

### April 2017-March 2027 SALES in Volume - Summary

| Customer        | 2017-18           | 2018-19           | 2019-20           | 2020-21           | 2021-22           | 2022-23           | 2023-24           | 2024-25           | 2025-26           | 2026-27           |
|-----------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Residential     | 3,323,890         | 3,372,200         | 3,422,910         | 3,491,070         | 3,556,810         | 3,620,830         | 3,703,620         | 3,797,630         | 3,877,460         | 3,952,420         |
| Farm            | 1,308,360         | 1,287,700         | 1,279,930         | 1,273,000         | 1,269,180         | 1,265,760         | 1,263,850         | 1,259,560         | 1,254,450         | 1,250,190         |
| Resellers       | 1,285,754         | 1,289,386         | 1,292,992         | 1,296,449         | 1,299,690         | 1,302,939         | 1,306,197         | 1,309,462         | 1,312,736         | 1,316,018         |
| Streetlights    | 60,550            | 60,930            | 61,430            | 61,490            | 62,000            | 62,370            | 62,850            | 62,890            | 63,410            | 63,770            |
| Commercial      | 3,853,920         | 3,878,280         | 3,901,320         | 3,922,820         | 3,941,810         | 3,957,000         | 3,968,980         | 3,982,700         | 3,998,160         | 4,014,620         |
| Power Customers | 9,217,658         | 9,339,085         | 9,716,654         | 9,850,142         | 9,947,761         | 10,142,239        | 10,307,132        | 10,394,984        | 10,557,735        | 10,666,691        |
| Oilfields       | 3,445,340         | 3,538,410         | 3,601,550         | 3,655,800         | 3,659,230         | 3,666,840         | 3,661,490         | 3,635,510         | 3,633,300         | 3,603,630         |
|                 | <b>22,495,472</b> | <b>22,765,991</b> | <b>23,276,786</b> | <b>23,550,771</b> | <b>23,736,481</b> | <b>24,017,978</b> | <b>24,274,119</b> | <b>24,442,736</b> | <b>24,697,251</b> | <b>24,867,339</b> |

April 2017-March 2027 SALES in Dollars - Summary

| Customer        | 2017-18                | 2018-19                | 2019-20                | 2020-21                | 2021-22                | 2022-23                | 2023-24                | 2024-25                | 2025-26                | 2026-27                |
|-----------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| Residential     | \$568,111,185          | \$576,818,043          | \$585,785,060          | \$597,105,993          | \$608,099,261          | \$618,851,884          | \$632,165,949          | \$646,994,754          | \$659,879,511          | \$672,077,486          |
| Farm            | 177,275,836            | 174,836,974            | 173,874,464            | 172,993,611            | 172,499,365            | 172,051,476            | 171,779,012            | 171,260,109            | 170,628,894            | 170,100,496            |
| Resellers       | 103,878,225            | 104,170,568            | 104,460,957            | 104,739,454            | 105,000,497            | 105,262,193            | 105,524,543            | 105,787,549            | 106,051,212            | 106,315,534            |
| Streetlights    | 17,007,014             | 17,290,409             | 17,614,139             | 17,944,086             | 18,275,164             | 18,608,802             | 18,942,483             | 19,277,014             | 19,612,944             | 19,954,574             |
| Commercial      | 490,877,263            | 494,026,854            | 496,763,162            | 499,813,295            | 502,313,769            | 504,346,083            | 505,706,655            | 507,801,449            | 509,868,586            | 512,057,849            |
| Power Customers | 704,451,491            | 714,939,354            | 743,614,034            | 753,900,758            | 761,661,138            | 776,497,396            | 789,363,274            | 796,080,008            | 808,406,740            | 816,332,564            |
| Oilfields       | 356,900,701            | 362,793,340            | 368,316,032            | 374,144,613            | 374,237,689            | 375,046,551            | 373,726,656            | 371,427,486            | 371,350,222            | 367,879,002            |
|                 | <b>\$2,418,501,715</b> | <b>\$2,444,875,542</b> | <b>\$2,490,427,848</b> | <b>\$2,520,641,810</b> | <b>\$2,542,086,883</b> | <b>\$2,570,664,385</b> | <b>\$2,597,208,572</b> | <b>\$2,618,628,369</b> | <b>\$2,645,798,109</b> | <b>\$2,664,717,505</b> |

# SaskPower

## 2017 (FISCAL) Q1 LOAD FORECAST



Load & Revenue Forecasting  
2016 December 15



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## INTRODUCTION

The Load Forecast is developed annually to determine the long term energy requirements and system peak demand for SaskPower's customers in the province of Saskatchewan. The 2016 Load Forecast was prepared for the fiscal years 2016-17 through 2025-26 using inputs from the 2016 SaskPower Economic Forecast, historical energy sales, and individual customer forecasts. The forecast is a compilation of energy sales forecasts for Power Accounts, Oilfield, Commercial, Residential, Farm, and Reseller customers and also includes projections for internal corporate use, system losses, peak demand, unaccounted energy use, and non-grid energy use. SaskPower's load forecast forms the basis for capacity additions, maintenance schedules, power plant operations, fuel budgets, operation budgets and the corporate revenue forecast.

A major input to the Load Forecast is the SaskPower Economic Forecast which provides information on population and household growth and GDP growth rates for commercial and farm categories. It is important to note that SaskPower and the Government of Saskatchewan use the same econometric model for forecasting and work closely together to ensure consistency. Since weather can have a significant impact on the amount of electricity used by Residential, Commercial, Farm and Reseller customers, average daily weather conditions for the last thirty years are assumed throughout the forecast horizon.

SaskPower's load forecast methodology is reviewed by outside industry experts every 5 years. The purpose of this review is to determine if the methodology is appropriate for SaskPower and is consistent with accepted electric power utility practices. The last methodology review was completed in 2010 by Itron Inc. Itron provided verification of SaskPower's methodology using their own forecasting expertise as well as an in depth industry survey. The next review has been delayed as we calibrate our new forecasting software.

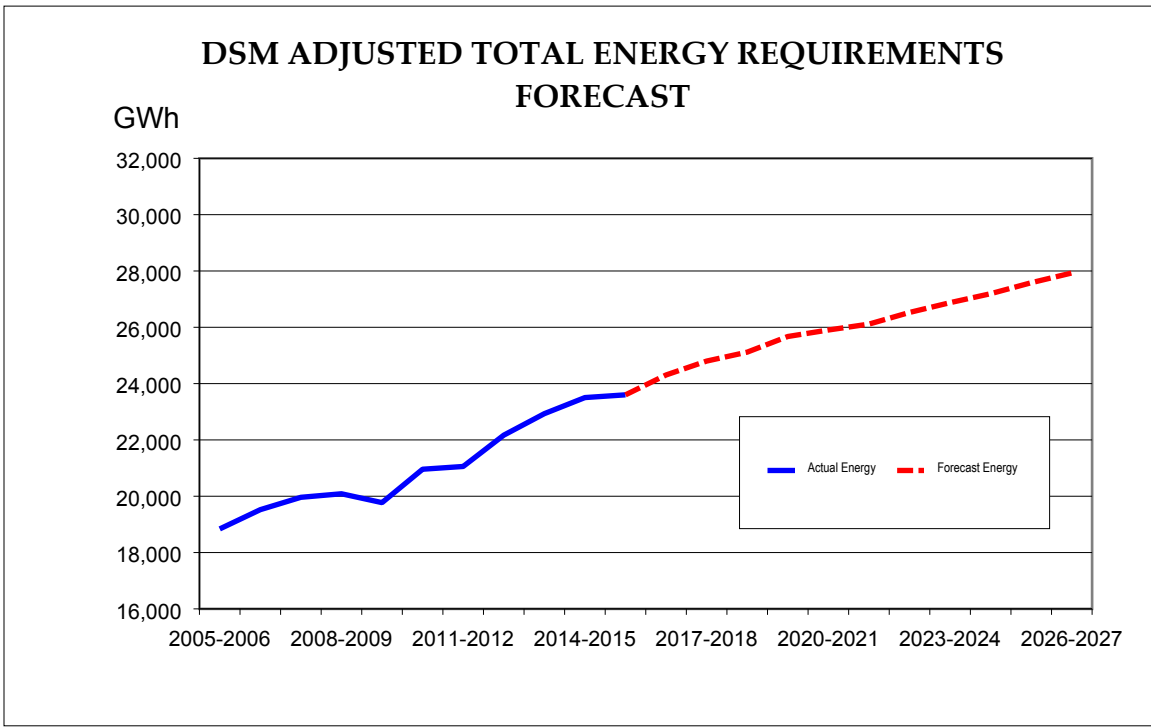
While there are many variables that can affect load forecasts, the most significant for SaskPower are the forecasts provided by large-scale industrial and commercial customers in the Power class. SaskPower contacts these customers quarterly to obtain short and long term expansion plans. This report summarizes the results of the 2017F Q1 load forecast which is based on discussions with Power class customers in the first trimester of 2016. Quarterly forecast updates will be prepared using data provided by Power class customers in June, September and November.

