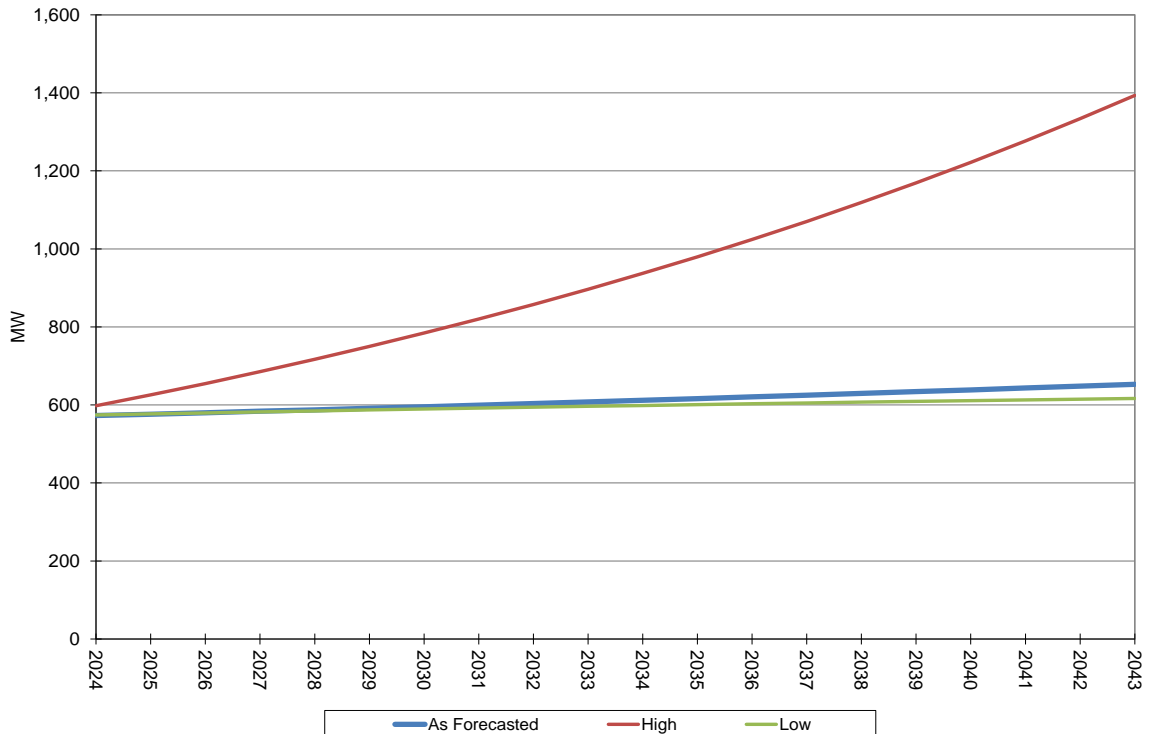
1/ High forecast assumes 4.4% growth per year (actual 1977-85 growth).

2/ Low forecast assumes 0.23% growth per year (actual 2013-21 growth).

Montana-Dakota Integrated System
 High-Growth and Low-Growth Scenarios - Energy in GWh



Montana-Dakota Integrated System
 High-Growth and Low-Growth Scenarios - Demand in MW



5. Allocations

Montana-Dakota's Integrated System consists of the service territories in Montana, North Dakota, and South Dakota. The sales forecasts were developed by sector for each state while the demand forecast was developed for the Integrated System in total. Montana-Dakota's Financial Forecasting Department requires forecasts of monthly peak demands by state, and monthly sales and energy requirements by sector for each state. Therefore, disaggregating the Integrated System forecast into peaks by state and month as well as disaggregating annual sales into monthly sales is necessary.

5.1 Sales and Customer Allocations by Month

The Financial Forecasting Department requires a calendar month forecast for each state. This is accomplished through a two-step process. First, monthly estimates of energy and customers by sector are determined by calculating the ratio of the monthly bill cycle value to the annual amount for the 5-year periods of time for 2018-2022 for both sales and customers. Results were averaged for each month for each sector for each state. These ratios were then applied to the forecasts by sector and by state (annual amounts) to arrive at monthly billing-cycle sales and customers. The allocation factors for billing-cycle sales and customers for each state, month and sector are shown in Appendix A-7. Billing-month to calendar-month apportionment factors are then used to convert from billing-month to calendar-month sales. These apportionment factors are shown in Appendix A-8.

5.2 Peak Demand Allocations by State

The forecasted summer and winter peak demand for the Integrated System were allocated to the states based on the percentage of each state's forecasted annual requirements to the total Integrated System forecasted requirements, for each year. This methodology permitted the seasonal demand forecasts by state to grow at the same rate as annual energy requirements for each state.

5.3 Peak Demand Allocations by Month

Allocating peak demand on a monthly basis by state consists of several steps:

1. Ratios of each monthly peak to the seasonal peak were calculated for each state for the 15-year periods of time from May 2008 through April 2023. (The summer season is May through October, and the winter season is November through April of the next year.)
2. The ratios determined by state in Step 1 from each month were averaged to determine which month of the season was to be the peak month, second highest month, etc. Final results of this step indicate that July and January are the peak months for the summer and winter seasons, respectively. (See the table below which gives the monthly ranks by state for each month and season.)

**Monthly Average of the Ratios of Monthly Peak
To Seasonal Peak for the Integrated System
(Number in Parenthesis is Rank)**

| | Summer Season | | | | | |
|-----------|--------------------------|--------|-----------|--------|-----------|--------|
| | ND | | SD | | MT | |
| MAY | (6) | 0.7099 | (6) | 0.6185 | (6) | 0.6830 |
| JUNE | (3) | 0.8904 | (3) | 0.8794 | (3) | 0.8749 |
| JULY | (1) | 0.9696 | (1) | 0.9518 | (1) | 0.9797 |
| AUGUST | (2) | 0.9792 | (2) | 0.9357 | (2) | 0.9524 |
| SEPTEMBER | (4) | 0.8541 | (4) | 0.8028 | (4) | 0.8215 |
| OCTOBER | (5) | 0.7461 | (5) | 0.7348 | (5) | 0.6916 |

| | Winter Season | | | | | |
|-------|--------------------------|--------|-----------|--------|-----------|--------|
| | ND | | SD | | MT | |
| NOV | (5) | 0.8387 | (5) | 0.8442 | (4) | 0.8551 |
| DEC | (2) | 0.9391 | (2) | 0.9425 | (2) | 0.9538 |
| JAN | (1) | 0.9842 | (1) | 0.9501 | (1) | 0.9334 |
| FEB | (3) | 0.9274 | (3) | 0.9277 | (3) | 0.9231 |
| MARCH | (4) | 0.8678 | (4) | 0.8555 | (5) | 0.8381 |
| APRIL | (6) | 0.7582 | (6) | 0.7425 | (6) | 0.7463 |

3. For each season, the monthly ratios determined in Step 1 for the 5-year periods of time from May 2018 through April 2023, were sorted into rank sequence for each year of historical data and averaged across the years for each ranking. Applying the ranked average ratios from this step to the proper month according to the rank determined in Step 2 results in the monthly assignments given in the following table.

ND 5-Year Average Monthly Ratios of Seasonal Peaks

| | | | |
|----------|--------|-----------|-----------|
| January | 1.0000 | July | 1.0000 */ |
| February | 0.9312 | August | 0.9678 |
| March | 0.8704 | September | 0.8440 |
| April | 0.7646 | October | 0.7848 |
| May | 0.6954 | November | 0.8164 |
| June | 0.9211 | December | 0.9376 |

SD 5-Year Average Monthly Ratios of Seasonal Peaks

| | | | |
|----------|--------|-----------|--------|
| January | 1.0000 | July | 1.0000 |
| February | 0.8921 | August | 0.9688 |
| March | 0.8398 | September | 0.8442 |
| April | 0.6982 | October | 0.7178 |
| May | 0.6162 | November | 0.8100 |
| June | 0.9195 | December | 0.9482 |

MT 5-Year Average Monthly Ratios of Seasonal Peaks

| | | | |
|----------|------------|-----------|--------|
| January | 1.0000 **/ | July | 1.0000 |
| February | 0.8824 | August | 0.9385 |
| March | 0.7934 | September | 0.7883 |
| April | 0.7380 | October | 0.7030 |
| May | 0.6466 | November | 0.8334 |
| June | 0.8482 | December | 0.9200 |

*/ The July and August ratios for the state of North Dakota as determined in Step 2 above were very close. Since July is typically the peak month, the ratios used here were flipped between July and August, allowing the peak month to continue to be July.

**/ The December and January ratios for the state of Montana as determined in Step 2 above were very close. Since January is typically the peak month, the ratios used here were flipped between December and January, allowing the peak month to continue to be January.

5.4 Annual Energy and Seasonal Peak Demand by State

The forecasts of summer and winter peak demands and annual energy through the year 2043 for the Integrated System, Montana, North Dakota, and South Dakota are shown in Appendices C-5 through C-6 and graphically depicted in Appendix C-7.

5.5 Sales Forecasts by Sector

The monthly forecasts for the ten-year period 2024-2033, which result from the allocation method described above, are shown in Appendices D, E, F, and G for Montana, North Dakota, South Dakota, and the Integrated System, respectively.

APPENDIX A

Integrated System Historical Data

Montana-Dakota Utilities Co.
Annual Sales by Class for the State of Montana
(Kilowatt Hours)

| <u>Year</u> | <u>Residential</u> | <u>Small C&I</u> | <u>Large C&I</u> | <u>Street Lighting</u> | <u>Other Public Sales</u> | <u>Interdepartmental</u> | <u>Company Use</u> | <u>Unbilled</u> | <u>Total</u> |
|-------------|--------------------|----------------------|----------------------|------------------------|---------------------------|--------------------------|--------------------|-----------------|--------------|
| 1966 | 68,502,477 | 49,977,929 | 72,419,095 | 3,866,284 | 3,808,210 | 1,015,211 | 377,210 | - | 199,966,416 |
| 1967 | 68,579,218 | 50,233,896 | 98,914,908 | 4,015,663 | 3,715,582 | 1,091,354 | 810,948 | - | 227,361,569 |
| 1968 | 71,874,276 | 52,477,560 | 118,039,208 | 4,249,304 | 3,535,121 | 1,375,297 | 723,627 | - | 252,274,393 |
| 1969 | 78,325,684 | 53,242,727 | 138,245,825 | 5,604,625 | 3,863,692 | 1,249,804 | 709,401 | - | 281,241,758 |
| 1970 | 82,496,690 | 55,175,717 | 153,459,061 | 6,083,320 | 3,897,568 | 1,160,863 | 737,641 | - | 303,010,860 |
| 1971 | 85,705,748 | 55,865,479 | 163,248,877 | 6,492,393 | 4,104,508 | 958,540 | 960,127 | - | 317,335,672 |
| 1972 | 90,077,273 | 58,161,951 | 172,396,207 | 6,600,222 | 3,795,853 | 992,915 | 890,585 | - | 332,915,006 |
| 1973 | 92,338,476 | 61,367,352 | 190,984,413 | 6,706,073 | 4,211,624 | 1,158,025 | 902,676 | - | 357,668,639 |
| 1974 | 96,505,351 | 66,904,551 | 186,287,388 | 6,840,674 | 4,153,930 | 1,315,961 | 945,082 | - | 362,952,937 |
| 1975 | 105,048,515 | 69,452,309 | 178,400,297 | 7,087,080 | 3,913,278 | 1,506,121 | 984,351 | - | 366,391,951 |
| 1976 | 115,110,425 | 77,612,604 | 175,313,131 | 7,268,240 | 4,495,249 | 1,583,748 | 1,004,267 | - | 382,387,664 |
| 1977 | 120,454,365 | 81,073,772 | 172,531,607 | 7,359,231 | 4,657,927 | 1,548,399 | 1,036,205 | - | 388,661,506 |
| 1978 | 129,852,166 | 87,526,266 | 175,599,086 | 7,353,808 | 4,677,788 | 4,820,487 | 1,049,471 | - | 410,879,072 |
| 1979 | 136,672,460 | 96,589,760 | 178,879,168 | 7,359,189 | 5,467,739 | 2,283,782 | 1,029,716 | - | 428,281,814 |
| 1980 | 136,149,204 | 101,715,349 | 198,015,998 | 7,459,268 | 6,123,304 | 1,797,126 | 972,817 | - | 452,233,066 |
| 1981 | 144,334,391 | 111,228,786 | 206,717,766 | 7,487,108 | 6,381,820 | 1,715,542 | 752,755 | - | 478,618,168 |
| 1982 | 153,313,720 | 125,817,634 | 213,636,154 | 7,407,897 | 5,634,466 | 2,943,589 | 1,651,780 | - | 510,405,240 |
| 1983 | 150,623,962 | 108,187,279 | 249,492,431 | 7,481,435 | 7,159,425 | 1,709,185 | 917,496 | - | 525,571,213 |
| 1984 | 149,973,668 | 101,423,250 | 272,228,601 | 7,379,668 | 6,998,461 | 3,442,266 | 900,229 | - | 542,346,143 |
| 1985 | 142,726,940 | 106,608,809 | 281,467,351 | 7,188,874 | 6,516,453 | 1,001,594 | 639,636 | - | 546,149,657 |
| 1986 | 133,656,316 | 101,534,376 | 277,264,926 | 7,266,290 | 5,968,032 | 189,694 | 590,579 | - | 526,470,213 |
| 1987 | 126,119,227 | 95,806,617 | 248,018,234 | 7,290,415 | 6,493,543 | 195,663 | 580,473 | - | 484,504,172 |
| 1988 | 139,327,515 | 87,777,108 | 259,622,149 | 7,217,742 | 7,711,112 | 211,260 | 616,658 | - | 502,483,544 |
| 1989 | 133,923,369 | 85,321,774 | 255,852,368 | 7,076,958 | 7,254,814 | 226,885 | 599,867 | - | 490,256,035 |
| 1990 | 130,093,020 | 84,487,870 | 253,081,235 | 7,009,344 | 7,148,412 | 226,321 | 714,125 | - | 482,760,327 |
| 1991 | 135,844,961 | 85,054,308 | 253,947,072 | 7,232,332 | 6,944,172 | 225,952 | 606,717 | - | 489,855,514 |
| 1992 | 126,265,220 | 82,097,610 | 246,018,931 | 7,228,554 | 6,937,275 | 215,649 | 560,531 | - | 469,323,770 |
| 1993 | 131,148,008 | 85,150,142 | 239,566,466 | 7,228,736 | 6,709,227 | 223,166 | 621,957 | - | 470,647,702 |
| 1994 | 137,293,020 | 91,734,345 | 237,573,170 | 7,257,426 | 7,110,947 | 232,838 | 679,830 | - | 481,881,576 |
| 1995 | 139,222,942 | 92,004,117 | 231,710,303 | 7,224,945 | 6,846,494 | 228,038 | 621,915 | - | 477,858,754 |
| 1996 | 147,421,480 | 96,007,848 | 231,515,420 | 7,237,827 | 7,135,267 | 233,336 | 574,831 | - | 490,126,009 |
| 1997 | 144,515,075 | 94,430,882 | 238,928,697 | 7,237,555 | 7,244,423 | 201,302 | 556,239 | - | 493,114,173 |
| 1998 | 144,374,643 | 96,561,060 | 237,770,443 | 7,271,601 | 7,162,112 | 213,369 | 549,751 | - | 493,902,979 |
| 1999 | 139,939,058 | 93,535,156 | 251,450,993 | 7,241,875 | 7,037,487 | 201,768 | 551,485 | - | 499,957,822 |
| 2000 | 143,298,426 | 94,947,102 | 276,845,617 | 7,212,210 | 6,819,914 | 218,795 | 456,819 | - | 529,798,883 |
| 2001 | 144,170,040 | 94,133,492 | 282,466,554 | 7,242,218 | 6,677,075 | 218,859 | 453,240 | - | 535,361,478 |
| 2002 | 147,916,359 | 96,252,274 | 306,159,986 | 7,240,913 | 6,893,847 | 195,977 | 448,893 | - | 565,108,249 |
| 2003 | 153,518,427 | 100,463,048 | 340,070,071 | 7,208,314 | 6,991,783 | 190,115 | 501,557 | - | 608,943,315 |
| 2004 | 141,249,319 | 98,150,615 | 348,097,119 | 7,249,849 | 6,709,211 | 178,934 | 469,139 | - | 602,104,186 |
| 2005 | 150,705,819 | 102,045,511 | 364,489,268 | 7,232,015 | 6,481,903 | 194,114 | 454,825 | - | 631,603,455 |
| 2006 | 157,205,695 | 104,213,569 | 368,666,049 | 7,202,765 | 6,996,525 | 189,666 | 435,247 | - | 644,909,516 |
| 2007 | 162,186,142 | 109,101,052 | 385,230,122 | 7,187,164 | 6,827,828 | 197,773 | 430,092 | - | 671,160,173 |
| 2008 | 162,181,766 | 108,595,072 | 408,686,454 | 7,243,765 | 7,034,312 | 190,513 | 411,809 | - | 694,343,691 |
| 2009 | 167,420,839 | 110,379,920 | 407,647,345 | 7,244,288 | 7,149,420 | 187,117 | 364,946 | - | 700,393,875 |
| 2010 | 171,661,490 | 109,187,916 | 415,946,482 | 7,203,307 | 6,973,614 | 185,423 | 351,780 | - | 711,510,012 |
| 2011 | 185,153,498 | 119,643,444 | 427,886,806 | 7,088,889 | 7,232,041 | 192,681 | 364,683 | - | 747,562,042 |
| 2012 | 187,634,686 | 132,714,357 | 420,458,666 | 7,106,072 | 7,603,435 | 171,842 | 358,713 | - | 756,047,771 |
| 2013 | 194,906,971 | 128,002,892 | 438,917,563 | 7,028,478 | 7,201,469 | 173,489 | 366,794 | - | 776,597,656 |
| 2014 | 200,088,171 | 137,799,079 | 451,686,572 | 7,107,653 | 7,341,210 | 175,228 | 384,145 | - | 804,582,058 |
| 2015 | 191,419,674 | 135,201,525 | 473,740,249 | 7,103,015 | 7,483,730 | 172,627 | 334,528 | - | 815,455,348 |
| 2016 | 184,295,936 | 131,689,711 | 474,495,852 | 7,102,363 | 7,019,988 | 170,203 | 326,917 | - | 805,100,970 |
| 2017 | 188,742,767 | 133,595,374 | 469,137,508 | 7,035,259 | 6,889,892 | 177,157 | 341,467 | - | 805,919,424 |
| 2018 | 192,079,714 | 138,485,324 | 469,653,438 | 4,451,247 | 5,752,819 | 176,856 | 372,851 | - | 810,972,249 |
| 2019 | 185,319,037 | 133,950,418 | 455,960,225 | 3,048,711 | 5,603,887 | 167,964 | 398,753 | - | 784,448,995 |
| 2020 | 184,784,621 | 125,022,927 | 421,234,462 | 3,077,171 | 5,904,576 | 147,189 | 372,449 | - | 740,543,395 |
| 2021 | 184,910,322 | 129,676,168 | 421,852,914 | 2,941,573 | 6,613,210 | 126,709 | 513,299 | - | 746,634,195 |
| 2022 | 191,158,226 | 131,236,062 | 424,603,574 | 2,912,718 | 6,427,606 | 127,437 | 749,447 | - | 757,215,070 |
| 2023 | 186,681,003 | 127,408,834 | 403,535,702 | 2,623,391 | 6,265,814 | 119,085 | 577,293 | - | 727,211,122 |

Montana-Dakota Utilities Co.
Annual Sales by Class for the State of North Dakota
(Kilowatt Hours)

| <u>Year</u> | <u>Residential</u> | <u>Small C&I</u> | <u>Large C&I</u> | <u>Street Lighting</u> | <u>Other Public Sales</u> | <u>Interdepartmental</u> | <u>Company Use</u> | <u>Unbilled</u> | <u>Total</u> |
|-------------|--------------------|----------------------|----------------------|------------------------|---------------------------|--------------------------|--------------------|-----------------|---------------|
| 1966 | 177,839,445 | 101,454,865 | 62,248,779 | 12,065,801 | 9,778,523 | 242,324 | 627,634 | 35,481 | 364,292,852 |
| 1967 | 178,648,631 | 101,511,079 | 66,238,823 | 12,404,851 | 10,627,735 | 235,590 | 1,496,352 | 68,626 | 371,231,687 |
| 1968 | 189,586,695 | 108,098,127 | 68,327,053 | 13,528,733 | 11,306,057 | 1,075,808 | 1,514,551 | 68,231 | 393,505,255 |
| 1969 | 203,352,077 | 117,146,235 | 69,429,138 | 14,548,153 | 11,781,023 | 3,257,680 | 1,710,576 | 66,543 | 421,291,425 |
| 1970 | 215,129,232 | 128,966,438 | 74,006,755 | 15,405,493 | 12,432,105 | 2,976,220 | 1,632,669 | 66,670 | 450,615,582 |
| 1971 | 224,660,134 | 137,368,067 | 78,485,841 | 15,852,055 | 12,356,099 | 1,532,592 | 3,570,747 | 68,888 | 473,894,423 |
| 1972 | 241,177,868 | 141,541,263 | 85,849,701 | 16,145,159 | 12,610,906 | 230,775 | 5,480,921 | 72,184 | 503,108,777 |
| 1973 | 245,827,613 | 146,917,105 | 92,262,004 | 16,519,767 | 14,113,173 | 198,917 | 5,488,128 | 71,349 | 521,398,056 |
| 1974 | 259,763,946 | 151,905,722 | 95,263,639 | 16,812,962 | 14,147,896 | 207,547 | 5,388,873 | 64,700 | 543,555,285 |
| 1975 | 284,712,928 | 174,078,088 | 107,153,806 | 17,229,492 | 14,613,377 | 194,573 | 5,283,319 | 54,272 | 603,319,855 |
| 1976 | 307,231,757 | 188,990,076 | 119,225,930 | 17,788,799 | 17,287,746 | 233,931 | 5,201,276 | 58,861 | 656,018,376 |
| 1977 | 322,066,615 | 202,204,724 | 123,518,797 | 18,705,610 | 20,388,865 | 775,960 | 5,329,555 | 61,312 | 693,051,438 |
| 1978 | 360,829,206 | 226,814,052 | 131,861,024 | 19,233,630 | 22,666,150 | 448,114 | 5,583,243 | 55,953 | 767,491,372 |
| 1979 | 385,274,877 | 251,074,945 | 134,220,720 | 19,899,710 | 23,913,957 | 263,925 | 5,383,105 | 56,305 | 820,087,544 |
| 1980 | 390,283,221 | 265,468,707 | 140,987,413 | 20,492,222 | 26,160,460 | 382,762 | 5,040,756 | 44,390 | 848,859,931 |
| 1981 | 408,735,140 | 273,869,995 | 175,505,109 | 21,076,949 | 24,329,774 | 244,375 | 4,212,597 | 46,134 | 908,020,073 |
| 1982 | 452,363,924 | 245,889,852 | 236,334,289 | 21,499,821 | 26,288,435 | 261,436 | 4,964,613 | 47,986 | 987,650,356 |
| 1983 | 456,184,125 | 258,134,530 | 230,553,333 | 21,370,120 | 28,270,730 | 382,443 | 8,659,379 | 41,916 | 1,003,596,576 |
| 1984 | 455,285,616 | 267,515,911 | 240,737,178 | 20,966,383 | 28,884,506 | 2,020,361 | 6,602,362 | 42,325 | 1,022,054,642 |
| 1985 | 450,793,794 | 284,254,986 | 233,446,499 | 20,793,870 | 28,421,516 | 194,570 | 6,810,757 | 39,484 | 1,024,755,476 |
| 1986 | 434,367,094 | 282,091,350 | 232,968,286 | 20,399,709 | 29,251,485 | 283,486 | 8,387,924 | 37,451 | 1,007,786,785 |
| 1987 | 414,769,777 | 226,151,695 | 289,829,031 | 20,488,538 | 27,652,568 | 306,718 | 6,531,047 | 46,880 | 985,776,254 |
| 1988 | 449,769,976 | 199,876,624 | 348,910,521 | 20,488,320 | 27,128,548 | 233,035 | 6,339,307 | 34,969 | 1,052,781,300 |
| 1989 | 443,827,623 | 195,738,987 | 362,960,433 | 20,407,635 | 26,027,847 | 236,202 | 6,825,024 | 38,865 | 1,056,062,616 |
| 1990 | 430,825,093 | 192,983,257 | 373,076,254 | 20,510,585 | 25,648,820 | 243,363 | 6,283,396 | 37,303 | 1,049,608,071 |
| 1991 | 450,333,411 | 196,030,842 | 383,766,958 | 20,458,655 | 30,828,407 | 266,645 | 6,137,808 | 33,378 | 1,087,856,104 |
| 1992 | 423,260,909 | 188,693,144 | 398,197,743 | 20,663,341 | 31,720,268 | 282,076 | 6,211,805 | 48,627 | 1,069,077,913 |
| 1993 | 439,344,573 | 191,672,169 | 416,752,959 | 20,565,116 | 31,146,204 | 322,281 | 5,956,790 | 46,519 | 1,105,806,611 |
| 1994 | 456,342,312 | 203,783,580 | 445,849,305 | 20,574,807 | 32,828,420 | 316,899 | 6,987,912 | 41,960 | 1,166,725,195 |
| 1995 | 473,310,757 | 207,631,769 | 447,406,363 | 20,664,316 | 32,139,766 | 311,888 | 7,116,061 | 43,365 | 1,188,624,285 |
| 1996 | 489,581,963 | 212,394,753 | 463,633,627 | 20,598,257 | 33,617,666 | 293,678 | 7,112,634 | 42,287 | 1,227,274,865 |
| 1997 | 485,185,916 | 215,341,328 | 464,356,987 | 20,448,097 | 35,525,187 | 276,970 | 7,039,295 | 37,836 | 1,228,211,616 |
| 1998 | 476,555,259 | 216,137,378 | 470,352,073 | 20,780,506 | 33,387,706 | 268,955 | 6,460,961 | 35,675 | 1,223,978,513 |
| 1999 | 476,150,870 | 215,933,149 | 487,339,322 | 20,930,538 | 32,535,686 | 269,387 | 6,214,785 | 24,378 | 1,239,398,115 |
| 2000 | 480,611,397 | 220,082,001 | 496,752,971 | 20,765,723 | 32,298,343 | 276,507 | 5,758,461 | - | 1,256,545,403 |
| 2001 | 495,264,092 | 219,718,551 | 524,934,913 | 20,801,786 | 32,839,971 | 283,411 | 5,380,094 | - | 1,299,222,818 |
| 2002 | 510,649,026 | 223,725,158 | 534,095,959 | 20,845,828 | 33,601,388 | 245,882 | 4,924,187 | - | 1,328,087,428 |
| 2003 | 518,362,506 | 230,831,463 | 538,714,606 | 20,964,805 | 33,818,825 | 243,012 | 5,146,364 | - | 1,348,081,581 |
| 2004 | 482,828,358 | 224,924,291 | 532,079,391 | 20,632,572 | 32,251,096 | 238,077 | 5,030,082 | - | 1,297,983,867 |
| 2005 | 525,132,818 | 250,022,338 | 563,792,863 | 20,484,092 | 33,806,432 | 248,541 | 5,291,349 | - | 1,398,778,433 |
| 2006 | 550,070,624 | 274,727,542 | 564,963,429 | 20,772,430 | 35,894,619 | 238,213 | 7,203,891 | - | 1,453,870,748 |
| 2007 | 568,709,867 | 299,602,230 | 570,170,485 | 20,947,764 | 36,072,776 | 235,341 | 7,511,339 | - | 1,503,249,802 |
| 2008 | 585,608,722 | 320,093,226 | 583,501,829 | 21,200,739 | 35,709,163 | 242,421 | 7,356,084 | - | 1,553,712,184 |
| 2009 | 609,178,728 | 340,495,770 | 551,113,741 | 20,582,112 | 36,202,033 | 237,223 | 7,494,346 | - | 1,565,303,953 |
| 2010 | 632,068,296 | 382,985,447 | 530,340,771 | 20,372,584 | 35,746,426 | 237,329 | 7,232,018 | - | 1,608,982,871 |
| 2011 | 687,464,765 | 450,098,381 | 514,238,222 | 20,059,394 | 38,643,539 | 230,042 | 7,390,957 | - | 1,718,125,300 |
| 2012 | 700,451,260 | 512,566,297 | 492,981,290 | 20,075,686 | 40,771,733 | 202,097 | 7,544,693 | - | 1,774,593,056 |
| 2013 | 774,915,846 | 559,838,729 | 516,813,483 | 19,894,701 | 41,656,843 | 207,997 | 5,541,282 | - | 1,918,868,881 |
| 2014 | 812,653,819 | 609,043,689 | 579,346,413 | 20,014,582 | 44,712,842 | 189,611 | 5,887,244 | - | 2,071,848,200 |
| 2015 | 784,976,717 | 614,126,114 | 603,878,747 | 20,313,025 | 45,323,656 | 172,838 | 5,233,849 | - | 2,074,024,946 |
| 2016 | 746,374,241 | 599,694,059 | 617,933,575 | 20,386,694 | 44,431,734 | 170,182 | 4,958,056 | - | 2,033,948,541 |
| 2017 | 754,399,763 | 585,174,349 | 638,719,056 | 20,041,593 | 53,958,297 | 170,423 | 4,892,346 | - | 2,057,355,827 |
| 2018 | 799,660,935 | 565,691,780 | 690,344,780 | 19,569,074 | 53,201,967 | 179,514 | 4,896,729 | - | 2,133,544,779 |
| 2019 | 784,808,269 | 573,956,119 | 675,578,678 | 16,733,425 | 51,275,800 | 165,045 | 4,819,419 | - | 2,107,336,755 |
| 2020 | 779,618,599 | 552,682,437 | 652,235,577 | 13,956,705 | 50,838,854 | 153,386 | 4,736,174 | - | 2,054,221,732 |
| 2021 | 759,330,204 | 530,068,190 | 716,278,492 | 13,753,205 | 51,171,048 | 145,864 | 4,644,860 | - | 2,075,391,863 |
| 2022 | 800,681,799 | 539,522,883 | 721,796,333 | 13,651,297 | 50,766,604 | 153,914 | 5,091,103 | - | 2,131,663,933 |
| 2023 | 791,661,606 | 575,891,106 | 732,336,414 | 13,401,222 | 50,478,935 | 150,129 | 4,872,606 | - | 2,168,792,018 |

Montana-Dakota Utilities Co.
Annual Sales by Class for the State of South Dakota
(Kilowatt Hours)

| <u>Year</u> | <u>Residential</u> | <u>Small C&I</u> | <u>Large C&I</u> | <u>Street Lighting</u> | <u>Other Public Sales</u> | <u>Interdepartmental</u> | <u>Company Use</u> | <u>Unbilled</u> | <u>Total</u> |
|-------------|--------------------|----------------------|----------------------|------------------------|---------------------------|--------------------------|--------------------|-----------------|--------------|
| 1966 | 42,230,739 | 22,427,449 | 6,732,280 | 2,095,903 | 1,697,150 | 1,424 | 126,325 | - | 75,311,270 |
| 1967 | 41,997,237 | 25,800,957 | 4,063,750 | 1,979,052 | 1,847,881 | 1,153 | 260,654 | - | 75,950,684 |
| 1968 | 43,952,926 | 23,284,225 | 3,940,603 | 2,575,843 | 1,707,100 | 1,608 | 268,857 | - | 75,731,162 |
| 1969 | 46,482,606 | 24,758,227 | 929,501 | 2,598,403 | 1,841,636 | 2,207 | 287,654 | - | 76,900,234 |
| 1970 | 47,361,709 | 22,775,007 | 3,464,385 | 2,547,642 | 1,759,567 | 2,154 | 269,189 | - | 78,179,653 |
| 1971 | 49,310,679 | 22,255,017 | 4,727,415 | 2,716,302 | 1,834,084 | 2,362 | 315,769 | 215 | 81,161,843 |
| 1972 | 52,980,235 | 22,785,758 | 5,347,104 | 2,813,232 | 1,918,580 | 2,270 | 365,122 | - | 86,212,301 |
| 1973 | 53,570,804 | 23,259,175 | 5,400,790 | 2,859,812 | 1,987,540 | 2,559 | 432,365 | - | 87,513,045 |
| 1974 | 56,666,860 | 23,203,748 | 5,840,707 | 2,994,179 | 2,138,696 | 2,487 | 428,561 | - | 91,275,238 |
| 1975 | 62,824,496 | 24,817,191 | 6,748,459 | 3,128,822 | 2,030,891 | 2,433 | 480,797 | - | 100,033,089 |
| 1976 | 66,343,302 | 25,800,602 | 7,756,873 | 3,103,016 | 2,053,227 | 2,370 | 467,531 | - | 105,526,921 |
| 1977 | 65,963,975 | 26,111,838 | 8,474,190 | 3,124,296 | 1,840,714 | 3,151 | 478,536 | - | 105,996,700 |
| 1978 | 68,589,710 | 27,328,956 | 9,693,110 | 3,113,948 | 1,774,321 | 2,966 | 607,731 | - | 111,110,742 |
| 1979 | 67,938,559 | 26,971,950 | 10,123,460 | 3,121,871 | 1,904,825 | 2,983 | 620,674 | - | 110,684,322 |
| 1980 | 64,325,468 | 26,196,596 | 10,851,108 | 3,140,131 | 2,170,017 | 3,737 | 507,507 | - | 107,194,564 |
| 1981 | 61,878,613 | 25,902,182 | 11,243,318 | 3,083,603 | 1,830,577 | 2,970 | 356,399 | - | 104,297,662 |
| 1982 | 65,558,005 | 27,156,570 | 11,426,316 | 3,030,031 | 1,871,552 | 2,943 | 607,247 | - | 109,652,664 |
| 1983 | 65,118,829 | 26,884,079 | 12,353,692 | 3,006,759 | 1,716,506 | 2,486 | 557,667 | - | 109,640,018 |
| 1984 | 65,920,772 | 27,933,476 | 12,698,954 | 2,964,197 | 1,816,219 | 1,782 | 545,965 | - | 111,881,365 |
| 1985 | 64,222,969 | 27,289,287 | 13,297,147 | 2,968,984 | 1,826,822 | 7,425 | 829,238 | - | 110,441,872 |
| 1986 | 62,444,941 | 27,005,631 | 14,820,308 | 2,987,404 | 1,637,375 | 22,258 | 571,879 | - | 109,489,796 |
| 1987 | 59,644,668 | 26,773,933 | 16,227,633 | 2,986,179 | 1,857,719 | 28,687 | 363,754 | - | 107,882,573 |
| 1988 | 63,622,038 | 28,168,260 | 18,064,220 | 2,953,900 | 1,925,245 | 14,449 | 419,470 | - | 115,167,582 |
| 1989 | 61,747,940 | 28,578,702 | 19,249,467 | 2,937,751 | 2,019,854 | 13,359 | 456,236 | - | 115,003,309 |
| 1990 | 59,041,129 | 27,674,002 | 20,540,349 | 2,938,991 | 1,879,111 | 9,908 | 369,286 | - | 112,452,776 |
| 1991 | 60,709,134 | 28,371,913 | 20,800,179 | 2,944,664 | 2,119,069 | 10,945 | 398,192 | - | 115,354,096 |
| 1992 | 56,416,333 | 27,113,531 | 21,125,368 | 2,920,263 | 2,354,085 | 10,701 | 343,584 | - | 110,283,865 |
| 1993 | 59,615,263 | 27,986,509 | 22,314,105 | 2,921,246 | 2,116,180 | 11,786 | 397,837 | - | 115,362,926 |
| 1994 | 61,124,471 | 30,267,538 | 23,784,346 | 2,922,998 | 2,427,771 | 11,901 | 422,267 | - | 120,961,292 |
| 1995 | 62,959,707 | 31,134,415 | 24,670,253 | 2,854,516 | 3,097,276 | 11,484 | 404,093 | - | 125,131,744 |
| 1996 | 63,638,266 | 32,141,951 | 25,352,355 | 2,872,136 | 3,137,175 | 12,172 | 352,311 | - | 127,506,366 |
| 1997 | 61,623,748 | 31,753,237 | 25,522,619 | 2,805,901 | 3,058,443 | 11,319 | 342,786 | - | 125,118,053 |
| 1998 | 59,360,287 | 32,313,292 | 25,113,488 | 2,796,107 | 3,003,078 | 9,777 | 286,457 | - | 122,882,486 |
| 1999 | 59,567,949 | 32,498,800 | 25,977,705 | 2,807,423 | 2,954,190 | 9,857 | 297,480 | - | 124,113,404 |
| 2000 | 59,525,312 | 32,320,913 | 25,956,274 | 2,740,106 | 2,810,931 | 9,227 | 308,855 | - | 123,671,618 |
| 2001 | 61,117,630 | 33,018,447 | 25,846,819 | 2,748,375 | 2,742,790 | 9,414 | 325,833 | - | 125,809,308 |
| 2002 | 61,780,443 | 33,800,702 | 26,645,097 | 2,691,584 | 2,737,670 | 9,884 | 329,617 | - | 127,994,997 |
| 2003 | 61,149,061 | 33,964,499 | 27,075,451 | 2,683,876 | 2,791,070 | 10,319 | 319,687 | - | 127,993,963 |
| 2004 | 56,535,958 | 32,909,312 | 27,090,632 | 2,672,475 | 2,885,412 | 9,788 | 290,260 | - | 122,393,837 |
| 2005 | 61,267,370 | 34,678,560 | 28,886,389 | 2,660,320 | 2,535,633 | 10,026 | 305,636 | - | 130,343,934 |
| 2006 | 61,675,574 | 34,206,361 | 28,556,470 | 2,626,482 | 2,204,422 | 9,086 | 299,875 | - | 129,578,270 |
| 2007 | 63,017,590 | 35,210,997 | 29,271,378 | 2,637,764 | 2,364,117 | 9,526 | 304,850 | - | 132,816,222 |
| 2008 | 67,104,019 | 36,965,622 | 30,890,745 | 2,635,828 | 2,432,011 | 9,826 | 318,928 | - | 140,356,979 |
| 2009 | 69,689,062 | 39,395,377 | 32,856,198 | 2,606,502 | 1,701,927 | 9,019 | 335,872 | - | 146,593,957 |
| 2010 | 70,867,723 | 37,312,865 | 34,338,981 | 2,638,638 | 1,210,011 | 8,876 | 316,402 | - | 146,693,496 |
| 2011 | 73,976,689 | 36,711,846 | 34,944,961 | 2,627,500 | 1,383,960 | 7,798 | 337,074 | - | 149,989,828 |
| 2012 | 69,097,067 | 34,638,566 | 35,388,342 | 2,620,423 | 1,518,467 | 2,742 | 289,333 | - | 143,554,940 |
| 2013 | 74,264,716 | 37,118,359 | 36,338,433 | 2,660,824 | 1,508,134 | 4,023 | 353,347 | - | 152,247,836 |
| 2014 | 75,462,217 | 38,045,222 | 37,507,489 | 2,650,807 | 1,431,970 | 4,128 | 316,511 | - | 155,418,344 |
| 2015 | 69,742,814 | 35,994,853 | 37,083,842 | 2,567,823 | 1,492,996 | 2,990 | 234,056 | - | 147,119,374 |
| 2016 | 67,300,830 | 35,799,151 | 35,874,593 | 2,517,019 | 1,485,537 | 2,291 | 215,472 | - | 143,194,893 |
| 2017 | 67,065,372 | 37,185,771 | 35,546,200 | 2,487,177 | 1,482,823 | 1,162 | 268,202 | - | 144,036,707 |
| 2018 | 72,030,090 | 39,185,098 | 36,289,248 | 2,461,232 | 1,434,645 | 1,919 | 295,533 | - | 151,697,765 |
| 2019 | 70,772,512 | 38,738,341 | 35,995,139 | 2,397,250 | 1,507,854 | 1,871 | 341,410 | - | 149,754,377 |
| 2020 | 68,270,425 | 36,425,549 | 35,840,638 | 1,555,865 | 1,413,561 | 1,699 | 267,237 | - | 143,774,974 |
| 2021 | 66,630,726 | 35,305,416 | 34,051,344 | 1,184,901 | 1,540,872 | 1,732 | 256,208 | - | 138,971,199 |
| 2022 | 69,481,874 | 36,811,331 | 34,053,609 | 1,208,285 | 1,694,394 | 1,948 | 308,194 | - | 143,559,635 |
| 2023 | 67,903,687 | 36,334,989 | 34,074,380 | 1,198,930 | 1,543,668 | 1,768 | 286,943 | - | 141,344,365 |

Montana-Dakota Utilities Co.
Annual Sales by Class for the Integrated System
(Kilowatt Hours)

| <u>Year</u> | <u>Residential</u> | <u>Small C&I</u> | <u>Large C&I</u> | <u>Street Lighting</u> | <u>Other Public Sales</u> | <u>Interdepartmental</u> | <u>Company Use</u> | <u>Unbilled</u> | <u>Total</u> |
|-------------|--------------------|----------------------|----------------------|------------------------|---------------------------|--------------------------|--------------------|-----------------|---------------|
| 1966 | 288,572,661 | 173,860,243 | 141,400,154 | 18,027,988 | 15,283,883 | 1,258,959 | 1,131,169 | 35,481 | 639,570,538 |
| 1967 | 289,225,086 | 177,545,932 | 169,217,481 | 18,399,566 | 16,191,198 | 1,328,097 | 2,567,954 | 68,626 | 674,543,940 |
| 1968 | 305,413,897 | 183,859,912 | 190,306,864 | 20,353,880 | 16,548,278 | 2,452,713 | 2,507,035 | 68,231 | 721,510,810 |
| 1969 | 328,160,367 | 195,147,189 | 208,604,464 | 22,751,181 | 17,486,351 | 4,509,691 | 2,707,631 | 66,543 | 779,433,417 |
| 1970 | 344,987,631 | 206,917,162 | 230,930,201 | 24,036,455 | 18,089,240 | 4,139,237 | 2,639,499 | 66,670 | 831,806,095 |
| 1971 | 359,676,561 | 215,488,563 | 246,462,133 | 25,060,750 | 18,294,691 | 2,493,494 | 4,846,643 | 69,103 | 872,391,938 |
| 1972 | 384,235,376 | 222,488,972 | 263,593,012 | 25,558,613 | 18,325,339 | 1,225,960 | 6,736,628 | 72,184 | 922,236,084 |
| 1973 | 391,736,893 | 231,543,632 | 288,647,207 | 26,085,652 | 20,312,337 | 1,359,501 | 6,823,169 | 71,349 | 966,579,740 |
| 1974 | 412,936,157 | 242,014,021 | 287,391,734 | 26,647,815 | 20,440,522 | 1,525,995 | 6,762,516 | 64,700 | 997,783,460 |
| 1975 | 452,585,939 | 268,347,588 | 292,302,562 | 27,445,394 | 20,557,546 | 1,703,127 | 6,748,467 | 54,272 | 1,069,744,895 |
| 1976 | 488,685,484 | 292,403,282 | 302,295,934 | 28,160,055 | 23,836,222 | 1,820,049 | 6,673,074 | 58,861 | 1,143,932,961 |
| 1977 | 508,484,955 | 309,390,334 | 304,524,594 | 29,189,137 | 26,887,506 | 2,327,510 | 6,844,296 | 61,312 | 1,187,709,644 |
| 1978 | 559,271,082 | 341,669,274 | 317,153,220 | 29,701,386 | 29,118,259 | 5,271,567 | 7,240,445 | 55,953 | 1,289,481,186 |
| 1979 | 589,885,896 | 374,636,655 | 323,223,348 | 30,380,770 | 31,286,521 | 2,550,690 | 7,033,495 | 56,305 | 1,359,053,680 |
| 1980 | 590,757,893 | 393,380,652 | 349,854,519 | 31,091,621 | 34,453,781 | 2,183,625 | 6,521,080 | 44,390 | 1,408,287,561 |
| 1981 | 614,948,144 | 411,000,963 | 393,466,193 | 31,647,660 | 32,542,171 | 1,962,887 | 5,321,751 | 46,134 | 1,490,935,903 |
| 1982 | 671,235,649 | 398,864,056 | 461,396,759 | 31,937,749 | 33,794,453 | 3,207,968 | 7,223,640 | 47,986 | 1,607,708,260 |
| 1983 | 671,926,916 | 393,205,888 | 492,399,456 | 31,858,314 | 37,146,661 | 2,094,114 | 10,134,542 | 41,916 | 1,638,807,807 |
| 1984 | 671,180,056 | 396,872,637 | 525,664,733 | 31,310,248 | 37,699,186 | 5,464,409 | 8,048,556 | 42,325 | 1,676,282,150 |
| 1985 | 657,743,703 | 418,153,082 | 528,210,997 | 30,951,728 | 36,764,791 | 1,203,589 | 8,279,631 | 39,484 | 1,681,347,005 |
| 1986 | 630,468,351 | 410,631,357 | 525,053,520 | 30,653,403 | 36,856,892 | 495,438 | 9,550,382 | 37,451 | 1,643,746,794 |
| 1987 | 600,533,672 | 348,732,245 | 554,074,898 | 30,765,132 | 36,003,830 | 531,068 | 7,475,274 | 46,880 | 1,578,162,999 |
| 1988 | 652,719,529 | 315,821,992 | 626,596,890 | 30,659,962 | 36,764,905 | 458,744 | 7,375,435 | 34,969 | 1,670,432,426 |
| 1989 | 639,498,932 | 309,639,463 | 638,062,268 | 30,422,344 | 35,302,515 | 476,446 | 7,881,127 | 38,865 | 1,661,321,960 |
| 1990 | 619,959,242 | 305,145,129 | 646,697,838 | 30,458,920 | 34,676,343 | 479,592 | 7,366,807 | 37,303 | 1,644,821,174 |
| 1991 | 646,887,506 | 309,457,063 | 658,514,209 | 30,635,651 | 39,891,648 | 503,542 | 7,142,717 | 33,378 | 1,693,065,714 |
| 1992 | 605,942,462 | 297,904,285 | 665,342,042 | 30,812,158 | 41,011,628 | 508,426 | 7,115,920 | 48,627 | 1,648,685,548 |
| 1993 | 630,107,844 | 304,808,820 | 678,633,530 | 30,715,098 | 39,971,611 | 557,233 | 6,976,584 | 46,519 | 1,691,817,239 |
| 1994 | 654,759,803 | 325,785,463 | 707,206,821 | 30,755,231 | 42,367,138 | 561,638 | 8,090,009 | 41,960 | 1,769,568,063 |
| 1995 | 675,493,406 | 330,770,301 | 703,786,919 | 30,743,777 | 42,083,536 | 551,410 | 8,142,069 | 43,365 | 1,791,614,783 |
| 1996 | 700,641,709 | 340,544,552 | 720,501,402 | 30,708,220 | 43,890,108 | 539,186 | 8,039,776 | 42,287 | 1,844,907,240 |
| 1997 | 691,324,739 | 341,525,447 | 728,808,303 | 30,491,553 | 45,828,053 | 489,591 | 7,938,320 | 37,836 | 1,846,443,842 |
| 1998 | 680,290,189 | 345,011,730 | 733,236,004 | 30,848,214 | 43,552,896 | 492,101 | 7,297,169 | 35,675 | 1,840,763,978 |
| 1999 | 675,657,877 | 341,967,105 | 764,768,020 | 30,979,836 | 42,527,363 | 481,012 | 7,063,750 | 24,378 | 1,863,469,341 |
| 2000 | 683,435,135 | 347,350,016 | 799,554,862 | 30,718,039 | 41,929,188 | 504,529 | 6,524,135 | - | 1,910,015,904 |
| 2001 | 700,551,762 | 346,870,490 | 833,248,286 | 30,792,379 | 42,259,836 | 511,684 | 6,159,167 | - | 1,960,393,604 |
| 2002 | 720,345,828 | 353,778,134 | 866,901,042 | 30,778,325 | 43,232,905 | 451,743 | 5,702,697 | - | 2,021,190,674 |
| 2003 | 733,029,994 | 365,259,010 | 905,860,128 | 30,856,995 | 43,601,678 | 443,446 | 5,967,608 | - | 2,085,018,859 |
| 2004 | 680,613,635 | 355,984,218 | 907,267,142 | 30,554,896 | 41,845,719 | 426,799 | 5,789,481 | - | 2,022,481,890 |
| 2005 | 737,106,007 | 386,746,409 | 957,168,520 | 30,376,427 | 42,823,968 | 452,681 | 6,051,810 | - | 2,160,725,822 |
| 2006 | 768,951,893 | 413,147,472 | 962,185,948 | 30,601,677 | 45,095,566 | 436,965 | 7,939,013 | - | 2,228,358,534 |
| 2007 | 793,913,599 | 443,914,279 | 984,671,985 | 30,772,692 | 45,264,721 | 442,640 | 8,246,281 | - | 2,307,226,197 |
| 2008 | 814,894,507 | 465,653,920 | 1,023,079,028 | 31,080,332 | 45,175,486 | 442,760 | 8,086,821 | - | 2,388,412,854 |
| 2009 | 846,288,629 | 490,271,067 | 991,617,284 | 30,432,902 | 45,053,380 | 433,359 | 8,195,164 | - | 2,412,291,785 |
| 2010 | 874,597,509 | 529,486,228 | 980,626,234 | 30,214,529 | 43,930,051 | 431,628 | 7,900,200 | - | 2,467,186,379 |
| 2011 | 946,594,952 | 606,453,671 | 977,069,989 | 29,775,783 | 47,259,540 | 430,521 | 8,092,714 | - | 2,615,677,170 |
| 2012 | 957,183,013 | 679,919,220 | 948,828,298 | 29,802,181 | 49,893,635 | 376,681 | 8,192,739 | - | 2,674,195,767 |
| 2013 | 1,044,087,533 | 724,959,980 | 992,069,479 | 29,584,003 | 50,366,446 | 385,509 | 6,261,423 | - | 2,847,714,373 |
| 2014 | 1,088,204,207 | 784,887,990 | 1,068,540,474 | 29,773,042 | 53,486,022 | 368,967 | 6,587,900 | - | 3,031,848,602 |
| 2015 | 1,046,139,205 | 785,322,492 | 1,114,702,838 | 29,983,863 | 54,300,382 | 348,455 | 5,802,433 | - | 3,036,599,668 |
| 2016 | 997,971,007 | 767,182,921 | 1,128,304,020 | 30,006,076 | 52,937,259 | 342,676 | 5,500,445 | - | 2,982,244,404 |
| 2017 | 1,010,207,902 | 755,955,494 | 1,143,402,764 | 29,564,029 | 62,331,012 | 348,742 | 5,502,015 | - | 3,007,311,958 |
| 2018 | 1,063,770,739 | 743,362,202 | 1,196,287,466 | 26,481,553 | 60,389,431 | 358,289 | 5,565,113 | - | 3,096,214,793 |
| 2019 | 1,040,899,818 | 746,644,878 | 1,167,534,042 | 22,179,386 | 58,387,541 | 334,880 | 5,559,582 | - | 3,041,540,127 |
| 2020 | 1,032,673,645 | 714,130,913 | 1,109,310,677 | 18,589,741 | 58,156,991 | 302,274 | 5,375,860 | - | 2,938,540,101 |
| 2021 | 1,010,871,252 | 695,049,774 | 1,172,182,750 | 17,879,679 | 59,325,130 | 274,305 | 5,414,367 | - | 2,960,997,257 |
| 2022 | 1,061,321,899 | 707,570,276 | 1,180,453,516 | 17,772,300 | 58,888,604 | 283,299 | 6,148,744 | - | 3,032,438,638 |
| 2023 | 1,046,246,296 | 739,634,929 | 1,169,946,496 | 17,223,543 | 58,288,417 | 270,982 | 5,736,842 | - | 3,037,347,505 |

**Montana-Dakota Utilities Co.
Integrated System Seasonal Peaks and Peak Month Load Factors 1/**

1/ MDU only net peak on combined system as calculated by MDU (excludes REC adjusted peak).

| Year | SUMMER | | | WINTER | | | Annual load Factor |
|------|--------|-------|----------------|--------|-------------|----------------|--------------------------|
| | MW | Month | Load Factor | MW | 2/ Month | Load Factor | |
| 1960 | 76.7 | AUG | 70.7 | 109.3 | DEC | 58.8 | 50.9 |
| 1961 | 82.8 | AUG | 73.7 | 113.7 | JAN | 62.0 | 52.5 |
| 1962 | 83.8 | AUG | 76.4 | 123.2 | JAN | 65.4 | 53.7 |
| 1963 | 95.9 | JUL | 68.9 | 127.6 | DEC | 63.3 | 52.5 |
| 1964 | 101.8 | AUG | 68.2 | 138.2 | DEC | 64.2 | 51.8 |
| 1965 | 108.4 | AUG | 68.7 | 138.0 | JAN | 68.5 | 56.5 |
| 1966 | 114.0 | JUL | 70.5 | 149.6 | JAN | 65.4 | 58.2 |
| 1967 | 129.0 | JUL | 71.3 | 161.8 | JAN | 68.1 | 60.0 |
| 1968 | 133.3 | JUL | 69.9 | 173.5 | DEC | 65.1 | 55.0 |
| 1969 | 153.4 | AUG | 70.0 | 178.2 | JAN | 70.3 | 62.0 |
| 1970 | 160.5 | JUL | 70.2 | 186.2 | DEC | 67.6 | 59.5 |
| 1971 | 170.9 | AUG | 72.2 | 195.7 | JAN | 70.5 | 58.2 |
| 1972 | 174.5 | AUG | 72.6 | 209.1 | DEC | 69.4 | 58.5 |
| 1973 | 199.6 | AUG | 69.9 | 200.1 | DEC | 67.3 | 63.2 |
| 1974 | 210.0 | JUL | 71.9 | 222.0 | JAN | 66.6 | 62.7 |
| 1975 | 230.8 | JUL | 68.3 | 238.2 | JAN | 67.8 | 59.5 |
| 1976 | 242.6 | AUG | 64.8 | 241.3 | JAN | 78.1 | 59.7 |
| 1977 | 253.7 | JUL | 61.2 | 257.8 | DEC | 71.3 | 57.9 |
| 1978 | 257.2 | SEP | 59.9 | 268.1 | JAN | 79.0 | 62.9 |
| 1979 | 257.6 | JUL | 65.0 | 287.5 | JAN | 73.7 | 63.1 |
| 1980 | 291.2 | JUL | 64.4 | 292.0 | DEC | 73.4 | 61.7 |
| 1981 | 315.4 | JUL | 61.6 | 333.4 | JAN | 75.2 | 59.0 |
| 1982 | 322.7 | AUG | 60.8 | 293.7 | DEC | 74.9 | 59.6 |
| 1983 | 337.5 | AUG | 68.5 | 354.1 | DEC | 72.7 | 57.5 |
| 1984 | 354.6 | AUG | 64.3 | 330.6 | JAN | 74.3 | 58.3 |
| 1985 | 350.4 | JUL | 62.7 | 324.2 | DEC | 74.2 | 59.8 |
| 1986 | 338.0 | JUN | 57.9 | 293.2 | DEC | 73.4 | 59.2 |
| 1987 | 358.6 | JUL | 58.7 | 306.2 | FEB | 76.2 | 54.6 |
| 1988 | 386.7 | JUN | 61.6 | 320.9 | FEB | 74.1 | 54.2 |
| 1989 | 383.6 | AUG | 57.1 | 341.6 | DEC | 69.8 | 54.4 |
| 1990 | 381.6 | JUL | 55.4 | 330.2 | DEC | 70.8 | 53.5 |
| 1991 | 387.1 | JUL | 58.0 | 311.8 | DEC | 74.3 | 54.2 |
| 1992 | 339.1 | AUG | 60.9 | 337.5 | DEC | 73.1 | 61.4 |
| 1993 | 350.3 | AUG | 62.3 | 332.7 | JAN | 77.5 | 61.0 |
| 1994 | 369.8 | AUG | 61.8 | 322.6 | DEC | 74.5 | 59.7 |
| 1995 | 412.7 | AUG | 59.8 | 348.7 | FEB | 68.6 | 54.0 |
| 1996 | 393.3 | AUG | 62.6 | 343.1 | JAN | 78.4 | 58.3 |
| 1997 | 404.6 | JUL | 61.6 | 332.8 | JAN | 74.4 | 56.6 |
| 1998 | 402.5 | AUG | 63.6 | 354.2 | DEC | 70.1 | 56.9 |
| 1999 | 420.6 | JUL | 61.3 | 342.4 | DEC | 70.7 | 54.2 |
| 2000 | 432.3 | AUG | 61.3 | 353.9 | DEC | 77.4 | 54.9 |
| 2001 | 452.9 | AUG | 62.3 | 328.9 | DEC | 78.2 | 53.0 |
| 2002 | 458.8 | JUL | 64.9 | 343.5 | JAN | 78.4 | 53.7 |
| 2003 | 470.5 | AUG | 64.3 | 367.7 | JAN | 77.2 | 54.0 |
| 2004 | 458.4 | JUL | 60.4 | 383.4 | JAN | 76.7 | 54.9 |
| 2005 | 459.1 | JUL | 65.9 | 387.2 | DEC | 76.8 | 57.9 |
| 2006 | 485.5 | JUL | 68.3 | 397.2 | NOV | 69.3 | 56.4 |
| 2007 | 525.6 | JUL | 66.3 | 407.3 | JAN | 80.5 | 54.5 |
| 2008 | 476.6 | AUG | 66.9 | 455.0 | DEC | 78.1 | 62.2 |
| 2009 | 473.8 | AUG | 61.2 | 459.6 | DEC | 78.4 | 62.5 |
| 2010 | 502.5 | AUG | 64.8 | 457.8 | JAN | 79.8 | 61.7 |
| 2011 | 535.8 | JUL | 63.2 | 510.8 | JAN | 71.6 | 59.2 |
| 2012 | 573.6 | JUL | 66.8 | 516.2 | JAN | 78.3 | 58.0 |
| 2013 | 546.9 | AUG | 65.2 | 582.1 | JAN | 74.2 | 63.5 |
| 2014 | 533.0 | AUG | 66.6 | 557.2 | JAN | 77.1 | 63.8 |
| 2015 | 611.5 | AUG | 63.2 | 514.9 | JAN | 83.4 | 60.9 |
| 2016 | 596.8 | JUL | 63.6 | 564.9 | DEC | 79.3 | 61.2 |
| 2017 | 579.1 | JUL | 70.6 | 565.1 | JAN | 78.3 | 64.1 |
| 2018 | 572.4 | JUL | 67.6 | 563.8 | FEB | 83.6 | 66.1 |
| 2019 | 536.9 | AUG | 67.8 | 571.1 | JAN | 76.3 | 66.8 |
| 2020 | 585.6 | AUG | 65.1 | 572.7 | FEB | 78.2 | 61.6 |
| 2021 | 603.7 | JUL | 69.3 | 558.0 | JAN | 77.5 | 63.9 |
| 2022 | 590.2 | AUG | 67.0 | 585.7 | DEC | 76.7 | 63.3 |
| 2023 | 588.8 | JUL | 63.1 | | | | |

2/ January and February is of the following year.

Montana-Dakota Utilities Co.
Demand by State at Time of System Seasonal Peak
(Megawatts)

| <u>Year</u> | <u>SUMMER</u> | | | | <u>WINTER</u> | | | |
|-------------|---------------|-----------|-----------|----------------|---------------|-----------|-----------|----------------|
| | <u>ND</u> | <u>SD</u> | <u>MT</u> | <u>Int Sys</u> | <u>ND</u> | <u>SD</u> | <u>MT</u> | <u>Int Sys</u> |
| 1975 | 139.4 | 22.1 | 69.3 | 230.8 | 145.1 | 22.8 | 70.3 | 238.2 * |
| 1976 | 147.4 | 24.2 | 71.0 | 242.6 | 147.3 | 24.1 | 69.9 | 241.3 * |
| 1977 | 155.9 | 23.5 | 74.6 | 254.0 | 155.1 | 24.3 | 78.4 | 257.8 |
| 1978 | 165.5 | 20.4 | 70.3 | 256.2 | 165.5 | 23.9 | 78.7 | 268.1 * |
| 1979 | 166.4 | 16.4 | 74.8 | 257.6 | 177.2 | 24.1 | 86.2 | 287.5 * |
| 1980 | 181.5 | 21.5 | 88.2 | 291.2 | 180.8 | 21.8 | 89.4 | 292.0 |
| 1981 | 202.3 | 21.0 | 92.1 | 315.4 | 201.5 | 24.9 | 106.9 | 333.3 * |
| 1982 | 208.0 | 20.8 | 93.9 | 322.7 | 185.0 | 21.1 | 87.6 | 293.7 |
| 1983 | 221.2 | 20.9 | 95.4 | 337.5 | 225.7 | 27.5 | 100.9 | 354.1 |
| 1984 | 234.8 | 23.9 | 96.0 | 354.7 | 209.4 | 23.0 | 98.2 | 330.6 * |
| 1985 | 233.3 | 24.4 | 92.7 | 350.4 | 206.9 | 22.4 | 94.9 | 324.2 |
| 1986 | 224.2 | 22.5 | 91.4 | 338.1 | 196.4 | 21.2 | 75.7 | 293.3 |
| 1987 | 242.1 | 28.5 | 88.1 | 358.7 | 204.6 | 22.8 | 78.8 | 306.2 * |
| 1988 | 265.6 | 28.4 | 92.7 | 386.7 | 212.1 | 23.7 | 85.0 | 320.8 * |
| 1989 | 265.1 | 27.6 | 90.9 | 383.6 | 225.6 | 26.9 | 89.1 | 341.6 |
| 1990 | 261.2 | 26.2 | 94.2 | 381.6 | 218.2 | 24.1 | 87.9 | 330.2 |
| 1991 | 271.9 | 30.0 | 85.2 | 387.1 | 217.5 | 19.9 | 74.4 | 311.8 |
| 1992 | 234.4 | 20.9 | 83.7 | 339.0 | 233.4 | 23.9 | 80.1 | 337.4 |
| 1993 | 251.1 | 23.3 | 75.9 | 350.3 | 225.6 | 25.5 | 81.6 | 332.7 * |
| 1994 | 253.7 | 27.9 | 88.2 | 369.8 | 220.9 | 24.5 | 77.2 | 322.6 |
| 1995 | 290.6 | 27.1 | 95.0 | 412.7 | 236.1 | 22.5 | 90.1 | 348.7 * |
| 1996 | 272.0 | 27.1 | 94.1 | 393.2 | 233.6 | 21.3 | 88.2 | 343.1 * |
| 1997 | 288.0 | 22.4 | 94.3 | 404.7 | 225.0 | 20.0 | 87.8 | 332.8 * |
| 1998 | 285.1 | 25.7 | 91.7 | 402.5 | 248.2 | 21.6 | 84.4 | 354.2 |
| 1999 | 295.0 | 28.7 | 96.9 | 420.6 | 237.3 | 21.6 | 83.6 | 342.5 |
| 2000 | 302.9 | 30.1 | 99.3 | 432.3 | 234.7 | 22.8 | 96.4 | 353.9 |
| 2001 | 317.8 | 29.8 | 105.4 | 453.0 | 235.0 | 14.3 | 79.6 | 328.9 |
| 2002 | 326.0 | 26.4 | 106.4 | 458.8 | 242.9 | 14.4 | 86.2 | 343.5 * |
| 2003 | 328.4 | 28.4 | 113.7 | 470.5 | 251.4 | 19.4 | 96.9 | 367.7 * |
| 2004 | 320.2 | 28.4 | 109.8 | 458.4 | 258.8 | 21.9 | 102.7 | 383.4 * |
| 2005 | 311.6 | 27.7 | 119.8 | 459.1 | 265.0 | 21.8 | 100.4 | 387.2 |
| 2006 | 346.3 | 29.0 | 110.1 | 485.4 | 272.0 | 23.8 | 101.4 | 397.2 |
| 2007 | 365.8 | 31.6 | 128.3 | 525.7 | 293.0 | 25.3 | 89.0 | 407.3 * |
| 2008 | 330.1 | 27.6 | 118.9 | 476.6 | 309.1 | 30.3 | 115.6 | 455.0 |
| 2009 | 337.0 | 27.7 | 109.0 | 473.7 | 313.3 | 28.8 | 117.5 | 459.6 |
| 2010 | 357.7 | 28.4 | 116.4 | 502.5 | 330.1 | 25.7 | 102.0 | 457.8 * |
| 2011 | 385.3 | 32.6 | 117.9 | 535.8 | 366.4 | 29.9 | 114.5 | 510.8 * |
| 2012 | 406.8 | 24.9 | 141.9 | 573.6 | 380.0 | 29.4 | 106.8 | 516.2 * |
| 2013 | 396.4 | 27.6 | 122.9 | 546.9 | 437.7 | 29.9 | 114.5 | 582.1 * |
| 2014 | 376.3 | 24.8 | 131.9 | 533.0 | 409.0 | 29.6 | 118.6 | 557.2 * |
| 2015 | 438.2 | 30.2 | 143.1 | 611.5 | 382.0 | 25.5 | 107.4 | 514.9 * |
| 2016 | 416.2 | 37.6 | 143.0 | 596.8 | 403.8 | 28.5 | 132.6 | 564.9 |
| 2017 | 412.3 | 31.8 | 135.0 | 579.1 | 409.9 | 29.4 | 125.7 | 565.1 * |
| 2018 | 410.5 | 29.2 | 132.6 | 572.4 | 397.1 | 28.8 | 137.9 | 563.8 * |
| 2019 | 383.7 | 25.7 | 127.5 | 536.9 | 408.7 | 31.6 | 130.8 | 571.1 * |
| 2020 | 414.1 | 30.4 | 141.1 | 585.6 | 408.9 | 30.2 | 133.6 | 572.7 * |
| 2021 | 424.6 | 31.7 | 147.4 | 603.7 | 384.7 | 24.4 | 148.9 | 558.0 * |
| 2022 | 395.5 | 27.7 | 166.9 | 590.2 | 430.8 | 30.4 | 124.6 | 585.7 |
| 2023 | 420.4 | 27.0 | 141.5 | 588.8 | | | | |

* Winter peak is in the following year.

**Montana-Dakota Utilities Co.
Billing Cycle Allocation Factors by State**

North Dakota

| Sales | January | February | March | April | May | June | July | August | September | October | November | December |
|--------------------|----------------|-----------------|--------------|--------------|------------|-------------|-------------|---------------|------------------|----------------|-----------------|-----------------|
| Residential | 0.113074 | 0.101305 | 0.102569 | 0.079963 | 0.064923 | 0.067223 | 0.081429 | 0.091117 | 0.074080 | 0.062299 | 0.068017 | 0.094001 |
| Small C&I | 0.101971 | 0.090405 | 0.099725 | 0.081372 | 0.070806 | 0.073133 | 0.078908 | 0.085191 | 0.077742 | 0.075116 | 0.073326 | 0.092303 |
| Large C&I | 0.092162 | 0.079806 | 0.090276 | 0.080135 | 0.073173 | 0.079551 | 0.084900 | 0.090782 | 0.083809 | 0.082556 | 0.075029 | 0.087821 |
| Street Lighting | 0.109031 | 0.090148 | 0.091386 | 0.085492 | 0.073210 | 0.071988 | 0.068973 | 0.071386 | 0.074298 | 0.081476 | 0.081882 | 0.100730 |
| Other Public Sales | 0.086175 | 0.073084 | 0.086454 | 0.077554 | 0.074698 | 0.089258 | 0.093922 | 0.099881 | 0.090087 | 0.080010 | 0.068515 | 0.080362 |
| Interdepartmental | 0.102929 | 0.098296 | 0.102487 | 0.090709 | 0.080356 | 0.073908 | 0.067112 | 0.068638 | 0.065694 | 0.071194 | 0.077289 | 0.095018 |
| Company Use | 0.091156 | 0.080246 | 0.093535 | 0.084451 | 0.075866 | 0.079746 | 0.086651 | 0.093247 | 0.081782 | 0.077799 | 0.069543 | 0.085978 |
| Dickinson Refinery | 0.098389 | 0.088217 | 0.091136 | 0.088958 | 0.057136 | 0.078260 | 0.078239 | 0.082292 | 0.073671 | 0.086043 | 0.084352 | 0.093308 |
| Tesoro Refinery | 0.086260 | 0.076394 | 0.086604 | 0.083628 | 0.073120 | 0.081360 | 0.083119 | 0.089022 | 0.088574 | 0.090927 | 0.077099 | 0.083892 |
| Westmoreland NAAC | 0.086643 | 0.087093 | 0.097018 | 0.083942 | 0.068381 | 0.073032 | 0.070840 | 0.088535 | 0.072062 | 0.083290 | 0.086766 | 0.102398 |
| Customers | | | | | | | | | | | | |
| Residential | 0.999720 | 0.999971 | 0.999768 | 0.999676 | 0.999252 | 0.999390 | 0.999760 | 1.000034 | 0.999968 | 1.000286 | 1.001009 | 1.001164 |
| Small C&I | 0.994466 | 0.994282 | 0.995436 | 0.997829 | 1.001460 | 1.003050 | 1.003033 | 1.004438 | 1.003418 | 1.001025 | 1.000339 | 1.001226 |
| Large C&I | 1.001129 | 1.000138 | 1.000964 | 1.002948 | 1.003278 | 1.003113 | 1.001625 | 0.999972 | 0.998320 | 0.996667 | 0.996501 | 0.995344 |
| Street Lighting | 0.992287 | 0.991562 | 0.991562 | 0.991925 | 0.992287 | 0.995191 | 0.997006 | 1.000272 | 1.003539 | 1.010435 | 1.014790 | 1.019145 |
| Other Public Sales | 1.000028 | 0.999689 | 1.000368 | 1.005805 | 1.006484 | 1.005805 | 1.004106 | 1.003087 | 1.001048 | 0.995611 | 0.991533 | 0.986436 |
| Peak Demand | 1.0000 | 0.9312 | 0.8704 | 0.7646 | 0.6954 | 0.9211 | 1.0000 | 0.9678 | 0.8440 | 0.7848 | 0.8164 | 0.9376 |

South Dakota

| Sales | January | February | March | April | May | June | July | August | September | October | November | December |
|--------------------|----------------|-----------------|--------------|--------------|------------|-------------|-------------|---------------|------------------|----------------|-----------------|-----------------|
| Residential | 0.112438 | 0.100474 | 0.103195 | 0.081794 | 0.067198 | 0.067867 | 0.080644 | 0.090808 | 0.072584 | 0.060903 | 0.068150 | 0.093944 |
| Small C&I | 0.110870 | 0.099824 | 0.108129 | 0.083975 | 0.070292 | 0.067904 | 0.075124 | 0.083042 | 0.072366 | 0.063987 | 0.069644 | 0.094844 |
| Large C&I | 0.095234 | 0.078780 | 0.084539 | 0.076206 | 0.073548 | 0.078307 | 0.082022 | 0.088480 | 0.086974 | 0.082147 | 0.079763 | 0.094000 |
| Street Lighting | 0.106876 | 0.089106 | 0.092223 | 0.088122 | 0.074207 | 0.076836 | 0.073535 | 0.078091 | 0.075820 | 0.081531 | 0.076449 | 0.087204 |
| Other Public Sales | 0.097129 | 0.089041 | 0.097264 | 0.089104 | 0.078302 | 0.083902 | 0.082992 | 0.083291 | 0.075620 | 0.072328 | 0.065541 | 0.085486 |
| Interdepartmental | 0.168503 | 0.156287 | 0.100011 | 0.067619 | 0.038063 | 0.047552 | 0.059112 | 0.065438 | 0.050605 | 0.052132 | 0.080052 | 0.114625 |
| Company Use | 0.156279 | 0.166727 | 0.156123 | 0.109042 | 0.059119 | 0.030726 | 0.028436 | 0.030589 | 0.028178 | 0.031383 | 0.072839 | 0.130559 |
| Customers | | | | | | | | | | | | |
| Residential | 1.000083 | 1.000083 | 0.999834 | 1.000983 | 1.001356 | 1.001387 | 1.001356 | 1.000797 | 1.000518 | 0.998468 | 0.998375 | 0.996760 |
| Small C&I | 0.991428 | 0.990683 | 0.991002 | 0.996747 | 1.005789 | 1.008767 | 1.009405 | 1.007172 | 1.007065 | 1.000363 | 0.996428 | 0.995151 |
| Large C&I | 0.997044 | 0.995177 | 0.997044 | 0.997044 | 0.998911 | 1.000778 | 0.998911 | 1.004512 | 1.002645 | 1.004512 | 1.002645 | 1.000778 |
| Street Lighting | 0.977199 | 0.986971 | 0.986971 | 0.986971 | 0.986971 | 0.986971 | 0.986971 | 0.986971 | 0.986971 | 1.035831 | 1.045603 | 1.045603 |
| Other Public Sales | 0.984173 | 0.984173 | 0.984173 | 0.992806 | 1.010072 | 1.010072 | 1.010072 | 1.010072 | 1.014388 | 1.005755 | 0.997122 | 0.997122 |
| Peak Demand | 1.0000 | 0.8921 | 0.8398 | 0.6982 | 0.6162 | 0.9195 | 1.0000 | 0.9688 | 0.8442 | 0.7178 | 0.8100 | 0.9482 |

Montana

| Sales | January | February | March | April | May | June | July | August | September | October | November | December |
|--------------------|----------------|-----------------|--------------|--------------|------------|-------------|-------------|---------------|------------------|----------------|-----------------|-----------------|
| Residential | 0.107412 | 0.094644 | 0.101005 | 0.077607 | 0.064023 | 0.065698 | 0.082926 | 0.104068 | 0.082522 | 0.063202 | 0.066061 | 0.090831 |
| Small C&I | 0.097258 | 0.086919 | 0.096507 | 0.079131 | 0.067701 | 0.071074 | 0.084074 | 0.101484 | 0.087274 | 0.075114 | 0.068143 | 0.085322 |
| Large C&I | 0.097892 | 0.084160 | 0.091427 | 0.082392 | 0.074186 | 0.078000 | 0.078306 | 0.082791 | 0.078754 | 0.082805 | 0.079604 | 0.089684 |
| Street Lighting | 0.112666 | 0.090150 | 0.097655 | 0.090583 | 0.080458 | 0.075360 | 0.073480 | 0.074622 | 0.072033 | 0.075140 | 0.070040 | 0.087814 |
| Other Public Sales | 0.078235 | 0.068161 | 0.083306 | 0.071350 | 0.066087 | 0.087701 | 0.101073 | 0.120957 | 0.105049 | 0.081401 | 0.060526 | 0.076154 |
| Interdepartmental | 0.112067 | 0.099210 | 0.105398 | 0.087227 | 0.073361 | 0.071071 | 0.069424 | 0.074314 | 0.069411 | 0.071848 | 0.074030 | 0.092639 |
| Company Use | 0.141540 | 0.107876 | 0.093311 | 0.083500 | 0.063404 | 0.060524 | 0.072168 | 0.077608 | 0.068199 | 0.065641 | 0.066116 | 0.100114 |
| Denbury Onshore | 0.092705 | 0.079442 | 0.085469 | 0.085067 | 0.079412 | 0.082909 | 0.081538 | 0.085500 | 0.080834 | 0.084060 | 0.077360 | 0.085703 |
| Customers | | | | | | | | | | | | |
| Residential | 1.002168 | 1.001936 | 1.001623 | 1.001360 | 0.999806 | 0.999371 | 0.999281 | 0.999008 | 0.998756 | 0.998897 | 0.998776 | 0.999018 |
| Small C&I | 0.988943 | 0.987782 | 0.986996 | 0.996992 | 1.006577 | 1.010358 | 1.011444 | 1.010770 | 1.009085 | 1.001635 | 0.995981 | 0.993436 |
| Large C&I | 0.996980 | 0.992354 | 0.993125 | 0.993896 | 1.002377 | 1.004691 | 1.006233 | 1.011630 | 1.009317 | 1.000835 | 0.994667 | 0.993896 |
| Street Lighting | 1.012322 | 1.012322 | 1.012322 | 1.006635 | 1.000948 | 1.006635 | 1.006635 | 0.983886 | 0.983886 | 0.978199 | 0.995261 | 1.000948 |
| Other Public Sales | 0.995851 | 0.995851 | 0.995851 | 0.999834 | 1.003817 | 1.003817 | 1.003817 | 1.003817 | 1.003817 | 0.999834 | 0.995851 | 0.997842 |
| Peak Demand | 1.0000 | 0.8824 | 0.7934 | 0.7380 | 0.6466 | 0.8482 | 1.0000 | 0.9385 | 0.7883 | 0.7030 | 0.8334 | 0.9200 |