Load & Revenue Forecasting develops a "Base" and "DSM Adjusted" load forecast. Once the 2016 Base forecast is completed using the methodology outlined above, the energy and peak demand savings identified by Customer Services are removed. All tables in this report will reflect the DSM adjusted forecast. Table A5 at the end of this report provides a summary of the Base and DSM Adjusted Forecasts.

## Introduction (cont.)

### Total System Energy Requirements

The 2016 DSM adjusted load forecast predicts an increase in the total system energy requirements of **3,622.8 GWh** over the next 10 years. This increase from **24,336.6 GWh** in 2016-2017 to **27,959.6 GWh** in 2026-2027 translates into an average annual growth rate of **1.4%** (Refer to Table A1). The historical average annual growth rate was **2.3%** for the years 2005-2006 to 2015-2016. The projected reduction in growth from the previous report is due to a reduction in the oilfield class based on expected decreased production as well as reductions in the potash, pipeline and northern mine sectors.



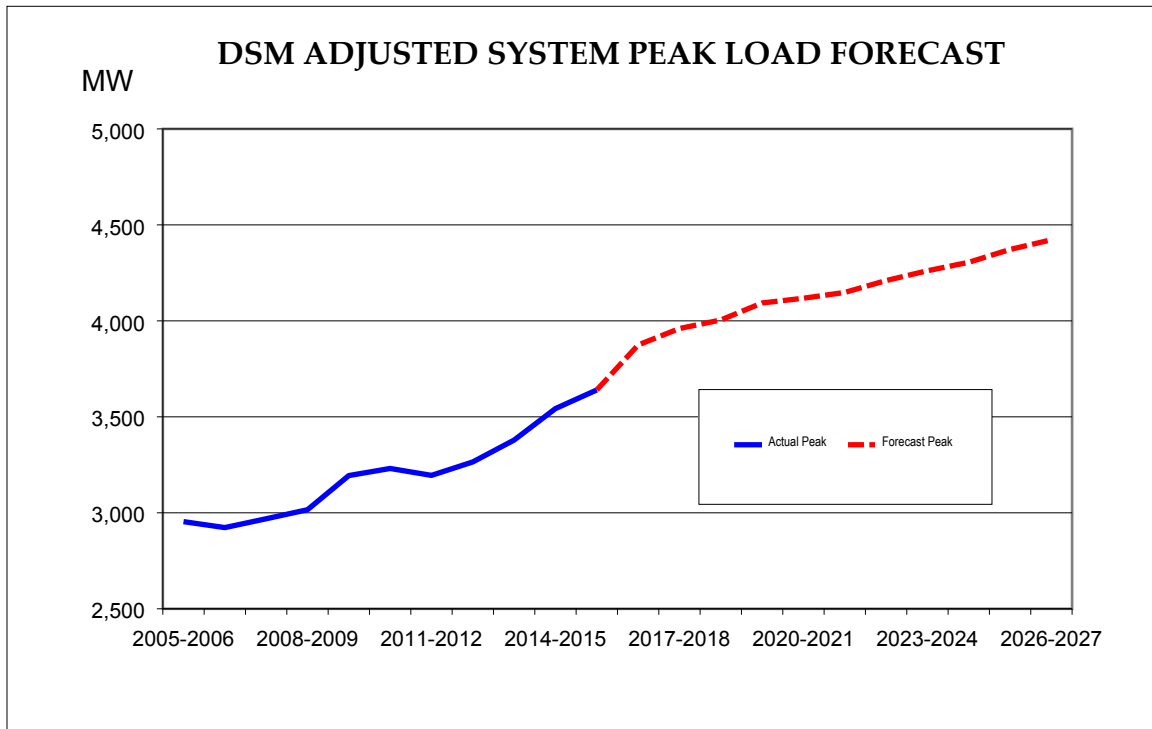


## Introduction (cont.)

### System Peak Load

The DSM adjusted calendar system peak load is expected to increase by **548 MW** from **3,874 MW** in 2016-2017 to **4,422 MW** in 2026-2027. This equates to an average annual growth rate of **1.3%** (Refer to Table A1). The system peak demand grew at an average annual rate of **2.1%** for the years 2005-2006 to 2015-2016.

Table A4 at the back of this report provides additional information on SaskPower's system peak demand. In addition to the (winter) potential peak forecast, table A4 also provides the summer potential peak forecast, which assumes sustained hot weather occurring in July. A most likely winter and summer peak forecast, based on the actual weather experienced at the time of the system peaks over the last 5 years, is also provided.



This report documents the definition of each customer class, the methodology behind the derivation of the forecast data, the assumptions and the forecast results for the 2016-2017 to 2026-2027 timeframe.

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## **POWER ACCOUNTS**

### **Definition**

A Power customer is defined as any large commercial or industrial customer who is currently on Standard Power rates or who has negotiated an Energy Service Agreement with SaskPower.

The 2016-2017 Power Account load forecast is a compilation of individual forecasts for each Power customer. Each customer forecast includes firm load and probable load when applicable. Firm load consists of projects or expansions which are very likely to proceed. Normally these are projects that are 2 to 3 years out, and the project has been announced and approved. Probable loads are longer term expansion plans or new projects which have not been approved. With input from SaskPower Senior Business Advisors, Key Accounts, these loads are assigned a probability of proceeding, and are included in the forecast on that basis.

### **Methodology**

The primary method used to forecast load for the Power class is through individual customer forecasts. SaskPower's Senior Business Advisors, Key Accounts meet with each customer and record their future load growth plans. SaskPower will also consult with the Ministry of the Economy to review mine expansion plans in the province. SaskPower also develops a potash sector energy forecast based on the Ministry of the Economy's potash production forecast. This forecast is used to compare to, and adjust, the individual potash customer forecasts if required.

After the Base Power class forecast has been completed, the DSM energy savings are removed; resulting in the DSM adjusted Power class forecast.

### **Assumptions**

Monthly maintenance schedules for individual Power customers are determined either by the customer's forecast or by assuming the same historical maintenance cycle.

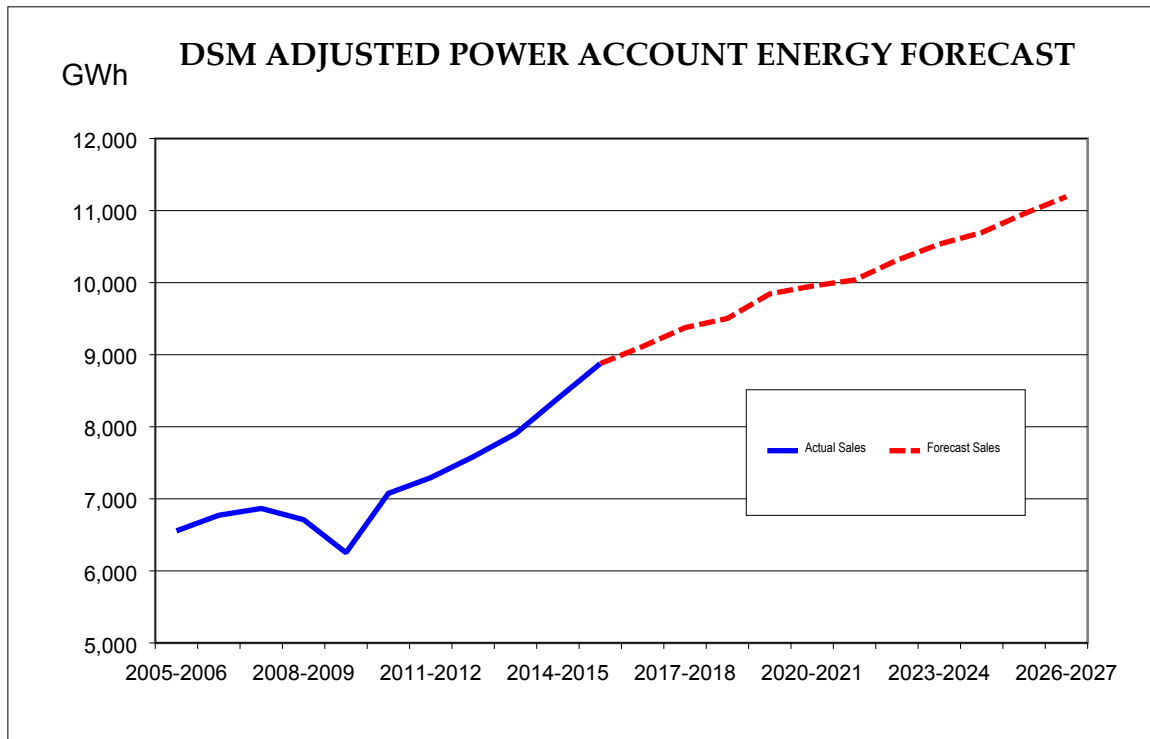
SaskPower will maintain its current customer base and market share.