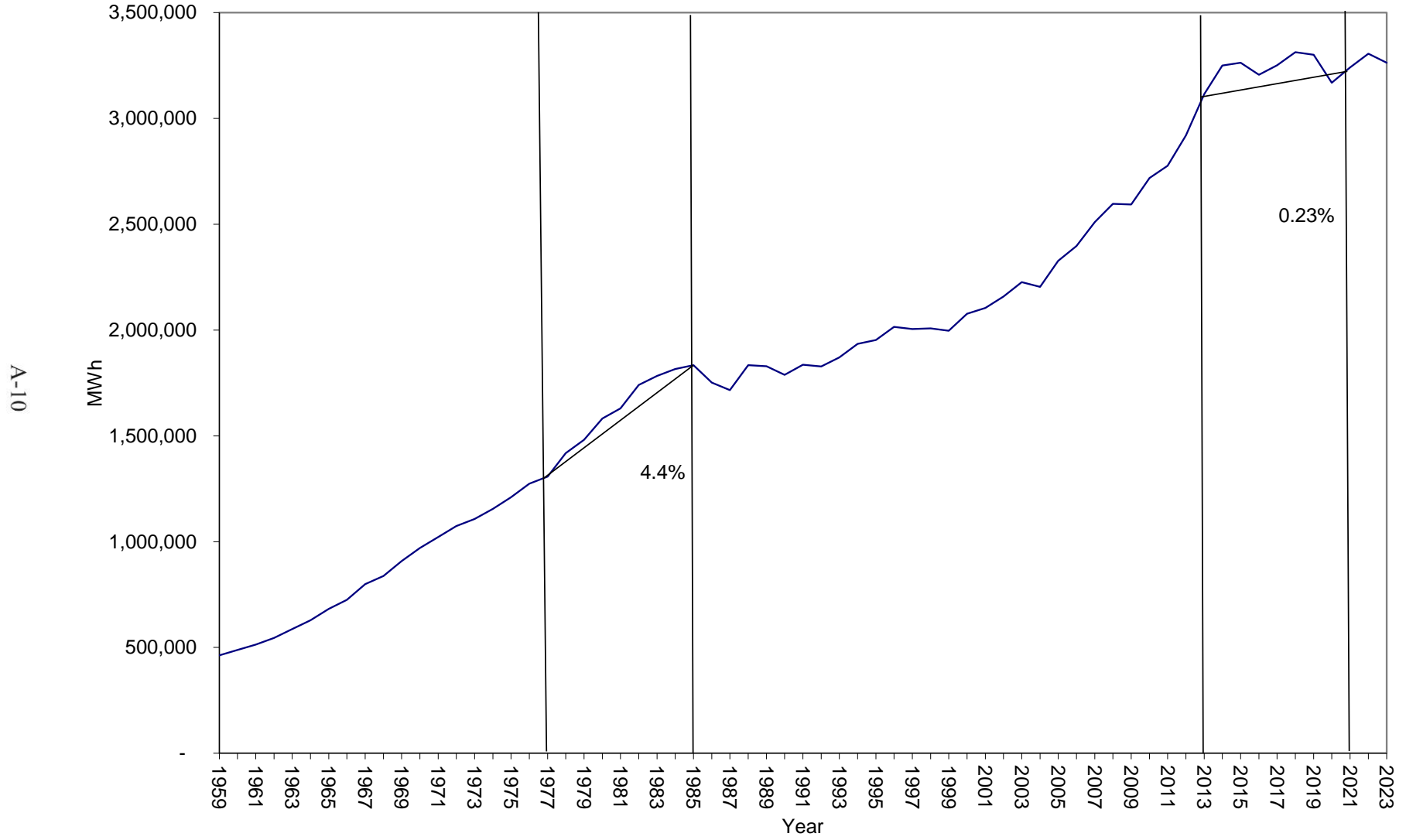
Montana-Dakota Utilities Co.
Billing-Month to Calendar-Month Allocation Factors

| Residential | January | February | March | April | May | June | July | August | September | October | November | December |
|---|----------------|-----------------|--------------|--------------|------------|-------------|-------------|---------------|------------------|----------------|-----------------|-----------------|
| North Dakota | 61.0% | 63.4% | 62.2% | 63.6% | 64.2% | 62.9% | 58.8% | 61.2% | 63.3% | 60.1% | 63.4% | 64.3% |
| South Dakota | 62.5% | 65.1% | 65.5% | 66.2% | 63.6% | 63.5% | 59.2% | 63.0% | 62.5% | 59.1% | 61.5% | 64.1% |
| Montana | 65.3% | 69.6% | 66.9% | 68.4% | 69.7% | 61.6% | 65.3% | 67.9% | 69.4% | 66.6% | 68.8% | 69.0% |
| <u>Small Commercial & Industrial</u> | | | | | | | | | | | | |
| North Dakota | 59.7% | 62.1% | 59.2% | 61.1% | 61.0% | 61.2% | 57.5% | 58.6% | 60.1% | 58.4% | 63.0% | 62.9% |
| South Dakota | 66.3% | 68.8% | 69.1% | 69.3% | 61.9% | 65.1% | 61.5% | 65.0% | 63.4% | 61.8% | 64.8% | 67.4% |
| Montana | 58.8% | 62.3% | 59.4% | 60.5% | 61.6% | 58.1% | 59.0% | 61.4% | 62.3% | 60.1% | 62.3% | 62.6% |
| <u>Large Commercial & Industrial</u> | | | | | | | | | | | | |
| North Dakota | 61.7% | 64.5% | 60.6% | 62.6% | 63.4% | 65.1% | 62.2% | 63.1% | 64.5% | 62.8% | 66.6% | 65.3% |
| South Dakota | 69.7% | 71.3% | 70.5% | 72.2% | 63.6% | 70.7% | 68.3% | 70.4% | 67.2% | 66.0% | 68.2% | 70.9% |
| Montana | 39.0% | 39.9% | 36.6% | 37.8% | 37.2% | 44.9% | 37.7% | 39.2% | 37.5% | 37.2% | 39.6% | 41.0% |
| <u>Street Lighting</u> | | | | | | | | | | | | |
| North Dakota | 58.1% | 60.8% | 57.0% | 59.1% | 58.9% | 60.1% | 56.0% | 56.2% | 56.6% | 55.8% | 60.6% | 60.0% |
| South Dakota | 67.0% | 69.4% | 66.8% | 69.2% | 59.9% | 69.8% | 66.9% | 66.9% | 65.3% | 64.3% | 67.2% | 68.5% |
| Montana | 63.6% | 68.2% | 65.1% | 65.8% | 67.2% | 60.6% | 64.0% | 64.3% | 64.7% | 65.2% | 68.5% | 62.5% |
| <u>Other Public Sales</u> | | | | | | | | | | | | |
| North Dakota | 58.3% | 61.5% | 57.5% | 58.2% | 57.9% | 59.4% | 56.1% | 56.5% | 57.2% | 55.2% | 60.9% | 61.6% |
| South Dakota | 72.1% | 76.0% | 73.6% | 76.3% | 56.9% | 76.6% | 73.8% | 73.8% | 69.7% | 62.4% | 65.9% | 69.9% |
| Montana | 61.3% | 65.6% | 60.7% | 62.7% | 63.7% | 56.3% | 59.4% | 61.7% | 62.3% | 61.7% | 64.9% | 64.2% |
| <u>Interdepartmental</u> | | | | | | | | | | | | |
| North Dakota | 67.3% | 70.0% | 69.7% | 70.2% | 72.1% | 72.0% | 68.7% | 70.0% | 70.6% | 68.4% | 71.4% | 71.1% |
| South Dakota | 26.1% | 23.9% | 22.0% | 24.9% | 70.9% | 28.6% | 24.2% | 24.5% | 82.1% | 24.1% | 25.7% | 27.5% |
| Montana | 68.1% | 71.9% | 68.4% | 71.6% | 73.2% | 63.6% | 70.0% | 76.0% | 70.3% | 70.6% | 72.3% | 71.5% |
| <u>Company Use</u> | | | | | | | | | | | | |
| North Dakota | 55.1% | 57.0% | 52.7% | 55.5% | 54.7% | 55.9% | 51.4% | 52.9% | 52.7% | 51.0% | 56.5% | 57.3% |
| South Dakota | 52.3% | 56.5% | 62.5% | 64.7% | 54.8% | 66.7% | 54.3% | 59.5% | 39.3% | 38.4% | 40.1% | 45.1% |
| Montana | 53.7% | 58.7% | 63.9% | 66.7% | 68.1% | 58.2% | 57.7% | 60.0% | 61.3% | 59.9% | 65.7% | 60.6% |

Montana-Dakota Utilities Co.
Historical Energy Requirements Integrated System
(Megawatt Hours)

| <u>Year</u> | <u>Total Requirements</u> | <u>%Inc/Dec</u> |
|-------------|---------------------------|-----------------|
| 1959 | 463,307 | |
| 1960 | 488,316 | 5.40% |
| 1961 | 514,086 | 5.28% |
| 1962 | 545,306 | 6.07% |
| 1963 | 586,589 | 7.57% |
| 1964 | 628,616 | 7.16% |
| 1965 | 682,214 | 8.53% |
| 1966 | 725,389 | 6.33% |
| 1967 | 798,855 | 10.13% |
| 1968 | 837,504 | 4.84% |
| 1969 | 908,231 | 8.44% |
| 1970 | 970,490 | 6.85% |
| 1971 | 1,021,876 | 5.29% |
| 1972 | 1,073,560 | 5.06% |
| 1973 | 1,107,691 | 3.18% |
| 1974 | 1,155,351 | 4.30% |
| 1975 | 1,210,168 | 4.74% |
| 1976 | 1,274,391 | 5.31% |
| 1977 | 1,307,542 | 2.60% |
| 1978 | 1,418,366 | 8.48% |
| 1979 | 1,481,019 | 4.42% |
| 1980 | 1,581,612 | 6.79% |
| 1981 | 1,629,323 | 3.02% |
| 1982 | 1,740,859 | 6.85% |
| 1983 | 1,783,753 | 2.46% |
| 1984 | 1,815,453 | 1.78% |
| 1985 | 1,834,294 | 1.04% |
| 1986 | 1,751,503 | -4.51% |
| 1987 | 1,716,377 | -2.01% |
| 1988 | 1,834,232 | 6.87% |
| 1989 | 1,828,665 | -0.30% |
| 1990 | 1,788,854 | -2.18% |
| 1991 | 1,836,243 | 2.65% |
| 1992 | 1,827,866 | -0.46% |
| 1993 | 1,870,268 | 2.32% |
| 1994 | 1,934,561 | 3.44% |
| 1995 | 1,952,872 | 0.95% |
| 1996 | 2,014,830 | 3.17% |
| 1997 | 2,005,195 | -0.48% |
| 1998 | 2,007,534 | 0.12% |
| 1999 | 1,996,647 | -0.54% |
| 2000 | 2,077,579 | 4.05% |
| 2001 | 2,104,119 | 1.28% |
| 2002 | 2,158,431 | 2.58% |
| 2003 | 2,226,531 | 3.16% |
| 2004 | 2,204,012 | -1.01% |
| 2005 | 2,327,117 | 5.59% |
| 2006 | 2,397,793 | 3.04% |
| 2007 | 2,510,540 | 4.70% |
| 2008 | 2,596,990 | 3.44% |
| 2009 | 2,593,368 | -0.14% |
| 2010 | 2,718,192 | 4.81% |
| 2011 | 2,776,082 | 2.13% |
| 2012 | 2,919,752 | 5.18% |
| 2013 | 3,115,064 | 6.69% |
| 2014 | 3,250,683 | 4.35% |
| 2015 | 3,263,271 | 0.39% |
| 2016 | 3,206,737 | -1.73% |
| 2017 | 3,251,539 | 1.40% |
| 2018 | 3,313,387 | 1.90% |
| 2019 | 3,301,537 | -0.36% |
| 2020 | 3,169,086 | -4.01% |
| 2021 | 3,240,600 | 2.26% |
| 2022 | 3,305,682 | 2.01% |
| 2023 | 3,263,461 | -1.28% |

Montana-Dakota Integrated System Total Energy Requirements



APPENDIX B

Integrated System Historical and Forecasted Exogenous Variables

Montana-Dakota Utilities Co.
Integrated System
Historical Electricity Prices 1/
cents/kWh

| <u>Year</u> | <u>Residential Prices</u> | | | <u>Small C&I Prices</u> | | | <u>Large C&I Prices</u> | | |
|-------------|---------------------------|-----------|-----------|-----------------------------|-----------|-----------|-----------------------------|-----------|-----------|
| | <u>MT</u> | <u>ND</u> | <u>SD</u> | <u>MT</u> | <u>ND</u> | <u>SD</u> | <u>MT</u> | <u>ND</u> | <u>SD</u> |
| 1997 | 7.408 | 6.845 | 8.875 | 6.191 | 7.666 | 8.384 | 4.977 | 5.510 | 6.177 |
| 1998 | 7.413 | 6.878 | 8.962 | 6.193 | 7.697 | 8.375 | 5.012 | 5.549 | 6.146 |
| 1999 | 7.433 | 6.833 | 8.923 | 6.200 | 7.622 | 8.339 | 4.888 | 5.447 | 6.134 |
| 2000 | 7.445 | 6.731 | 8.783 | 6.177 | 7.512 | 8.243 | 4.850 | 5.339 | 5.989 |
| 2001 | 7.356 | 6.839 | 8.862 | 6.142 | 7.651 | 8.338 | 4.840 | 5.431 | 6.182 |
| 2002 | 7.335 | 6.753 | 8.807 | 6.109 | 7.552 | 8.294 | 4.821 | 5.509 | 6.162 |
| 2003 | 7.331 | 6.812 | 8.884 | 6.087 | 7.606 | 8.379 | 4.517 | 5.510 | 6.273 |
| 2004 | 7.375 | 7.172 | 9.098 | 6.133 | 7.861 | 8.565 | 4.524 | 5.720 | 6.440 |
| 2005 | 7.352 | 7.010 | 8.918 | 6.142 | 7.681 | 8.437 | 4.512 | 5.635 | 6.356 |
| 2006 | 7.337 | 7.342 | 9.165 | 6.106 | 8.027 | 8.689 | 4.500 | 6.009 | 6.596 |
| 2007 | 7.338 | 7.823 | 9.616 | 6.116 | 8.544 | 9.142 | 4.477 | 6.573 | 7.134 |
| 2008 | 8.370 | 7.844 | 9.606 | 7.288 | 8.683 | 9.125 | 5.183 | 6.673 | 7.167 |
| 2009 | 7.844 | 7.236 | 9.176 | 6.993 | 8.121 | 8.646 | 5.257 | 6.228 | 6.865 |
| 2010 | 7.973 | 7.664 | 9.243 | 7.171 | 8.596 | 8.779 | 4.946 | 6.709 | 7.217 |
| 2011 | 8.301 | 8.020 | 9.082 | 7.478 | 8.935 | 8.667 | 5.432 | 7.040 | 7.156 |
| 2012 | 8.453 | 8.406 | 9.349 | 7.592 | 9.216 | 8.962 | 5.624 | 7.388 | 7.334 |
| 2013 | 8.585 | 8.230 | 9.304 | 7.715 | 9.037 | 8.850 | 5.634 | 7.467 | 7.365 |
| 2014 | 8.705 | 8.614 | 9.360 | 7.809 | 9.397 | 8.877 | 5.851 | 7.719 | 7.470 |
| 2015 | 8.705 | 9.095 | 9.404 | 7.790 | 10.203 | 8.916 | 5.991 | 7.913 | 7.418 |
| 2016 | 8.718 | 9.907 | 10.934 | 7.934 | 11.044 | 10.400 | 5.743 | 8.481 | 8.570 |
| 2017 | 9.314 | 10.730 | 10.907 | 8.690 | 12.156 | 10.856 | 6.508 | 9.130 | 8.525 |
| 2018 | 9.423 | 10.729 | 10.862 | 8.948 | 12.390 | 10.905 | 6.687 | 9.005 | 8.576 |
| 2019 | 10.716 | 10.568 | 11.245 | 10.258 | 12.275 | 11.310 | 7.436 | 8.924 | 9.140 |
| 2020 | 10.826 | 10.295 | 11.028 | 10.250 | 12.117 | 10.984 | 7.654 | 8.575 | 8.625 |
| 2021 | 10.950 | 10.799 | 11.197 | 10.325 | 12.572 | 11.126 | 7.743 | 8.872 | 8.746 |
| 2022 | 11.125 | 11.330 | 12.060 | 10.536 | 13.289 | 12.133 | 7.743 | 9.517 | 9.765 |

SOURCE:

1997-2022: Historical prices calculated from Montana-Dakota Utilities Co.,
Electric Operating Revenues Reports

1/ Price of electricity reflects the "all-inclusive" price for each kWh sold (basic service charge, demand charge, energy charge, and fuel and purchased power.)

**Montana-Dakota Utilities Co.
Integrated System
Historical Natural Gas Prices
\$/Dk**

| <u>Year</u> | <u>Residential Price</u> | <u>Firm Price</u> |
|-------------|------------------------------|-----------------------|
| 1997 | 4.54 | 4.09 |
| 1998 | 4.85 | 4.30 |
| 1999 | 5.08 | 4.54 |
| 2000 | 5.92 | 5.39 |
| 2001 | 7.42 | 6.87 |
| 2002 | 4.57 | 4.03 |
| 2003 | 6.83 | 6.29 |
| 2004 | 8.56 | 7.97 |
| 2005 | 10.49 | 9.84 |
| 2006 | 9.87 | 9.15 |
| 2007 | 7.78 | 7.09 |
| 2008 | 9.42 | 8.77 |
| 2009 | 7.82 | 7.19 |
| 2010 | 7.05 | 6.37 |
| 2011 | 7.03 | 6.37 |
| 2012 | 6.52 | 5.65 |
| 2013 | 6.56 | 5.85 |
| 2014 | 7.80 | 6.91 |
| 2015 | 7.56 | 6.55 |
| 2016 | 6.40 | 5.10 |
| 2017 | 6.89 | 5.68 |
| 2018 | 6.52 | 5.44 |
| 2019 | 6.44 | 5.41 |
| 2020 | 6.35 | 5.22 |
| 2021 | 8.22 | 6.73 |
| 2022 | 9.82 | 8.57 |

SOURCE:
1997-2022: CSBE Rate Reporting Class Report
Gas Year-to-Date Report for Year-end

**Bismarck, ND and Aberdeen, SD
Heating Degree Days (HDD)
and
Cooling Degree Days (CDD)
(Annual)**

| | HDD | | CDD | |
|--------|---------------------------|------------------|---------------------------|------------------|
| | <u>MT & ND</u> | <u>SD</u> | <u>MT & ND</u> | <u>SD</u> |
| 1997 | 8,450 | 8,854 | 609 | 540 |
| 1998 | 7,765 | 7,502 | 633 | 645 |
| 1999 | 7,710 | 7,401 | 457 | 507 |
| 2000 | 8,412 | 8,436 | 549 | 554 |
| 2001 | 8,039 | 8,348 | 668 | 727 |
| 2002 | 8,532 | 8,369 | 745 | 788 |
| 2003 | 8,493 | 8,319 | 737 | 601 |
| 2004 | 8,183 | 8,035 | 379 | 341 |
| 2005 | 7,792 | 7,871 | 555 | 659 |
| 2006 | 7,525 | 7,437 | 793 | 704 |
| 2007 | 8,345 | 8,465 | 666 | 698 |
| 2008 | 8,946 | 9,022 | 524 | 499 |
| 2009 | 9,108 | 8,847 | 331 | 327 |
| 2010 | 8,643 | 8,255 | 507 | 661 |
| 2011 | 8,750 | 8,668 | 425 | 729 |
| 2012 | 7,612 | 7,342 | 599 | 764 |
| 2013 | 9,133 | 9,445 | 555 | 580 |
| 2014 | 8,887 | 9,087 | 457 | 342 |
| 2015 | 7,655 | 7,364 | 622 | 677 |
| 2016 | 7,235 | 7,015 | 548 | 722 |
| 2017 | 7,894 | 7,845 | 615 | 552 |
| 2018 | 8,825 | 8,728 | 701 | 849 |
| 2019 | 9,327 | 9,261 | 530 | 601 |
| 2020 | 7,774 | 7,789 | 793 | 871 |
| 2021 | 7,360 | 7,134 | 1,045 | 986 |
| 2022 | 8,826 | 8,509 | 755 | 837 |
| NORMAL | 8,472 | 8,221 | 538 | 631 |

**Montana-Dakota Utilities Co.
Service Territory Counties
Personal Income (2009 \$s)**

| <u>Year</u> | <u>Montana</u> | <u>North Dakota</u> | <u>South Dakota</u> |
|-------------|----------------|---------------------|---------------------|
| 1997 | 1,577,087 | 5,578,045 | 781,954 |
| 1998 | 1,644,943 | 6,068,216 | 857,977 |
| 1999 | 1,657,881 | 6,087,875 | 885,744 |
| 2000 | 1,652,750 | 6,508,866 | 949,202 |
| 2001 | 1,721,939 | 6,751,838 | 956,215 |
| 2002 | 1,668,578 | 6,597,177 | 802,916 |
| 2003 | 1,801,663 | 7,174,562 | 963,925 |
| 2004 | 1,843,781 | 7,237,624 | 972,390 |
| 2005 | 1,893,847 | 7,626,810 | 982,634 |
| 2006 | 1,879,825 | 7,844,624 | 781,076 |
| 2007 | 2,060,069 | 8,479,774 | 999,552 |
| 2008 | 2,191,916 | 9,444,114 | 1,133,465 |
| 2009 | 2,166,134 | 9,669,883 | 1,036,380 |
| 2010 | 2,372,397 | 10,914,325 | 1,092,444 |
| 2011 | 2,482,097 | 12,722,814 | 1,319,614 |
| 2012 | 2,839,006 | 15,307,035 | 1,339,194 |
| 2013 | 2,917,296 | 15,753,811 | 1,440,265 |
| 2014 | 2,992,500 | 17,382,996 | 1,353,057 |
| 2015 | 2,864,944 | 16,008,696 | 1,204,711 |
| 2016 | 2,597,460 | 14,346,208 | 1,060,555 |
| 2017 | 2,640,055 | 14,227,358 | 1,073,304 |
| 2018 | 2,616,118 | 14,823,483 | 1,097,321 |
| 2019 | 2,638,968 | 15,397,264 | 1,096,148 |
| 2020 | 2,786,096 | 15,638,900 | 1,297,022 |
| 2021 | 2,735,419 | 15,615,464 | 1,427,106 |
| 2022 | 2,742,949 | 16,289,384 | 1,394,721 |

SOURCES:

1997-2021: U.S. Dept. of Commerce
2022: Woods & Poole Economics, Inc.

Integrated System
Personal Consumption Expenditure Deflator

| <u>Year</u> | <u>Personal Consumption Expenditure Deflator (2012 = 100)</u> | <u>Inflation Rate</u> |
|-------------|---|---------------------------|
| 1997 | 74.48 | |
| 1998 | 75.07 | 0.8% |
| 1999 | 76.16 | 1.5% |
| 2000 | 78.09 | 2.5% |
| 2001 | 79.66 | 2.0% |
| 2002 | 80.70 | 1.3% |
| 2003 | 82.40 | 2.1% |
| 2004 | 84.44 | 2.5% |
| 2005 | 86.88 | 2.9% |
| 2006 | 89.32 | 2.8% |
| 2007 | 91.61 | 2.6% |
| 2008 | 94.33 | 3.0% |
| 2009 | 94.06 | -0.3% |
| 2010 | 95.75 | 1.8% |
| 2011 | 98.17 | 2.5% |
| 2012 | 100.00 | 1.9% |
| 2013 | 101.35 | 1.4% |
| 2014 | 102.89 | 1.5% |
| 2015 | 103.12 | 0.2% |
| 2016 | 104.15 | 1.0% |
| 2017 | 106.05 | 1.8% |
| 2018 | 108.32 | 2.1% |
| 2019 | 109.93 | 1.5% |
| 2020 | 111.15 | 1.1% |
| 2021 | 115.62 | 4.0% |
| 2022 | 122.86 | 6.3% |
| 2023 | 127.84 | 4.1% |
| 2024 | 132.25 | 3.4% |
| 2025 | 136.22 | 3.0% |
| 2026 | 140.30 | 3.0% |
| 2027 | 144.53 | 3.0% |
| 2028 | 148.96 | 3.1% |
| 2029 | 153.60 | 3.1% |
| 2030 | 158.44 | 3.2% |
| 2031 | 163.48 | 3.2% |
| 2032 | 168.69 | 3.2% |
| 2033 | 174.09 | 3.2% |
| 2034 | 179.67 | 3.2% |
| 2035 | 185.45 | 3.2% |
| 2036 | 191.42 | 3.2% |
| 2037 | 197.59 | 3.2% |
| 2038 | 203.97 | 3.2% |
| 2039 | 210.56 | 3.2% |
| 2040 | 217.37 | 3.2% |
| 2041 | 224.40 | 3.2% |
| 2042 | 231.67 | 3.2% |
| 2043 | 239.17 | 3.2% |

SOURCES:

1997-2022 U.S. Department of Commerce
2023-2043 Woods & Poole Economics, Inc.

**Montana-Dakota Utilities Co.
Integrated System
Residential Sector
Households and Customers for Service Territory Counties**

| Year | Montana | | North Dakota | | South Dakota | |
|------|----------------------|-------------------|----------------------|-------------------|----------------------|-------------------|
| | Number of Households | Average Customers | Number of Households | Average Customers | Number of Households | Average Customers |
| 1997 | 24,100 | 18,803 | 80,321 | 58,787 | 11,538 | 6,919 |
| 1998 | 24,019 | 18,839 | 80,967 | 59,081 | 11,384 | 6,913 |
| 1999 | 23,884 | 18,799 | 81,058 | 58,988 | 11,505 | 6,883 |
| 2000 | 23,829 | 18,716 | 81,566 | 59,332 | 11,459 | 6,866 |
| 2001 | 24,092 | 18,645 | 83,396 | 59,405 | 11,545 | 6,816 |
| 2002 | 23,799 | 18,635 | 83,797 | 59,608 | 11,407 | 6,768 |
| 2003 | 23,959 | 18,602 | 85,009 | 59,953 | 11,391 | 6,724 |
| 2004 | 23,931 | 18,539 | 85,375 | 60,279 | 11,204 | 6,681 |
| 2005 | 23,976 | 18,502 | 86,433 | 60,641 | 11,133 | 6,648 |
| 2006 | 23,945 | 18,505 | 87,358 | 61,026 | 10,989 | 6,620 |
| 2007 | 24,224 | 18,531 | 89,030 | 61,451 | 10,962 | 6,593 |
| 2008 | 24,285 | 18,582 | 89,973 | 62,068 | 10,897 | 6,612 |
| 2009 | 24,574 | 18,636 | 91,208 | 62,631 | 10,767 | 6,619 |
| 2010 | 24,545 | 18,716 | 91,736 | 63,619 | 10,761 | 6,609 |
| 2011 | 25,277 | 18,883 | 95,728 | 65,196 | 10,948 | 6,602 |
| 2012 | 25,418 | 19,191 | 97,192 | 67,888 | 10,935 | 6,616 |
| 2013 | 25,609 | 19,616 | 98,772 | 70,949 | 10,943 | 6,590 |
| 2014 | 25,739 | 19,918 | 100,521 | 73,909 | 10,965 | 6,580 |
| 2015 | 25,982 | 20,135 | 102,743 | 76,894 | 11,017 | 6,662 |
| 2016 | 26,222 | 20,128 | 104,735 | 78,553 | 11,058 | 6,546 |
| 2017 | 26,307 | 19,981 | 106,207 | 78,564 | 11,035 | 6,533 |
| 2018 | 26,663 | 19,911 | 108,107 | 78,510 | 11,085 | 6,496 |
| 2019 | 26,866 | 19,896 | 109,772 | 78,567 | 11,110 | 6,442 |
| 2020 | 26,813 | 19,798 | 110,491 | 78,812 | 11,021 | 6,441 |
| 2021 | 26,644 | 19,746 | 109,284 | 78,896 | 11,032 | 6,423 |
| 2022 | 26,669 | 19,695 | 109,626 | 79,076 | 11,066 | 6,398 |
| 2023 | 26,805 | 19,695 | 111,109 | 79,251 | 11,086 | 6,398 |
| 2024 | 26,909 | 19,695 | 112,511 | 79,426 | 11,096 | 6,398 |
| 2025 | 26,996 | 19,695 | 113,839 | 79,576 | 11,097 | 6,398 |
| 2026 | 27,064 | 19,695 | 115,100 | 79,726 | 11,089 | 6,398 |
| 2027 | 27,117 | 19,695 | 116,315 | 79,876 | 11,078 | 6,398 |
| 2028 | 27,158 | 19,695 | 117,482 | 80,026 | 11,061 | 6,398 |
| 2029 | 27,181 | 19,695 | 118,586 | 80,176 | 11,037 | 6,398 |
| 2030 | 27,193 | 19,695 | 119,644 | 80,326 | 11,011 | 6,398 |
| 2031 | 27,194 | 19,695 | 120,672 | 80,476 | 10,975 | 6,398 |
| 2032 | 27,188 | 19,695 | 121,653 | 80,626 | 10,939 | 6,398 |
| 2033 | 27,173 | 19,695 | 122,613 | 80,776 | 10,899 | 6,398 |
| 2034 | 27,150 | 19,695 | 123,552 | 80,926 | 10,857 | 6,398 |
| 2035 | 27,122 | 19,695 | 124,464 | 81,076 | 10,813 | 6,398 |
| 2036 | 27,096 | 19,695 | 125,367 | 81,226 | 10,770 | 6,398 |
| 2037 | 27,063 | 19,695 | 126,260 | 81,376 | 10,725 | 6,398 |
| 2038 | 27,026 | 19,695 | 127,143 | 81,526 | 10,676 | 6,398 |
| 2039 | 26,987 | 19,695 | 128,005 | 81,676 | 10,629 | 6,398 |
| 2040 | 26,947 | 19,695 | 128,873 | 81,826 | 10,582 | 6,398 |
| 2041 | 26,910 | 19,695 | 129,760 | 81,976 | 10,537 | 6,398 |
| 2042 | 26,881 | 19,695 | 130,689 | 82,126 | 10,492 | 6,398 |
| 2043 | 26,854 | 19,695 | 131,643 | 82,276 | 10,454 | 6,398 |

*/ Actual customer numbers for 1999 are unavailable due to the installation of a new CIS.
This number is an estimate.

SOURCES:

Households

2000, 2010: U.S. Department of Commerce

All other years: Estimated and projected by Woods & Poole Economics, Inc.

Customers

1997-2022: Actuals from Montana-Dakota Utilities Co. Customer Information System Active Customers Report

2023-2043: Montana-Dakota forecast

**Integrated System
Employment Data
Total Employment less Farming and Mining Employment**

| Year | Montana | | | | North Dakota | | | | South Dakota | |
|------|---------------------|-------------|---------------------|-------------|---------------------|-------------|---------------------|-------------|---------------------|-------------|
| | Number of Employees | Growth Rate | Adjusted Employment | Growth Rate | Number of Employees | Growth Rate | Adjusted Employment | Growth Rate | Number of Employees | Growth Rate |
| 1997 | 30,476 | | | | 113,370 | | | | 12,140 | |
| 1998 | 30,900 | 1.39% | | | 115,802 | 2.15% | | | 12,242 | 0.84% |
| 1999 | 30,706 | -0.63% | | | 116,960 | 1.00% | | | 12,218 | -0.20% |
| 2000 | 30,740 | 0.11% | | | 119,268 | 1.97% | | | 12,397 | 1.47% |
| 2001 | 30,225 | -1.68% | | | 119,232 | -0.03% | | | 12,158 | -1.93% |
| 2002 | 30,161 | -0.21% | | | 120,587 | 1.14% | | | 12,157 | -0.01% |
| 2003 | 30,333 | 0.57% | | | 121,984 | 1.16% | | | 11,849 | -2.53% |
| 2004 | 30,481 | 0.49% | | | 124,639 | 2.18% | | | 11,967 | 1.00% |
| 2005 | 30,629 | 0.49% | | | 127,430 | 2.24% | | | 12,007 | 0.33% |
| 2006 | 30,877 | 0.81% | | | 131,633 | 3.30% | | | 12,143 | 1.13% |
| 2007 | 31,592 | 2.32% | | | 134,564 | 2.23% | | | 12,192 | 0.40% |
| 2008 | 32,020 | 1.35% | | | 137,569 | 2.23% | | | 12,248 | 0.46% |
| 2009 | 32,289 | 0.84% | | | 139,792 | 1.62% | | | 12,358 | 0.90% |
| 2010 | 32,673 | 1.19% | | | 144,236 | 3.18% | | | 12,364 | 0.05% |
| 2011 | 33,939 | 3.87% | | | 155,904 | 8.09% | | | 12,393 | 0.23% |
| 2012 | 34,854 | 2.70% | | | 172,058 | 10.36% | | | 12,430 | 0.30% |
| 2013 | 35,748 | 2.56% | | | 182,903 | 6.30% | | | 12,734 | 2.45% |
| 2014 | 35,841 | 0.26% | | | 193,399 | 5.74% | | | 12,851 | 0.92% |
| 2015 | 35,026 | -2.27% | | | 190,728 | -1.38% | | | 12,774 | -0.60% |
| 2016 | 33,587 | -4.11% | | | 179,257 | -6.01% | | | 12,744 | -0.23% |
| 2017 | 33,217 | -1.10% | | | 176,559 | -1.51% | | | 12,596 | -1.16% |
| 2018 | 32,502 | -2.15% | | | 178,080 | 0.86% | | | 12,496 | -0.79% |
| 2019 | 32,034 | -1.44% | | | 181,570 | 1.96% | | | 12,174 | -2.58% |
| 2020 | 31,402 | -1.97% | | | 173,225 | -4.60% | | | 12,172 | -0.02% |
| 2021 | 31,481 | 0.25% | | | 173,451 | 0.13% | | | 12,293 | 0.99% |
| 2022 | 32,261 | 2.48% | | | 184,900 | 6.60% | | | 12,411 | 0.96% |
| 2023 | 32,652 | 1.21% | 32,308 | 0.14% | 190,631 | 3.10% | 185,978 | 0.58% | 12,467 | 0.45% |
| 2024 | 33,038 | 1.18% | 32,401 | 0.29% | 196,368 | 3.01% | 187,730 | 0.94% | 12,521 | 0.43% |
| 2025 | 33,279 | 0.73% | 32,494 | 0.29% | 199,601 | 1.65% | 189,429 | 0.90% | 12,604 | 0.66% |
| 2026 | 33,483 | 0.61% | 32,587 | 0.29% | 202,698 | 1.55% | 191,132 | 0.90% | 12,686 | 0.65% |
| 2027 | 33,689 | 0.62% | 32,680 | 0.29% | 205,776 | 1.52% | 192,841 | 0.89% | 12,755 | 0.54% |
| 2028 | 33,881 | 0.57% | 32,773 | 0.28% | 208,825 | 1.48% | 194,554 | 0.89% | 12,820 | 0.51% |
| 2029 | 34,070 | 0.56% | 32,866 | 0.28% | 211,884 | 1.46% | 196,273 | 0.88% | 12,876 | 0.44% |
| 2030 | 34,256 | 0.55% | 32,959 | 0.28% | 214,952 | 1.45% | 197,997 | 0.88% | 12,945 | 0.54% |
| 2031 | 34,431 | 0.51% | 33,052 | 0.28% | 218,008 | 1.42% | 199,726 | 0.87% | 13,004 | 0.46% |
| 2032 | 34,606 | 0.51% | 33,146 | 0.28% | 221,071 | 1.40% | 201,459 | 0.87% | 13,065 | 0.47% |
| 2033 | 34,777 | 0.49% | 33,239 | 0.28% | 224,148 | 1.39% | 203,198 | 0.86% | 13,125 | 0.46% |
| 2034 | 34,945 | 0.48% | 33,332 | 0.28% | 227,220 | 1.37% | 204,942 | 0.86% | 13,180 | 0.42% |
| 2035 | 35,109 | 0.47% | 33,425 | 0.28% | 230,328 | 1.37% | 206,691 | 0.85% | 13,238 | 0.44% |
| 2036 | 35,273 | 0.47% | 33,518 | 0.28% | 233,437 | 1.35% | 208,446 | 0.85% | 13,294 | 0.42% |
| 2037 | 35,428 | 0.44% | 33,611 | 0.28% | 236,559 | 1.34% | 210,205 | 0.84% | 13,346 | 0.39% |
| 2038 | 35,580 | 0.43% | 33,704 | 0.28% | 239,691 | 1.32% | 211,969 | 0.84% | 13,401 | 0.41% |
| 2039 | 35,734 | 0.43% | 33,797 | 0.28% | 242,826 | 1.31% | 213,738 | 0.83% | 13,451 | 0.37% |
| 2040 | 35,880 | 0.41% | 33,890 | 0.28% | 245,985 | 1.30% | 215,513 | 0.83% | 13,505 | 0.40% |
| 2041 | 36,022 | 0.40% | 33,983 | 0.27% | 249,141 | 1.28% | 217,292 | 0.83% | 13,548 | 0.32% |
| 2042 | 36,166 | 0.40% | 34,077 | 0.27% | 252,311 | 1.27% | 219,077 | 0.82% | 13,599 | 0.38% |
| 2043 | 36,304 | 0.38% | 34,170 | 0.27% | 255,493 | 1.26% | 220,866 | 0.82% | 13,648 | 0.36% |

SOURCES:

Number of Employees:

1997-2021: U.S. Department of Commerce

2022-2042: Estimated and projected by Woods & Poole Economics, Inc.

Adjusted Employment:

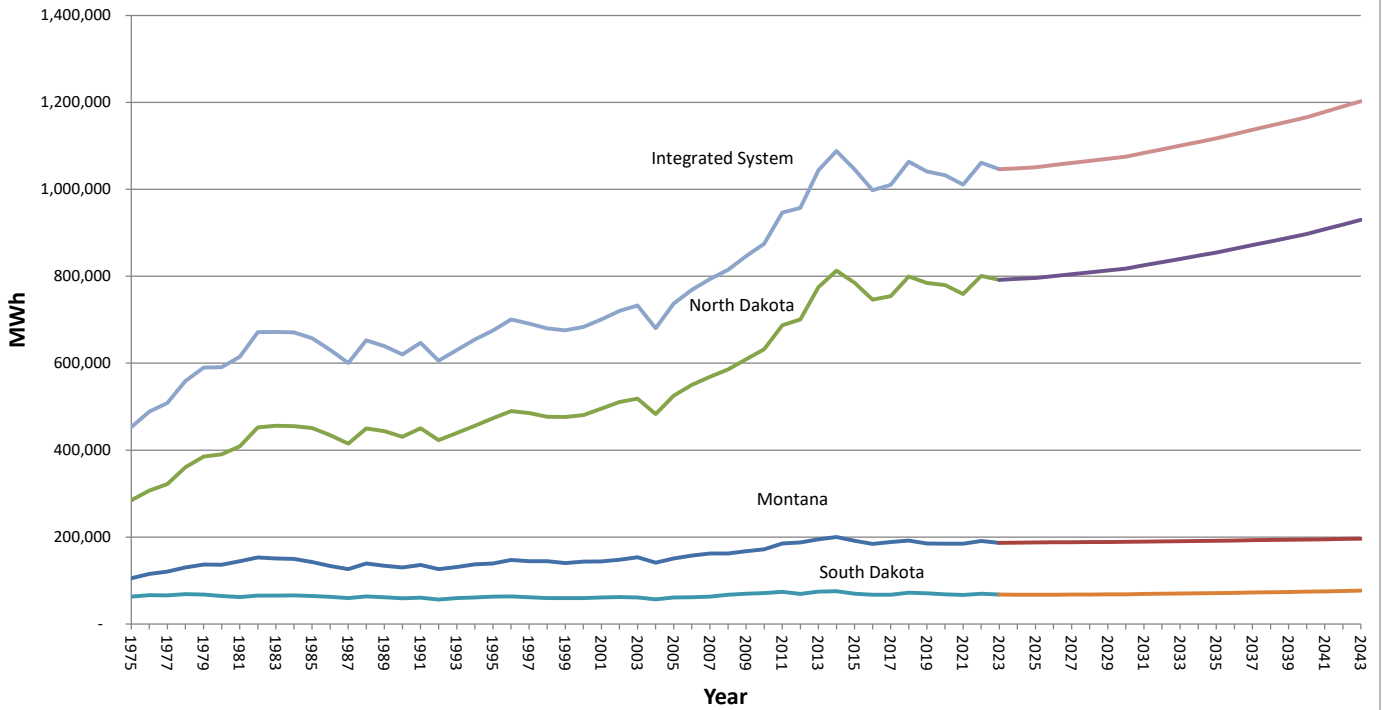
2023-2043: For Montana and North Dakota, employment was tied to the growth in residential customers by running a regression on the historical (1997-2022) ratio of actual residential customer numbers to employees. Those regression results were then applied on a forecasted basis to the adjusted forecast of residential customer numbers to arrive at an adjusted forecast of number of employees. No adjustment was made to South Dakota employment.