### **Power Account Forecast Results**

The total DSM adjusted Power class sales forecast (including probable load) is expected to grow from 9,114.4 GWh in 2016-2017 to 11,194.6 GWh in 2026-2027. The total increase of 2,080.2 GWh equates to an average annual growth rate of 2.1% (Refer to Table A2).

## **Power Accounts (cont.)**

Energy sales for the Power class have grown at an average rate of 3.1% per year from 2005-2006 to 2015-2016. In 2009, energy sales dropped substantially due to the global economic downturn. The potash, pipeline pumping and steel sectors were particularly hard hit in Saskatchewan. In 2010 the Power class loads returned to levels exceeding those before the economic downturn, and have experienced steady or increasing growth for the last several years.



### **Power Account Major Growth Increases**

The major growth in the Power class is from the potash, pipeline pumping, and northern mining sectors.

#### **Potash Sector**

There was a reduction in potash sales and the energy supplied to Saskatchewan potash mines in 2009, however energy sales returned to normal levels in 2010. Potash sales are expected to continue to grow in the medium term. One mine is in the construction phase. By 2026-2027, the annual sector load is forecast to increase by 1,350 GWh.

#### **Pipeline Pumping Sector**

Loads are increasing in the pipeline sector as expanding Alberta oilsands production and conventional oil production in Alberta and Saskatchewan are shipped through Saskatchewan to markets in eastern Canada and the United States. By 2026-2027, the annual sector load is forecast to increase by 408 GWh. The reduced growth over the last forecast is attributed to delays in large projects.

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## **Power Accounts (cont.)**

### **Northern Mining Sector**

The northern mining sector consists of the gold and uranium mines supplied through the northern transmission system originating from the Island Falls generating plant. Load is still increasing in the Northern Mining Sector, but is tempered by delayed projects and the lower price of uranium.

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## OILFIELD

### Definition

Oilfield customers are those involved in individual oil and gas production and ‘in-field’ oil pumping and processing services. The Oilfield class is comprised of wells pumping oil from underground patches throughout Saskatchewan. These wells are separated into six regions: **Lloydminster Heavy, Kindersley Heavy, Swift Current Medium, Estevan Medium, Kindersley Light and Estevan Light.**

Due to the global nature of the oil and gas market, oil production in Saskatchewan is heavily influenced by the world market. It is greatly affected by the demand for and price of oil and gas and by provincial royalty structures.

### Methodology

Econometric, extrapolation and statistical regression methods are used to determine the future energy requirements of the Oilfield class. The number of customer accounts is estimated using the existing number of operating wells and future forecasts of the number of wells drilled, provided by the Ministry of Economy. To determine the forecast for the Oilfield class energy, a regression analysis is developed for energy intensity in kWh per cubic meter of oil or fluid (oil and water) production by year for each region. The forecasted energy requirements are then calculated using the regression analysis results and the forecasted oil or fluid (oil and water) production. The forecasted oil production is provided by the Ministry of Economy and the Canadian Association of Petroleum Producers and the forecasted water production is based on historic water cut trends.

Large Oilfield customer forecasts are prepared on an individual basis. The methodology for the preparation of this forecast is based on historical usage patterns, individual customer information (if available), along with the appropriate Ministry of Economy growth drivers.

### Assumptions

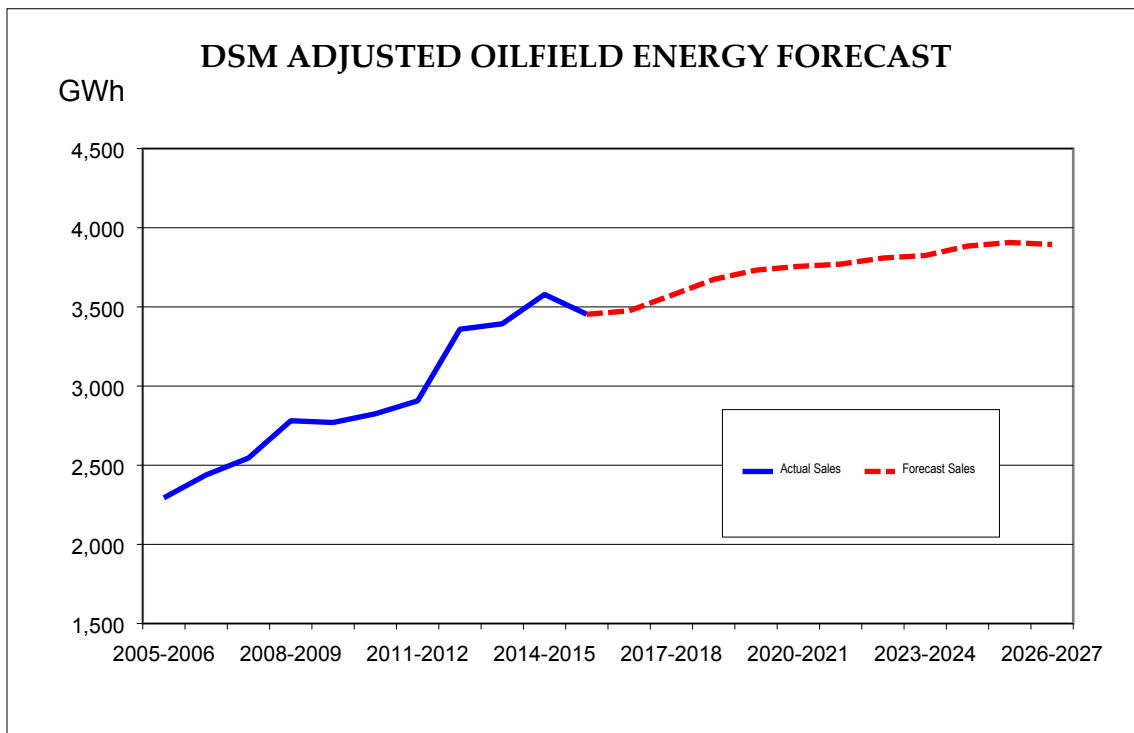
An oil production forecast for the years 2016-2026 was provided by the Ministry of Economy and by the Canadian Association of Petroleum Producers (CAPP).

## Oilfield (cont.)

### Oilfield Forecast Results

The DSM adjusted 2016-2017 Oilfield forecast predicts energy sales to grow from **3,475.1** GWh in 2016-2017 to **3,894.3** GWh in 2026-2027. The increase of **419.1** GWh equates to an average annual growth rate of **1.1%** (Refer to Table A2). This is a result of the oil production forecast which peaks and then drops off over the 10 year period. Aging Saskatchewan oilfields also require more energy to extract oil from reserves including the use of CO<sub>2</sub> injection to enhance oil recovery.

Energy sales for the Oilfield sector have grown at an average rate of **4.2%** per year from 2005-2006 to 2015-2016. The reduction in growth rate from historical levels is a result of lower oil production forecast offset by changing fluid customers. Low oil prices have impacted oil production and the Oilfield load forecast in the short term.



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## COMMERCIAL

### Definition

Commercial customers are defined as non-residential and non-farm customers not included in any other category. This customer class consists of customers involved in a wide range of activities, varying from small and large business establishments to streetlights.

### Methodology

Econometric, extrapolation and statistical regression methods are used to develop the energy forecast for the Commercial class. The forecasted number of commercial customers forecast is determined by first developing a regression analysis with the number of residential customers. This regression is then combined with the forecasted number of residential customers (from the Economic Forecast) to determine the future number of commercial customers.

Forecasted Commercial class energy sales are determined by first removing the streetlight load from the commercial class. The Streetlight energy forecast is determined by lamp count and usage for different lamp technologies with future lamp counts escalated to the number of Residential customers. The remainder of the Commercial class load is forecasted using a regression analysis of commercial energy sales to GDP indicators from the SaskPower Economic Forecast for the following commercial categories.

- Finance, Insurance and Real Estate
- Public Administration
- Retail and Wholesale Trade
- Transportation & Warehousing

The forecasted GDP indicators for these categories from the Economic Forecast and the regression analysis results are used to forecast future Commercial class energy sales.

After the Base Commercial class forecast has been completed, the DSM energy savings as identified by SaskPower's DSM department are removed; resulting in the DSM adjusted Commercial class forecast.

### Assumptions

The electrical usage for commercial customers assumes weather conditions equivalent to the average weather conditions over the last thirty years.