NOTE: The number of employees used for the forecast is total employment less farming and mining employment (most farms are not served by Montana-Dakota and the mining sector (oil fields and coal mining) is forecasted separately).

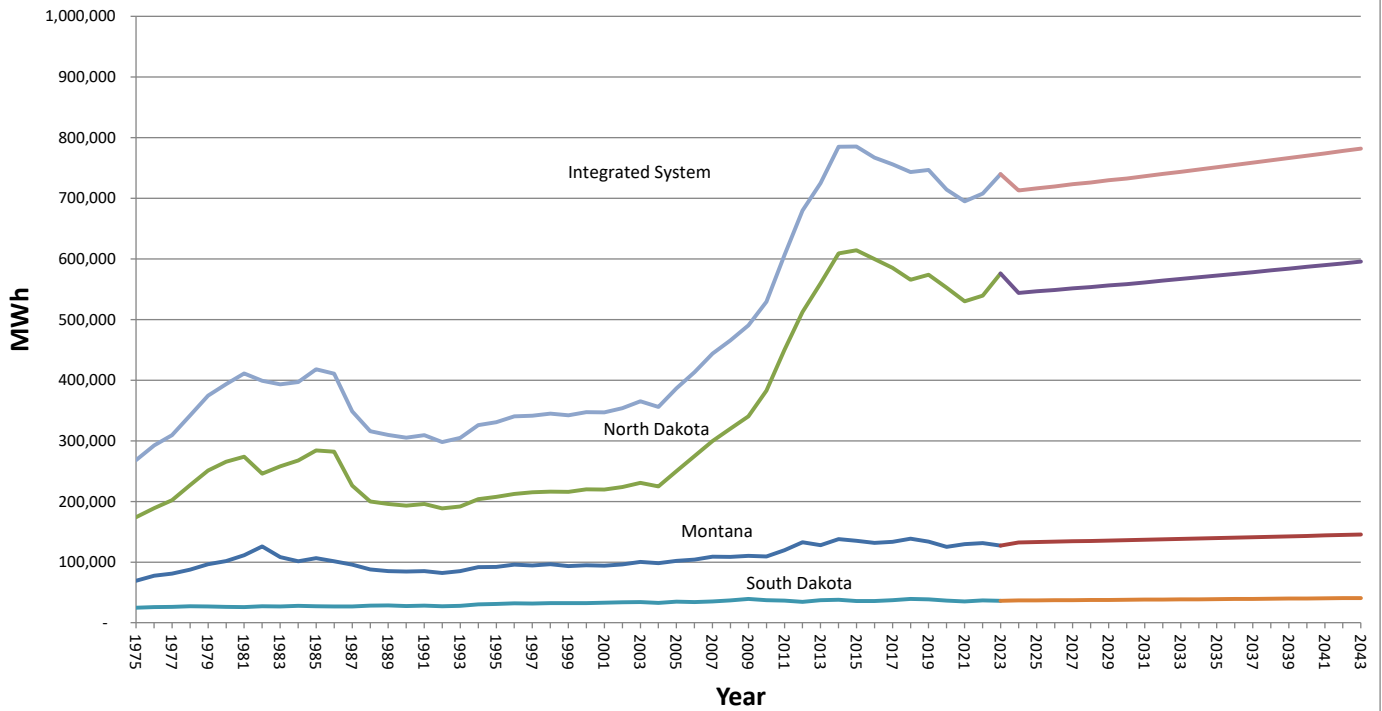
APPENDIX C

Integrated System Forecast Results

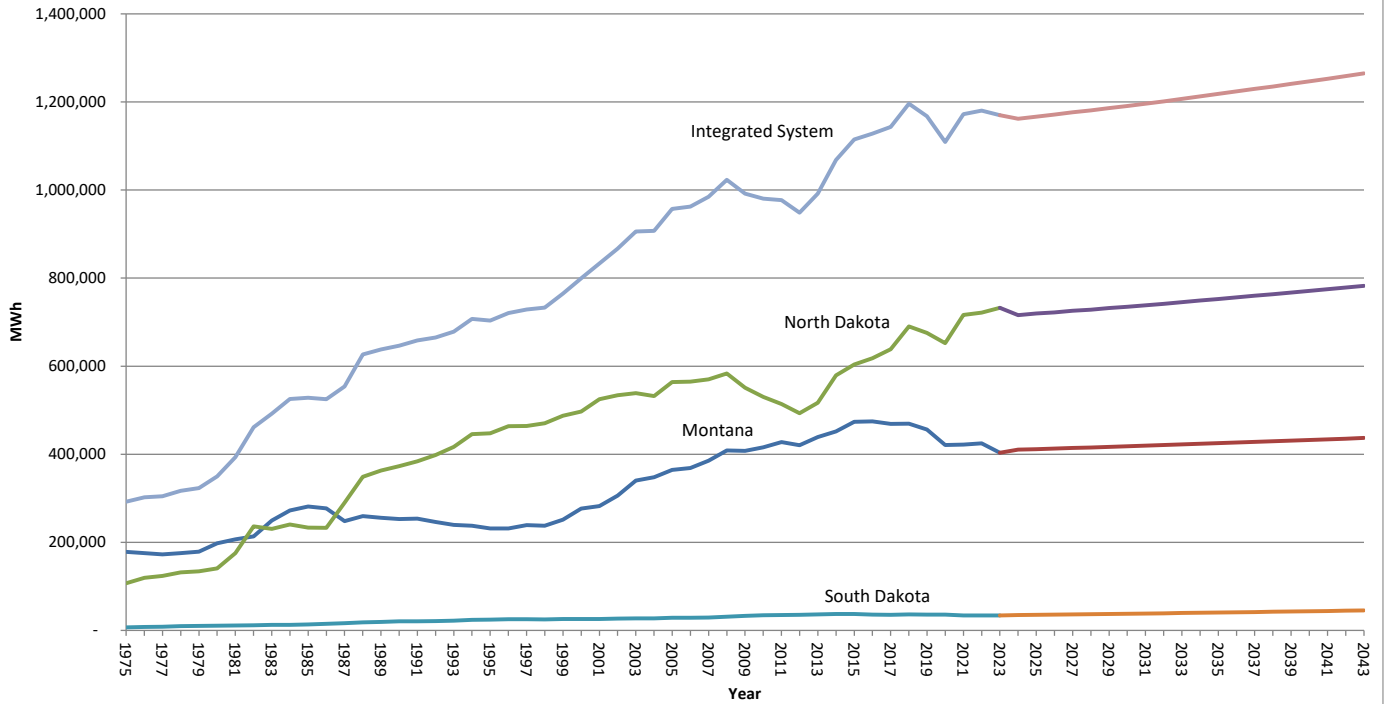
Montana-Dakota Integrated System Historical and Forecasted Residential Sales



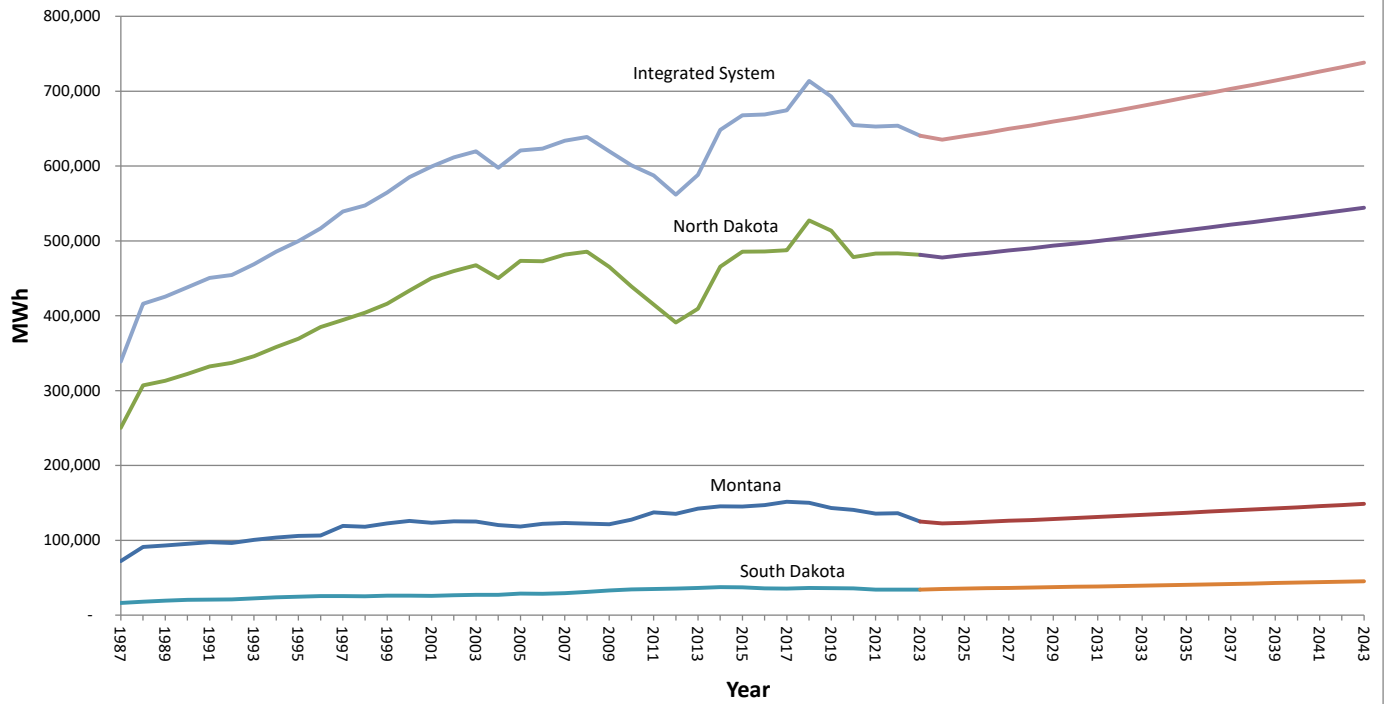
Montana-Dakota Integrated System Historical and Forecasted Small C&I



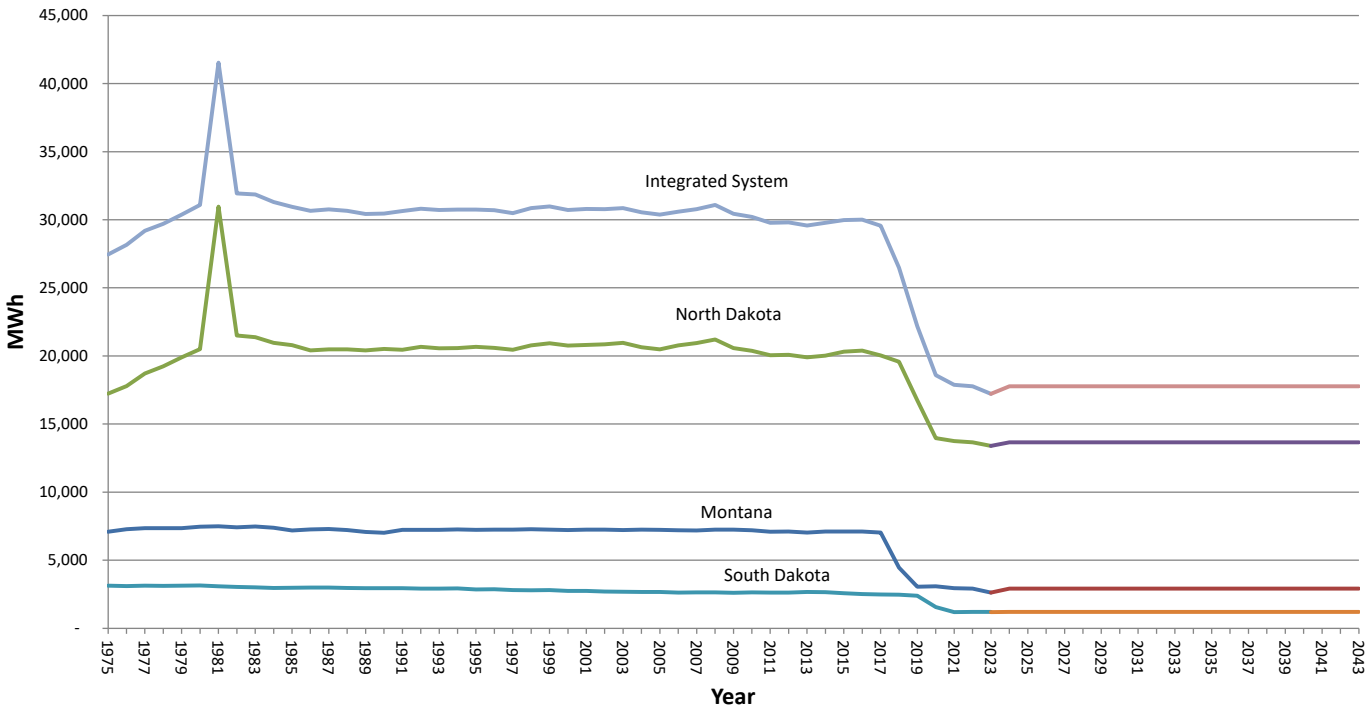
Montana-Dakota Integrated System Historical and Forecasted Large C&I



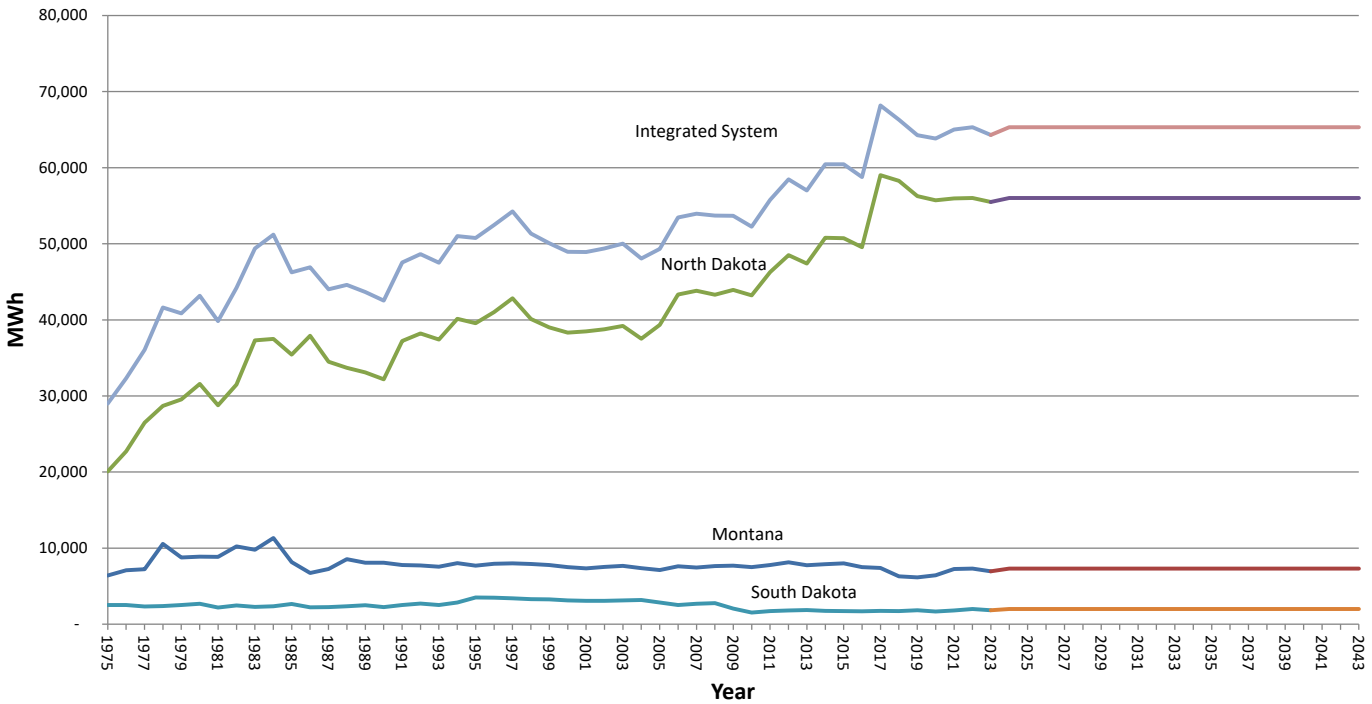
Montana-Dakota Integrated System General LC&I Sales



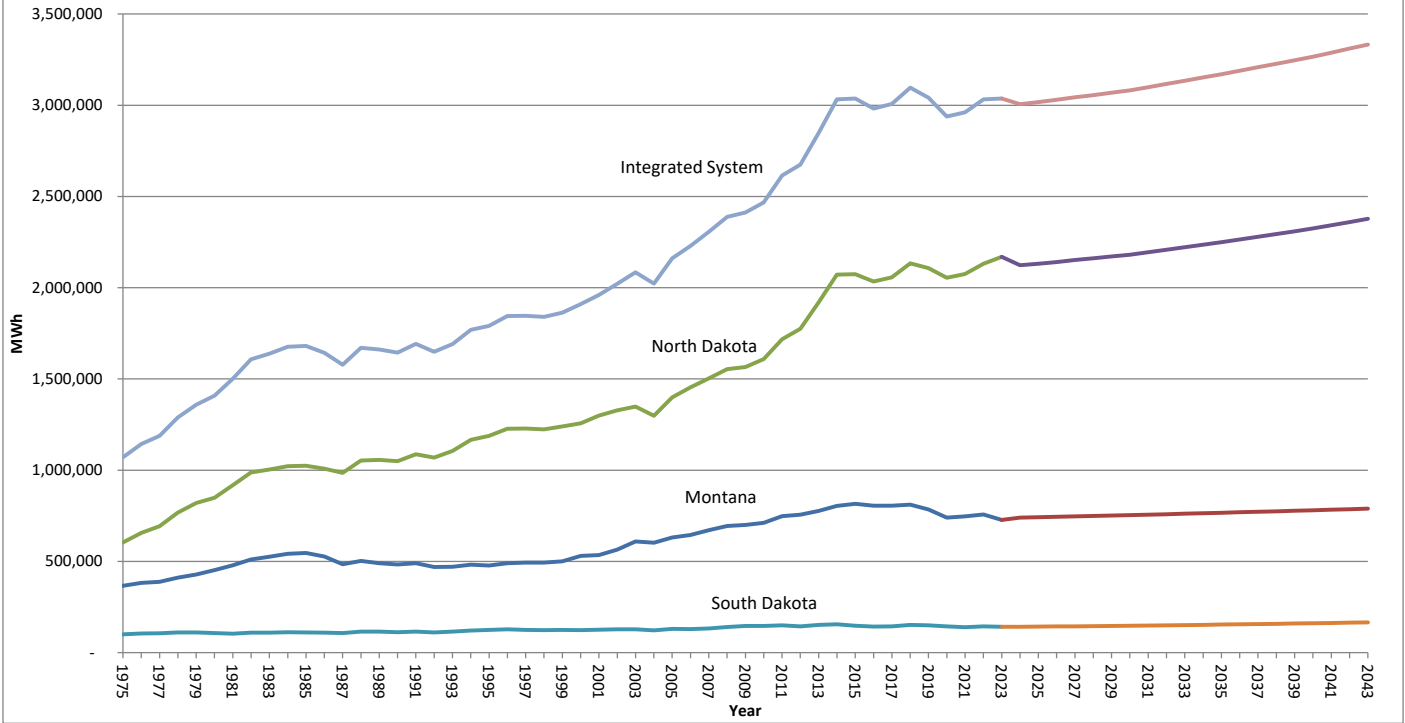
Montana-Dakota Integrated System Historical and Forecasted Street Lighting



Montana-Dakota Integrated System Historical and Forecasted Miscellaneous



Montana-Dakota Integrated System Historical and Forecasted Total Sales



**Montana-Dakota Utilities Co.
Forecasted Energy (MWh) and
Seasonal Demands (MW) Prior to Demand Response
Integrated System**

| <u>Year</u> | <u>Summer Peak net of Energy Efficiency Programs</u> | | <u>Winter Peak net of Energy Efficiency Programs</u> | | <u>Annual Energy Requirments</u> | | <u>Load Factor (%)</u> |
|-------------|--|--------------|--|--------------|--------------------------------------|--------------|--------------------------------|
| | <u>(MW)</u> | <u>% Chg</u> | <u>(MW)</u> | <u>% Chg</u> | <u>(GWh)</u> | <u>% Chg</u> | |
| 2024 | 572.8 | | 569.3 | | 3,251.7 | | 64.63% |
| 2025 | 576.3 | 0.61% | 571.4 | 0.37% | 3,263.7 | 0.37% | 64.65% |
| 2026 | 580.0 | 0.64% | 573.8 | 0.42% | 3,277.3 | 0.42% | 64.50% |
| 2027 | 583.8 | 0.66% | 576.5 | 0.48% | 3,292.1 | 0.45% | 64.37% |
| 2028 | 587.5 | 0.63% | 578.9 | 0.40% | 3,305.2 | 0.40% | 64.05% |
| 2029 | 591.2 | 0.63% | 581.5 | 0.45% | 3,320.2 | 0.45% | 64.11% |
| 2030 | 595.0 | 0.64% | 583.9 | 0.41% | 3,334.2 | 0.42% | 63.97% |
| 2031 | 599.3 | 0.72% | 587.3 | 0.60% | 3,352.8 | 0.56% | 63.86% |
| 2032 | 603.5 | 0.70% | 590.7 | 0.57% | 3,371.9 | 0.57% | 63.61% |
| 2033 | 607.8 | 0.71% | 594.1 | 0.59% | 3,391.0 | 0.57% | 63.69% |
| 2034 | 612.0 | 0.69% | 597.6 | 0.58% | 3,410.1 | 0.56% | 63.61% |
| 2035 | 616.3 | 0.70% | 600.9 | 0.56% | 3,429.4 | 0.57% | 63.52% |
| 2036 | 620.7 | 0.71% | 604.9 | 0.66% | 3,450.2 | 0.61% | 63.28% |
| 2037 | 625.2 | 0.72% | 608.5 | 0.60% | 3,471.1 | 0.60% | 63.38% |
| 2038 | 629.7 | 0.72% | 612.2 | 0.61% | 3,491.5 | 0.59% | 63.30% |
| 2039 | 634.1 | 0.70% | 615.8 | 0.59% | 3,512.5 | 0.60% | 63.23% |
| 2040 | 638.5 | 0.69% | 619.7 | 0.62% | 3,533.7 | 0.60% | 63.01% |
| 2041 | 643.3 | 0.75% | 624.0 | 0.69% | 3,557.6 | 0.68% | 63.13% |
| 2042 | 648.0 | 0.73% | 628.4 | 0.70% | 3,581.6 | 0.67% | 63.10% |
| 2043 | 652.8 | 0.74% | 632.6 | 0.68% | 3,605.8 | 0.68% | 63.05% |

**Montana-Dakota Utilities Co.
Forecasted Energy (MWh) and
Seasonal Demands (MW) Prior to Demand Response
Montana**

| <u>Year</u> | <u>Summer Peak net of Energy Efficiency Programs</u> | | <u>Winter Peak net of Energy Efficiency Programs</u> | | <u>Annual Energy Requirments</u> | | <u>Load Factor (%)</u> |
|-------------|--|--------------|--|--------------|--------------------------------------|--------------|--------------------------------|
| | <u>(MW)</u> | <u>% Chg</u> | <u>(MW)</u> | <u>% Chg</u> | <u>(GWh)</u> | <u>% Chg</u> | |
| 2024 | 141.1 | | 140.2 | | 800.8 | | 64.61% |
| 2025 | 141.8 | 0.50% | 140.6 | 0.30% | 803.3 | 0.30% | 64.67% |
| 2026 | 142.6 | 0.56% | 141.1 | 0.34% | 805.7 | 0.31% | 64.50% |
| 2027 | 143.3 | 0.49% | 141.5 | 0.31% | 808.2 | 0.31% | 64.38% |
| 2028 | 144.0 | 0.49% | 141.9 | 0.23% | 810.1 | 0.24% | 64.05% |
| 2029 | 144.7 | 0.49% | 142.4 | 0.34% | 812.6 | 0.31% | 64.11% |
| 2030 | 145.5 | 0.55% | 142.8 | 0.29% | 815.2 | 0.31% | 63.96% |
| 2031 | 146.2 | 0.48% | 143.2 | 0.33% | 817.8 | 0.33% | 63.86% |
| 2032 | 146.9 | 0.48% | 143.8 | 0.37% | 820.7 | 0.35% | 63.60% |
| 2033 | 147.6 | 0.48% | 144.2 | 0.33% | 823.5 | 0.35% | 63.69% |
| 2034 | 148.3 | 0.47% | 144.8 | 0.38% | 826.3 | 0.35% | 63.61% |
| 2035 | 149.0 | 0.47% | 145.3 | 0.36% | 829.2 | 0.35% | 63.53% |
| 2036 | 149.7 | 0.47% | 145.9 | 0.38% | 832.2 | 0.36% | 63.29% |
| 2037 | 150.4 | 0.47% | 146.4 | 0.36% | 835.2 | 0.36% | 63.39% |
| 2038 | 151.1 | 0.47% | 146.9 | 0.36% | 838.0 | 0.34% | 63.31% |
| 2039 | 151.8 | 0.46% | 147.4 | 0.35% | 841.0 | 0.36% | 63.24% |
| 2040 | 152.5 | 0.46% | 148.0 | 0.36% | 844.0 | 0.36% | 63.01% |
| 2041 | 153.2 | 0.46% | 148.6 | 0.40% | 847.1 | 0.36% | 63.12% |
| 2042 | 153.8 | 0.39% | 149.2 | 0.39% | 850.2 | 0.37% | 63.10% |
| 2043 | 154.5 | 0.46% | 149.7 | 0.37% | 853.3 | 0.37% | 63.05% |

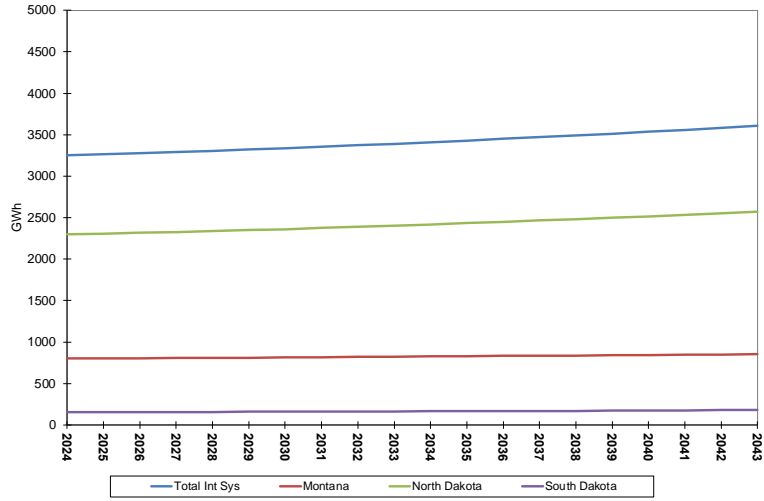
**Montana-Dakota Utilities Co.
Forecasted Energy (MWh) and
Seasonal Demands (MW) Prior to Demand Response
North Dakota**

| <u>Year</u> | <u>Summer Peak net of Energy Efficiency Programs</u> | | <u>Winter Peak net of Energy Efficiency Programs</u> | | <u>Annual Energy Requirments</u> | | <u>Load Factor (%)</u> |
|-------------|--|--------------|--|--------------|--------------------------------------|--------------|--------------------------------|
| | <u>(MW)</u> | <u>% Chg</u> | <u>(MW)</u> | <u>% Chg</u> | <u>(GWh)</u> | <u>% Chg</u> | |
| 2024 | 404.7 | | 402.2 | | 2,297.3 | | 64.62% |
| 2025 | 407.2 | 0.62% | 403.8 | 0.40% | 2,306.1 | 0.38% | 64.65% |
| 2026 | 409.9 | 0.66% | 405.5 | 0.42% | 2,316.2 | 0.44% | 64.50% |
| 2027 | 412.8 | 0.71% | 407.6 | 0.52% | 2,327.5 | 0.49% | 64.37% |
| 2028 | 415.5 | 0.65% | 409.4 | 0.44% | 2,337.7 | 0.44% | 64.05% |
| 2029 | 418.3 | 0.67% | 411.4 | 0.49% | 2,349.1 | 0.49% | 64.11% |
| 2030 | 421.1 | 0.67% | 413.2 | 0.44% | 2,359.5 | 0.44% | 63.96% |
| 2031 | 424.3 | 0.76% | 415.9 | 0.65% | 2,374.1 | 0.62% | 63.87% |
| 2032 | 427.6 | 0.78% | 418.5 | 0.63% | 2,388.9 | 0.62% | 63.60% |
| 2033 | 430.8 | 0.75% | 421.2 | 0.65% | 2,403.8 | 0.62% | 63.70% |
| 2034 | 434.1 | 0.77% | 423.9 | 0.64% | 2,418.7 | 0.62% | 63.60% |
| 2035 | 437.4 | 0.76% | 426.5 | 0.61% | 2,433.7 | 0.62% | 63.52% |
| 2036 | 440.8 | 0.78% | 429.5 | 0.70% | 2,450.0 | 0.67% | 63.28% |
| 2037 | 444.2 | 0.77% | 432.3 | 0.65% | 2,466.3 | 0.67% | 63.38% |
| 2038 | 447.7 | 0.79% | 435.3 | 0.69% | 2,482.5 | 0.65% | 63.30% |
| 2039 | 451.1 | 0.76% | 438.1 | 0.64% | 2,498.9 | 0.66% | 63.24% |
| 2040 | 454.5 | 0.75% | 441.1 | 0.68% | 2,515.5 | 0.67% | 63.01% |
| 2041 | 458.3 | 0.84% | 444.5 | 0.77% | 2,534.5 | 0.76% | 63.13% |
| 2042 | 462.0 | 0.81% | 448.0 | 0.79% | 2,553.6 | 0.75% | 63.10% |
| 2043 | 465.8 | 0.82% | 451.4 | 0.76% | 2,572.8 | 0.75% | 63.05% |

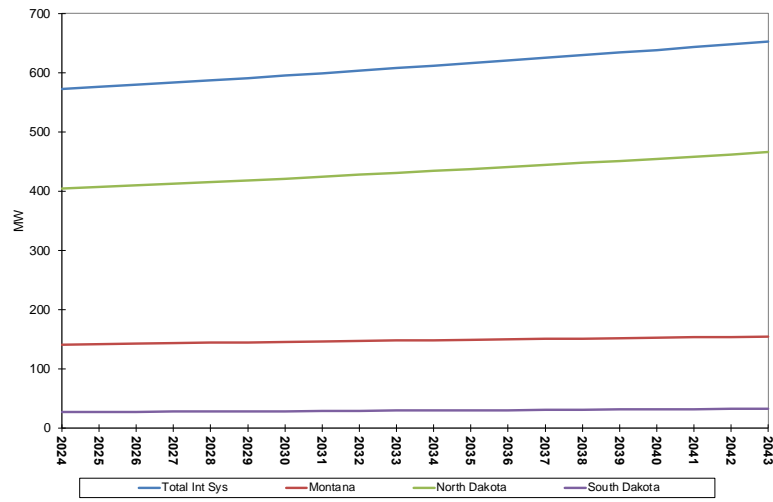
**Montana-Dakota Utilities Co.
Forecasted Energy (MWh) and
Seasonal Demands (MW) Prior to Demand Response
South Dakota**

| <u>Year</u> | <u>Summer Peak net of Energy Efficiency Programs</u> | | <u>Winter Peak net of Energy Efficiency Programs</u> | | <u>Annual Energy Requirments</u> | | <u>Load Factor (%)</u> |
|-------------|--|--------------|--|--------------|--------------------------------------|--------------|--------------------------------|
| | <u>(MW)</u> | <u>% Chg</u> | <u>(MW)</u> | <u>% Chg</u> | <u>(GWh)</u> | <u>% Chg</u> | |
| 2024 | 27.0 | | 26.9 | | 153.6 | | 64.76% |
| 2025 | 27.3 | 1.11% | 27.0 | 0.37% | 154.4 | 0.49% | 64.54% |
| 2026 | 27.5 | 0.73% | 27.2 | 0.74% | 155.4 | 0.67% | 64.50% |
| 2027 | 27.7 | 0.73% | 27.4 | 0.74% | 156.4 | 0.66% | 64.46% |
| 2028 | 28.0 | 1.08% | 27.6 | 0.73% | 157.4 | 0.62% | 63.99% |
| 2029 | 28.2 | 0.71% | 27.7 | 0.36% | 158.4 | 0.67% | 64.14% |
| 2030 | 28.4 | 0.71% | 27.9 | 0.72% | 159.5 | 0.69% | 64.13% |
| 2031 | 28.8 | 1.41% | 28.2 | 1.08% | 160.9 | 0.85% | 63.78% |
| 2032 | 29.0 | 0.69% | 28.4 | 0.71% | 162.3 | 0.87% | 63.71% |
| 2033 | 29.4 | 1.38% | 28.7 | 1.06% | 163.7 | 0.85% | 63.55% |
| 2034 | 29.6 | 0.68% | 28.9 | 0.70% | 165.1 | 0.85% | 63.66% |
| 2035 | 29.9 | 1.01% | 29.1 | 0.69% | 166.5 | 0.86% | 63.56% |
| 2036 | 30.2 | 1.00% | 29.5 | 1.37% | 168.0 | 0.93% | 63.34% |
| 2037 | 30.6 | 1.32% | 29.8 | 1.02% | 169.6 | 0.92% | 63.26% |
| 2038 | 30.9 | 0.98% | 30.0 | 0.67% | 171.1 | 0.90% | 63.21% |
| 2039 | 31.2 | 0.97% | 30.3 | 1.00% | 172.7 | 0.91% | 63.17% |
| 2040 | 31.5 | 0.96% | 30.6 | 0.99% | 174.2 | 0.92% | 62.97% |
| 2041 | 31.8 | 0.95% | 30.9 | 0.98% | 176.1 | 1.04% | 63.20% |
| 2042 | 32.2 | 1.26% | 31.2 | 0.97% | 177.9 | 1.04% | 63.06% |
| 2043 | 32.5 | 0.93% | 31.5 | 0.96% | 179.7 | 1.03% | 63.13% |

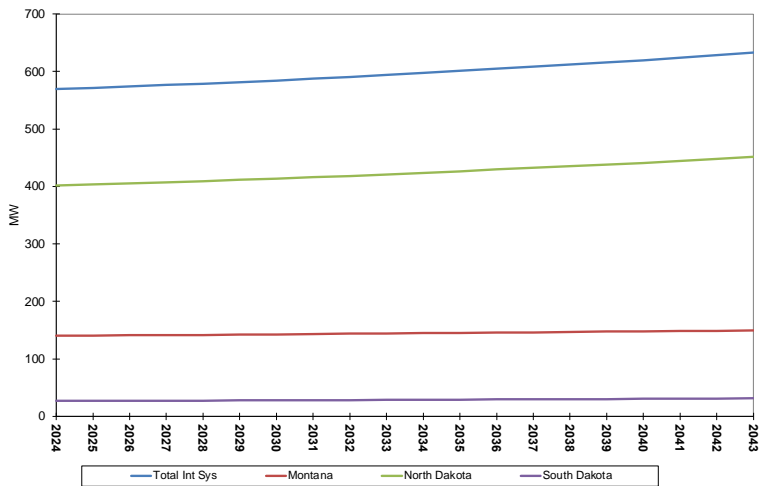
Montana-Dakota Integrated System
Forecast of Annual Energy by State



Montana-Dakota Integrated System
Forecast of Summer Peak Demand (Prior to Demand Response)
by State



Montana-Dakota Integrated System
Forecast of Winter Peak Demand by State



APPENDIX D

Monthly Forecasts – Montana (2024-2033)

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

MONTANA YEAR 2024

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 977.6 | 913.3 | 820.4 | 655.9 | 568.8 | 754.4 | 945.2 | 862.2 | 640.5 | 632.9 | 792.0 | 937.0 | 9,500.7 |
| # of Residential Customers | 19,738 | 19,733 | 19,727 | 19,722 | 19,691 | 19,683 | 19,681 | 19,675 | 19,670 | 19,673 | 19,671 | 19,676 | 19,695 |
| Total Residential Sales - MWh | 19,295 | 18,023 | 16,185 | 12,936 | 11,200 | 14,849 | 18,602 | 16,963 | 12,598 | 12,451 | 15,579 | 18,436 | 187,117 |
| Use per Small Comm & Ind Customer - kWh | 2,334.5 | 2,234.7 | 2,161.2 | 1,793.1 | 1,638.0 | 1,925.0 | 2,344.4 | 2,267.7 | 1,895.0 | 1,771.5 | 1,946.1 | 2,204.5 | 24,508.7 |
| # of Small Comm & Ind Customers | 5,340 | 5,334 | 5,330 | 5,384 | 5,436 | 5,456 | 5,462 | 5,458 | 5,449 | 5,409 | 5,378 | 5,365 | 5,400 |
| Total Small Comm & Ind Sales - MWh | 12,466 | 11,920 | 11,519 | 9,654 | 8,904 | 10,503 | 12,805 | 12,377 | 10,326 | 9,582 | 10,466 | 11,827 | 132,349 |
| Large Comm & Ind Sales | 37,360 | 33,566 | 36,075 | 33,078 | 34,572 | 30,530 | 33,959 | 33,273 | 33,211 | 34,291 | 34,286 | 36,619 | 410,820 |
| Total Sales (Residential, SC&I and LC&I) | 69,121 | 63,509 | 63,779 | 55,668 | 54,676 | 55,882 | 65,366 | 62,613 | 56,135 | 56,324 | 60,331 | 66,882 | 730,286 |
| Other Public Sales | 482 | 475 | 498 | 442 | 472 | 633 | 744 | 718 | 577 | 453 | 451 | 484 | 6,429 |
| Street & Highway Lighting Sales | 299 | 269 | 273 | 248 | 210 | 224 | 217 | 213 | 217 | 216 | 224 | 305 | 2,915 |
| Interdepartmental Sales | 14 | 13 | 12 | 10 | 8 | 10 | 10 | 8 | 9 | 9 | 11 | 13 | 127 |
| Total Billed Sales - MWh | 69,916 | 64,266 | 64,562 | 56,368 | 55,366 | 56,749 | 66,337 | 63,552 | 56,938 | 57,002 | 61,017 | 67,684 | 739,757 |
| Company Use | 97 | 78 | 67 | 53 | 41 | 50 | 58 | 54 | 49 | 52 | 63 | 86 | 748 |
| Total Energy | 70,013 | 64,344 | 64,629 | 56,421 | 55,407 | 56,799 | 66,395 | 63,606 | 56,987 | 57,054 | 61,080 | 67,770 | 740,505 |
| Total Requirements (Energy + Losses) | 75,717 | 69,586 | 69,894 | 61,018 | 59,921 | 61,426 | 71,804 | 68,788 | 61,630 | 61,702 | 66,056 | 73,291 | 800,833 |
| # of Large Comm & Ind Customers | 254 | 253 | 253 | 253 | 256 | 256 | 257 | 258 | 257 | 255 | 254 | 253 | 255 |
| # of Other Public Customers | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 |
| # of Street & Highway Lighting Customers | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 |
| Peak Demand Net of Energy Efficiency Progs | 141.2 | 124.6 | 112.0 | 104.2 | 91.2 | 119.7 | 141.1 | 132.4 | 111.2 | 99.2 | 116.8 | 129.0 | 141.2 |