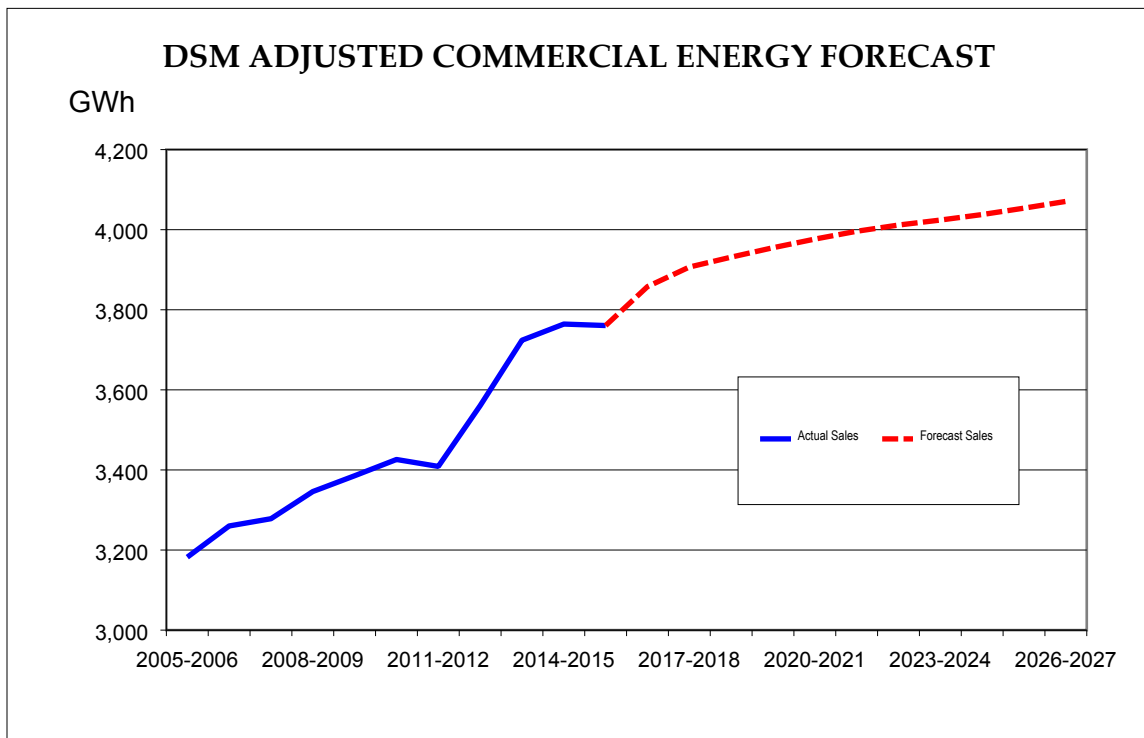
SaskPower will maintain its current customer base and market share.

## Commercial (cont.)

### Grid Commercial Forecast Results

The DSM adjusted Grid energy sales for the Commercial class is expected to grow from **3,857.9 GWh** in 2016-2017 to **4,070.6 GWh** in 2026-2027. This **212.7 GWh** increase translates into an average annual growth rate of **0.5%** (Refer to Table A2).

Energy sales for the Commercial class have grown at an average rate of **1.7%** per year from 2005-2006. This growth reflects the exceptional level of economic activity in Saskatchewan between 2009 and 2014 and unusually cold winters in 2013 and 2014. The reduction in load growth in the forecast reflects a more typical level of economic activity in the province, the return to normal weather and SaskPower's aggressive demand side management (DSM) energy savings targets for the Commercial class.





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## **RESIDENTIAL**

### **Definition**

The Residential class includes customers occupying residential premises, including apartment units, resort cottages and domestic outbuildings. Residential customers served by municipal utilities in Swift Current and Saskatoon are excluded from this customer class.

### **Methodology**

Econometric, end use, extrapolation and statistical regression methods are used to predict future residential customers' energy requirements. Energy sales to the Residential class are forecasted based on the number of residential customers and the average use per residential customer.

The number of residential customers is determined using the population and number of persons per household as provided in the SaskPower Economic Forecast. The households are separated into two categories: apartments and single family dwellings.

The average use per residential customer is calculated based on the type of household, end use market conditions and efficiency standards. This methodology includes twenty-four end uses. The use per appliance calculation considers market saturation and penetration rates, average load of appliances, hours of use, life expectancy and efficiency standards. Saturation rates are based on data from the 2010 Residential End Use Survey. Efficiency standards are based on information from Statistics Canada.

After the Base Residential class forecast has been completed, the DSM energy savings are removed; resulting in the DSM adjusted Residential class forecast.

The Residential forecast is validated through a comparison of weather-normalized actual energy sales to forecast energy sales.

### **Assumptions**

The electrical usage for Residential customers assumes normal daily weather conditions based on a thirty-year average.

The energy efficiency standards used in the forecast are a criterion set by regulatory boards, which must be met by all electrical appliance manufacturers.

SaskPower will maintain its current customer base and market share.

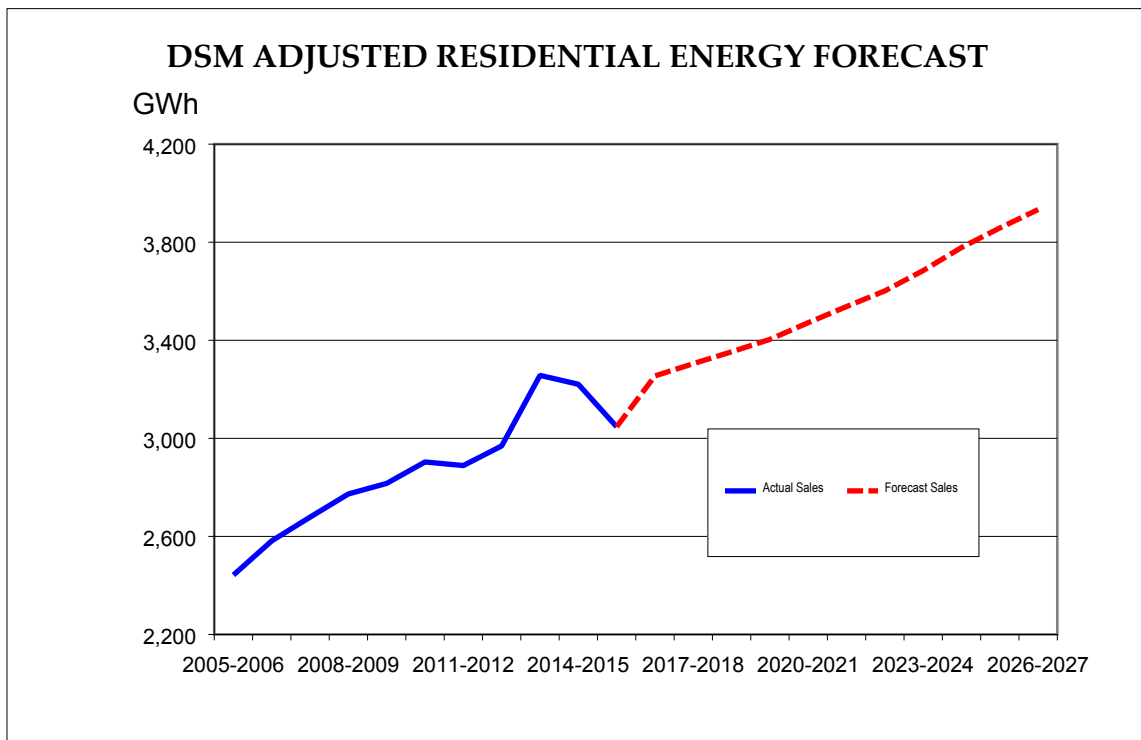
## Residential (cont.)

### Grid Residential Forecast Results

The annual DSM adjusted Grid energy sales forecast for the Residential class is expected to grow from **3,254.7 GWh** in 2016-2017 to **3,933.2 GWh** in 2026-2027. This total growth of **678.6 GWh** equates to an average annual growth rate of **1.9%** (Refer to Table A2). This growth is due to an increase in the number of customers as well as an increasing use per customer over time.

In the past 10 years, sales for the Grid Residential class have increased by **605.0 GWh**. This represents a **2.2%** average annual growth rate from 2005-2006 to 2015-2016. As was the case for the Commercial class, this growth reflects the exceptional level of economic activity in Saskatchewan between 2009 and 2014 and unusually cold winters in 2013 and 2014.

The reduction in load growth in the forecast reflects a more typical level of economic activity in the province, the return to normal weather and SaskPower's aggressive demand side management (DSM) energy savings targets for the Residential class.



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## FARM

### Definition

A Farm customer is one with normal farm household and agricultural use, and irrigation loads.

### Methodology

The forecasted number of Farm customers is developed by first dividing the total number of Farm class customers to households and operations. The future number of farm households is obtained from the Economic Forecast. The future number of farm operations is forecasted using a regression analysis with the number of farm households. The methodology used to predict the future Farm class household energy sales is the same as that used to forecast the Residential class energy sales described above. The energy use for the operations component of the Farm class is also derived from an end use model combined with Farm economic indicators from the Economic Forecast. Energy consumption for irrigation is calculated based on the number of services and the average use per service.

After the Base Farm class forecast has been completed, the DSM energy savings are removed; resulting in the DSM adjusted Farm forecast.

The Farm forecast is validated through a comparison of weather-normalized actual energy sales to forecast energy sales. The growth in the economic variables is also analyzed.

### Assumptions

The electrical usage for farm customers assumes thirty-year average weather conditions.

SaskPower will maintain its current customer base and market share.

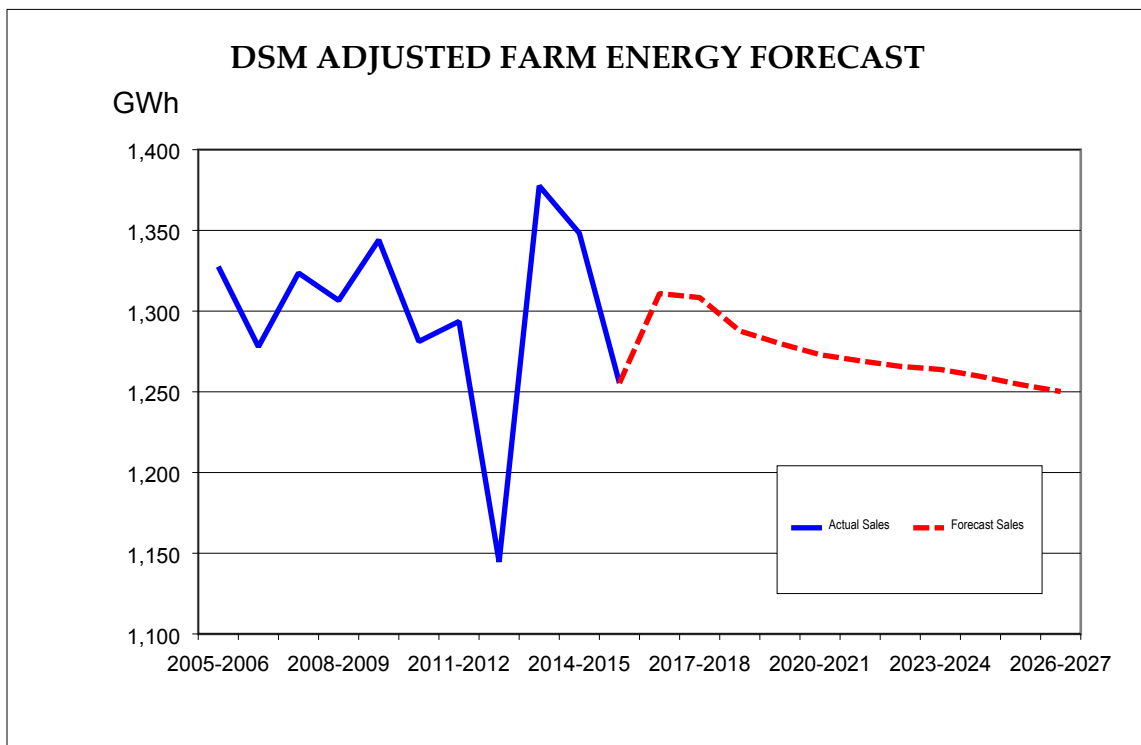
**Farm (cont.)**

**Farm Forecast Results**

DSM adjusted energy sales for the Farm class are expected to decrease from **1,310.9 GWh** annually in 2016-2017 to **1,250.2 GWh** in 2026-2027 (Refer to Table A2). This pattern reflects the trend of fewer, more energy intensive farms.

Annual Farm class energy sales have fallen slightly between 2005-2006 and 2015-2016, decreasing by **72.2 GWh** or **0.6%** over this time period.

Energy sales in the Farm class were also impacted by the unusually cold weather during the years 2013 and 2014.



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## **RESELLER**

### **Definition**

The Reseller class includes customers who purchase bulk power from SaskPower and distribute to residential and commercial customers within their jurisdictions. SaskPower serves two Reseller customers, the City of Saskatoon and the City of Swift Current.

### **Methodology**

Since the Reseller class customers have a fixed franchise area which limits their expansion, SaskPower's Senior Business Advisors, Key Accounts will meet with each customer and record their estimate of future load growth. An individual forecast is developed for each customer, which are then combined into a total Reseller class forecast.

To validate the Reseller class forecast, the forecasted energy sales are compared to historical sales trends.

### **Assumptions**

Normal daily weather conditions are based on a thirty-year average.

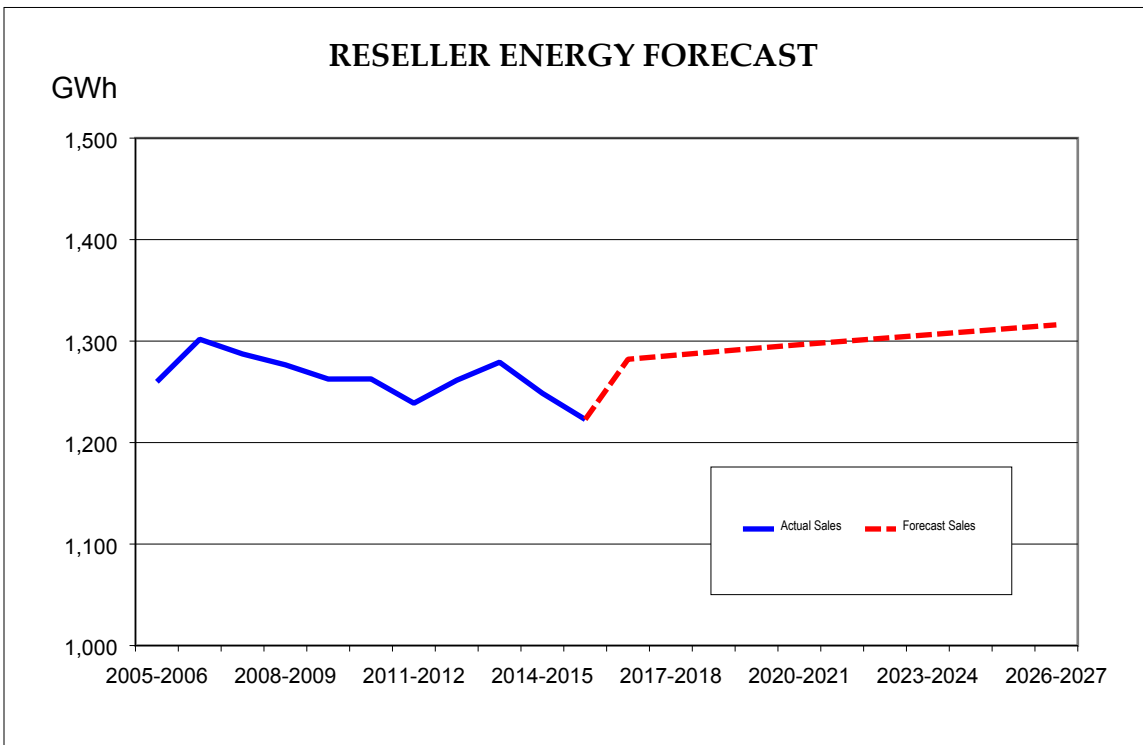
SaskPower will maintain its current customer base and market share.

**Reseller (cont.)**

**Reseller Forecast Results**

Annual Reseller class energy sales are expected to grow from **1,282.1 GWh** in 2016-2017 to **1,316.0 GWh** in 2026-2027 (Refer to Table A2). This increase of **33.9 GWh** over 10 years translates into a **0.3%** average annual growth rate.

A **37.1 GWh** or **0.3%** annual decrease in Reseller class energy sales was experienced from 2005-2006 to 2015-2016.



## CORPORATE USE

### Definition

Corporate use includes electrical energy used by SaskPower for fuel supply and all other electric system internal use. Station service usage at the corporate generating plants is excluded from Corporate use.