D-1

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

MONTANA YEAR 2025

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 981.1 | 916.6 | 823.4 | 658.2 | 570.8 | 757.2 | 948.6 | 865.3 | 642.8 | 635.2 | 794.9 | 938.9 | 9,533.6 |
| # of Residential Customers | 19,738 | 19,733 | 19,727 | 19,722 | 19,691 | 19,683 | 19,681 | 19,675 | 19,670 | 19,673 | 19,671 | 19,676 | 19,695 |
| Total Residential Sales - MWh | 19,365 | 18,088 | 16,243 | 12,982 | 11,240 | 14,903 | 18,669 | 17,024 | 12,644 | 12,497 | 15,636 | 18,473 | 187,764 |
| Use per Small Comm & Ind Customer - kWh | 2,339.4 | 2,239.4 | 2,165.5 | 1,796.7 | 1,641.2 | 1,929.1 | 2,349.4 | 2,272.6 | 1,899.2 | 1,775.3 | 1,950.1 | 2,209.5 | 24,560.6 |
| # of Small Comm & Ind Customers | 5,356 | 5,350 | 5,346 | 5,400 | 5,452 | 5,472 | 5,478 | 5,474 | 5,465 | 5,425 | 5,394 | 5,380 | 5,416 |
| Total Small Comm & Ind Sales - MWh | 12,530 | 11,981 | 11,577 | 9,702 | 8,948 | 10,556 | 12,870 | 12,440 | 10,379 | 9,631 | 10,519 | 11,887 | 133,020 |
| Large Comm & Ind Sales | 37,445 | 33,643 | 36,157 | 33,149 | 34,646 | 30,596 | 34,034 | 33,346 | 33,284 | 34,368 | 34,363 | 36,719 | 411,750 |
| Total Sales (Residential, SC&I and LC&I) | 69,340 | 63,712 | 63,977 | 55,833 | 54,834 | 56,055 | 65,573 | 62,810 | 56,307 | 56,496 | 60,518 | 67,079 | 732,534 |
| Other Public Sales | 482 | 475 | 498 | 442 | 472 | 633 | 744 | 718 | 577 | 453 | 451 | 484 | 6,429 |
| Street & Highway Lighting Sales | 299 | 269 | 273 | 248 | 210 | 224 | 217 | 213 | 217 | 216 | 224 | 305 | 2,915 |
| Interdepartmental Sales | 14 | 13 | 12 | 10 | 8 | 10 | 10 | 8 | 9 | 9 | 11 | 13 | 127 |
| Total Billed Sales - MWh | 70,135 | 64,469 | 64,760 | 56,533 | 55,524 | 56,922 | 66,544 | 63,749 | 57,110 | 57,174 | 61,204 | 67,881 | 742,005 |
| Company Use | 97 | 78 | 67 | 53 | 41 | 50 | 58 | 54 | 49 | 52 | 63 | 86 | 748 |
| Total Energy | 70,232 | 64,547 | 64,827 | 56,586 | 55,565 | 56,972 | 66,602 | 63,803 | 57,159 | 57,226 | 61,267 | 67,967 | 742,753 |
| Total Requirements (Energy + Losses) | 75,954 | 69,806 | 70,108 | 61,196 | 60,092 | 61,614 | 72,028 | 69,001 | 61,816 | 61,888 | 66,258 | 73,504 | 803,265 |
| # of Large Comm & Ind Customers | 254 | 253 | 253 | 253 | 256 | 256 | 257 | 258 | 257 | 255 | 254 | 253 | 255 |
| # of Other Public Customers | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 |
| # of Street & Highway Lighting Customers | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 |
| Peak Demand Net of Energy Efficiency Progs | 140.2 | 123.7 | 111.2 | 103.5 | 91.7 | 120.3 | 141.8 | 133.1 | 111.8 | 99.7 | 117.2 | 129.4 | 141.8 |

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

MONTANA YEAR 2026

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 982.4 | 917.9 | 824.5 | 659.2 | 571.6 | 758.2 | 949.9 | 866.4 | 643.7 | 636.1 | 795.9 | 940.1 | 9,546.5 |
| # of Residential Customers | 19,738 | 19,733 | 19,727 | 19,722 | 19,691 | 19,683 | 19,681 | 19,675 | 19,670 | 19,673 | 19,671 | 19,676 | 19,695 |
| Total Residential Sales - MWh | 19,391 | 18,113 | 16,265 | 13,000 | 11,255 | 14,923 | 18,694 | 17,047 | 12,661 | 12,514 | 15,657 | 18,498 | 188,018 |
| Use per Small Comm & Ind Customer - kWh | 2,344.6 | 2,244.5 | 2,170.7 | 1,800.9 | 1,645.1 | 1,933.7 | 2,354.8 | 2,277.8 | 1,903.5 | 1,779.4 | 1,954.7 | 2,214.5 | 24,617.4 |
| # of Small Comm & Ind Customers | 5,371 | 5,365 | 5,360 | 5,415 | 5,467 | 5,487 | 5,493 | 5,489 | 5,480 | 5,440 | 5,409 | 5,395 | 5,431 |
| Total Small Comm & Ind Sales - MWh | 12,593 | 12,042 | 11,635 | 9,752 | 8,994 | 10,610 | 12,935 | 12,503 | 10,431 | 9,680 | 10,573 | 11,947 | 133,695 |
| Large Comm & Ind Sales | 37,571 | 33,756 | 36,277 | 33,256 | 34,757 | 30,694 | 34,143 | 33,453 | 33,392 | 34,480 | 34,478 | 36,842 | 413,099 |
| Total Sales (Residential, SC&I and LC&I) | 69,555 | 63,911 | 64,177 | 56,008 | 55,006 | 56,227 | 65,772 | 63,003 | 56,484 | 56,674 | 60,708 | 67,287 | 734,812 |
| Other Public Sales | 482 | 475 | 498 | 442 | 472 | 633 | 744 | 718 | 577 | 453 | 451 | 484 | 6,429 |
| Street & Highway Lighting Sales | 299 | 269 | 273 | 248 | 210 | 224 | 217 | 213 | 217 | 216 | 224 | 305 | 2,915 |
| Interdepartmental Sales | 14 | 13 | 12 | 10 | 8 | 10 | 10 | 8 | 9 | 9 | 11 | 13 | 127 |
| Total Billed Sales - MWh | 70,350 | 64,668 | 64,960 | 56,708 | 55,696 | 57,094 | 66,743 | 63,942 | 57,287 | 57,352 | 61,394 | 68,089 | 744,283 |
| Company Use | 97 | 78 | 67 | 53 | 41 | 50 | 58 | 54 | 49 | 52 | 63 | 86 | 748 |
| Total Energy | 70,447 | 64,746 | 65,027 | 56,761 | 55,737 | 57,144 | 66,801 | 63,996 | 57,336 | 57,404 | 61,457 | 68,175 | 745,031 |
| Total Requirements (Energy + Losses) | 76,186 | 70,021 | 70,325 | 61,385 | 60,278 | 61,800 | 72,243 | 69,210 | 62,007 | 62,081 | 66,464 | 73,729 | 805,729 |
| # of Large Comm & Ind Customers | 255 | 254 | 254 | 254 | 257 | 257 | 258 | 259 | 258 | 256 | 255 | 254 | 256 |
| # of Other Public Customers | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 |
| # of Street & Highway Lighting Customers | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 |
| Peak Demand Net of Energy Efficiency Progs | 140.6 | 124.1 | 111.6 | 103.8 | 92.2 | 120.9 | 142.6 | 133.8 | 112.4 | 100.3 | 117.6 | 129.8 | 142.6 |

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

MONTANA YEAR 2027

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 983.7 | 919.1 | 825.6 | 660.1 | 572.4 | 759.2 | 951.1 | 867.6 | 644.5 | 636.9 | 797.0 | 941.4 | 9,559.3 |
| # of Residential Customers | 19,738 | 19,733 | 19,727 | 19,722 | 19,691 | 19,683 | 19,681 | 19,675 | 19,670 | 19,673 | 19,671 | 19,676 | 19,695 |
| Total Residential Sales - MWh | 19,417 | 18,137 | 16,287 | 13,018 | 11,271 | 14,943 | 18,719 | 17,070 | 12,678 | 12,530 | 15,678 | 18,523 | 188,271 |
| Use per Small Comm & Ind Customer - kWh | 2,349.5 | 2,249.4 | 2,175.4 | 1,804.6 | 1,648.6 | 1,937.9 | 2,360.0 | 2,282.2 | 1,907.6 | 1,783.2 | 1,958.7 | 2,217.7 | 24,667.9 |
| # of Small Comm & Ind Customers | 5,387 | 5,380 | 5,376 | 5,431 | 5,483 | 5,503 | 5,509 | 5,506 | 5,496 | 5,456 | 5,425 | 5,411 | 5,447 |
| Total Small Comm & Ind Sales - MWh | 12,657 | 12,102 | 11,695 | 9,801 | 9,039 | 10,664 | 13,001 | 12,566 | 10,484 | 9,729 | 10,626 | 12,000 | 134,364 |
| Large Comm & Ind Sales | 37,698 | 33,871 | 36,399 | 33,364 | 34,868 | 30,794 | 34,255 | 33,563 | 33,501 | 34,595 | 34,594 | 36,952 | 414,454 |
| Total Sales (Residential, SC&I and LC&I) | 69,772 | 64,110 | 64,381 | 56,183 | 55,178 | 56,401 | 65,975 | 63,199 | 56,663 | 56,854 | 60,898 | 67,475 | 737,089 |
| Other Public Sales | 482 | 475 | 498 | 442 | 472 | 633 | 744 | 718 | 577 | 453 | 451 | 484 | 6,429 |
| Street & Highway Lighting Sales | 299 | 269 | 273 | 248 | 210 | 224 | 217 | 213 | 217 | 216 | 224 | 305 | 2,915 |
| Interdepartmental Sales | 14 | 13 | 12 | 10 | 8 | 10 | 10 | 8 | 9 | 9 | 11 | 13 | 127 |
| Total Billed Sales - MWh | 70,567 | 64,867 | 65,164 | 56,883 | 55,868 | 57,268 | 66,946 | 64,138 | 57,466 | 57,532 | 61,584 | 68,277 | 746,560 |
| Company Use | 97 | 78 | 67 | 53 | 41 | 50 | 58 | 54 | 49 | 52 | 63 | 86 | 748 |
| Total Energy | 70,664 | 64,945 | 65,231 | 56,936 | 55,909 | 57,318 | 67,004 | 64,192 | 57,515 | 57,584 | 61,647 | 68,363 | 747,308 |
| Total Requirements (Energy + Losses) | 76,421 | 70,236 | 70,545 | 61,575 | 60,464 | 61,988 | 72,463 | 69,422 | 62,201 | 62,275 | 66,669 | 73,933 | 808,192 |
| # of Large Comm & Ind Customers | 256 | 255 | 255 | 255 | 258 | 258 | 259 | 260 | 259 | 257 | 256 | 255 | 257 |
| # of Other Public Customers | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 |
| # of Street & Highway Lighting Customers | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 |
| Peak Demand Net of Energy Efficiency Progs | 141.1 | 124.5 | 112.0 | 104.1 | 92.7 | 121.5 | 143.3 | 134.5 | 113.0 | 100.7 | 118.0 | 130.2 | 143.3 |

D-4

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

MONTANA YEAR 2028

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 985.1 | 920.3 | 826.7 | 660.9 | 573.2 | 760.2 | 952.4 | 868.8 | 645.4 | 637.8 | 798.1 | 942.6 | 9,572.2 |
| # of Residential Customers | 19,738 | 19,733 | 19,727 | 19,722 | 19,691 | 19,683 | 19,681 | 19,675 | 19,670 | 19,673 | 19,671 | 19,676 | 19,695 |
| Total Residential Sales - MWh | 19,443 | 18,161 | 16,309 | 13,035 | 11,286 | 14,964 | 18,745 | 17,093 | 12,695 | 12,547 | 15,700 | 18,547 | 188,525 |
| Use per Small Comm & Ind Customer - kWh | 2,352.5 | 2,252.3 | 2,178.1 | 1,807.0 | 1,650.8 | 1,940.0 | 2,362.5 | 2,285.3 | 1,909.7 | 1,785.4 | 1,961.2 | 2,221.9 | 24,699.7 |
| # of Small Comm & Ind Customers | 5,402 | 5,395 | 5,391 | 5,446 | 5,498 | 5,519 | 5,525 | 5,521 | 5,512 | 5,471 | 5,440 | 5,426 | 5,462 |
| Total Small Comm & Ind Sales - MWh | 12,708 | 12,151 | 11,742 | 9,841 | 9,076 | 10,707 | 13,053 | 12,617 | 10,526 | 9,768 | 10,669 | 12,056 | 134,914 |
| Large Comm & Ind Sales | 37,791 | 33,954 | 36,486 | 33,441 | 34,949 | 30,865 | 34,335 | 33,641 | 33,580 | 34,677 | 34,678 | 37,057 | 415,454 |
| Total Sales (Residential, SC&I and LC&I) | 69,942 | 64,266 | 64,537 | 56,317 | 55,311 | 56,536 | 66,133 | 63,351 | 56,801 | 56,992 | 61,047 | 67,660 | 738,893 |
| Other Public Sales | 482 | 475 | 498 | 442 | 472 | 633 | 744 | 718 | 577 | 453 | 451 | 484 | 6,429 |
| Street & Highway Lighting Sales | 299 | 269 | 273 | 248 | 210 | 224 | 217 | 213 | 217 | 216 | 224 | 305 | 2,915 |
| Interdepartmental Sales | 14 | 13 | 12 | 10 | 8 | 10 | 10 | 8 | 9 | 9 | 11 | 13 | 127 |
| Total Billed Sales - MWh | 70,737 | 65,023 | 65,320 | 57,017 | 56,001 | 57,403 | 67,104 | 64,290 | 57,604 | 57,670 | 61,733 | 68,462 | 748,364 |
| Company Use | 97 | 78 | 67 | 53 | 41 | 50 | 58 | 54 | 49 | 52 | 63 | 86 | 748 |
| Total Energy | 70,834 | 65,101 | 65,387 | 57,070 | 56,042 | 57,453 | 67,162 | 64,344 | 57,653 | 57,722 | 61,796 | 68,548 | 749,112 |
| Total Requirements (Energy + Losses) | 76,605 | 70,405 | 70,714 | 61,719 | 60,608 | 62,134 | 72,634 | 69,586 | 62,350 | 62,425 | 66,831 | 74,133 | 810,144 |
| # of Large Comm & Ind Customers | 256 | 255 | 255 | 255 | 258 | 258 | 259 | 260 | 259 | 257 | 256 | 255 | 257 |
| # of Other Public Customers | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 |
| # of Street & Highway Lighting Customers | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 |
| Peak Demand Net of Energy Efficiency Progs | 141.5 | 124.9 | 112.3 | 104.5 | 93.1 | 122.1 | 144.0 | 135.1 | 113.5 | 101.2 | 118.2 | 130.5 | 144.0 |

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

MONTANA YEAR 2029

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 986.4 | 921.6 | 827.9 | 661.8 | 573.9 | 761.2 | 953.7 | 869.9 | 646.3 | 638.6 | 799.2 | 943.9 | 9,585.1 |
| # of Residential Customers | 19,738 | 19,733 | 19,727 | 19,722 | 19,691 | 19,683 | 19,681 | 19,675 | 19,670 | 19,673 | 19,671 | 19,676 | 19,695 |
| Total Residential Sales - MWh | 19,469 | 18,186 | 16,331 | 13,052 | 11,301 | 14,983 | 18,770 | 17,116 | 12,712 | 12,564 | 15,721 | 18,573 | 188,778 |
| Use per Small Comm & Ind Customer - kWh | 2,357.8 | 2,257.1 | 2,182.5 | 1,810.7 | 1,654.2 | 1,944.2 | 2,367.8 | 2,290.0 | 1,913.7 | 1,789.1 | 1,965.4 | 2,226.6 | 24,752.1 |
| # of Small Comm & Ind Customers | 5,417 | 5,411 | 5,407 | 5,462 | 5,514 | 5,535 | 5,541 | 5,537 | 5,528 | 5,487 | 5,456 | 5,442 | 5,478 |
| Total Small Comm & Ind Sales - MWh | 12,772 | 12,213 | 11,801 | 9,890 | 9,121 | 10,761 | 13,120 | 12,680 | 10,579 | 9,817 | 10,723 | 12,117 | 135,594 |
| Large Comm & Ind Sales | 37,917 | 34,068 | 36,608 | 33,548 | 35,060 | 30,964 | 34,446 | 33,751 | 33,689 | 34,791 | 34,793 | 37,182 | 416,817 |
| Total Sales (Residential, SC&I and LC&I) | 70,158 | 64,467 | 64,740 | 56,490 | 55,482 | 56,708 | 66,336 | 63,547 | 56,980 | 57,172 | 61,237 | 67,872 | 741,189 |
| Other Public Sales | 482 | 475 | 498 | 442 | 472 | 633 | 744 | 718 | 577 | 453 | 451 | 484 | 6,429 |
| Street & Highway Lighting Sales | 299 | 269 | 273 | 248 | 210 | 224 | 217 | 213 | 217 | 216 | 224 | 305 | 2,915 |
| Interdepartmental Sales | 14 | 13 | 12 | 10 | 8 | 10 | 10 | 8 | 9 | 9 | 11 | 13 | 127 |
| Total Billed Sales - MWh | 70,953 | 65,224 | 65,523 | 57,190 | 56,172 | 57,575 | 67,307 | 64,486 | 57,783 | 57,850 | 61,923 | 68,674 | 750,660 |
| Company Use | 97 | 78 | 67 | 53 | 41 | 50 | 58 | 54 | 49 | 52 | 63 | 86 | 748 |
| Total Energy | 71,050 | 65,302 | 65,590 | 57,243 | 56,213 | 57,625 | 67,365 | 64,540 | 57,832 | 57,902 | 61,986 | 68,760 | 751,408 |
| Total Requirements (Energy + Losses) | 76,838 | 70,622 | 70,934 | 61,907 | 60,793 | 62,320 | 72,853 | 69,798 | 62,544 | 62,619 | 67,036 | 74,362 | 812,626 |
| # of Large Comm & Ind Customers | 257 | 256 | 256 | 256 | 259 | 259 | 260 | 261 | 260 | 258 | 257 | 256 | 258 |
| # of Other Public Customers | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 |
| # of Street & Highway Lighting Customers | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 |
| Peak Demand Net of Energy Efficiency Progs | 141.9 | 125.2 | 112.6 | 104.7 | 93.6 | 122.7 | 144.7 | 135.8 | 114.1 | 101.7 | 118.6 | 131.0 | 144.7 |

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

MONTANA YEAR 2030

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 987.8 | 922.9 | 829.0 | 662.7 | 574.7 | 762.3 | 955.0 | 871.1 | 647.2 | 639.5 | 800.3 | 946.1 | 9,599.2 |
| # of Residential Customers | 19,738 | 19,733 | 19,727 | 19,722 | 19,691 | 19,683 | 19,681 | 19,675 | 19,670 | 19,673 | 19,671 | 19,676 | 19,695 |
| Total Residential Sales - MWh | 19,497 | 18,211 | 16,353 | 13,070 | 11,316 | 15,004 | 18,796 | 17,139 | 12,730 | 12,581 | 15,743 | 18,616 | 189,056 |
| Use per Small Comm & Ind Customer - kWh | 2,363.2 | 2,262.1 | 2,187.6 | 1,815.2 | 1,658.2 | 1,948.6 | 2,373.1 | 2,295.4 | 1,918.3 | 1,793.3 | 1,969.8 | 2,231.6 | 24,809.6 |
| # of Small Comm & Ind Customers | 5,432 | 5,426 | 5,422 | 5,476 | 5,529 | 5,550 | 5,556 | 5,552 | 5,543 | 5,502 | 5,471 | 5,457 | 5,493 |
| Total Small Comm & Ind Sales - MWh | 12,837 | 12,274 | 11,861 | 9,940 | 9,168 | 10,815 | 13,185 | 12,744 | 10,633 | 9,867 | 10,777 | 12,178 | 136,279 |
| Large Comm & Ind Sales | 38,047 | 34,185 | 36,732 | 33,658 | 35,173 | 31,064 | 34,558 | 33,861 | 33,800 | 34,907 | 34,911 | 37,303 | 418,199 |
| Total Sales (Residential, SC&I and LC&I) | 70,381 | 64,670 | 64,946 | 56,668 | 55,657 | 56,883 | 66,539 | 63,744 | 57,163 | 57,355 | 61,431 | 68,097 | 743,534 |
| Other Public Sales | 482 | 475 | 498 | 442 | 472 | 633 | 744 | 718 | 577 | 453 | 451 | 484 | 6,429 |
| Street & Highway Lighting Sales | 299 | 269 | 273 | 248 | 210 | 224 | 217 | 213 | 217 | 216 | 224 | 305 | 2,915 |
| Interdepartmental Sales | 14 | 13 | 12 | 10 | 8 | 10 | 10 | 8 | 9 | 9 | 11 | 13 | 127 |
| Total Billed Sales - MWh | 71,176 | 65,427 | 65,729 | 57,368 | 56,347 | 57,750 | 67,510 | 64,683 | 57,966 | 58,033 | 62,117 | 68,899 | 753,005 |
| Company Use | 97 | 78 | 67 | 53 | 41 | 50 | 58 | 54 | 49 | 52 | 63 | 86 | 748 |
| Total Energy | 71,273 | 65,505 | 65,796 | 57,421 | 56,388 | 57,800 | 67,568 | 64,737 | 58,015 | 58,085 | 62,180 | 68,985 | 753,753 |
| Total Requirements (Energy + Losses) | 77,080 | 70,842 | 71,156 | 62,099 | 60,982 | 62,509 | 73,073 | 70,011 | 62,741 | 62,817 | 67,246 | 74,605 | 815,161 |
| # of Large Comm & Ind Customers | 258 | 257 | 257 | 257 | 260 | 260 | 261 | 262 | 261 | 259 | 258 | 257 | 259 |
| # of Other Public Customers | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 |
| # of Street & Highway Lighting Customers | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 |
| Peak Demand Net of Energy Efficiency Progs | 142.4 | 125.6 | 112.9 | 105.1 | 94.1 | 123.4 | 145.5 | 136.6 | 114.7 | 102.3 | 119.0 | 131.3 | 145.5 |

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

MONTANA YEAR 2031

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 990.4 | 925.4 | 831.2 | 664.5 | 576.3 | 764.4 | 957.6 | 873.5 | 648.9 | 641.2 | 802.5 | 948.7 | 9,625.1 |
| # of Residential Customers | 19,738 | 19,733 | 19,727 | 19,722 | 19,691 | 19,683 | 19,681 | 19,675 | 19,670 | 19,673 | 19,671 | 19,676 | 19,695 |
| Total Residential Sales - MWh | 19,549 | 18,260 | 16,398 | 13,105 | 11,347 | 15,045 | 18,846 | 17,186 | 12,764 | 12,615 | 15,785 | 18,666 | 189,566 |
| Use per Small Comm & Ind Customer - kWh | 2,368.2 | 2,267.0 | 2,192.4 | 1,819.0 | 1,661.7 | 1,952.9 | 2,378.3 | 2,300.5 | 1,922.3 | 1,797.2 | 1,973.9 | 2,236.4 | 24,863.0 |
| # of Small Comm & Ind Customers | 5,448 | 5,442 | 5,437 | 5,492 | 5,545 | 5,566 | 5,572 | 5,568 | 5,559 | 5,518 | 5,487 | 5,473 | 5,509 |
| Total Small Comm & Ind Sales - MWh | 12,902 | 12,337 | 11,920 | 9,990 | 9,214 | 10,870 | 13,252 | 12,809 | 10,686 | 9,917 | 10,831 | 12,240 | 136,968 |
| Large Comm & Ind Sales | 38,164 | 34,291 | 36,844 | 33,757 | 35,276 | 31,156 | 34,660 | 33,962 | 33,902 | 35,012 | 35,018 | 37,424 | 419,466 |
| Total Sales (Residential, SC&I and LC&I) | 70,615 | 64,888 | 65,162 | 56,852 | 55,837 | 57,071 | 66,758 | 63,957 | 57,352 | 57,544 | 61,634 | 68,330 | 746,000 |
| Other Public Sales | 482 | 475 | 498 | 442 | 472 | 633 | 744 | 718 | 577 | 453 | 451 | 484 | 6,429 |
| Street & Highway Lighting Sales | 299 | 269 | 273 | 248 | 210 | 224 | 217 | 213 | 217 | 216 | 224 | 305 | 2,915 |
| Interdepartmental Sales | 14 | 13 | 12 | 10 | 8 | 10 | 10 | 8 | 9 | 9 | 11 | 13 | 127 |
| Total Billed Sales - MWh | 71,410 | 65,645 | 65,945 | 57,552 | 56,527 | 57,938 | 67,729 | 64,896 | 58,155 | 58,222 | 62,320 | 69,132 | 755,471 |
| Company Use | 97 | 78 | 67 | 53 | 41 | 50 | 58 | 54 | 49 | 52 | 63 | 86 | 748 |
| Total Energy | 71,507 | 65,723 | 66,012 | 57,605 | 56,568 | 57,988 | 67,787 | 64,950 | 58,204 | 58,274 | 62,383 | 69,218 | 756,219 |
| Total Requirements (Energy + Losses) | 77,333 | 71,077 | 71,390 | 62,298 | 61,177 | 62,712 | 73,310 | 70,241 | 62,946 | 63,022 | 67,465 | 74,857 | 817,828 |
| # of Large Comm & Ind Customers | 259 | 258 | 258 | 258 | 261 | 261 | 262 | 263 | 262 | 260 | 259 | 258 | 260 |
| # of Other Public Customers | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 |
| # of Street & Highway Lighting Customers | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 |
| Peak Demand Net of Energy Efficiency Progs | 142.8 | 126.0 | 113.3 | 105.4 | 94.5 | 124.0 | 146.2 | 137.2 | 115.3 | 102.8 | 119.4 | 131.8 | 146.2 |

D-8

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

MONTANA YEAR 2032

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 993.1 | 927.8 | 833.5 | 666.3 | 577.8 | 766.4 | 960.2 | 875.8 | 650.6 | 643.0 | 804.6 | 951.3 | 9,651.0 |
| # of Residential Customers | 19,738 | 19,733 | 19,727 | 19,722 | 19,691 | 19,683 | 19,681 | 19,675 | 19,670 | 19,673 | 19,671 | 19,676 | 19,695 |
| Total Residential Sales - MWh | 19,602 | 18,309 | 16,442 | 13,141 | 11,377 | 15,085 | 18,897 | 17,232 | 12,798 | 12,649 | 15,828 | 18,717 | 190,077 |
| Use per Small Comm & Ind Customer - kWh | 2,373.6 | 2,272.1 | 2,197.5 | 1,823.3 | 1,665.5 | 1,957.5 | 2,383.9 | 2,305.9 | 1,927.0 | 1,801.4 | 1,978.6 | 2,241.4 | 24,920.9 |
| # of Small Comm & Ind Customers | 5,463 | 5,457 | 5,452 | 5,507 | 5,560 | 5,581 | 5,587 | 5,583 | 5,574 | 5,533 | 5,502 | 5,488 | 5,524 |
| Total Small Comm & Ind Sales - MWh | 12,967 | 12,399 | 11,981 | 10,041 | 9,260 | 10,925 | 13,319 | 12,874 | 10,741 | 9,967 | 10,886 | 12,301 | 137,661 |
| Large Comm & Ind Sales | 38,297 | 34,409 | 36,970 | 33,869 | 35,391 | 31,258 | 34,775 | 34,075 | 34,014 | 35,130 | 35,137 | 37,552 | 420,877 |
| Total Sales (Residential, SC&I and LC&I) | 70,866 | 65,117 | 65,393 | 57,051 | 56,028 | 57,268 | 66,991 | 64,181 | 57,553 | 57,746 | 61,851 | 68,570 | 748,615 |
| Other Public Sales | 482 | 475 | 498 | 442 | 472 | 633 | 744 | 718 | 577 | 453 | 451 | 484 | 6,429 |
| Street & Highway Lighting Sales | 299 | 269 | 273 | 248 | 210 | 224 | 217 | 213 | 217 | 216 | 224 | 305 | 2,915 |
| Interdepartmental Sales | 14 | 13 | 12 | 10 | 8 | 10 | 10 | 8 | 9 | 9 | 11 | 13 | 127 |
| Total Billed Sales - MWh | 71,661 | 65,874 | 66,176 | 57,751 | 56,718 | 58,135 | 67,962 | 65,120 | 58,356 | 58,424 | 62,537 | 69,372 | 758,086 |
| Company Use | 97 | 78 | 67 | 53 | 41 | 50 | 58 | 54 | 49 | 52 | 63 | 86 | 748 |
| Total Energy | 71,758 | 65,952 | 66,243 | 57,804 | 56,759 | 58,185 | 68,020 | 65,174 | 58,405 | 58,476 | 62,600 | 69,458 | 758,834 |
| Total Requirements (Energy + Losses) | 77,604 | 71,325 | 71,640 | 62,513 | 61,383 | 62,925 | 73,562 | 70,484 | 63,163 | 63,240 | 67,700 | 75,117 | 820,656 |
| # of Large Comm & Ind Customers | 259 | 258 | 258 | 258 | 261 | 261 | 262 | 263 | 262 | 260 | 259 | 258 | 260 |
| # of Other Public Customers | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 |
| # of Street & Highway Lighting Customers | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 |
| Peak Demand Net of Energy Efficiency Progs | 143.2 | 126.4 | 113.6 | 105.7 | 95.0 | 124.6 | 146.9 | 137.9 | 115.8 | 103.3 | 119.8 | 132.3 | 146.9 |

D-9

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

MONTANA YEAR 2033

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 995.8 | 930.4 | 835.7 | 668.1 | 579.4 | 768.5 | 962.8 | 878.2 | 652.4 | 644.7 | 806.8 | 953.8 | 9,677.0 |
| # of Residential Customers | 19,738 | 19,733 | 19,727 | 19,722 | 19,691 | 19,683 | 19,681 | 19,675 | 19,670 | 19,673 | 19,671 | 19,676 | 19,695 |
| Total Residential Sales - MWh | 19,655 | 18,359 | 16,486 | 13,176 | 11,408 | 15,126 | 18,948 | 17,279 | 12,832 | 12,683 | 15,870 | 18,766 | 190,588 |
| Use per Small Comm & Ind Customer - kWh | 2,378.5 | 2,277.2 | 2,202.1 | 1,827.1 | 1,669.3 | 1,961.8 | 2,389.3 | 2,310.5 | 1,931.1 | 1,805.2 | 1,982.8 | 2,246.2 | 24,974.2 |
| # of Small Comm & Ind Customers | 5,479 | 5,472 | 5,468 | 5,523 | 5,576 | 5,597 | 5,603 | 5,600 | 5,590 | 5,549 | 5,518 | 5,504 | 5,540 |
| Total Small Comm & Ind Sales - MWh | 13,032 | 12,461 | 12,041 | 10,091 | 9,308 | 10,980 | 13,387 | 12,939 | 10,795 | 10,017 | 10,941 | 12,363 | 138,355 |
| Large Comm & Ind Sales | 38,428 | 34,528 | 37,096 | 33,980 | 35,506 | 31,360 | 34,890 | 34,188 | 34,127 | 35,248 | 35,258 | 37,682 | 422,291 |
| Total Sales (Residential, SC&I and LC&I) | 71,115 | 65,348 | 65,623 | 57,247 | 56,222 | 57,466 | 67,225 | 64,406 | 57,754 | 57,948 | 62,069 | 68,811 | 751,234 |
| Other Public Sales | 482 | 475 | 498 | 442 | 472 | 633 | 744 | 718 | 577 | 453 | 451 | 484 | 6,429 |
| Street & Highway Lighting Sales | 299 | 269 | 273 | 248 | 210 | 224 | 217 | 213 | 217 | 216 | 224 | 305 | 2,915 |
| Interdepartmental Sales | 14 | 13 | 12 | 10 | 8 | 10 | 10 | 8 | 9 | 9 | 11 | 13 | 127 |
| Total Billed Sales - MWh | 71,910 | 66,105 | 66,406 | 57,947 | 56,912 | 58,333 | 68,196 | 65,345 | 58,557 | 58,626 | 62,755 | 69,613 | 760,705 |
| Company Use | 97 | 78 | 67 | 53 | 41 | 50 | 58 | 54 | 49 | 52 | 63 | 86 | 748 |
| Total Energy | 72,007 | 66,183 | 66,473 | 58,000 | 56,953 | 58,383 | 68,254 | 65,399 | 58,606 | 58,678 | 62,818 | 69,699 | 761,453 |
| Total Requirements (Energy + Losses) | 77,873 | 71,575 | 71,889 | 62,725 | 61,593 | 63,139 | 73,815 | 70,727 | 63,381 | 63,458 | 67,936 | 75,377 | 823,488 |
| # of Large Comm & Ind Customers | 260 | 259 | 259 | 259 | 262 | 262 | 263 | 264 | 263 | 261 | 260 | 259 | 261 |
| # of Other Public Customers | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 |
| # of Street & Highway Lighting Customers | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 |
| Peak Demand Net of Energy Efficiency Progs | 143.8 | 126.9 | 114.1 | 106.1 | 95.4 | 125.2 | 147.6 | 138.5 | 116.4 | 103.8 | 120.2 | 132.7 | 147.6 |

D-10

APPENDIX E

Monthly Forecasts - North Dakota (2024-2033)

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

NORTH DAKOTA YEAR 2024

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 1,083.4 | 1,008.7 | 896.4 | 708.0 | 655.7 | 728.6 | 893.2 | 822.3 | 646.2 | 679.5 | 852.4 | 1,025.6 | 10,000.4 |
| # of Residential Customers | 79,404 | 79,424 | 79,408 | 79,400 | 79,367 | 79,378 | 79,407 | 79,429 | 79,423 | 79,449 | 79,506 | 79,518 | 79,426 |
| Total Residential Sales - MWh | 86,029 | 80,112 | 71,179 | 56,217 | 52,038 | 57,831 | 70,929 | 65,317 | 51,326 | 53,988 | 67,771 | 81,557 | 794,294 |
| Use per Small Comm & Ind Customer - kWh | 4,333.2 | 4,158.4 | 4,024.8 | 3,324.2 | 3,202.5 | 3,258.3 | 3,687.4 | 3,617.6 | 3,307.4 | 3,428.4 | 3,774.0 | 4,223.7 | 44,329.8 |
| # of Small Comm & Ind Customers | 12,204 | 12,202 | 12,216 | 12,245 | 12,290 | 12,309 | 12,309 | 12,326 | 12,314 | 12,285 | 12,276 | 12,287 | 12,272 |
| Total Small Comm & Ind Sales - MWh | 52,882 | 50,741 | 49,167 | 40,705 | 39,359 | 40,107 | 45,388 | 44,591 | 40,727 | 42,118 | 46,330 | 51,897 | 544,012 |
| Large Comm & Ind Sales | 62,307 | 59,460 | 62,141 | 54,550 | 55,722 | 56,768 | 62,799 | 62,025 | 59,121 | 59,127 | 59,641 | 62,622 | 716,283 |
| Total Sales (Residential, SC&I and LC&I) | 201,218 | 190,313 | 182,487 | 151,472 | 147,119 | 154,706 | 179,116 | 171,933 | 151,174 | 155,233 | 173,742 | 196,076 | 2,054,589 |
| Other Public Sales | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Street & Highway Lighting Sales | 4,106 | 3,952 | 4,157 | 3,841 | 4,288 | 4,514 | 4,958 | 4,822 | 4,199 | 3,938 | 3,873 | 4,117 | 50,765 |
| Interdepartmental Sales | 1,372 | 1,194 | 1,226 | 1,066 | 1,001 | 920 | 962 | 1,001 | 1,061 | 1,169 | 1,265 | 1,415 | 13,652 |
| Total Billed Sales - MWh | 206,696 | 195,459 | 187,870 | 156,379 | 152,408 | 160,140 | 185,036 | 177,756 | 156,434 | 160,340 | 178,880 | 201,608 | 2,119,006 |
| Company Use | 441 | 427 | 464 | 402 | 402 | 406 | 466 | 443 | 399 | 394 | 405 | 443 | 5,092 |
| Total Energy | 207,137 | 195,886 | 188,334 | 156,781 | 152,810 | 160,546 | 185,502 | 178,199 | 156,833 | 160,734 | 179,285 | 202,051 | 2,124,098 |
| Total Requirements (Energy + Losses) | 224,030 | 211,862 | 203,694 | 169,568 | 165,271 | 173,636 | 200,627 | 192,728 | 169,621 | 173,842 | 193,906 | 218,529 | 2,297,314 |
| # of Large Comm & Ind Customers | 1,195 | 1,194 | 1,195 | 1,198 | 1,198 | 1,198 | 1,196 | 1,194 | 1,192 | 1,190 | 1,190 | 1,188 | 1,194 |
| # of Other Public Customers | 559 | 559 | 559 | 562 | 563 | 562 | 561 | 561 | 560 | 557 | 554 | 551 | 559 |
| # of Street & Highway Lighting Customers | 586 | 586 | 586 | 586 | 586 | 588 | 589 | 591 | 593 | 597 | 600 | 602 | 591 |
| Peak Demand Net of Energy Efficiency Progs | 402.4 | 374.7 | 350.3 | 307.7 | 281.4 | 372.8 | 404.7 | 391.7 | 341.6 | 317.6 | 328.3 | 377.1 | 404.7 |

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

NORTH DAKOTA YEAR 2025

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 1,083.9 | 1,009.1 | 896.8 | 708.3 | 656.0 | 728.9 | 893.6 | 822.7 | 646.6 | 679.8 | 852.8 | 1,028.3 | 10,007.3 |
| # of Residential Customers | 79,554 | 79,574 | 79,558 | 79,550 | 79,516 | 79,527 | 79,557 | 79,579 | 79,573 | 79,599 | 79,656 | 79,669 | 79,576 |
| Total Residential Sales - MWh | 86,232 | 80,301 | 71,347 | 56,349 | 52,161 | 57,968 | 71,096 | 65,471 | 51,448 | 54,115 | 67,932 | 81,922 | 796,342 |
| Use per Small Comm & Ind Customer - kWh | 4,315.9 | 4,141.9 | 4,008.8 | 3,310.8 | 3,189.7 | 3,245.1 | 3,672.4 | 3,603.0 | 3,294.2 | 3,414.6 | 3,758.9 | 4,204.0 | 44,149.3 |
| # of Small Comm & Ind Customers | 12,314 | 12,312 | 12,326 | 12,356 | 12,401 | 12,421 | 12,421 | 12,438 | 12,425 | 12,396 | 12,387 | 12,398 | 12,383 |
| Total Small Comm & Ind Sales - MWh | 53,146 | 50,995 | 49,413 | 40,908 | 39,556 | 40,308 | 45,615 | 44,814 | 40,931 | 42,328 | 46,562 | 52,121 | 546,697 |
| Large Comm & Ind Sales | 62,604 | 59,744 | 62,433 | 54,811 | 55,990 | 57,042 | 63,104 | 62,324 | 59,400 | 59,402 | 59,922 | 62,881 | 719,657 |
| Total Sales (Residential, SC&I and LC&I) | 201,982 | 191,040 | 183,193 | 152,068 | 147,707 | 155,318 | 179,815 | 172,609 | 151,779 | 155,845 | 174,416 | 196,924 | 2,062,696 |
| Other Public Sales | 4,106 | 3,952 | 4,157 | 3,841 | 4,288 | 4,514 | 4,958 | 4,822 | 4,199 | 3,938 | 3,873 | 4,117 | 50,765 |
| Street & Highway Lighting Sales | 1,372 | 1,194 | 1,226 | 1,066 | 1,001 | 920 | 962 | 1,001 | 1,061 | 1,169 | 1,265 | 1,415 | 13,652 |
| Interdepartmental Sales | 16 | 16 | 15 | 13 | 11 | 10 | 11 | 10 | 10 | 12 | 14 | 16 | 154 |
| Total Billed Sales - MWh | 207,476 | 196,202 | 188,591 | 156,988 | 153,007 | 160,762 | 185,746 | 178,442 | 157,049 | 160,964 | 179,568 | 202,472 | 2,127,267 |
| Company Use | 441 | 427 | 464 | 402 | 402 | 406 | 466 | 443 | 399 | 394 | 405 | 443 | 5,092 |
| Total Energy | 207,917 | 196,629 | 189,055 | 157,390 | 153,409 | 161,168 | 186,212 | 178,885 | 157,448 | 161,358 | 179,973 | 202,915 | 2,132,359 |
| Total Requirements (Energy + Losses) | 224,856 | 212,648 | 204,457 | 170,213 | 165,907 | 174,298 | 201,383 | 193,459 | 170,275 | 174,504 | 194,635 | 219,446 | 2,306,081 |
| # of Large Comm & Ind Customers | 1,206 | 1,205 | 1,206 | 1,209 | 1,209 | 1,209 | 1,207 | 1,205 | 1,203 | 1,201 | 1,201 | 1,199 | 1,205 |
| # of Other Public Customers | 559 | 559 | 559 | 562 | 563 | 562 | 561 | 561 | 560 | 557 | 554 | 551 | 559 |
| # of Street & Highway Lighting Customers | 586 | 586 | 586 | 586 | 586 | 588 | 589 | 591 | 593 | 597 | 600 | 602 | 591 |
| Peak Demand Net of Energy Efficiency Progs | 402.2 | 374.5 | 350.1 | 307.5 | 283.2 | 375.1 | 407.2 | 394.1 | 343.7 | 319.6 | 329.6 | 378.6 | 407.2 |

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

NORTH DAKOTA YEAR 2026

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 1,087.8 | 1,012.8 | 900.0 | 710.9 | 658.3 | 731.5 | 896.9 | 825.7 | 648.9 | 682.3 | 855.9 | 1,032.0 | 10,043.3 |
| # of Residential Customers | 79,704 | 79,724 | 79,708 | 79,700 | 79,666 | 79,677 | 79,707 | 79,729 | 79,723 | 79,749 | 79,806 | 79,819 | 79,726 |
| Total Residential Sales - MWh | 86,705 | 80,741 | 71,739 | 56,659 | 52,447 | 58,286 | 71,486 | 65,830 | 51,730 | 54,412 | 68,304 | 82,370 | 800,709 |
| Use per Small Comm & Ind Customer - kWh | 4,294.2 | 4,121.1 | 3,988.7 | 3,294.3 | 3,173.9 | 3,229.1 | 3,654.2 | 3,585.2 | 3,277.7 | 3,397.7 | 3,740.3 | 4,185.9 | 43,932.2 |
| # of Small Comm & Ind Customers | 12,425 | 12,423 | 12,437 | 12,467 | 12,512 | 12,532 | 12,532 | 12,549 | 12,537 | 12,507 | 12,498 | 12,509 | 12,494 |
| Total Small Comm & Ind Sales - MWh | 53,355 | 51,196 | 49,608 | 41,070 | 39,712 | 40,467 | 45,795 | 44,991 | 41,092 | 42,495 | 46,746 | 52,362 | 548,889 |
| Large Comm & Ind Sales | 62,840 | 59,970 | 62,667 | 55,019 | 56,205 | 57,263 | 63,349 | 62,563 | 59,622 | 59,622 | 60,146 | 63,161 | 722,427 |
| Total Sales (Residential, SC&I and LC&I) | 202,900 | 191,907 | 184,014 | 152,748 | 148,364 | 156,016 | 180,630 | 173,384 | 152,444 | 156,529 | 175,196 | 197,893 | 2,072,025 |
| Other Public Sales | 4,106 | 3,952 | 4,157 | 3,841 | 4,288 | 4,514 | 4,958 | 4,822 | 4,199 | 3,938 | 3,873 | 4,117 | 50,765 |
| Street & Highway Lighting Sales | 1,372 | 1,194 | 1,226 | 1,066 | 1,001 | 920 | 962 | 1,001 | 1,061 | 1,169 | 1,265 | 1,415 | 13,652 |
| Interdepartmental Sales | 16 | 16 | 15 | 13 | 11 | 10 | 11 | 10 | 10 | 12 | 14 | 16 | 154 |
| Total Billed Sales - MWh | 208,394 | 197,069 | 189,412 | 157,668 | 153,664 | 161,460 | 186,561 | 179,217 | 157,714 | 161,648 | 180,348 | 203,441 | 2,136,596 |
| Company Use | 441 | 427 | 464 | 402 | 402 | 406 | 466 | 443 | 399 | 394 | 405 | 443 | 5,092 |
| Total Energy | 208,835 | 197,496 | 189,876 | 158,070 | 154,066 | 161,866 | 187,027 | 179,660 | 158,113 | 162,042 | 180,753 | 203,884 | 2,141,688 |
| Total Requirements (Energy + Losses) | 225,849 | 213,586 | 205,345 | 170,948 | 166,618 | 175,053 | 202,264 | 194,297 | 170,994 | 175,244 | 195,479 | 220,494 | 2,316,171 |
| # of Large Comm & Ind Customers | 1,217 | 1,216 | 1,217 | 1,220 | 1,220 | 1,220 | 1,218 | 1,216 | 1,214 | 1,212 | 1,212 | 1,210 | 1,216 |
| # of Other Public Customers | 559 | 559 | 559 | 562 | 563 | 562 | 561 | 561 | 560 | 557 | 554 | 551 | 559 |
| # of Street & Highway Lighting Customers | 586 | 586 | 586 | 586 | 586 | 588 | 589 | 591 | 593 | 597 | 600 | 602 | 591 |
| Peak Demand Net of Energy Efficiency Progs | 403.8 | 376.0 | 351.5 | 308.8 | 285.1 | 377.6 | 409.9 | 396.7 | 346.0 | 321.7 | 331.0 | 380.2 | 409.9 |

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

NORTH DAKOTA YEAR 2027

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 1,091.7 | 1,016.4 | 903.2 | 713.4 | 660.7 | 734.1 | 900.1 | 828.6 | 651.2 | 684.7 | 858.9 | 1,035.6 | 10,079.1 |
| # of Residential Customers | 79,854 | 79,874 | 79,857 | 79,850 | 79,816 | 79,827 | 79,857 | 79,879 | 79,873 | 79,899 | 79,957 | 79,969 | 79,876 |
| Total Residential Sales - MWh | 87,178 | 81,182 | 72,130 | 56,967 | 52,733 | 58,604 | 71,877 | 66,190 | 52,012 | 54,709 | 68,677 | 82,818 | 805,077 |
| Use per Small Comm & Ind Customer - kWh | 4,277.4 | 4,104.9 | 3,973.1 | 3,281.2 | 3,161.4 | 3,216.5 | 3,639.9 | 3,570.9 | 3,264.8 | 3,384.3 | 3,725.5 | 4,166.6 | 43,756.5 |
| # of Small Comm & Ind Customers | 12,536 | 12,534 | 12,548 | 12,579 | 12,624 | 12,644 | 12,644 | 12,662 | 12,649 | 12,619 | 12,610 | 12,621 | 12,606 |
| Total Small Comm & Ind Sales - MWh | 53,621 | 51,451 | 49,855 | 41,274 | 39,910 | 40,669 | 46,023 | 45,215 | 41,297 | 42,707 | 46,978 | 52,587 | 551,587 |
| Large Comm & Ind Sales | 63,141 | 60,258 | 62,964 | 55,284 | 56,477 | 57,542 | 63,658 | 62,867 | 59,905 | 59,902 | 60,432 | 63,426 | 725,856 |
| Total Sales (Residential, SC&I and LC&I) | 203,940 | 192,891 | 184,949 | 153,525 | 149,120 | 156,815 | 181,558 | 174,272 | 153,214 | 157,318 | 176,087 | 198,831 | 2,082,520 |
| Other Public Sales | 4,106 | 3,952 | 4,157 | 3,841 | 4,288 | 4,514 | 4,958 | 4,822 | 4,199 | 3,938 | 3,873 | 4,117 | 50,765 |
| Street & Highway Lighting Sales | 1,372 | 1,194 | 1,226 | 1,066 | 1,001 | 920 | 962 | 1,001 | 1,061 | 1,169 | 1,265 | 1,415 | 13,652 |
| Interdepartmental Sales | 16 | 16 | 15 | 13 | 11 | 10 | 11 | 10 | 10 | 12 | 14 | 16 | 154 |
| Total Billed Sales - MWh | 209,434 | 198,053 | 190,347 | 158,445 | 154,420 | 162,259 | 187,489 | 180,105 | 158,484 | 162,437 | 181,239 | 204,379 | 2,147,091 |
| Company Use | 441 | 427 | 464 | 402 | 402 | 406 | 466 | 443 | 399 | 394 | 405 | 443 | 5,092 |
| Total Energy | 209,875 | 198,480 | 190,811 | 158,847 | 154,822 | 162,665 | 187,955 | 180,548 | 158,883 | 162,831 | 181,644 | 204,822 | 2,152,183 |
| Total Requirements (Energy + Losses) | 226,974 | 214,650 | 206,356 | 171,788 | 167,435 | 175,917 | 203,268 | 195,257 | 171,827 | 176,097 | 196,443 | 221,509 | 2,327,521 |
| # of Large Comm & Ind Customers | 1,228 | 1,227 | 1,228 | 1,231 | 1,231 | 1,231 | 1,229 | 1,227 | 1,225 | 1,223 | 1,223 | 1,221 | 1,227 |
| # of Other Public Customers | 559 | 559 | 559 | 562 | 563 | 562 | 561 | 561 | 560 | 557 | 554 | 551 | 559 |
| # of Street & Highway Lighting Customers | 586 | 586 | 586 | 586 | 586 | 588 | 589 | 591 | 593 | 597 | 600 | 602 | 591 |
| Peak Demand Net of Energy Efficiency Progs | 405.5 | 377.6 | 352.9 | 310.1 | 287.1 | 380.2 | 412.8 | 399.5 | 348.4 | 324.0 | 332.7 | 382.2 | 412.8 |

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

NORTH DAKOTA YEAR 2028

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 1,095.6 | 1,020.0 | 906.4 | 716.0 | 663.0 | 736.7 | 903.3 | 831.6 | 653.5 | 687.1 | 862.0 | 1,039.3 | 10,114.8 |
| # of Residential Customers | 80,004 | 80,024 | 80,007 | 80,000 | 79,966 | 79,977 | 80,007 | 80,029 | 80,023 | 80,049 | 80,107 | 80,119 | 80,026 |
| Total Residential Sales - MWh | 87,651 | 81,623 | 72,521 | 57,277 | 53,020 | 58,922 | 72,267 | 66,549 | 52,294 | 55,005 | 69,049 | 83,265 | 809,443 |
| Use per Small Comm & Ind Customer - kWh | 4,256.2 | 4,084.9 | 3,953.4 | 3,265.2 | 3,145.6 | 3,200.4 | 3,621.9 | 3,553.5 | 3,248.8 | 3,367.7 | 3,707.1 | 4,148.6 | 43,543.2 |
| # of Small Comm & Ind Customers | 12,648 | 12,645 | 12,660 | 12,690 | 12,737 | 12,757 | 12,757 | 12,774 | 12,761 | 12,731 | 12,722 | 12,734 | 12,718 |
| Total Small Comm & Ind Sales - MWh | 53,832 | 51,653 | 50,050 | 41,435 | 40,066 | 40,828 | 46,204 | 45,392 | 41,458 | 42,874 | 47,162 | 52,828 | 553,782 |
| Large Comm & Ind Sales | 63,383 | 60,490 | 63,203 | 55,496 | 56,696 | 57,766 | 63,908 | 63,110 | 60,132 | 60,127 | 60,662 | 63,712 | 728,685 |
| Total Sales (Residential, SC&I and LC&I) | 204,866 | 193,766 | 185,774 | 154,208 | 149,782 | 157,516 | 182,379 | 175,051 | 153,884 | 158,006 | 176,873 | 199,805 | 2,091,910 |
| Other Public Sales | 4,106 | 3,952 | 4,157 | 3,841 | 4,288 | 4,514 | 4,958 | 4,822 | 4,199 | 3,938 | 3,873 | 4,117 | 50,765 |
| Street & Highway Lighting Sales | 1,372 | 1,194 | 1,226 | 1,066 | 1,001 | 920 | 962 | 1,001 | 1,061 | 1,169 | 1,265 | 1,415 | 13,652 |
| Interdepartmental Sales | 16 | 16 | 15 | 13 | 11 | 10 | 11 | 10 | 10 | 12 | 14 | 16 | 154 |
| Total Billed Sales - MWh | 210,360 | 198,928 | 191,172 | 159,128 | 155,082 | 162,960 | 188,310 | 180,884 | 159,154 | 163,125 | 182,025 | 205,353 | 2,156,481 |
| Company Use | 441 | 427 | 464 | 402 | 402 | 406 | 466 | 443 | 399 | 394 | 405 | 443 | 5,092 |
| Total Energy | 210,801 | 199,355 | 191,636 | 159,530 | 155,484 | 163,366 | 188,776 | 181,327 | 159,553 | 163,519 | 182,430 | 205,796 | 2,161,573 |
| Total Requirements (Energy + Losses) | 227,975 | 215,596 | 207,249 | 172,527 | 168,151 | 176,675 | 204,156 | 196,100 | 172,552 | 176,841 | 197,293 | 222,562 | 2,337,677 |
| # of Large Comm & Ind Customers | 1,239 | 1,238 | 1,239 | 1,242 | 1,242 | 1,242 | 1,240 | 1,238 | 1,236 | 1,234 | 1,234 | 1,232 | 1,238 |
| # of Other Public Customers | 559 | 559 | 559 | 562 | 563 | 562 | 561 | 561 | 560 | 557 | 554 | 551 | 559 |
| # of Street & Highway Lighting Customers | 586 | 586 | 586 | 586 | 586 | 588 | 589 | 591 | 593 | 597 | 600 | 602 | 591 |
| Peak Demand Net of Energy Efficiency Progs | 407.6 | 379.6 | 354.8 | 311.7 | 289.0 | 382.7 | 415.5 | 402.1 | 350.7 | 326.1 | 334.2 | 383.9 | 415.5 |

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

NORTH DAKOTA YEAR 2029

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 1,099.4 | 1,023.6 | 909.6 | 718.5 | 665.3 | 739.3 | 906.4 | 834.5 | 655.8 | 689.6 | 865.0 | 1,042.9 | 10,150.3 |
| # of Residential Customers | 80,154 | 80,174 | 80,157 | 80,150 | 80,116 | 80,127 | 80,157 | 80,179 | 80,173 | 80,199 | 80,257 | 80,269 | 80,176 |
| Total Residential Sales - MWh | 88,124 | 82,063 | 72,913 | 57,586 | 53,305 | 59,239 | 72,656 | 66,908 | 52,577 | 55,302 | 69,422 | 83,713 | 813,808 |
| Use per Small Comm & Ind Customer - kWh | 4,240.0 | 4,069.1 | 3,938.5 | 3,252.8 | 3,133.7 | 3,188.4 | 3,608.1 | 3,539.8 | 3,236.3 | 3,354.9 | 3,693.0 | 4,129.9 | 43,374.4 |
| # of Small Comm & Ind Customers | 12,759 | 12,757 | 12,771 | 12,802 | 12,849 | 12,869 | 12,869 | 12,887 | 12,874 | 12,843 | 12,834 | 12,846 | 12,830 |
| Total Small Comm & Ind Sales - MWh | 54,098 | 51,909 | 50,299 | 41,642 | 40,265 | 41,031 | 46,433 | 45,617 | 41,664 | 43,087 | 47,396 | 53,053 | 556,494 |
| Large Comm & Ind Sales | 63,690 | 60,783 | 63,507 | 55,766 | 56,974 | 58,051 | 64,224 | 63,420 | 60,421 | 60,412 | 60,954 | 63,978 | 732,180 |
| Total Sales (Residential, SC&I and LC&I) | 205,912 | 194,755 | 186,719 | 154,994 | 150,544 | 158,321 | 183,313 | 175,945 | 154,662 | 158,801 | 177,772 | 200,744 | 2,102,482 |
| Other Public Sales | 4,106 | 3,952 | 4,157 | 3,841 | 4,288 | 4,514 | 4,958 | 4,822 | 4,199 | 3,938 | 3,873 | 4,117 | 50,765 |
| Street & Highway Lighting Sales | 1,372 | 1,194 | 1,226 | 1,066 | 1,001 | 920 | 962 | 1,001 | 1,061 | 1,169 | 1,265 | 1,415 | 13,652 |
| Interdepartmental Sales | 16 | 16 | 15 | 13 | 11 | 10 | 11 | 10 | 10 | 12 | 14 | 16 | 154 |
| Total Billed Sales - MWh | 211,406 | 199,917 | 192,117 | 159,914 | 155,844 | 163,765 | 189,244 | 181,778 | 159,932 | 163,920 | 182,924 | 206,292 | 2,167,053 |
| Company Use | 441 | 427 | 464 | 402 | 402 | 406 | 466 | 443 | 399 | 394 | 405 | 443 | 5,092 |
| Total Energy | 211,847 | 200,344 | 192,581 | 160,316 | 156,246 | 164,171 | 189,710 | 182,221 | 160,331 | 164,314 | 183,329 | 206,735 | 2,172,145 |
| Total Requirements (Energy + Losses) | 229,106 | 216,666 | 208,271 | 173,377 | 168,975 | 177,546 | 205,166 | 197,067 | 173,393 | 177,701 | 198,265 | 223,578 | 2,349,111 |
| # of Large Comm & Ind Customers | 1,249 | 1,248 | 1,249 | 1,252 | 1,252 | 1,252 | 1,250 | 1,248 | 1,246 | 1,244 | 1,244 | 1,242 | 1,248 |
| # of Other Public Customers | 559 | 559 | 559 | 562 | 563 | 562 | 561 | 561 | 560 | 557 | 554 | 551 | 559 |
| # of Street & Highway Lighting Customers | 586 | 586 | 586 | 586 | 586 | 588 | 589 | 591 | 593 | 597 | 600 | 602 | 591 |
| Peak Demand Net of Energy Efficiency Progs | 409.4 | 381.2 | 356.3 | 313.0 | 290.9 | 385.3 | 418.3 | 404.8 | 353.1 | 328.3 | 335.8 | 385.7 | 418.3 |

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

NORTH DAKOTA YEAR 2030

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 1,103.3 | 1,027.1 | 912.8 | 721.0 | 667.7 | 741.9 | 909.6 | 837.4 | 658.1 | 692.0 | 868.0 | 1,049.1 | 10,188.3 |
| # of Residential Customers | 80,304 | 80,324 | 80,307 | 80,300 | 80,266 | 80,277 | 80,307 | 80,329 | 80,323 | 80,349 | 80,407 | 80,419 | 80,326 |
| Total Residential Sales - MWh | 88,597 | 82,504 | 73,304 | 57,895 | 53,592 | 59,558 | 73,046 | 67,267 | 52,859 | 55,599 | 69,795 | 84,367 | 818,383 |
| Use per Small Comm & Ind Customer - kWh | 4,219.4 | 4,049.3 | 3,919.1 | 3,236.8 | 3,118.5 | 3,172.9 | 3,590.6 | 3,522.7 | 3,220.6 | 3,338.5 | 3,675.0 | 4,112.7 | 43,166.1 |
| # of Small Comm & Ind Customers | 12,871 | 12,869 | 12,884 | 12,915 | 12,962 | 12,982 | 12,982 | 13,000 | 12,987 | 12,956 | 12,947 | 12,959 | 12,943 |
| Total Small Comm & Ind Sales - MWh | 54,308 | 52,111 | 50,494 | 41,803 | 40,422 | 41,190 | 46,613 | 45,795 | 41,826 | 43,254 | 47,580 | 53,296 | 558,692 |
| Large Comm & Ind Sales | 63,931 | 61,014 | 63,745 | 55,979 | 57,193 | 58,275 | 64,472 | 63,664 | 60,648 | 60,636 | 61,182 | 64,255 | 734,994 |
| Total Sales (Residential, SC&I and LC&I) | 206,836 | 195,629 | 187,543 | 155,677 | 151,207 | 159,023 | 184,131 | 176,726 | 155,333 | 159,489 | 178,557 | 201,918 | 2,112,069 |
| Other Public Sales | 4,106 | 3,952 | 4,157 | 3,841 | 4,288 | 4,514 | 4,958 | 4,822 | 4,199 | 3,938 | 3,873 | 4,117 | 50,765 |
| Street & Highway Lighting Sales | 1,372 | 1,194 | 1,226 | 1,066 | 1,001 | 920 | 962 | 1,001 | 1,061 | 1,169 | 1,265 | 1,415 | 13,652 |
| Interdepartmental Sales | 16 | 16 | 15 | 13 | 11 | 10 | 11 | 10 | 10 | 12 | 14 | 16 | 154 |
| Total Billed Sales - MWh | 212,330 | 200,791 | 192,941 | 160,597 | 156,507 | 164,467 | 190,062 | 182,559 | 160,603 | 164,608 | 183,709 | 207,466 | 2,176,640 |
| Company Use | 441 | 427 | 464 | 402 | 402 | 406 | 466 | 443 | 399 | 394 | 405 | 443 | 5,092 |
| Total Energy | 212,771 | 201,218 | 193,405 | 160,999 | 156,909 | 164,873 | 190,528 | 183,002 | 161,002 | 165,002 | 184,114 | 207,909 | 2,181,732 |
| Total Requirements (Energy + Losses) | 230,105 | 217,611 | 209,162 | 174,116 | 169,692 | 178,305 | 206,050 | 197,911 | 174,119 | 178,445 | 199,114 | 224,847 | 2,359,477 |
| # of Large Comm & Ind Customers | 1,260 | 1,259 | 1,260 | 1,263 | 1,263 | 1,263 | 1,261 | 1,259 | 1,257 | 1,255 | 1,255 | 1,253 | 1,259 |
| # of Other Public Customers | 559 | 559 | 559 | 562 | 563 | 562 | 561 | 561 | 560 | 557 | 554 | 551 | 559 |
| # of Street & Highway Lighting Customers | 586 | 586 | 586 | 586 | 586 | 588 | 589 | 591 | 593 | 597 | 600 | 602 | 591 |
| Peak Demand Net of Energy Efficiency Progs | 411.4 | 383.1 | 358.1 | 314.6 | 292.9 | 387.9 | 421.1 | 407.6 | 355.4 | 330.5 | 337.3 | 387.4 | 421.1 |

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

NORTH DAKOTA YEAR 2031

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 1,111.1 | 1,034.4 | 919.3 | 726.1 | 672.4 | 747.2 | 916.1 | 843.4 | 662.8 | 696.9 | 874.2 | 1,056.5 | 10,260.7 |
| # of Residential Customers | 80,453 | 80,474 | 80,457 | 80,450 | 80,416 | 80,427 | 80,457 | 80,479 | 80,473 | 80,499 | 80,557 | 80,570 | 80,476 |
| Total Residential Sales - MWh | 89,394 | 83,246 | 73,963 | 58,416 | 54,074 | 60,094 | 73,704 | 67,872 | 53,334 | 56,099 | 70,423 | 85,121 | 825,740 |
| Use per Small Comm & Ind Customer - kWh | 4,203.5 | 4,034.3 | 3,904.7 | 3,224.6 | 3,106.8 | 3,160.8 | 3,577.0 | 3,509.3 | 3,208.4 | 3,326.0 | 3,661.3 | 4,097.3 | 43,004.0 |
| # of Small Comm & Ind Customers | 12,984 | 12,981 | 12,996 | 13,028 | 13,075 | 13,096 | 13,096 | 13,114 | 13,101 | 13,069 | 13,060 | 13,072 | 13,056 |
| Total Small Comm & Ind Sales - MWh | 54,578 | 52,369 | 50,745 | 42,010 | 40,622 | 41,394 | 46,844 | 46,021 | 42,033 | 43,468 | 47,816 | 53,560 | 561,460 |
| Large Comm & Ind Sales | 64,225 | 61,296 | 64,035 | 56,238 | 57,458 | 58,548 | 64,774 | 63,959 | 60,924 | 60,909 | 61,462 | 64,561 | 738,389 |
| Total Sales (Residential, SC&I and LC&I) | 208,197 | 196,911 | 188,743 | 156,664 | 152,154 | 160,036 | 185,322 | 177,852 | 156,291 | 160,476 | 179,701 | 203,242 | 2,125,589 |
| Other Public Sales | 4,106 | 3,952 | 4,157 | 3,841 | 4,288 | 4,514 | 4,958 | 4,822 | 4,199 | 3,938 | 3,873 | 4,117 | 50,765 |
| Street & Highway Lighting Sales | 1,372 | 1,194 | 1,226 | 1,066 | 1,001 | 920 | 962 | 1,001 | 1,061 | 1,169 | 1,265 | 1,415 | 13,652 |
| Interdepartmental Sales | 16 | 16 | 15 | 13 | 11 | 10 | 11 | 10 | 10 | 12 | 14 | 16 | 154 |
| Total Billed Sales - MWh | 213,691 | 202,073 | 194,141 | 161,584 | 157,454 | 165,480 | 191,253 | 183,685 | 161,561 | 165,595 | 184,853 | 208,790 | 2,190,160 |
| Company Use | 441 | 427 | 464 | 402 | 402 | 406 | 466 | 443 | 399 | 394 | 405 | 443 | 5,092 |
| Total Energy | 214,132 | 202,500 | 194,605 | 161,986 | 157,856 | 165,886 | 191,719 | 184,128 | 161,960 | 165,989 | 185,258 | 209,233 | 2,195,252 |
| Total Requirements (Energy + Losses) | 231,577 | 218,998 | 210,459 | 175,183 | 170,717 | 179,401 | 207,338 | 199,129 | 175,155 | 179,512 | 200,351 | 226,279 | 2,374,099 |
| # of Large Comm & Ind Customers | 1,271 | 1,270 | 1,271 | 1,274 | 1,274 | 1,274 | 1,272 | 1,270 | 1,268 | 1,266 | 1,266 | 1,264 | 1,270 |
| # of Other Public Customers | 559 | 559 | 559 | 562 | 563 | 562 | 561 | 561 | 560 | 557 | 554 | 551 | 559 |
| # of Street & Highway Lighting Customers | 586 | 586 | 586 | 586 | 586 | 588 | 589 | 591 | 593 | 597 | 600 | 602 | 591 |
| Peak Demand Net of Energy Efficiency Progs | 413.2 | 384.8 | 359.7 | 315.9 | 295.1 | 390.8 | 424.3 | 410.7 | 358.1 | 333.0 | 339.5 | 390.0 | 424.3 |

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

NORTH DAKOTA YEAR 2032

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 1,119.0 | 1,041.7 | 925.8 | 731.2 | 677.2 | 752.4 | 922.5 | 849.3 | 667.4 | 701.8 | 880.3 | 1,063.9 | 10,332.8 |
| # of Residential Customers | 80,603 | 80,624 | 80,607 | 80,600 | 80,566 | 80,577 | 80,607 | 80,629 | 80,623 | 80,649 | 80,707 | 80,720 | 80,626 |
| Total Residential Sales - MWh | 90,191 | 83,988 | 74,623 | 58,936 | 54,556 | 60,629 | 74,361 | 68,477 | 53,809 | 56,599 | 71,050 | 85,876 | 833,095 |
| Use per Small Comm & Ind Customer - kWh | 4,188.1 | 4,019.3 | 3,890.2 | 3,213.0 | 3,095.5 | 3,149.3 | 3,563.9 | 3,496.6 | 3,196.8 | 3,313.9 | 3,647.8 | 4,082.4 | 42,846.9 |
| # of Small Comm & Ind Customers | 13,096 | 13,094 | 13,109 | 13,140 | 13,188 | 13,209 | 13,209 | 13,227 | 13,214 | 13,182 | 13,173 | 13,185 | 13,169 |
| Total Small Comm & Ind Sales - MWh | 54,848 | 52,629 | 50,996 | 42,219 | 40,823 | 41,599 | 47,076 | 46,249 | 42,242 | 43,684 | 48,053 | 53,826 | 564,244 |
| Large Comm & Ind Sales | 64,534 | 61,592 | 64,341 | 56,510 | 57,739 | 58,836 | 65,093 | 64,272 | 61,215 | 61,198 | 61,756 | 64,873 | 741,959 |
| Total Sales (Residential, SC&I and LC&I) | 209,573 | 198,209 | 189,960 | 157,665 | 153,118 | 161,064 | 186,530 | 178,998 | 157,266 | 161,481 | 180,859 | 204,575 | 2,139,298 |
| Other Public Sales | 4,106 | 3,952 | 4,157 | 3,841 | 4,288 | 4,514 | 4,958 | 4,822 | 4,199 | 3,938 | 3,873 | 4,117 | 50,765 |
| Street & Highway Lighting Sales | 1,372 | 1,194 | 1,226 | 1,066 | 1,001 | 920 | 962 | 1,001 | 1,061 | 1,169 | 1,265 | 1,415 | 13,652 |
| Interdepartmental Sales | 16 | 16 | 15 | 13 | 11 | 10 | 11 | 10 | 10 | 12 | 14 | 16 | 154 |
| Total Billed Sales - MWh | 215,067 | 203,371 | 195,358 | 162,585 | 158,418 | 166,508 | 192,461 | 184,831 | 162,536 | 166,600 | 186,011 | 210,123 | 2,203,869 |
| Company Use | 441 | 427 | 464 | 402 | 402 | 406 | 466 | 443 | 399 | 394 | 405 | 443 | 5,092 |
| Total Energy | 215,508 | 203,798 | 195,822 | 162,987 | 158,820 | 166,914 | 192,927 | 185,274 | 162,935 | 166,994 | 186,416 | 210,566 | 2,208,961 |
| Total Requirements (Energy + Losses) | 233,065 | 220,401 | 211,776 | 176,266 | 171,759 | 180,512 | 208,645 | 200,368 | 176,209 | 180,599 | 201,603 | 227,721 | 2,388,924 |
| # of Large Comm & Ind Customers | 1,282 | 1,281 | 1,282 | 1,285 | 1,285 | 1,285 | 1,283 | 1,281 | 1,279 | 1,277 | 1,277 | 1,275 | 1,281 |
| # of Other Public Customers | 559 | 559 | 559 | 562 | 563 | 562 | 561 | 561 | 560 | 557 | 554 | 551 | 559 |
| # of Street & Highway Lighting Customers | 586 | 586 | 586 | 586 | 586 | 588 | 589 | 591 | 593 | 597 | 600 | 602 | 591 |
| Peak Demand Net of Energy Efficiency Progs | 415.9 | 387.3 | 362.0 | 318.0 | 297.4 | 393.9 | 427.6 | 413.8 | 360.9 | 335.6 | 341.6 | 392.4 | 427.6 |

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

NORTH DAKOTA YEAR 2033

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 1,126.7 | 1,049.0 | 932.2 | 736.3 | 681.9 | 757.7 | 928.9 | 855.2 | 672.1 | 706.7 | 886.5 | 1,071.2 | 10,404.7 |
| # of Residential Customers | 80,753 | 80,774 | 80,757 | 80,750 | 80,716 | 80,727 | 80,757 | 80,779 | 80,773 | 80,799 | 80,858 | 80,870 | 80,776 |
| Total Residential Sales - MWh | 90,988 | 84,730 | 75,282 | 59,458 | 55,038 | 61,165 | 75,017 | 69,082 | 54,285 | 57,100 | 71,679 | 86,630 | 840,454 |
| Use per Small Comm & Ind Customer - kWh | 4,172.9 | 4,004.6 | 3,876.0 | 3,201.1 | 3,084.2 | 3,137.6 | 3,551.0 | 3,483.7 | 3,185.1 | 3,301.6 | 3,634.3 | 4,067.4 | 42,689.7 |
| # of Small Comm & Ind Customers | 13,209 | 13,207 | 13,222 | 13,254 | 13,302 | 13,324 | 13,323 | 13,342 | 13,328 | 13,297 | 13,288 | 13,299 | 13,283 |
| Total Small Comm & Ind Sales - MWh | 55,120 | 52,889 | 51,249 | 42,428 | 41,026 | 41,806 | 47,310 | 46,479 | 42,451 | 43,901 | 48,292 | 54,093 | 567,044 |
| Large Comm & Ind Sales | 64,845 | 61,889 | 64,648 | 56,784 | 58,020 | 59,124 | 65,414 | 64,586 | 61,508 | 61,487 | 62,051 | 65,189 | 745,545 |
| Total Sales (Residential, SC&I and LC&I) | 210,953 | 199,508 | 191,179 | 158,670 | 154,084 | 162,095 | 187,741 | 180,147 | 158,244 | 162,488 | 182,022 | 205,912 | 2,153,043 |
| Other Public Sales | 4,106 | 3,952 | 4,157 | 3,841 | 4,288 | 4,514 | 4,958 | 4,822 | 4,199 | 3,938 | 3,873 | 4,117 | 50,765 |
| Street & Highway Lighting Sales | 1,372 | 1,194 | 1,226 | 1,066 | 1,001 | 920 | 962 | 1,001 | 1,061 | 1,169 | 1,265 | 1,415 | 13,652 |
| Interdepartmental Sales | 16 | 16 | 15 | 13 | 11 | 10 | 11 | 10 | 10 | 12 | 14 | 16 | 154 |
| Total Billed Sales - MWh | 216,447 | 204,670 | 196,577 | 163,590 | 159,384 | 167,539 | 193,672 | 185,980 | 163,514 | 167,607 | 187,174 | 211,460 | 2,217,614 |
| Company Use | 441 | 427 | 464 | 402 | 402 | 406 | 466 | 443 | 399 | 394 | 405 | 443 | 5,092 |
| Total Energy | 216,888 | 205,097 | 197,041 | 163,992 | 159,786 | 167,945 | 194,138 | 186,423 | 163,913 | 168,001 | 187,579 | 211,903 | 2,222,706 |
| Total Requirements (Energy + Losses) | 234,558 | 221,806 | 213,094 | 177,352 | 172,804 | 181,627 | 209,954 | 201,611 | 177,267 | 181,688 | 202,861 | 229,167 | 2,403,789 |
| # of Large Comm & Ind Customers | 1,294 | 1,293 | 1,294 | 1,297 | 1,297 | 1,297 | 1,295 | 1,293 | 1,291 | 1,289 | 1,288 | 1,287 | 1,293 |
| # of Other Public Customers | 559 | 559 | 559 | 562 | 563 | 562 | 561 | 561 | 560 | 557 | 554 | 551 | 559 |
| # of Street & Highway Lighting Customers | 586 | 586 | 586 | 586 | 586 | 588 | 589 | 591 | 593 | 597 | 600 | 602 | 591 |
| Peak Demand Net of Energy Efficiency Progs | 418.5 | 389.7 | 364.3 | 320.0 | 299.6 | 396.8 | 430.8 | 416.9 | 363.6 | 338.1 | 343.8 | 394.9 | 430.8 |

E-10

APPENDIX F

Monthly Forecasts – South Dakota (2024-2033)