### Methodology

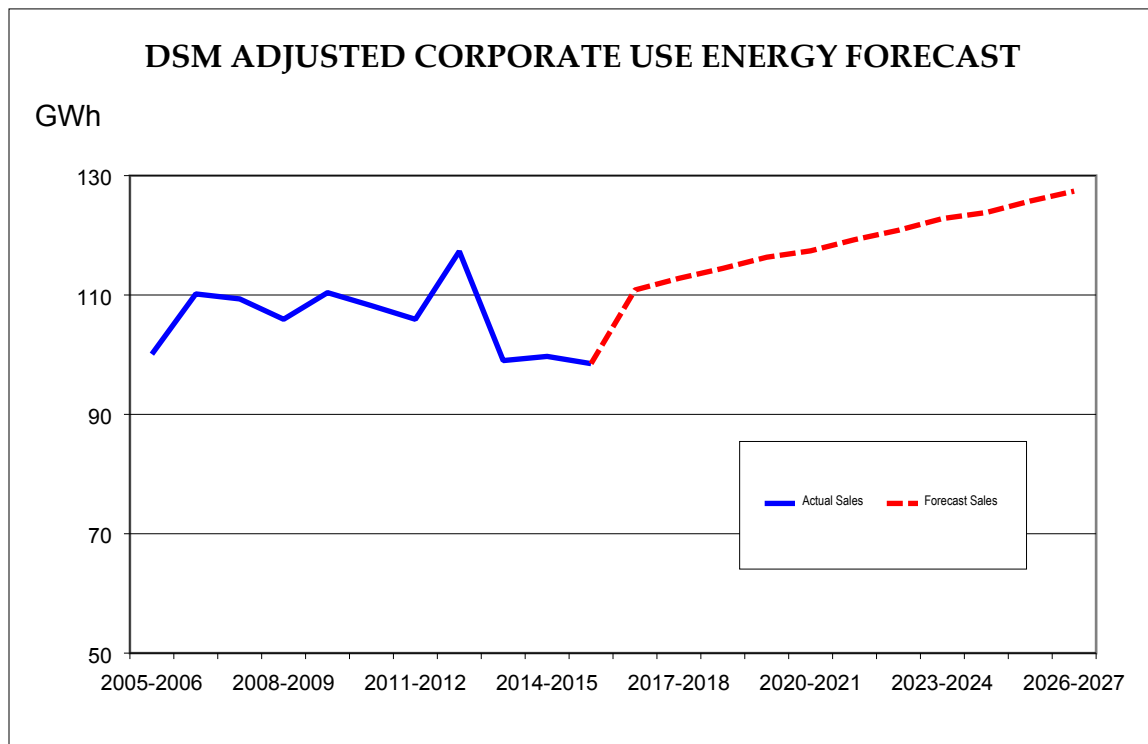
Extrapolation is used to estimate the future corporate internal energy use. The coal mine consumption is calculated from production estimates projected by Fuel Supply.

After the Base Corporate use forecast has been completed, the DSM energy savings are removed; resulting in the DSM adjusted Corporate use forecast.

### Corporate Use Forecast Results

Annual DSM adjusted Corporate Use energy is expected to increase from 110.8 GWh in 2016-2017 to 127.4 GWh in 2026-27 (Refer to Table A2).

Corporate use had negative growth of 1.6 GWh or -0.2% on an annual basis over the 2006-2007 to 2015-2016 timeframe.



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## **SYSTEM LOSSES and UNACCOUNTED ENERGY**

### **Definition**

This category is comprised of transmission and distribution losses and unmetered corporate and customer electric energy use.

Transmission losses are incurred in transmitting power from generating stations to the distribution system – typically the high voltage side of 138kV to 25kV or 72kV to 25kV substations. Distribution losses are the losses incurred in distributing power to the customers. Unaccounted use is the unmetered corporate energy use including the energy use at all switching stations and distribution substations.

### **Methodology**

Extrapolation techniques as well as the SPLOSS program are used to predict the future energy losses due to transmission, distribution system losses and unmetered use.

Transmission losses are determined by Network Development using the SPLOSS program. Distribution losses are estimated using a 5-year historical average percent of distribution sales applied to future distribution sales. The method used to estimate unaccounted energy usage is the same as used for estimating distribution losses.

After the base loss forecast has been completed, the DSM energy savings are removed; resulting in the DSM adjusted loss forecast.

A comparison of historical actual to forecast energy consumption is used to validate the Losses and Unaccounted forecast.

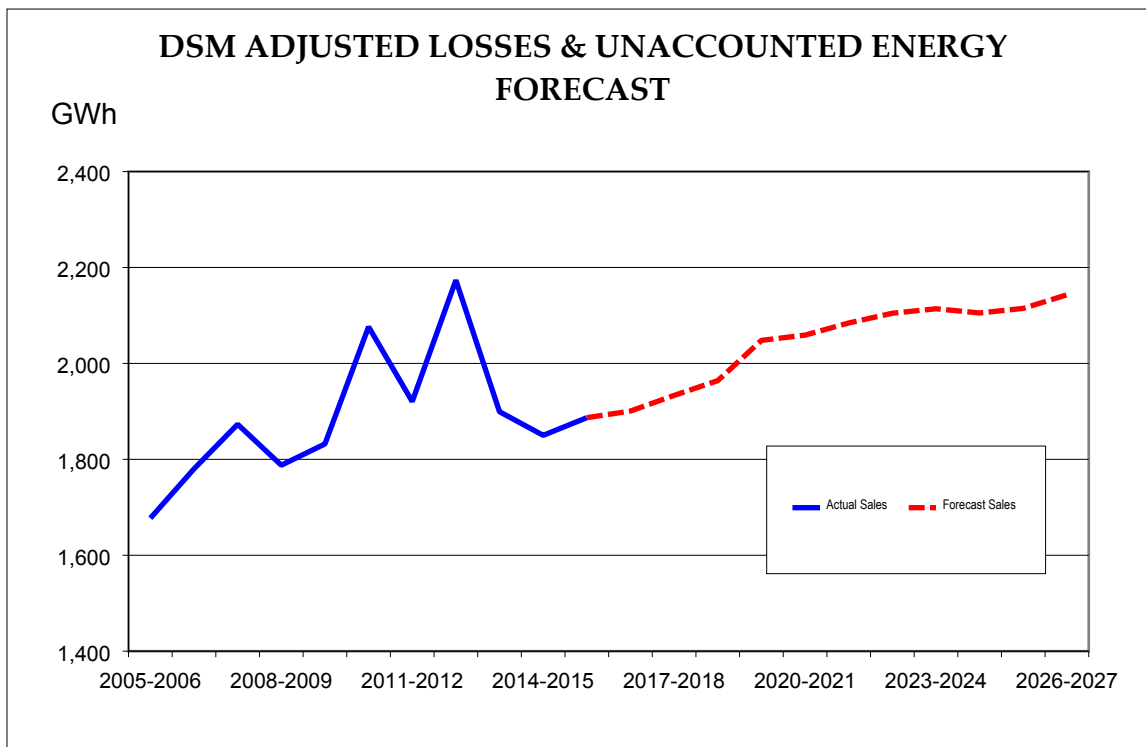


## System Losses and Unaccounted Energy (cont.)

### Grid Losses and Unaccounted Forecast Results

DSM adjusted losses and unaccounted energy are expected to increase from **1,900.7** GWh in 2016-2017 to **2,143.1** GWh in 2026-2027 (Refer to Table A2). This **242.4** GWh increase translates into an average annual rate of **1.2%**.

Losses and unaccounted energy have increased at an average annual rate of **1.2%** in the past 10 years. The **209.6** GWh increase from 2006-2007 to 2015-2016 is correlated to the growth in energy sales for each year, partially offset by system improvements.



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## **NON-GRID**

### **Definition**

The Non-Grid forecast represents energy sold to customers in communities which do not have access to the SaskPower electrical grid. These communities include Kinoosao, Creighton, Sturgeon Landing and Denare Beach. The energy sold to these communities comes from the Kinoosao diesel plant and power purchases from Manitoba Hydro. The customers in these communities are classified as residential, commercial or corporate. The Non-Grid forecast also includes distribution system losses incurred serving these communities.

### **Methodology**

Extrapolation is used for predicting the future use per customer and the number of customers.

To validate the Non-Grid forecast a comparison of historical to forecast consumption is made.

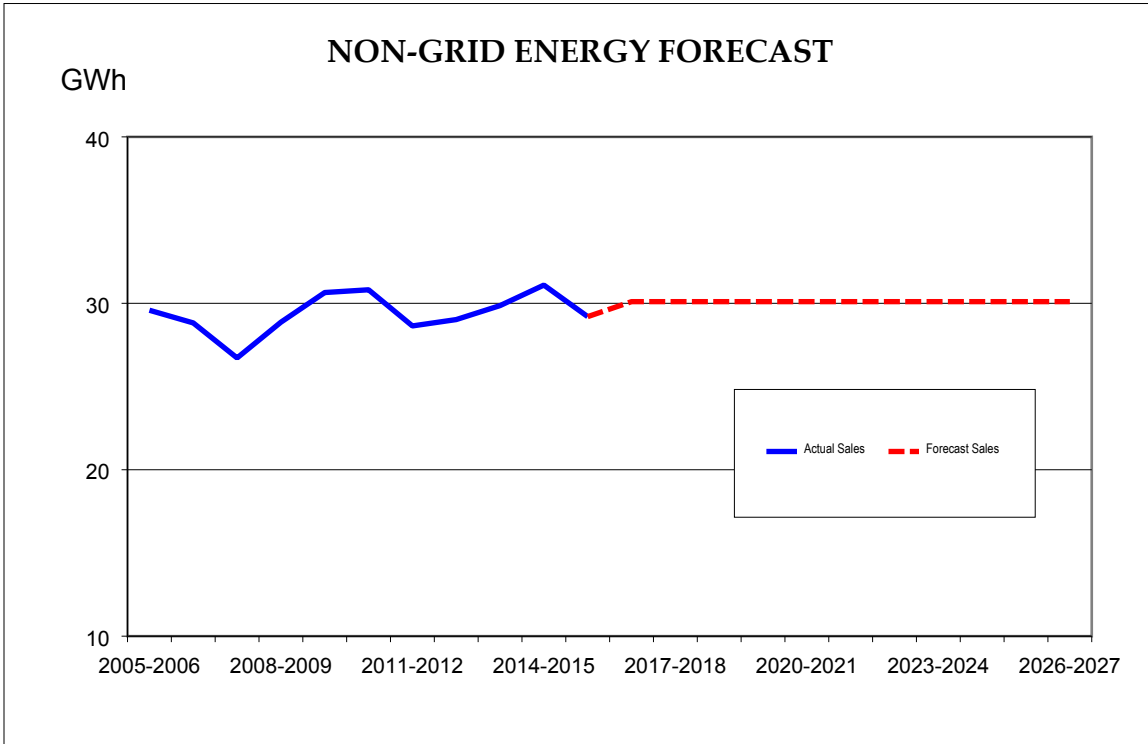
### **Assumption**

SaskPower will maintain its current customer base and market share.