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

SOUTH DAKOTA YEAR 2024

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 1,127.7 | 1,076.1 | 941.1 | 737.4 | 707.2 | 759.2 | 943.5 | 827.3 | 662.4 | 701.6 | 907.8 | 1,094.4 | 10,484.5 |
| # of Residential Customers | 6,399 | 6,399 | 6,397 | 6,404 | 6,407 | 6,407 | 6,407 | 6,403 | 6,401 | 6,388 | 6,388 | 6,377 | 6,398 |
| Total Residential Sales - MWh | 7,216 | 6,886 | 6,020 | 4,722 | 4,531 | 4,864 | 6,045 | 5,297 | 4,240 | 4,482 | 5,799 | 6,979 | 67,081 |
| Use per Small Comm & Ind Customer - kWh | 2,074.0 | 2,073.0 | 1,792.8 | 1,348.0 | 1,368.5 | 1,343.3 | 1,592.6 | 1,442.9 | 1,271.6 | 1,348.3 | 1,721.8 | 2,043.0 | 19,400.4 |
| # of Small Comm & Ind Customers | 1,878 | 1,876 | 1,877 | 1,888 | 1,905 | 1,911 | 1,912 | 1,908 | 1,907 | 1,895 | 1,887 | 1,885 | 1,894 |
| Total Small Comm & Ind Sales - MWh | 3,895 | 3,889 | 3,365 | 2,545 | 2,607 | 2,567 | 3,045 | 2,753 | 2,425 | 2,555 | 3,249 | 3,851 | 36,746 |
| Large Comm & Ind Sales | 2,973 | 2,874 | 2,795 | 2,376 | 2,872 | 2,761 | 3,087 | 2,959 | 2,893 | 2,879 | 3,217 | 3,306 | 34,992 |
| Total Sales (Residential, SC&I and LC&I) | 14,084 | 13,649 | 12,180 | 9,643 | 10,010 | 10,192 | 12,177 | 11,009 | 9,558 | 9,916 | 12,265 | 14,136 | 138,819 |
| Other Public Sales | 161 | 158 | 159 | 111 | 166 | 137 | 141 | 126 | 116 | 119 | 139 | 163 | 1,696 |
| Street & Highway Lighting Sales | 118 | 107 | 110 | 87 | 101 | 88 | 92 | 91 | 95 | 97 | 102 | 120 | 1,208 |
| Interdepartmental Sales | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total Billed Sales - MWh | 14,363 | 13,914 | 12,449 | 9,841 | 10,277 | 10,417 | 12,410 | 11,226 | 9,769 | 10,132 | 12,506 | 14,419 | 141,723 |
| Company Use | 52 | 52 | 40 | 22 | 14 | 8 | 9 | 7 | 9 | 15 | 31 | 47 | 306 |
| Total Energy | 14,415 | 13,966 | 12,489 | 9,863 | 10,291 | 10,425 | 12,419 | 11,233 | 9,778 | 10,147 | 12,537 | 14,466 | 142,029 |
| Total Requirements (Energy + Losses) | 15,589 | 15,104 | 13,506 | 10,667 | 11,129 | 11,274 | 13,431 | 12,148 | 10,575 | 10,974 | 13,558 | 15,645 | 153,600 |
| # of Large Comm & Ind Customers | 108 | 107 | 108 | 108 | 108 | 108 | 108 | 108 | 108 | 108 | 108 | 108 | 108 |
| # of Other Public Customers | 47 | 47 | 47 | 48 | 48 | 48 | 48 | 48 | 49 | 48 | 48 | 48 | 48 |
| # of Street & Highway Lighting Customers | 12 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 25 | 25 | 25 | 23 |
| Peak Demand Net of Energy Efficiency Progs | 26.7 | 23.8 | 22.4 | 18.6 | 16.6 | 24.8 | 27.0 | 26.2 | 22.8 | 19.4 | 21.8 | 25.5 | 27.0 |

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

SOUTH DAKOTA YEAR 2025

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 1,128.1 | 1,076.7 | 941.7 | 737.7 | 707.7 | 759.5 | 944.0 | 827.7 | 662.7 | 702.1 | 908.3 | 1,097.4 | 10,492.5 |
| # of Residential Customers | 6,399 | 6,399 | 6,397 | 6,404 | 6,407 | 6,407 | 6,407 | 6,403 | 6,401 | 6,388 | 6,388 | 6,377 | 6,398 |
| Total Residential Sales - MWh | 7,219 | 6,890 | 6,024 | 4,724 | 4,534 | 4,866 | 6,048 | 5,300 | 4,242 | 4,485 | 5,802 | 6,998 | 67,132 |
| Use per Small Comm & Ind Customer - kWh | 2,072.5 | 2,071.0 | 1,790.9 | 1,346.8 | 1,367.8 | 1,342.7 | 1,591.5 | 1,441.7 | 1,271.0 | 1,347.1 | 1,719.9 | 2,041.1 | 19,384.8 |
| # of Small Comm & Ind Customers | 1,890 | 1,888 | 1,889 | 1,900 | 1,917 | 1,923 | 1,924 | 1,920 | 1,919 | 1,907 | 1,899 | 1,897 | 1,906 |
| Total Small Comm & Ind Sales - MWh | 3,917 | 3,910 | 3,383 | 2,559 | 2,622 | 2,582 | 3,062 | 2,768 | 2,439 | 2,569 | 3,266 | 3,872 | 36,949 |
| Large Comm & Ind Sales | 3,010 | 2,911 | 2,831 | 2,406 | 2,908 | 2,796 | 3,125 | 2,996 | 2,929 | 2,915 | 3,258 | 3,351 | 35,436 |
| Total Sales (Residential, SC&I and LC&I) | 14,146 | 13,711 | 12,238 | 9,689 | 10,064 | 10,244 | 12,235 | 11,064 | 9,610 | 9,969 | 12,326 | 14,221 | 139,517 |
| Other Public Sales | 161 | 158 | 159 | 111 | 166 | 137 | 141 | 126 | 116 | 119 | 139 | 163 | 1,696 |
| Street & Highway Lighting Sales | 118 | 107 | 110 | 87 | 101 | 88 | 92 | 91 | 95 | 97 | 102 | 120 | 1,208 |
| Interdepartmental Sales | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total Billed Sales - MWh | 14,425 | 13,976 | 12,507 | 9,887 | 10,331 | 10,469 | 12,468 | 11,281 | 9,821 | 10,185 | 12,567 | 14,504 | 142,421 |
| Company Use | 52 | 52 | 40 | 22 | 14 | 8 | 9 | 7 | 9 | 15 | 31 | 47 | 306 |
| Total Energy | 14,477 | 14,028 | 12,547 | 9,909 | 10,345 | 10,477 | 12,477 | 11,288 | 9,830 | 10,200 | 12,598 | 14,551 | 142,727 |
| Total Requirements (Energy + Losses) | 15,656 | 15,171 | 13,569 | 10,716 | 11,188 | 11,331 | 13,494 | 12,208 | 10,631 | 11,031 | 13,624 | 15,736 | 154,355 |
| # of Large Comm & Ind Customers | 108 | 107 | 108 | 108 | 108 | 108 | 108 | 108 | 108 | 108 | 108 | 108 | 108 |
| # of Other Public Customers | 47 | 47 | 47 | 48 | 48 | 48 | 48 | 48 | 49 | 48 | 48 | 48 | 48 |
| # of Street & Highway Lighting Customers | 12 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 25 | 25 | 25 | 23 |
| Peak Demand Net of Energy Efficiency Progs | 26.9 | 24.0 | 22.6 | 18.8 | 16.8 | 25.1 | 27.3 | 26.4 | 23.0 | 19.6 | 21.9 | 25.6 | 27.3 |

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

SOUTH DAKOTA YEAR 2026

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 1,132.7 | 1,081.0 | 945.3 | 740.5 | 710.5 | 762.4 | 947.6 | 830.9 | 665.4 | 704.8 | 911.9 | 1,101.8 | 10,533.5 |
| # of Residential Customers | 6,399 | 6,399 | 6,397 | 6,404 | 6,407 | 6,407 | 6,407 | 6,403 | 6,401 | 6,388 | 6,388 | 6,377 | 6,398 |
| Total Residential Sales - MWh | 7,248 | 6,917 | 6,047 | 4,742 | 4,552 | 4,885 | 6,071 | 5,320 | 4,259 | 4,502 | 5,825 | 7,026 | 67,394 |
| Use per Small Comm & Ind Customer - kWh | 2,070.5 | 2,069.5 | 1,789.6 | 1,345.7 | 1,366.5 | 1,341.6 | 1,590.4 | 1,441.0 | 1,269.2 | 1,346.0 | 1,718.5 | 2,039.3 | 19,368.5 |
| # of Small Comm & Ind Customers | 1,902 | 1,900 | 1,901 | 1,912 | 1,929 | 1,935 | 1,936 | 1,932 | 1,932 | 1,919 | 1,911 | 1,909 | 1,918 |
| Total Small Comm & Ind Sales - MWh | 3,938 | 3,932 | 3,402 | 2,573 | 2,636 | 2,596 | 3,079 | 2,784 | 2,452 | 2,583 | 3,284 | 3,893 | 37,152 |
| Large Comm & Ind Sales | 3,052 | 2,951 | 2,870 | 2,439 | 2,948 | 2,834 | 3,169 | 3,038 | 2,970 | 2,955 | 3,303 | 3,397 | 35,926 |
| Total Sales (Residential, SC&I and LC&I) | 14,238 | 13,800 | 12,319 | 9,754 | 10,136 | 10,315 | 12,319 | 11,142 | 9,681 | 10,040 | 12,412 | 14,316 | 140,472 |
| Other Public Sales | 161 | 158 | 159 | 111 | 166 | 137 | 141 | 126 | 116 | 119 | 139 | 163 | 1,696 |
| Street & Highway Lighting Sales | 118 | 107 | 110 | 87 | 101 | 88 | 92 | 91 | 95 | 97 | 102 | 120 | 1,208 |
| Interdepartmental Sales | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total Billed Sales - MWh | 14,517 | 14,065 | 12,588 | 9,952 | 10,403 | 10,540 | 12,552 | 11,359 | 9,892 | 10,256 | 12,653 | 14,599 | 143,376 |
| Company Use | 52 | 52 | 40 | 22 | 14 | 8 | 9 | 7 | 9 | 15 | 31 | 47 | 306 |
| Total Energy | 14,569 | 14,117 | 12,628 | 9,974 | 10,417 | 10,548 | 12,561 | 11,366 | 9,901 | 10,271 | 12,684 | 14,646 | 143,682 |
| Total Requirements (Energy + Losses) | 15,756 | 15,267 | 13,657 | 10,787 | 11,266 | 11,407 | 13,584 | 12,292 | 10,708 | 11,108 | 13,717 | 15,839 | 155,388 |
| # of Large Comm & Ind Customers | 109 | 108 | 109 | 109 | 109 | 109 | 109 | 109 | 109 | 109 | 109 | 109 | 109 |
| # of Other Public Customers | 47 | 47 | 47 | 48 | 48 | 48 | 48 | 48 | 49 | 48 | 48 | 48 | 48 |
| # of Street & Highway Lighting Customers | 12 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 25 | 25 | 25 | 23 |
| Peak Demand Net of Energy Efficiency Progs | 27.0 | 24.1 | 22.7 | 18.9 | 16.9 | 25.3 | 27.5 | 26.6 | 23.2 | 19.7 | 22.0 | 25.8 | 27.5 |

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

SOUTH DAKOTA YEAR 2027

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 1,137.1 | 1,085.2 | 948.9 | 743.3 | 713.1 | 765.4 | 951.3 | 834.1 | 667.9 | 707.4 | 915.3 | 1,105.8 | 10,573.8 |
| # of Residential Customers | 6,399 | 6,399 | 6,397 | 6,404 | 6,407 | 6,407 | 6,407 | 6,403 | 6,401 | 6,388 | 6,388 | 6,377 | 6,398 |
| Total Residential Sales - MWh | 7,276 | 6,944 | 6,070 | 4,760 | 4,569 | 4,904 | 6,095 | 5,341 | 4,275 | 4,519 | 5,847 | 7,052 | 67,652 |
| Use per Small Comm & Ind Customer - kWh | 2,073.3 | 2,070.7 | 1,791.1 | 1,347.2 | 1,367.9 | 1,342.6 | 1,591.8 | 1,441.5 | 1,270.0 | 1,347.5 | 1,720.3 | 2,039.6 | 19,384.2 |
| # of Small Comm & Ind Customers | 1,910 | 1,909 | 1,910 | 1,921 | 1,938 | 1,944 | 1,945 | 1,941 | 1,941 | 1,928 | 1,920 | 1,918 | 1,927 |
| Total Small Comm & Ind Sales - MWh | 3,960 | 3,953 | 3,421 | 2,588 | 2,651 | 2,610 | 3,096 | 2,798 | 2,465 | 2,598 | 3,303 | 3,912 | 37,355 |
| Large Comm & Ind Sales | 3,094 | 2,991 | 2,910 | 2,473 | 2,988 | 2,873 | 3,212 | 3,080 | 3,011 | 2,995 | 3,348 | 3,441 | 36,416 |
| Total Sales (Residential, SC&I and LC&I) | 14,330 | 13,888 | 12,401 | 9,821 | 10,208 | 10,387 | 12,403 | 11,219 | 9,751 | 10,112 | 12,498 | 14,405 | 141,423 |
| Other Public Sales | 161 | 158 | 159 | 111 | 166 | 137 | 141 | 126 | 116 | 119 | 139 | 163 | 1,696 |
| Street & Highway Lighting Sales | 118 | 107 | 110 | 87 | 101 | 88 | 92 | 91 | 95 | 97 | 102 | 120 | 1,208 |
| Interdepartmental Sales | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total Billed Sales - MWh | 14,609 | 14,153 | 12,670 | 10,019 | 10,475 | 10,612 | 12,636 | 11,436 | 9,962 | 10,328 | 12,739 | 14,688 | 144,327 |
| Company Use | 52 | 52 | 40 | 22 | 14 | 8 | 9 | 7 | 9 | 15 | 31 | 47 | 306 |
| Total Energy | 14,661 | 14,205 | 12,710 | 10,041 | 10,489 | 10,620 | 12,645 | 11,443 | 9,971 | 10,343 | 12,770 | 14,735 | 144,633 |
| Total Requirements (Energy + Losses) | 15,855 | 15,362 | 13,745 | 10,859 | 11,344 | 11,485 | 13,675 | 12,375 | 10,783 | 11,186 | 13,810 | 15,935 | 156,414 |
| # of Large Comm & Ind Customers | 109 | 108 | 109 | 109 | 109 | 109 | 109 | 109 | 109 | 109 | 109 | 109 | 109 |
| # of Other Public Customers | 47 | 47 | 47 | 48 | 48 | 48 | 48 | 48 | 49 | 48 | 48 | 48 | 48 |
| # of Street & Highway Lighting Customers | 12 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 25 | 25 | 25 | 23 |
| Peak Demand Net of Energy Efficiency Progs | 27.2 | 24.3 | 22.8 | 19.0 | 17.1 | 25.5 | 27.7 | 26.8 | 23.4 | 19.9 | 22.2 | 26.0 | 27.7 |

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

SOUTH DAKOTA YEAR 2028

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 1,141.4 | 1,089.2 | 952.6 | 746.3 | 715.9 | 768.5 | 955.0 | 837.3 | 670.5 | 710.2 | 918.9 | 1,110.2 | 10,615.2 |
| # of Residential Customers | 6,399 | 6,399 | 6,397 | 6,404 | 6,407 | 6,407 | 6,407 | 6,403 | 6,401 | 6,388 | 6,388 | 6,377 | 6,398 |
| Total Residential Sales - MWh | 7,304 | 6,970 | 6,094 | 4,779 | 4,587 | 4,924 | 6,119 | 5,361 | 4,292 | 4,537 | 5,870 | 7,080 | 67,917 |
| Use per Small Comm & Ind Customer - kWh | 2,072.4 | 2,070.4 | 1,790.5 | 1,346.6 | 1,367.7 | 1,342.5 | 1,591.6 | 1,441.5 | 1,270.3 | 1,346.9 | 1,720.1 | 2,041.0 | 19,382.4 |
| # of Small Comm & Ind Customers | 1,919 | 1,918 | 1,919 | 1,930 | 1,947 | 1,953 | 1,954 | 1,950 | 1,950 | 1,937 | 1,929 | 1,927 | 1,936 |
| Total Small Comm & Ind Sales - MWh | 3,977 | 3,971 | 3,436 | 2,599 | 2,663 | 2,622 | 3,110 | 2,811 | 2,477 | 2,609 | 3,318 | 3,933 | 37,526 |
| Large Comm & Ind Sales | 3,133 | 3,029 | 2,946 | 2,504 | 3,026 | 2,909 | 3,253 | 3,119 | 3,049 | 3,034 | 3,391 | 3,488 | 36,881 |
| Total Sales (Residential, SC&I and LC&I) | 14,414 | 13,970 | 12,476 | 9,882 | 10,276 | 10,455 | 12,482 | 11,291 | 9,818 | 10,180 | 12,579 | 14,501 | 142,324 |
| Other Public Sales | 161 | 158 | 159 | 111 | 166 | 137 | 141 | 126 | 116 | 119 | 139 | 163 | 1,696 |
| Street & Highway Lighting Sales | 118 | 107 | 110 | 87 | 101 | 88 | 92 | 91 | 95 | 97 | 102 | 120 | 1,208 |
| Interdepartmental Sales | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total Billed Sales - MWh | 14,693 | 14,235 | 12,745 | 10,080 | 10,543 | 10,680 | 12,715 | 11,508 | 10,029 | 10,396 | 12,820 | 14,784 | 145,228 |
| Company Use | 52 | 52 | 40 | 22 | 14 | 8 | 9 | 7 | 9 | 15 | 31 | 47 | 306 |
| Total Energy | 14,745 | 14,287 | 12,785 | 10,102 | 10,557 | 10,688 | 12,724 | 11,515 | 10,038 | 10,411 | 12,851 | 14,831 | 145,534 |
| Total Requirements (Energy + Losses) | 15,946 | 15,451 | 13,827 | 10,925 | 11,417 | 11,559 | 13,761 | 12,453 | 10,856 | 11,259 | 13,898 | 16,039 | 157,391 |
| # of Large Comm & Ind Customers | 110 | 109 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 |
| # of Other Public Customers | 47 | 47 | 47 | 48 | 48 | 48 | 48 | 48 | 49 | 48 | 48 | 48 | 48 |
| # of Street & Highway Lighting Customers | 12 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 25 | 25 | 25 | 23 |
| Peak Demand Net of Energy Efficiency Progs | 27.4 | 24.4 | 23.0 | 19.1 | 17.3 | 25.7 | 28.0 | 27.1 | 23.6 | 20.1 | 22.4 | 26.2 | 28.0 |

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

SOUTH DAKOTA YEAR 2029

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 1,145.8 | 1,093.5 | 956.2 | 749.1 | 718.7 | 771.5 | 958.6 | 840.5 | 673.0 | 712.9 | 922.5 | 1,114.5 | 10,655.8 |
| # of Residential Customers | 6,399 | 6,399 | 6,397 | 6,404 | 6,407 | 6,407 | 6,407 | 6,403 | 6,401 | 6,388 | 6,388 | 6,377 | 6,398 |
| Total Residential Sales - MWh | 7,332 | 6,997 | 6,117 | 4,797 | 4,605 | 4,943 | 6,142 | 5,382 | 4,308 | 4,554 | 5,893 | 7,107 | 68,177 |
| Use per Small Comm & Ind Customer - kWh | 2,072.5 | 2,070.0 | 1,791.1 | 1,346.2 | 1,367.2 | 1,342.7 | 1,591.3 | 1,441.1 | 1,269.8 | 1,347.0 | 1,719.6 | 2,040.2 | 19,379.6 |
| # of Small Comm & Ind Customers | 1,930 | 1,929 | 1,929 | 1,941 | 1,958 | 1,964 | 1,965 | 1,961 | 1,961 | 1,948 | 1,940 | 1,938 | 1,947 |
| Total Small Comm & Ind Sales - MWh | 4,000 | 3,993 | 3,455 | 2,613 | 2,677 | 2,637 | 3,127 | 2,826 | 2,490 | 2,624 | 3,336 | 3,954 | 37,732 |
| Large Comm & Ind Sales | 3,176 | 3,071 | 2,987 | 2,539 | 3,069 | 2,950 | 3,299 | 3,162 | 3,091 | 3,076 | 3,438 | 3,536 | 37,394 |
| Total Sales (Residential, SC&I and LC&I) | 14,508 | 14,061 | 12,559 | 9,949 | 10,351 | 10,530 | 12,568 | 11,370 | 9,889 | 10,254 | 12,667 | 14,597 | 143,303 |
| Other Public Sales | 161 | 158 | 159 | 111 | 166 | 137 | 141 | 126 | 116 | 119 | 139 | 163 | 1,696 |
| Street & Highway Lighting Sales | 118 | 107 | 110 | 87 | 101 | 88 | 92 | 91 | 95 | 97 | 102 | 120 | 1,208 |
| Interdepartmental Sales | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total Billed Sales - MWh | 14,787 | 14,326 | 12,828 | 10,147 | 10,618 | 10,755 | 12,801 | 11,587 | 10,100 | 10,470 | 12,908 | 14,880 | 146,207 |
| Company Use | 52 | 52 | 40 | 22 | 14 | 8 | 9 | 7 | 9 | 15 | 31 | 47 | 306 |
| Total Energy | 14,839 | 14,378 | 12,868 | 10,169 | 10,632 | 10,763 | 12,810 | 11,594 | 10,109 | 10,485 | 12,939 | 14,927 | 146,513 |
| Total Requirements (Energy + Losses) | 16,048 | 15,549 | 13,916 | 10,997 | 11,498 | 11,640 | 13,854 | 12,539 | 10,933 | 11,339 | 13,993 | 16,143 | 158,449 |
| # of Large Comm & Ind Customers | 111 | 110 | 111 | 111 | 111 | 111 | 111 | 112 | 111 | 112 | 111 | 111 | 111 |
| # of Other Public Customers | 47 | 47 | 47 | 48 | 48 | 48 | 48 | 48 | 49 | 48 | 48 | 48 | 48 |
| # of Street & Highway Lighting Customers | 12 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 25 | 25 | 25 | 23 |
| Peak Demand Net of Energy Efficiency Progs | 27.6 | 24.6 | 23.2 | 19.3 | 17.4 | 25.9 | 28.2 | 27.3 | 23.8 | 20.2 | 22.4 | 26.3 | 28.2 |

F-6

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

SOUTH DAKOTA YEAR 2030

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 1,150.2 | 1,097.7 | 960.0 | 752.0 | 721.4 | 774.3 | 962.4 | 843.8 | 675.7 | 715.7 | 926.1 | 1,121.7 | 10,699.9 |
| # of Residential Customers | 6,399 | 6,399 | 6,397 | 6,404 | 6,407 | 6,407 | 6,407 | 6,403 | 6,401 | 6,388 | 6,388 | 6,377 | 6,398 |
| Total Residential Sales - MWh | 7,360 | 7,024 | 6,141 | 4,816 | 4,622 | 4,961 | 6,166 | 5,403 | 4,325 | 4,572 | 5,916 | 7,153 | 68,459 |
| Use per Small Comm & Ind Customer - kWh | 2,074.3 | 2,071.7 | 1,792.6 | 1,347.7 | 1,368.6 | 1,343.6 | 1,592.7 | 1,442.6 | 1,271.6 | 1,348.0 | 1,720.9 | 2,042.1 | 19,397.2 |
| # of Small Comm & Ind Customers | 1,939 | 1,938 | 1,938 | 1,950 | 1,967 | 1,973 | 1,974 | 1,970 | 1,970 | 1,957 | 1,949 | 1,947 | 1,956 |
| Total Small Comm & Ind Sales - MWh | 4,022 | 4,015 | 3,474 | 2,628 | 2,692 | 2,651 | 3,144 | 2,842 | 2,505 | 2,638 | 3,354 | 3,976 | 37,941 |
| Large Comm & Ind Sales | 3,221 | 3,114 | 3,028 | 2,574 | 3,111 | 2,991 | 3,344 | 3,205 | 3,134 | 3,118 | 3,485 | 3,584 | 37,909 |
| Total Sales (Residential, SC&I and LC&I) | 14,603 | 14,153 | 12,643 | 10,018 | 10,425 | 10,603 | 12,654 | 11,450 | 9,964 | 10,328 | 12,755 | 14,713 | 144,309 |
| Other Public Sales | 161 | 158 | 159 | 111 | 166 | 137 | 141 | 126 | 116 | 119 | 139 | 163 | 1,696 |
| Street & Highway Lighting Sales | 118 | 107 | 110 | 87 | 101 | 88 | 92 | 91 | 95 | 97 | 102 | 120 | 1,208 |
| Interdepartmental Sales | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total Billed Sales - MWh | 14,882 | 14,418 | 12,912 | 10,216 | 10,692 | 10,828 | 12,887 | 11,667 | 10,175 | 10,544 | 12,996 | 14,996 | 147,213 |
| Company Use | 52 | 52 | 40 | 22 | 14 | 8 | 9 | 7 | 9 | 15 | 31 | 47 | 306 |
| Total Energy | 14,934 | 14,470 | 12,952 | 10,238 | 10,706 | 10,836 | 12,896 | 11,674 | 10,184 | 10,559 | 13,027 | 15,043 | 147,519 |
| Total Requirements (Energy + Losses) | 16,151 | 15,649 | 14,007 | 11,072 | 11,578 | 11,719 | 13,947 | 12,625 | 11,014 | 11,419 | 14,088 | 16,269 | 159,538 |
| # of Large Comm & Ind Customers | 111 | 110 | 111 | 111 | 111 | 111 | 111 | 112 | 111 | 112 | 111 | 111 | 111 |
| # of Other Public Customers | 47 | 47 | 47 | 48 | 48 | 48 | 48 | 48 | 49 | 48 | 48 | 48 | 48 |
| # of Street & Highway Lighting Customers | 12 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 25 | 25 | 25 | 23 |
| Peak Demand Net of Energy Efficiency Progs | 27.7 | 24.7 | 23.3 | 19.3 | 17.5 | 26.1 | 28.4 | 27.5 | 24.0 | 20.4 | 22.6 | 26.5 | 28.4 |

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

SOUTH DAKOTA YEAR 2031

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 1,159.2 | 1,106.3 | 967.5 | 758.0 | 727.2 | 780.4 | 969.7 | 850.4 | 680.8 | 721.2 | 933.3 | 1,130.5 | 10,783.4 |
| # of Residential Customers | 6,399 | 6,399 | 6,397 | 6,404 | 6,407 | 6,407 | 6,407 | 6,403 | 6,401 | 6,388 | 6,388 | 6,377 | 6,398 |
| Total Residential Sales - MWh | 7,418 | 7,079 | 6,189 | 4,854 | 4,659 | 5,000 | 6,213 | 5,445 | 4,358 | 4,607 | 5,962 | 7,209 | 68,993 |
| Use per Small Comm & Ind Customer - kWh | 2,076.0 | 2,073.4 | 1,794.0 | 1,349.2 | 1,370.4 | 1,345.1 | 1,594.6 | 1,444.2 | 1,272.4 | 1,349.4 | 1,722.7 | 2,045.0 | 19,417.1 |
| # of Small Comm & Ind Customers | 1,948 | 1,947 | 1,947 | 1,959 | 1,976 | 1,982 | 1,983 | 1,979 | 1,979 | 1,966 | 1,958 | 1,955 | 1,965 |
| Total Small Comm & Ind Sales - MWh | 4,044 | 4,037 | 3,493 | 2,643 | 2,708 | 2,666 | 3,162 | 2,858 | 2,518 | 2,653 | 3,373 | 3,998 | 38,153 |
| Large Comm & Ind Sales | 3,264 | 3,156 | 3,069 | 2,609 | 3,153 | 3,031 | 3,389 | 3,249 | 3,176 | 3,160 | 3,532 | 3,634 | 38,422 |
| Total Sales (Residential, SC&I and LC&I) | 14,726 | 14,272 | 12,751 | 10,106 | 10,520 | 10,697 | 12,764 | 11,552 | 10,052 | 10,420 | 12,867 | 14,841 | 145,568 |
| Other Public Sales | 161 | 158 | 159 | 111 | 166 | 137 | 141 | 126 | 116 | 119 | 139 | 163 | 1,696 |
| Street & Highway Lighting Sales | 118 | 107 | 110 | 87 | 101 | 88 | 92 | 91 | 95 | 97 | 102 | 120 | 1,208 |
| Interdepartmental Sales | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total Billed Sales - MWh | 15,005 | 14,537 | 13,020 | 10,304 | 10,787 | 10,922 | 12,997 | 11,769 | 10,263 | 10,636 | 13,108 | 15,124 | 148,472 |
| Company Use | 52 | 52 | 40 | 22 | 14 | 8 | 9 | 7 | 9 | 15 | 31 | 47 | 306 |
| Total Energy | 15,057 | 14,589 | 13,060 | 10,326 | 10,801 | 10,930 | 13,006 | 11,776 | 10,272 | 10,651 | 13,139 | 15,171 | 148,778 |
| Total Requirements (Energy + Losses) | 16,284 | 15,778 | 14,124 | 11,167 | 11,681 | 11,820 | 14,066 | 12,735 | 11,109 | 11,519 | 14,209 | 16,407 | 160,899 |
| # of Large Comm & Ind Customers | 112 | 111 | 112 | 112 | 112 | 112 | 112 | 113 | 112 | 113 | 112 | 112 | 112 |
| # of Other Public Customers | 47 | 47 | 47 | 48 | 48 | 48 | 48 | 48 | 49 | 48 | 48 | 48 | 48 |
| # of Street & Highway Lighting Customers | 12 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 25 | 25 | 25 | 23 |
| Peak Demand Net of Energy Efficiency Progs | 27.9 | 24.9 | 23.4 | 19.5 | 17.7 | 26.5 | 28.8 | 27.9 | 24.3 | 20.7 | 22.8 | 26.7 | 28.8 |

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

SOUTH DAKOTA YEAR 2032

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 1,168.2 | 1,114.9 | 975.0 | 763.7 | 732.6 | 786.5 | 977.4 | 856.9 | 686.3 | 726.8 | 940.4 | 1,139.1 | 10,866.7 |
| # of Residential Customers | 6,399 | 6,399 | 6,397 | 6,404 | 6,407 | 6,407 | 6,407 | 6,403 | 6,401 | 6,388 | 6,388 | 6,377 | 6,398 |
| Total Residential Sales - MWh | 7,475 | 7,134 | 6,237 | 4,891 | 4,694 | 5,039 | 6,262 | 5,487 | 4,393 | 4,643 | 6,007 | 7,264 | 69,526 |
| Use per Small Comm & Ind Customer - kWh | 2,077.7 | 2,075.2 | 1,796.0 | 1,350.1 | 1,371.3 | 1,346.6 | 1,595.1 | 1,445.7 | 1,273.6 | 1,350.9 | 1,724.5 | 2,046.8 | 19,434.1 |
| # of Small Comm & Ind Customers | 1,957 | 1,956 | 1,956 | 1,968 | 1,985 | 1,991 | 1,993 | 1,988 | 1,988 | 1,975 | 1,967 | 1,964 | 1,974 |
| Total Small Comm & Ind Sales - MWh | 4,066 | 4,059 | 3,513 | 2,657 | 2,722 | 2,681 | 3,179 | 2,874 | 2,532 | 2,668 | 3,392 | 4,020 | 38,363 |
| Large Comm & Ind Sales | 3,310 | 3,200 | 3,113 | 2,646 | 3,198 | 3,074 | 3,437 | 3,295 | 3,221 | 3,206 | 3,583 | 3,685 | 38,968 |
| Total Sales (Residential, SC&I and LC&I) | 14,851 | 14,393 | 12,863 | 10,194 | 10,614 | 10,794 | 12,878 | 11,656 | 10,146 | 10,517 | 12,982 | 14,969 | 146,857 |
| Other Public Sales | 161 | 158 | 159 | 111 | 166 | 137 | 141 | 126 | 116 | 119 | 139 | 163 | 1,696 |
| Street & Highway Lighting Sales | 118 | 107 | 110 | 87 | 101 | 88 | 92 | 91 | 95 | 97 | 102 | 120 | 1,208 |
| Interdepartmental Sales | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total Billed Sales - MWh | 15,130 | 14,658 | 13,132 | 10,392 | 10,881 | 11,019 | 13,111 | 11,873 | 10,357 | 10,733 | 13,223 | 15,252 | 149,761 |
| Company Use | 52 | 52 | 40 | 22 | 14 | 8 | 9 | 7 | 9 | 15 | 31 | 47 | 306 |
| Total Energy | 15,182 | 14,710 | 13,172 | 10,414 | 10,895 | 11,027 | 13,120 | 11,880 | 10,366 | 10,748 | 13,254 | 15,299 | 150,067 |
| Total Requirements (Energy + Losses) | 16,419 | 15,908 | 14,245 | 11,262 | 11,783 | 11,925 | 14,189 | 12,848 | 11,211 | 11,624 | 14,334 | 16,545 | 162,293 |
| # of Large Comm & Ind Customers | 112 | 111 | 112 | 112 | 112 | 112 | 112 | 113 | 112 | 113 | 112 | 112 | 112 |
| # of Other Public Customers | 47 | 47 | 47 | 48 | 48 | 48 | 48 | 48 | 49 | 48 | 48 | 48 | 48 |
| # of Street & Highway Lighting Customers | 12 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 25 | 25 | 25 | 23 |
| Peak Demand Net of Energy Efficiency Progs | 28.2 | 25.2 | 23.7 | 19.7 | 17.9 | 26.7 | 29.0 | 28.1 | 24.5 | 20.8 | 23.0 | 26.9 | 29.0 |

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

SOUTH DAKOTA YEAR 2033

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 1,177.1 | 1,123.3 | 982.3 | 769.5 | 738.3 | 792.6 | 984.9 | 863.5 | 691.5 | 732.5 | 947.7 | 1,147.9 | 10,949.8 |
| # of Residential Customers | 6,399 | 6,399 | 6,397 | 6,404 | 6,407 | 6,407 | 6,407 | 6,403 | 6,401 | 6,388 | 6,388 | 6,377 | 6,398 |
| Total Residential Sales - MWh | 7,532 | 7,188 | 6,284 | 4,928 | 4,730 | 5,078 | 6,310 | 5,529 | 4,426 | 4,679 | 6,054 | 7,320 | 70,058 |
| Use per Small Comm & Ind Customer - kWh | 2,080.9 | 2,078.4 | 1,798.4 | 1,352.2 | 1,373.3 | 1,348.2 | 1,597.7 | 1,447.9 | 1,275.6 | 1,352.5 | 1,726.6 | 2,049.7 | 19,462.2 |
| # of Small Comm & Ind Customers | 1,965 | 1,964 | 1,964 | 1,976 | 1,993 | 1,999 | 2,001 | 1,996 | 1,996 | 1,983 | 1,975 | 1,972 | 1,982 |
| Total Small Comm & Ind Sales - MWh | 4,089 | 4,082 | 3,532 | 2,672 | 2,737 | 2,695 | 3,197 | 2,890 | 2,546 | 2,682 | 3,410 | 4,042 | 38,574 |
| Large Comm & Ind Sales | 3,356 | 3,245 | 3,156 | 2,683 | 3,242 | 3,117 | 3,486 | 3,341 | 3,266 | 3,250 | 3,631 | 3,736 | 39,509 |
| Total Sales (Residential, SC&I and LC&I) | 14,977 | 14,515 | 12,972 | 10,283 | 10,709 | 10,890 | 12,993 | 11,760 | 10,238 | 10,611 | 13,095 | 15,098 | 148,141 |
| Other Public Sales | 161 | 158 | 159 | 111 | 166 | 137 | 141 | 126 | 116 | 119 | 139 | 163 | 1,696 |
| Street & Highway Lighting Sales | 118 | 107 | 110 | 87 | 101 | 88 | 92 | 91 | 95 | 97 | 102 | 120 | 1,208 |
| Interdepartmental Sales | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total Billed Sales - MWh | 15,256 | 14,780 | 13,241 | 10,481 | 10,976 | 11,115 | 13,226 | 11,977 | 10,449 | 10,827 | 13,336 | 15,381 | 151,045 |
| Company Use | 52 | 52 | 40 | 22 | 14 | 8 | 9 | 7 | 9 | 15 | 31 | 47 | 306 |
| Total Energy | 15,308 | 14,832 | 13,281 | 10,503 | 10,990 | 11,123 | 13,235 | 11,984 | 10,458 | 10,842 | 13,367 | 15,428 | 151,351 |
| Total Requirements (Energy + Losses) | 16,555 | 16,040 | 14,363 | 11,359 | 11,885 | 12,029 | 14,313 | 12,960 | 11,310 | 11,725 | 14,456 | 16,685 | 163,680 |
| # of Large Comm & Ind Customers | 113 | 112 | 113 | 113 | 113 | 113 | 113 | 114 | 113 | 114 | 113 | 113 | 113 |
| # of Other Public Customers | 47 | 47 | 47 | 48 | 48 | 48 | 48 | 48 | 49 | 48 | 48 | 48 | 48 |
| # of Street & Highway Lighting Customers | 12 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 25 | 25 | 25 | 23 |
| Peak Demand Net of Energy Efficiency Progs | 28.4 | 25.3 | 23.8 | 19.8 | 18.1 | 27.0 | 29.4 | 28.5 | 24.8 | 21.1 | 23.2 | 27.2 | 29.4 |

F-10

APPENDIX G

Monthly Forecasts – Integrated System (2024-2033)

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

INTEGRATED SYSTEM YEAR 2024

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 1,066.3 | 994.9 | 884.9 | 700.1 | 642.6 | 735.2 | 906.0 | 830.1 | 646.1 | 672.2 | 844.5 | 1,013.3 | 9,936.5 |
| # of Residential Customers | 105,541 | 105,556 | 105,532 | 105,526 | 105,465 | 105,468 | 105,495 | 105,507 | 105,494 | 105,510 | 105,565 | 105,571 | 105,519 |
| Total Residential Sales - MWh | 112,540 | 105,021 | 93,384 | 73,875 | 67,769 | 77,544 | 95,576 | 87,577 | 68,164 | 70,921 | 89,149 | 106,972 | 1,048,492 |
| Use per Small Comm & Ind Customer - kWh | 3,565.2 | 3,428.3 | 3,297.7 | 2,710.7 | 2,591.3 | 2,702.6 | 3,111.2 | 3,032.8 | 2,718.8 | 2,769.7 | 3,072.8 | 3,458.8 | 36,446.1 |
| # of Small Comm & Ind Customers | 19,422 | 19,412 | 19,423 | 19,517 | 19,631 | 19,676 | 19,683 | 19,692 | 19,670 | 19,589 | 19,541 | 19,537 | 19,566 |
| Total Small Comm & Ind Sales - MWh | 69,243 | 66,550 | 64,051 | 52,904 | 50,870 | 53,177 | 61,238 | 59,721 | 53,478 | 54,255 | 60,045 | 67,575 | 713,107 |
| Large Comm & Ind Sales | 102,640 | 95,900 | 101,011 | 90,004 | 93,166 | 90,059 | 99,845 | 98,257 | 95,225 | 96,297 | 97,144 | 102,547 | 1,162,095 |
| Total Sales (Residential, SC&I and LC&I) | 284,423 | 267,471 | 258,446 | 216,783 | 211,805 | 220,780 | 256,659 | 245,555 | 216,867 | 221,473 | 246,338 | 277,094 | 2,923,694 |
| Other Public Sales | 643 | 633 | 657 | 553 | 638 | 770 | 885 | 844 | 693 | 572 | 590 | 647 | 8,125 |
| Street & Highway Lighting Sales | 4,523 | 4,328 | 4,540 | 4,176 | 4,599 | 4,826 | 5,267 | 5,126 | 4,511 | 4,251 | 4,199 | 4,542 | 54,888 |
| Interdepartmental Sales | 1,386 | 1,207 | 1,238 | 1,076 | 1,009 | 930 | 972 | 1,009 | 1,070 | 1,178 | 1,276 | 1,428 | 13,779 |
| Total Billed Sales - MWh | 290,975 | 273,639 | 264,881 | 222,588 | 218,051 | 227,306 | 263,783 | 252,534 | 223,141 | 227,474 | 252,403 | 283,711 | 3,000,486 |
| Company Use | 590 | 557 | 571 | 477 | 457 | 464 | 533 | 504 | 457 | 461 | 499 | 576 | 6,146 |
| Total Energy | 291,565 | 274,196 | 265,452 | 223,065 | 218,508 | 227,770 | 264,316 | 253,038 | 223,598 | 227,935 | 252,902 | 284,287 | 3,006,632 |
| Total Requirements (Energy + Losses) | 315,336 | 296,552 | 287,094 | 241,253 | 236,321 | 246,336 | 285,862 | 273,664 | 241,826 | 246,518 | 273,520 | 307,465 | 3,251,747 |
| # of Large Comm & Ind Customers | 1,557 | 1,554 | 1,556 | 1,559 | 1,562 | 1,562 | 1,561 | 1,560 | 1,557 | 1,553 | 1,552 | 1,549 | 1,557 |
| # of Other Public Customers | 704 | 704 | 704 | 708 | 709 | 708 | 707 | 707 | 707 | 703 | 700 | 697 | 705 |
| # of Street & Highway Lighting Customers | 632 | 644 | 644 | 644 | 644 | 646 | 647 | 649 | 651 | 656 | 659 | 661 | 648 |
| Peak Demand Net of Energy Efficiency Progs | 570.3 | 523.1 | 484.7 | 430.5 | 389.2 | 517.3 | 572.8 | 550.3 | 475.6 | 436.2 | 466.9 | 531.6 | 572.8 |