## Non-Grid (cont.)

### Non-Grid Forecast Results

The energy requirements for Non-Grid customers are expected to remain at **30.1 GW·h** from 2016-2017 into the future. (Refer to Table A3). The number of customers and energy requirements are forecast to remain stable in the residential, commercial and corporate sectors.



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## **POTENTIAL SYSTEM PEAK DEMAND**

### **Definition**

The system peak demand represents the highest level of demand placed on the supply system at any time during the year. The system peak has historically occurred in the winter months and is important for planning purposes because SaskPower must have adequate generation and transmission capacity available to supply the system peak demand.

### **Methodology**

SaskPower forecasts an instantaneous as well as hourly interval system peak demand. The factors that contribute to the peak load include time of day, seasonal variations, industrial load and weather conditions. Seasonal variations include Christmas lighting, increased lighting load due to shorter daylight hours and increased shopping hours. Historically, the peak load has occurred during the heating season months of November, December, January and February. SaskPower forecasts a potential system peak demand which requires sustained cold weather during the month of December prior to the Christmas vacation period.

Historical and current sales forecast data is used to develop an hourly interval coincident peak load factor for each Power class and Large Oilfield customer. This information, along with that obtained during discussions with each Account Manager regarding anticipated changes in operations, is used to develop an hourly interval peak demand forecast for each Power class and Large Oilfield customer. The hourly interval peak forecast for all other customer classes is estimated using coincident peak load factors developed from SaskPower's interval meter load research. This load research relates customer class historic contribution to the system peak demand to annual energy sales. The hourly interval system peak load forecast is determined by adding the hourly interval peak load for each class and the instantaneous system peak load is calculated using the historic relationship between the hourly interval and instantaneous peak demand.

After the Base system peak demand forecast has been completed, the DSM peak demand savings are removed; resulting in the DSM adjusted system peak demand forecast.

Three approaches are used to validate the system peak demand forecast. Historical peak load is compared to forecast peak load, forecasted peak load is compared to historical system peak loads normalized for weather conditions, and historical load factor is compared to forecasted future system load factor.

## Potential System Peak Demand (cont.)

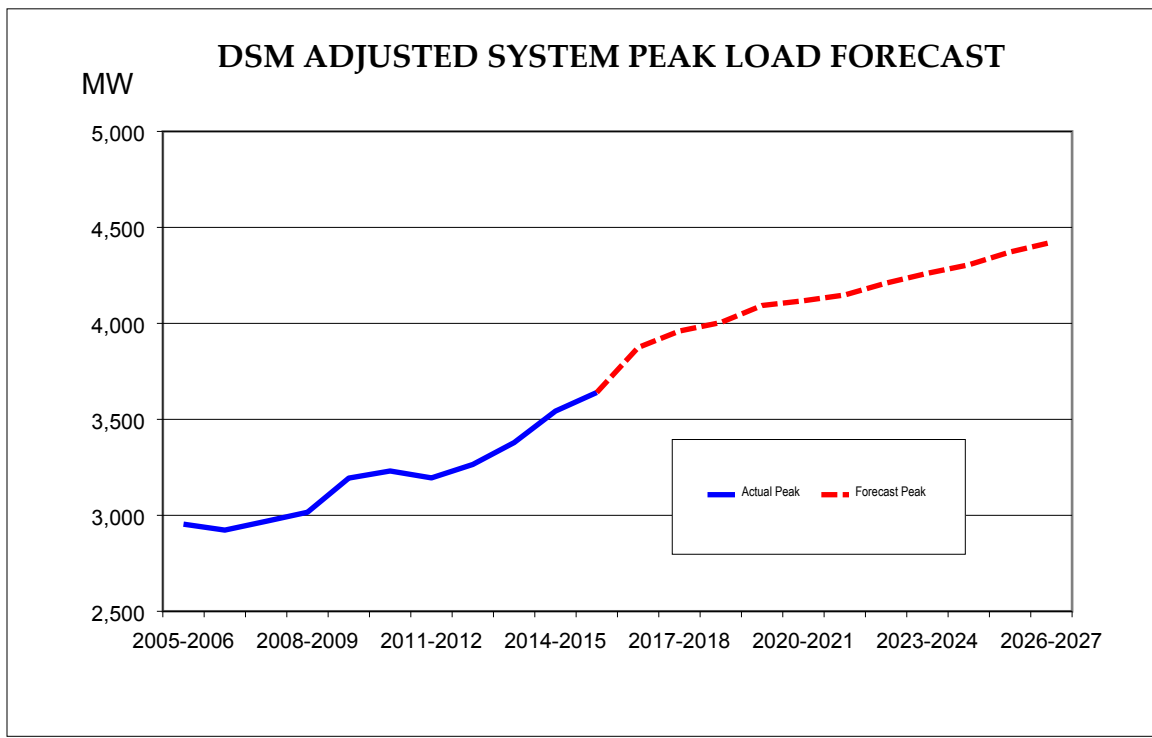
### Assumptions

All customer classes, with the exception of Power Accounts and Large Oilfield customers, use hourly interval coincident peak load factors from SaskPower load research. Each Power Account and Large Oilfield customer uses a five-year historical average where applicable to determine its hourly interval coincident peak load factor. For those customers who have not been in existence for this period of time, the most recent history is used, or a coincidence factor from a similar customer is assumed.

### Potential Peak Forecast Results

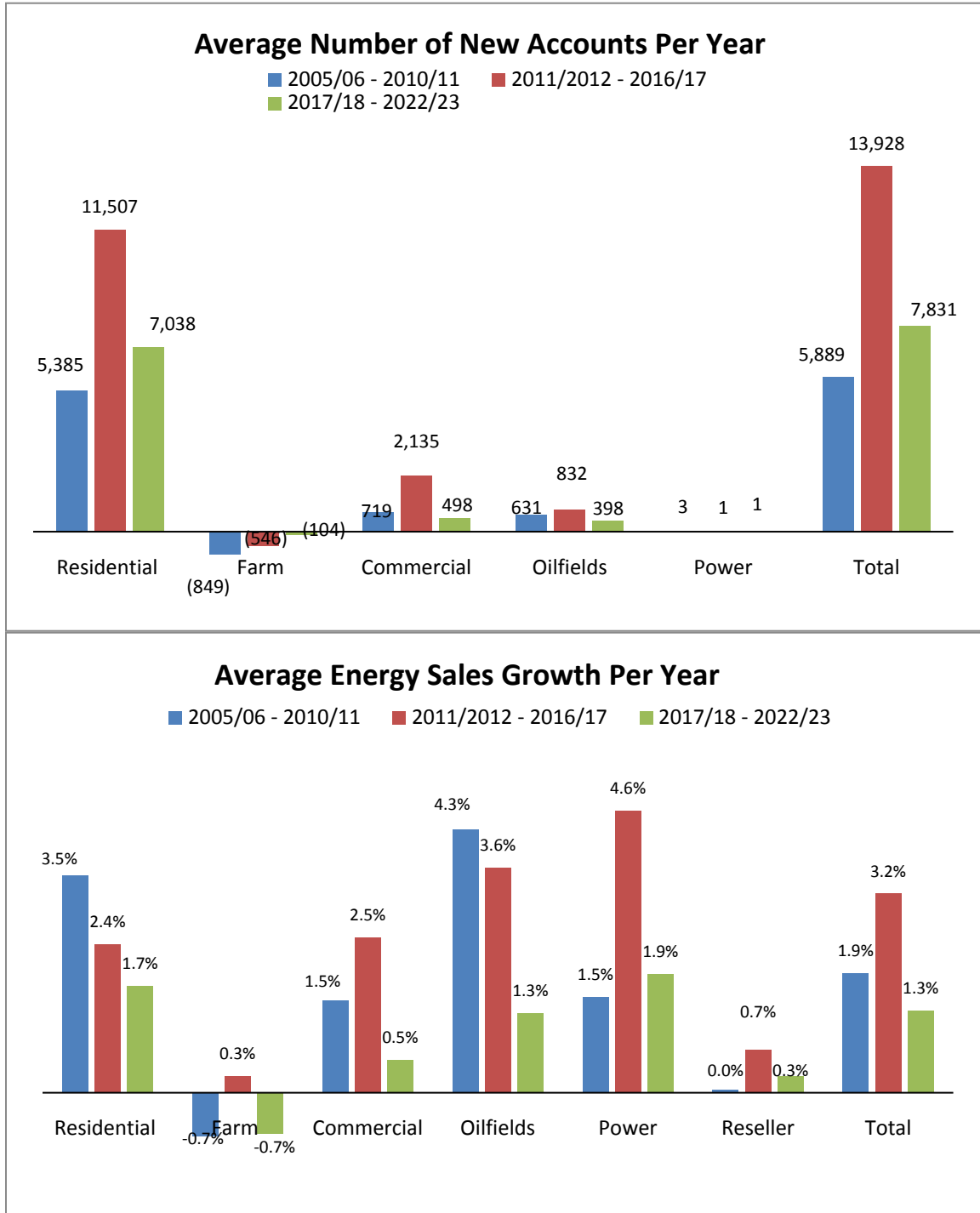
The 2016-2017 DSM adjusted instantaneous system peak load is expected to reach **3,874** MW. By 2026-2027, a system peak load of **4,422** MW is expected (Refer to Table A1). This increase of **548** MW, or an average annual growth rate of **1.3%**, is largely attributed to the expected growth in the Power, Oilfield, Commercial and Residential classes.