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

INTEGRATED SYSTEM YEAR 2025

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 1,067.4 | 996.0 | 885.8 | 700.8 | 643.2 | 736.0 | 906.9 | 830.9 | 646.8 | 672.9 | 845.4 | 1,015.8 | 9,948.4 |
| # of Residential Customers | 105,691 | 105,706 | 105,682 | 105,676 | 105,614 | 105,617 | 105,645 | 105,657 | 105,644 | 105,660 | 105,715 | 105,722 | 105,669 |
| Total Residential Sales - MWh | 112,816 | 105,279 | 93,614 | 74,055 | 67,935 | 77,737 | 95,813 | 87,795 | 68,334 | 71,097 | 89,370 | 107,393 | 1,051,238 |
| Use per Small Comm & Ind Customer - kWh | 3,557.9 | 3,421.3 | 3,290.9 | 2,705.0 | 2,586.0 | 2,697.1 | 3,104.8 | 3,026.5 | 2,713.4 | 2,764.0 | 3,066.4 | 3,450.1 | 36,369.8 |
| # of Small Comm & Ind Customers | 19,560 | 19,550 | 19,561 | 19,656 | 19,770 | 19,816 | 19,823 | 19,832 | 19,809 | 19,728 | 19,680 | 19,675 | 19,705 |
| Total Small Comm & Ind Sales - MWh | 69,593 | 66,886 | 64,373 | 53,169 | 51,126 | 53,446 | 61,547 | 60,022 | 53,749 | 54,528 | 60,347 | 67,880 | 716,666 |
| Large Comm & Ind Sales | 103,059 | 96,298 | 101,421 | 90,366 | 93,544 | 90,434 | 100,263 | 98,666 | 95,613 | 96,685 | 97,543 | 102,951 | 1,166,843 |
| Total Sales (Residential, SC&I and LC&I) | 285,468 | 268,463 | 259,408 | 217,590 | 212,605 | 221,617 | 257,623 | 246,483 | 217,696 | 222,310 | 247,260 | 278,224 | 2,934,747 |
| Other Public Sales | 4,749 | 4,585 | 4,814 | 4,394 | 4,926 | 5,284 | 5,843 | 5,666 | 4,892 | 4,510 | 4,463 | 4,764 | 58,890 |
| Street & Highway Lighting Sales | 1,789 | 1,570 | 1,609 | 1,401 | 1,312 | 1,232 | 1,271 | 1,305 | 1,373 | 1,482 | 1,591 | 1,840 | 17,775 |
| Interdepartmental Sales | 30 | 29 | 27 | 23 | 19 | 20 | 21 | 18 | 19 | 21 | 25 | 29 | 281 |
| Total Billed Sales - MWh | 292,036 | 274,647 | 265,858 | 223,408 | 218,862 | 228,153 | 264,758 | 253,472 | 223,980 | 228,323 | 253,339 | 284,857 | 3,011,693 |
| Company Use | 590 | 557 | 571 | 477 | 457 | 464 | 533 | 504 | 457 | 461 | 499 | 576 | 6,146 |
| Total Energy | 292,626 | 275,204 | 266,429 | 223,885 | 219,319 | 228,617 | 265,291 | 253,976 | 224,437 | 228,784 | 253,838 | 285,433 | 3,017,839 |
| Total Requirements (Energy + Losses) | 316,466 | 297,625 | 288,134 | 242,125 | 237,187 | 247,243 | 286,905 | 274,668 | 242,722 | 247,423 | 274,517 | 308,686 | 3,263,701 |
| # of Large Comm & Ind Customers | 1,568 | 1,565 | 1,567 | 1,570 | 1,573 | 1,573 | 1,572 | 1,571 | 1,568 | 1,564 | 1,563 | 1,560 | 1,568 |
| # of Other Public Customers | 704 | 704 | 704 | 708 | 709 | 708 | 707 | 707 | 707 | 703 | 700 | 697 | 705 |
| # of Street & Highway Lighting Customers | 632 | 644 | 644 | 644 | 644 | 646 | 647 | 649 | 651 | 656 | 659 | 661 | 648 |
| Peak Demand Net of Energy Efficiency Progs | 569.3 | 522.2 | 483.9 | 429.8 | 391.7 | 520.5 | 576.3 | 553.6 | 478.5 | 438.9 | 468.7 | 533.6 | 576.3 |

G-2

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

INTEGRATED SYSTEM YEAR 2026

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 1,070.9 | 999.2 | 888.7 | 703.1 | 645.3 | 738.4 | 909.8 | 833.6 | 648.9 | 675.1 | 848.1 | 1,019.1 | 9,980.4 |
| # of Residential Customers | 105,841 | 105,856 | 105,832 | 105,826 | 105,764 | 105,767 | 105,795 | 105,807 | 105,794 | 105,810 | 105,865 | 105,872 | 105,819 |
| Total Residential Sales - MWh | 113,344 | 105,771 | 94,051 | 74,401 | 68,254 | 78,094 | 96,251 | 88,197 | 68,650 | 71,428 | 89,786 | 107,894 | 1,056,121 |
| Use per Small Comm & Ind Customer - kWh | 3,547.9 | 3,411.7 | 3,281.8 | 2,697.5 | 2,579.0 | 2,689.8 | 3,096.5 | 3,018.4 | 2,705.6 | 2,756.4 | 3,058.0 | 3,442.3 | 36,271.4 |
| # of Small Comm & Ind Customers | 19,698 | 19,688 | 19,698 | 19,794 | 19,908 | 19,954 | 19,961 | 19,970 | 19,949 | 19,866 | 19,818 | 19,813 | 19,843 |
| Total Small Comm & Ind Sales - MWh | 69,886 | 67,170 | 64,645 | 53,395 | 51,342 | 53,673 | 61,809 | 60,278 | 53,975 | 54,758 | 60,603 | 68,202 | 719,736 |
| Large Comm & Ind Sales | 103,463 | 96,677 | 101,814 | 90,714 | 93,910 | 90,791 | 100,661 | 99,054 | 95,984 | 97,057 | 97,927 | 103,400 | 1,171,452 |
| Total Sales (Residential, SC&I and LC&I) | 286,693 | 269,618 | 260,510 | 218,510 | 213,506 | 222,558 | 258,721 | 247,529 | 218,609 | 223,243 | 248,316 | 279,496 | 2,947,309 |
| Other Public Sales | 4,749 | 4,585 | 4,814 | 4,394 | 4,926 | 5,284 | 5,843 | 5,666 | 4,892 | 4,510 | 4,463 | 4,764 | 58,890 |
| Street & Highway Lighting Sales | 1,789 | 1,570 | 1,609 | 1,401 | 1,312 | 1,232 | 1,271 | 1,305 | 1,373 | 1,482 | 1,591 | 1,840 | 17,775 |
| Interdepartmental Sales | 30 | 29 | 27 | 23 | 19 | 20 | 21 | 18 | 19 | 21 | 25 | 29 | 281 |
| Total Billed Sales - MWh | 293,261 | 275,802 | 266,960 | 224,328 | 219,763 | 229,094 | 265,856 | 254,518 | 224,893 | 229,256 | 254,395 | 286,129 | 3,024,255 |
| Company Use | 590 | 557 | 571 | 477 | 457 | 464 | 533 | 504 | 457 | 461 | 499 | 576 | 6,146 |
| Total Energy | 293,851 | 276,359 | 267,531 | 224,805 | 220,220 | 229,558 | 266,389 | 255,022 | 225,350 | 229,717 | 254,894 | 286,705 | 3,030,401 |
| Total Requirements (Energy + Losses) | 317,791 | 298,874 | 289,327 | 243,120 | 238,162 | 248,260 | 288,091 | 275,799 | 243,709 | 248,433 | 275,660 | 310,062 | 3,277,288 |
| # of Large Comm & Ind Customers | 1,581 | 1,578 | 1,580 | 1,583 | 1,586 | 1,586 | 1,585 | 1,584 | 1,581 | 1,577 | 1,576 | 1,573 | 1,581 |
| # of Other Public Customers | 704 | 704 | 704 | 708 | 709 | 708 | 707 | 707 | 707 | 703 | 700 | 697 | 705 |
| # of Street & Highway Lighting Customers | 632 | 644 | 644 | 644 | 644 | 646 | 647 | 649 | 651 | 656 | 659 | 661 | 648 |
| Peak Demand Net of Energy Efficiency Progs | 571.4 | 524.2 | 485.8 | 431.5 | 394.2 | 523.8 | 580.0 | 557.1 | 481.6 | 441.7 | 470.6 | 535.8 | 580.0 |

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

INTEGRATED SYSTEM YEAR 2027

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 1,074.3 | 1,002.4 | 891.5 | 705.3 | 647.4 | 740.7 | 912.7 | 836.2 | 651.0 | 677.2 | 850.8 | 1,022.4 | 10,012.4 |
| # of Residential Customers | 105,991 | 106,006 | 105,981 | 105,976 | 105,914 | 105,917 | 105,945 | 105,957 | 105,944 | 105,960 | 106,016 | 106,022 | 105,969 |
| Total Residential Sales - MWh | 113,871 | 106,263 | 94,487 | 74,745 | 68,573 | 78,451 | 96,691 | 88,601 | 68,965 | 71,758 | 90,202 | 108,393 | 1,061,000 |
| Use per Small Comm & Ind Customer - kWh | 3,541.5 | 3,405.4 | 3,275.7 | 2,692.4 | 2,574.2 | 2,684.9 | 3,090.9 | 3,012.5 | 2,700.7 | 2,751.3 | 3,052.2 | 3,433.5 | 36,201.8 |
| # of Small Comm & Ind Customers | 19,833 | 19,823 | 19,834 | 19,931 | 20,045 | 20,091 | 20,098 | 20,109 | 20,086 | 20,003 | 19,955 | 19,950 | 19,980 |
| Total Small Comm & Ind Sales - MWh | 70,238 | 67,506 | 64,971 | 53,663 | 51,600 | 53,943 | 62,120 | 60,579 | 54,246 | 55,034 | 60,907 | 68,499 | 723,306 |
| Large Comm & Ind Sales | 103,933 | 97,120 | 102,273 | 91,121 | 94,333 | 91,209 | 101,125 | 99,510 | 96,417 | 97,492 | 98,374 | 103,819 | 1,176,726 |
| Total Sales (Residential, SC&I and LC&I) | 288,042 | 270,889 | 261,731 | 219,529 | 214,506 | 223,603 | 259,936 | 248,690 | 219,628 | 224,284 | 249,483 | 280,711 | 2,961,032 |
| Other Public Sales | 4,749 | 4,585 | 4,814 | 4,394 | 4,926 | 5,284 | 5,843 | 5,666 | 4,892 | 4,510 | 4,463 | 4,764 | 58,890 |
| Street & Highway Lighting Sales | 1,789 | 1,570 | 1,609 | 1,401 | 1,312 | 1,232 | 1,271 | 1,305 | 1,373 | 1,482 | 1,591 | 1,840 | 17,775 |
| Interdepartmental Sales | 30 | 29 | 27 | 23 | 19 | 20 | 21 | 18 | 19 | 21 | 25 | 29 | 281 |
| Total Billed Sales - MWh | 294,610 | 277,073 | 268,181 | 225,347 | 220,763 | 230,139 | 267,071 | 255,679 | 225,912 | 230,297 | 255,562 | 287,344 | 3,037,978 |
| Company Use | 590 | 557 | 571 | 477 | 457 | 464 | 533 | 504 | 457 | 461 | 499 | 576 | 6,146 |
| Total Energy | 295,200 | 277,630 | 268,752 | 225,824 | 221,220 | 230,603 | 267,604 | 256,183 | 226,369 | 230,758 | 256,061 | 287,920 | 3,044,124 |
| Total Requirements (Energy + Losses) | 319,250 | 300,248 | 290,646 | 244,222 | 239,243 | 249,390 | 289,406 | 277,054 | 244,811 | 249,558 | 276,922 | 311,377 | 3,292,127 |
| # of Large Comm & Ind Customers | 1,593 | 1,590 | 1,592 | 1,595 | 1,598 | 1,598 | 1,597 | 1,596 | 1,593 | 1,589 | 1,588 | 1,585 | 1,593 |
| # of Other Public Customers | 704 | 704 | 704 | 708 | 709 | 708 | 707 | 707 | 707 | 703 | 700 | 697 | 705 |
| # of Street & Highway Lighting Customers | 632 | 644 | 644 | 644 | 644 | 646 | 647 | 649 | 651 | 656 | 659 | 661 | 648 |
| Peak Demand Net of Energy Efficiency Progs | 573.8 | 526.4 | 487.7 | 433.2 | 396.9 | 527.2 | 583.8 | 560.8 | 484.8 | 444.6 | 472.9 | 538.4 | 583.8 |

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

INTEGRATED SYSTEM YEAR 2028

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 1,077.8 | 1,005.6 | 894.4 | 707.6 | 649.5 | 743.0 | 915.5 | 838.8 | 653.0 | 679.4 | 853.6 | 1,025.6 | 10,044.2 |
| # of Residential Customers | 106,141 | 106,156 | 106,131 | 106,126 | 106,064 | 106,067 | 106,095 | 106,107 | 106,094 | 106,110 | 106,166 | 106,172 | 106,119 |
| Total Residential Sales - MWh | 114,398 | 106,754 | 94,924 | 75,091 | 68,893 | 78,810 | 97,131 | 89,003 | 69,281 | 72,089 | 90,619 | 108,892 | 1,065,885 |
| Use per Small Comm & Ind Customer - kWh | 3,531.3 | 3,395.9 | 3,266.3 | 2,684.9 | 2,566.9 | 2,677.2 | 3,082.0 | 3,004.2 | 2,693.0 | 2,743.5 | 3,043.6 | 3,425.9 | 36,101.3 |
| # of Small Comm & Ind Customers | 19,969 | 19,958 | 19,970 | 20,066 | 20,182 | 20,229 | 20,236 | 20,245 | 20,223 | 20,139 | 20,091 | 20,087 | 20,116 |
| Total Small Comm & Ind Sales - MWh | 70,517 | 67,775 | 65,228 | 53,875 | 51,805 | 54,157 | 62,367 | 60,820 | 54,461 | 55,251 | 61,149 | 68,817 | 726,222 |
| Large Comm & Ind Sales | 104,307 | 97,473 | 102,635 | 91,441 | 94,671 | 91,540 | 101,496 | 99,870 | 96,761 | 97,838 | 98,731 | 104,257 | 1,181,020 |
| Total Sales (Residential, SC&I and LC&I) | 289,222 | 272,002 | 262,787 | 220,407 | 215,369 | 224,507 | 260,994 | 249,693 | 220,503 | 225,178 | 250,499 | 281,966 | 2,973,127 |
| Other Public Sales | 4,749 | 4,585 | 4,814 | 4,394 | 4,926 | 5,284 | 5,843 | 5,666 | 4,892 | 4,510 | 4,463 | 4,764 | 58,890 |
| Street & Highway Lighting Sales | 1,789 | 1,570 | 1,609 | 1,401 | 1,312 | 1,232 | 1,271 | 1,305 | 1,373 | 1,482 | 1,591 | 1,840 | 17,775 |
| Interdepartmental Sales | 30 | 29 | 27 | 23 | 19 | 20 | 21 | 18 | 19 | 21 | 25 | 29 | 281 |
| Total Billed Sales - MWh | 295,790 | 278,186 | 269,237 | 226,225 | 221,626 | 231,043 | 268,129 | 256,682 | 226,787 | 231,191 | 256,578 | 288,599 | 3,050,073 |
| Company Use | 590 | 557 | 571 | 477 | 457 | 464 | 533 | 504 | 457 | 461 | 499 | 576 | 6,146 |
| Total Energy | 296,380 | 278,743 | 269,808 | 226,702 | 222,083 | 231,507 | 268,662 | 257,186 | 227,244 | 231,652 | 257,077 | 289,175 | 3,056,219 |
| Total Requirements (Energy + Losses) | 320,526 | 301,452 | 291,790 | 245,171 | 240,176 | 250,368 | 290,551 | 278,139 | 245,758 | 250,525 | 278,022 | 312,734 | 3,305,212 |
| # of Large Comm & Ind Customers | 1,605 | 1,602 | 1,604 | 1,607 | 1,610 | 1,610 | 1,609 | 1,608 | 1,605 | 1,601 | 1,600 | 1,597 | 1,605 |
| # of Other Public Customers | 704 | 704 | 704 | 708 | 709 | 708 | 707 | 707 | 707 | 703 | 700 | 697 | 705 |
| # of Street & Highway Lighting Customers | 632 | 644 | 644 | 644 | 644 | 646 | 647 | 649 | 651 | 656 | 659 | 661 | 648 |
| Peak Demand Net of Energy Efficiency Progs | 576.5 | 528.9 | 490.1 | 435.3 | 399.4 | 530.5 | 587.5 | 564.3 | 487.8 | 447.4 | 474.8 | 540.6 | 587.5 |

G-5

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

INTEGRATED SYSTEM YEAR 2029

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 1,081.2 | 1,008.8 | 897.3 | 709.8 | 651.6 | 745.3 | 918.3 | 841.4 | 655.1 | 681.5 | 856.3 | 1,028.9 | 10,076.0 |
| # of Residential Customers | 106,291 | 106,306 | 106,281 | 106,276 | 106,214 | 106,217 | 106,245 | 106,257 | 106,244 | 106,260 | 106,316 | 106,322 | 106,269 |
| Total Residential Sales - MWh | 114,925 | 107,246 | 95,361 | 75,435 | 69,211 | 79,165 | 97,568 | 89,406 | 69,597 | 72,420 | 91,036 | 109,393 | 1,070,763 |
| Use per Small Comm & Ind Customer - kWh | 3,524.8 | 3,389.3 | 3,260.3 | 2,679.8 | 2,562.0 | 2,672.3 | 3,076.3 | 2,998.4 | 2,687.9 | 2,738.3 | 3,037.8 | 3,417.6 | 36,031.4 |
| # of Small Comm & Ind Customers | 20,106 | 20,097 | 20,107 | 20,205 | 20,321 | 20,368 | 20,375 | 20,385 | 20,363 | 20,278 | 20,230 | 20,226 | 20,255 |
| Total Small Comm & Ind Sales - MWh | 70,870 | 68,115 | 65,555 | 54,145 | 52,063 | 54,429 | 62,680 | 61,123 | 54,733 | 55,528 | 61,455 | 69,124 | 729,820 |
| Large Comm & Ind Sales | 104,783 | 97,922 | 103,102 | 91,853 | 95,103 | 91,965 | 101,969 | 100,333 | 97,201 | 98,279 | 99,185 | 104,696 | 1,186,391 |
| Total Sales (Residential, SC&I and LC&I) | 290,578 | 273,283 | 264,018 | 221,433 | 216,377 | 225,559 | 262,217 | 250,862 | 221,531 | 226,227 | 251,676 | 283,213 | 2,986,974 |
| Other Public Sales | 4,749 | 4,585 | 4,814 | 4,394 | 4,926 | 5,284 | 5,843 | 5,666 | 4,892 | 4,510 | 4,463 | 4,764 | 58,890 |
| Street & Highway Lighting Sales | 1,789 | 1,570 | 1,609 | 1,401 | 1,312 | 1,232 | 1,271 | 1,305 | 1,373 | 1,482 | 1,591 | 1,840 | 17,775 |
| Interdepartmental Sales | 30 | 29 | 27 | 23 | 19 | 20 | 21 | 18 | 19 | 21 | 25 | 29 | 281 |
| Total Billed Sales - MWh | 297,146 | 279,467 | 270,468 | 227,251 | 222,634 | 232,095 | 269,352 | 257,851 | 227,815 | 232,240 | 257,755 | 289,846 | 3,063,920 |
| Company Use | 590 | 557 | 571 | 477 | 457 | 464 | 533 | 504 | 457 | 461 | 499 | 576 | 6,146 |
| Total Energy | 297,736 | 280,024 | 271,039 | 227,728 | 223,091 | 232,559 | 269,885 | 258,355 | 228,272 | 232,701 | 258,254 | 290,422 | 3,070,066 |
| Total Requirements (Energy + Losses) | 321,992 | 302,837 | 293,121 | 246,281 | 241,266 | 251,506 | 291,873 | 279,404 | 246,870 | 251,659 | 279,294 | 314,083 | 3,320,186 |
| # of Large Comm & Ind Customers | 1,617 | 1,614 | 1,616 | 1,619 | 1,622 | 1,622 | 1,621 | 1,621 | 1,617 | 1,614 | 1,612 | 1,609 | 1,617 |
| # of Other Public Customers | 704 | 704 | 704 | 708 | 709 | 708 | 707 | 707 | 707 | 703 | 700 | 697 | 705 |
| # of Street & Highway Lighting Customers | 632 | 644 | 644 | 644 | 644 | 646 | 647 | 649 | 651 | 656 | 659 | 661 | 648 |
| Peak Demand Net of Energy Efficiency Progs | 578.9 | 531.0 | 492.1 | 437.0 | 401.9 | 533.9 | 591.2 | 567.9 | 491.0 | 450.2 | 476.8 | 543.0 | 591.2 |

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

INTEGRATED SYSTEM YEAR 2030

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 1,084.7 | 1,012.1 | 900.1 | 712.1 | 653.7 | 747.6 | 921.2 | 844.0 | 657.1 | 683.7 | 859.0 | 1,034.4 | 10,110.0 |
| # of Residential Customers | 106,441 | 106,456 | 106,431 | 106,426 | 106,364 | 106,367 | 106,395 | 106,407 | 106,394 | 106,410 | 106,466 | 106,472 | 106,419 |
| Total Residential Sales - MWh | 115,454 | 107,739 | 95,798 | 75,781 | 69,530 | 79,523 | 98,008 | 89,809 | 69,914 | 72,752 | 91,454 | 110,136 | 1,075,898 |
| Use per Small Comm & Ind Customer - kWh | 3,515.8 | 3,380.6 | 3,251.8 | 2,673.0 | 2,555.6 | 2,665.5 | 3,068.5 | 2,991.0 | 2,681.2 | 2,731.3 | 3,030.0 | 3,410.6 | 35,941.4 |
| # of Small Comm & Ind Customers | 20,242 | 20,233 | 20,244 | 20,341 | 20,458 | 20,505 | 20,512 | 20,522 | 20,500 | 20,415 | 20,367 | 20,363 | 20,392 |
| Total Small Comm & Ind Sales - MWh | 71,167 | 68,400 | 65,829 | 54,371 | 52,282 | 54,656 | 62,942 | 61,381 | 54,964 | 55,759 | 61,711 | 69,450 | 732,912 |
| Large Comm & Ind Sales | 105,199 | 98,313 | 103,505 | 92,211 | 95,477 | 92,330 | 102,374 | 100,730 | 97,582 | 98,661 | 99,578 | 105,142 | 1,191,102 |
| Total Sales (Residential, SC&I and LC&I) | 291,820 | 274,452 | 265,132 | 222,363 | 217,289 | 226,509 | 263,324 | 251,920 | 222,460 | 227,172 | 252,743 | 284,728 | 2,999,912 |
| Other Public Sales | 4,749 | 4,585 | 4,814 | 4,394 | 4,926 | 5,284 | 5,843 | 5,666 | 4,892 | 4,510 | 4,463 | 4,764 | 58,890 |
| Street & Highway Lighting Sales | 1,789 | 1,570 | 1,609 | 1,401 | 1,312 | 1,232 | 1,271 | 1,305 | 1,373 | 1,482 | 1,591 | 1,840 | 17,775 |
| Interdepartmental Sales | 30 | 29 | 27 | 23 | 19 | 20 | 21 | 18 | 19 | 21 | 25 | 29 | 281 |
| Total Billed Sales - MWh | 298,388 | 280,636 | 271,582 | 228,181 | 223,546 | 233,045 | 270,459 | 258,909 | 228,744 | 233,185 | 258,822 | 291,361 | 3,076,858 |
| Company Use | 590 | 557 | 571 | 477 | 457 | 464 | 533 | 504 | 457 | 461 | 499 | 576 | 6,146 |
| Total Energy | 298,978 | 281,193 | 272,153 | 228,658 | 224,003 | 233,509 | 270,992 | 259,413 | 229,201 | 233,646 | 259,321 | 291,937 | 3,083,004 |
| Total Requirements (Energy + Losses) | 323,336 | 304,102 | 294,325 | 247,287 | 242,252 | 252,533 | 293,070 | 280,547 | 247,874 | 252,681 | 280,448 | 315,721 | 3,334,176 |
| # of Large Comm & Ind Customers | 1,629 | 1,626 | 1,628 | 1,631 | 1,634 | 1,634 | 1,633 | 1,633 | 1,629 | 1,626 | 1,624 | 1,621 | 1,629 |
| # of Other Public Customers | 704 | 704 | 704 | 708 | 709 | 708 | 707 | 707 | 707 | 703 | 700 | 697 | 705 |
| # of Street & Highway Lighting Customers | 632 | 644 | 644 | 644 | 644 | 646 | 647 | 649 | 651 | 656 | 659 | 661 | 648 |
| Peak Demand Net of Energy Efficiency Progs | 581.5 | 533.4 | 494.3 | 439.0 | 404.5 | 537.4 | 595.0 | 571.7 | 494.1 | 453.2 | 478.9 | 545.2 | 595.0 |

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

INTEGRATED SYSTEM YEAR 2031

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 1,091.7 | 1,018.6 | 905.9 | 716.6 | 657.9 | 752.4 | 927.0 | 849.3 | 661.3 | 688.1 | 864.5 | 1,041.0 | 10,174.6 |
| # of Residential Customers | 106,590 | 106,606 | 106,581 | 106,576 | 106,514 | 106,517 | 106,545 | 106,557 | 106,544 | 106,560 | 106,616 | 106,623 | 106,569 |
| Total Residential Sales - MWh | 116,361 | 108,585 | 96,550 | 76,375 | 70,080 | 80,139 | 98,763 | 90,503 | 70,456 | 73,321 | 92,170 | 110,996 | 1,084,299 |
| Use per Small Comm & Ind Customer - kWh | 3,509.5 | 3,374.7 | 3,246.2 | 2,668.2 | 2,551.2 | 2,660.8 | 3,063.2 | 2,985.7 | 2,676.3 | 2,726.5 | 3,024.6 | 3,404.8 | 35,878.6 |
| # of Small Comm & Ind Customers | 20,380 | 20,370 | 20,380 | 20,479 | 20,596 | 20,644 | 20,651 | 20,661 | 20,639 | 20,553 | 20,505 | 20,500 | 20,530 |
| Total Small Comm & Ind Sales - MWh | 71,524 | 68,743 | 66,158 | 54,643 | 52,544 | 54,930 | 63,258 | 61,688 | 55,237 | 56,038 | 62,020 | 69,798 | 736,581 |
| Large Comm & Ind Sales | 105,653 | 98,743 | 103,948 | 92,604 | 95,887 | 92,735 | 102,823 | 101,170 | 98,002 | 99,081 | 100,012 | 105,619 | 1,196,277 |
| Total Sales (Residential, SC&I and LC&I) | 293,538 | 276,071 | 266,656 | 223,622 | 218,511 | 227,804 | 264,844 | 253,361 | 223,695 | 228,440 | 254,202 | 286,413 | 3,017,157 |
| Other Public Sales | 4,749 | 4,585 | 4,814 | 4,394 | 4,926 | 5,284 | 5,843 | 5,666 | 4,892 | 4,510 | 4,463 | 4,764 | 58,890 |
| Street & Highway Lighting Sales | 1,789 | 1,570 | 1,609 | 1,401 | 1,312 | 1,232 | 1,271 | 1,305 | 1,373 | 1,482 | 1,591 | 1,840 | 17,775 |
| Interdepartmental Sales | 30 | 29 | 27 | 23 | 19 | 20 | 21 | 18 | 19 | 21 | 25 | 29 | 281 |
| Total Billed Sales - MWh | 300,106 | 282,255 | 273,106 | 229,440 | 224,768 | 234,340 | 271,979 | 260,350 | 229,979 | 234,453 | 260,281 | 293,046 | 3,094,103 |
| Company Use | 590 | 557 | 571 | 477 | 457 | 464 | 533 | 504 | 457 | 461 | 499 | 576 | 6,146 |
| Total Energy | 300,696 | 282,812 | 273,677 | 229,917 | 225,225 | 234,804 | 272,512 | 260,854 | 230,436 | 234,914 | 260,780 | 293,622 | 3,100,249 |
| Total Requirements (Energy + Losses) | 325,194 | 305,853 | 295,973 | 248,648 | 243,575 | 253,933 | 294,714 | 282,105 | 249,210 | 254,053 | 282,025 | 317,543 | 3,352,826 |
| # of Large Comm & Ind Customers | 1,642 | 1,639 | 1,641 | 1,644 | 1,647 | 1,647 | 1,646 | 1,646 | 1,642 | 1,639 | 1,637 | 1,634 | 1,642 |
| # of Other Public Customers | 704 | 704 | 704 | 708 | 709 | 708 | 707 | 707 | 707 | 703 | 700 | 697 | 705 |
| # of Street & Highway Lighting Customers | 632 | 644 | 644 | 644 | 644 | 646 | 647 | 649 | 651 | 656 | 659 | 661 | 648 |
| Peak Demand Net of Energy Efficiency Progs | 583.9 | 535.7 | 496.4 | 440.8 | 407.3 | 541.3 | 599.3 | 575.8 | 497.7 | 456.5 | 481.7 | 548.5 | 599.3 |

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

INTEGRATED SYSTEM YEAR 2032

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 1,098.6 | 1,025.1 | 911.7 | 721.2 | 662.1 | 757.1 | 932.8 | 854.6 | 665.5 | 692.4 | 870.0 | 1,047.6 | 10,239.0 |
| # of Residential Customers | 106,740 | 106,756 | 106,731 | 106,726 | 106,664 | 106,667 | 106,695 | 106,707 | 106,694 | 106,710 | 106,766 | 106,773 | 106,719 |
| Total Residential Sales - MWh | 117,268 | 109,431 | 97,302 | 76,968 | 70,627 | 80,753 | 99,520 | 91,196 | 71,000 | 73,891 | 92,885 | 111,857 | 1,092,698 |
| Use per Small Comm & Ind Customer - kWh | 3,503.7 | 3,368.9 | 3,240.7 | 2,663.9 | 2,546.9 | 2,656.5 | 3,058.1 | 2,980.9 | 2,672.1 | 2,722.0 | 3,019.6 | 3,399.1 | 35,819.3 |
| # of Small Comm & Ind Customers | 20,516 | 20,507 | 20,517 | 20,615 | 20,733 | 20,781 | 20,789 | 20,798 | 20,776 | 20,690 | 20,642 | 20,637 | 20,667 |
| Total Small Comm & Ind Sales - MWh | 71,881 | 69,087 | 66,490 | 54,917 | 52,805 | 55,205 | 63,574 | 61,997 | 55,515 | 56,319 | 62,331 | 70,147 | 740,268 |
| Large Comm & Ind Sales | 106,141 | 99,201 | 104,424 | 93,025 | 96,328 | 93,168 | 103,305 | 101,642 | 98,450 | 99,534 | 100,476 | 106,110 | 1,201,804 |
| Total Sales (Residential, SC&I and LC&I) | 295,290 | 277,719 | 268,216 | 224,910 | 219,760 | 229,126 | 266,399 | 254,835 | 224,965 | 229,744 | 255,692 | 288,114 | 3,034,770 |
| Other Public Sales | 4,749 | 4,585 | 4,814 | 4,394 | 4,926 | 5,284 | 5,843 | 5,666 | 4,892 | 4,510 | 4,463 | 4,764 | 58,890 |
| Street & Highway Lighting Sales | 1,789 | 1,570 | 1,609 | 1,401 | 1,312 | 1,232 | 1,271 | 1,305 | 1,373 | 1,482 | 1,591 | 1,840 | 17,775 |
| Interdepartmental Sales | 30 | 29 | 27 | 23 | 19 | 20 | 21 | 18 | 19 | 21 | 25 | 29 | 281 |
| Total Billed Sales - MWh | 301,858 | 283,903 | 274,666 | 230,728 | 226,017 | 235,662 | 273,534 | 261,824 | 231,249 | 235,757 | 261,771 | 294,747 | 3,111,716 |
| Company Use | 590 | 557 | 571 | 477 | 457 | 464 | 533 | 504 | 457 | 461 | 499 | 576 | 6,146 |
| Total Energy | 302,448 | 284,460 | 275,237 | 231,205 | 226,474 | 236,126 | 274,067 | 262,328 | 231,706 | 236,218 | 262,270 | 295,323 | 3,117,862 |
| Total Requirements (Energy + Losses) | 327,088 | 307,634 | 297,661 | 250,041 | 244,925 | 255,362 | 296,396 | 283,700 | 250,583 | 255,463 | 283,637 | 319,383 | 3,371,873 |
| # of Large Comm & Ind Customers | 1,653 | 1,650 | 1,652 | 1,655 | 1,658 | 1,658 | 1,657 | 1,657 | 1,653 | 1,650 | 1,648 | 1,645 | 1,653 |
| # of Other Public Customers | 704 | 704 | 704 | 708 | 709 | 708 | 707 | 707 | 707 | 703 | 700 | 697 | 705 |
| # of Street & Highway Lighting Customers | 632 | 644 | 644 | 644 | 644 | 646 | 647 | 649 | 651 | 656 | 659 | 661 | 648 |
| Peak Demand Net of Energy Efficiency Progs | 587.3 | 538.9 | 499.3 | 443.4 | 410.3 | 545.2 | 603.5 | 579.8 | 501.2 | 459.7 | 484.4 | 551.6 | 603.5 |

**MONTHLY FORECASTS
SALES AND ENERGY (MWH)
PEAK DEMAND (MW)**

INTEGRATED SYSTEM YEAR 2033

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Use per Residential Customer - kWh | 1,105.6 | 1,031.5 | 917.4 | 725.7 | 666.4 | 761.8 | 938.5 | 859.9 | 669.6 | 696.8 | 875.5 | 1,054.2 | 10,303.3 |
| # of Residential Customers | 106,890 | 106,906 | 106,881 | 106,876 | 106,814 | 106,817 | 106,845 | 106,857 | 106,844 | 106,860 | 106,917 | 106,923 | 106,869 |
| Total Residential Sales - MWh | 118,175 | 110,277 | 98,052 | 77,562 | 71,176 | 81,369 | 100,275 | 91,890 | 71,543 | 74,462 | 93,603 | 112,716 | 1,101,100 |
| Use per Small Comm & Ind Customer - kWh | 3,497.8 | 3,363.5 | 3,235.3 | 2,659.4 | 2,542.8 | 2,652.1 | 3,053.2 | 2,975.8 | 2,667.7 | 2,717.4 | 3,014.4 | 3,393.4 | 35,759.6 |
| # of Small Comm & Ind Customers | 20,653 | 20,643 | 20,654 | 20,753 | 20,871 | 20,920 | 20,927 | 20,938 | 20,914 | 20,829 | 20,781 | 20,775 | 20,805 |
| Total Small Comm & Ind Sales - MWh | 72,241 | 69,432 | 66,822 | 55,191 | 53,071 | 55,481 | 63,894 | 62,308 | 55,792 | 56,600 | 62,643 | 70,498 | 743,973 |
| Large Comm & Ind Sales | 106,629 | 99,662 | 104,900 | 93,447 | 96,768 | 93,601 | 103,790 | 102,115 | 98,901 | 99,985 | 100,940 | 106,607 | 1,207,345 |
| Total Sales (Residential, SC&I and LC&I) | 297,045 | 279,371 | 269,774 | 226,200 | 221,015 | 230,451 | 267,959 | 256,313 | 226,236 | 231,047 | 257,186 | 289,821 | 3,052,418 |
| Other Public Sales | 4,749 | 4,585 | 4,814 | 4,394 | 4,926 | 5,284 | 5,843 | 5,666 | 4,892 | 4,510 | 4,463 | 4,764 | 58,890 |
| Street & Highway Lighting Sales | 1,789 | 1,570 | 1,609 | 1,401 | 1,312 | 1,232 | 1,271 | 1,305 | 1,373 | 1,482 | 1,591 | 1,840 | 17,775 |
| Interdepartmental Sales | 30 | 29 | 27 | 23 | 19 | 20 | 21 | 18 | 19 | 21 | 25 | 29 | 281 |
| Total Billed Sales - MWh | 303,613 | 285,555 | 276,224 | 232,018 | 227,272 | 236,987 | 275,094 | 263,302 | 232,520 | 237,060 | 263,265 | 296,454 | 3,129,364 |
| Company Use | 590 | 557 | 571 | 477 | 457 | 464 | 533 | 504 | 457 | 461 | 499 | 576 | 6,146 |
| Total Energy | 304,203 | 286,112 | 276,795 | 232,495 | 227,729 | 237,451 | 275,627 | 263,806 | 232,977 | 237,521 | 263,764 | 297,030 | 3,135,510 |
| Total Requirements (Energy + Losses) | 328,986 | 309,421 | 299,346 | 251,436 | 246,282 | 256,795 | 298,082 | 285,298 | 251,958 | 256,871 | 285,253 | 321,229 | 3,390,957 |
| # of Large Comm & Ind Customers | 1,667 | 1,664 | 1,666 | 1,669 | 1,672 | 1,672 | 1,671 | 1,671 | 1,667 | 1,664 | 1,661 | 1,659 | 1,667 |
| # of Other Public Customers | 704 | 704 | 704 | 708 | 709 | 708 | 707 | 707 | 707 | 703 | 700 | 697 | 705 |
| # of Street & Highway Lighting Customers | 632 | 644 | 644 | 644 | 644 | 646 | 647 | 649 | 651 | 656 | 659 | 661 | 648 |
| Peak Demand Net of Energy Efficiency Progs | 590.7 | 541.9 | 502.2 | 445.9 | 413.1 | 549.0 | 607.8 | 583.9 | 504.8 | 463.0 | 487.2 | 554.8 | 607.8 |