The system peak load has increased at an annual rate of **2.1%** over the last 10 years.



## Growth in Number of Accounts and Energy Sales

The tables below provide the average number of new accounts/year and the average energy sales growth/year over 3 time periods – actual loads for 2005/06-2010/11, 2011/12-2016/17, and 2017/18-2009 to 2014 and forecasted loads for 2017/18-2022/23. The average number of accounts and energy sales growth in the 2005/06-2010/11 period was typical, with the exception of the Power class which was affected by the 2008 – 2009 recession. Oilfield energy growth was very strong over this period.



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## **Growth in Number of Accounts and Energy Sales (cont)**

The exceptional level of economic activity in Saskatchewan between 2009 and 2014 led to an increased number of accounts, and combined with the unusually cold winters in 2013 and 2014, led to a substantial increase in energy sales growth. Oilfield energy sales continued to be strong and the Power class growth recovered from the recession to provide strong gains, particularly in the pipeline pumping, potash and northern mine sectors.

The average number of accounts and average energy sales growth for the 2017 to 2020 period reflect a return to a more typical level of economic activity in the province. The reduction in growth rate in the Residential and Commercial classes also reflects the return to normal weather and SaskPower's aggressive demand side management (DSM) energy savings targets for these classes. The oilfield forecast is significantly lower than in recent years, due to the impact of low oil price on production in the province. Power class load growth continues to be strong, led by the pipeline pumping, potash and northern mine sectors.



TABLE A1

# 2017 (FISCAL) DSM ADJUSTED TOTAL SYSTEM LOAD FORECAST

## 2017 FISCAL Q1

### ENERGY SALES, NUMBER OF ACCOUNTS AND PEAK DEMAND

| Year      | POWER    |               | OILFIELDS |               | COMMERCIAL |               | RESIDENTIAL |               | FARM    |               | RESELLER |               | CORPORATE USE |               | TOTAL SALES |               | LOSSES  | TOTAL ENERGY REQUIREMENTS GWh | FISCAL YR PEAK DEMAND MW |
|-----------|----------|---------------|-----------|---------------|------------|---------------|-------------|---------------|---------|---------------|----------|---------------|---------------|---------------|-------------|---------------|---------|-------------------------------|--------------------------|
|           | GWh      | # of Accounts | GWh       | # of Accounts | GWh        | # of Accounts | GWh         | # of Accounts | GWh     | # of Accounts | GWh      | # of Accounts | GWh           | # of Accounts | GWh         | # of Accounts |         |                               |                          |
| 2005-2006 | 6,555.6  | 78            | 2,293.9   | 11,599        | 3,189.3    | 50,388        | 2,460.4     | 294,830       | 1,327.6 | 29,319        | 1,259.9  | 2             | 100.4         | 212           | 17,187.1    | 386,494       | 1,681.4 | 18,868.4                      | 2,954                    |
| 2006-2007 | 6,772.3  | 78            | 2,438.9   | 12,248        | 3,268.6    | 50,831        | 2,600.0     | 297,424       | 1,277.9 | 28,894        | 1,301.8  | 2             | 110.5         | 212           | 17,770.0    | 389,738       | 1,781.9 | 19,551.9                      | 2,923                    |
| 2007-2008 | 6,866.5  | 78            | 2,545.4   | 13,092        | 3,285.1    | 51,341        | 2,695.6     | 304,157       | 1,323.6 | 28,504        | 1,287.3  | 2             | 109.7         | 212           | 18,113.2    | 397,451       | 1,875.5 | 19,988.6                      | 2,969                    |
| 2008-2009 | 6,710.6  | 78            | 2,780.9   | 13,639        | 3,351.9    | 51,819        | 2,791.6     | 310,060       | 1,306.6 | 28,429        | 1,276.6  | 2             | 106.3         | 212           | 18,324.5    | 404,329       | 1,791.9 | 20,116.4                      | 3,016                    |
| 2009-2010 | 6,252.1  | 82            | 2,769.8   | 14,314        | 3,392.1    | 52,431        | 2,835.9     | 316,123       | 1,344.1 | 28,327        | 1,262.6  | 2             | 110.7         | 212           | 17,967.3    | 411,609       | 1,836.2 | 19,803.5                      | 3,194                    |
| 2010-2011 | 7,076.0  | 91            | 2,824.9   | 14,756        | 3,433.6    | 53,983        | 2,923.6     | 321,755       | 1,281.2 | 28,236        | 1,262.7  | 2             | 108.6         | 212           | 18,910.6    | 419,173       | 2,079.2 | 20,989.8                      | 3,231                    |
| 2011-2012 | 7,293.9  | 97            | 2,906.6   | 15,133        | 3,416.1    | 53,863        | 2,907.6     | 329,286       | 1,293.6 | 36,754        | 1,238.8  | 2             | 106.3         | 212           | 19,162.9    | 435,523       | 1,923.0 | 21,085.8                      | 3,195                    |
| 2012-2013 | 7,583.3  | 100           | 3,359.2   | 16,728        | 3,568.0    | 55,812        | 2,988.5     | 352,748       | 1,144.6 | 61,914        | 1,261.4  | 2             | 117.7         | 212           | 20,022.7    | 487,789       | 2,175.1 | 22,197.8                      | 3,265                    |
| 2013-2014 | 7,903.1  | 101           | 3,393.3   | 17,621        | 3,731.3    | 56,741        | 3,276.0     | 363,040       | 1,377.6 | 60,805        | 1,279.2  | 2             | 99.6          | 212           | 21,060.1    | 498,850       | 1,902.0 | 22,962.0                      | 3,379                    |
| 2014-2015 | 8,393.4  | 101           | 3,578.9   | 18,485        | 3,771.9    | 42,935        | 3,240.7     | 277,735       | 1,348.3 | 59,228        | 1,248.6  | 2             | 100.3         | 212           | 21,682.1    | 399,058       | 1,852.9 | 23,535.1                      | 3,543                    |
| 2015-2016 | 8,876.5  | 101           | 3,453.3   | 19,126        | 3,768.1    | 61,159        | 3,066.6     | 379,079       | 1,255.4 | 59,397        | 1,222.8  | 2             | 99.3          | 212           | 21,742.0    | 519,420       | 1,888.4 | 23,630.4                      | 3,640                    |
| 2016-2017 | 9,114.4  | 101           | 3,475.1   | 19,293        | 3,865.7    | 64,538        | 3,273.9     | 386,819       | 1,310.9 | 59,151        | 1,282.1  | 2             | 111.7         | 212           | 22,433.7    | 530,449       | 1,903.1 | 24,336.8                      | 3,874                    |
| 2017-2018 | 9,375.7  | 101           | 3,573.0   | 19,691        | 3,914.5    | 65,086        | 3,323.9     | 394,423       | 1,308.4 | 58,987        | 1,285.8  | 2             | 113.6         | 212           | 22,894.8    | 538,834       | 1,935.7 | 24,830.4                      | 3,960                    |
| 2018-2019 | 9,503.7  | 102           | 3,673.9   | 20,089        | 3,939.2    | 65,606        | 3,372.2     | 401,747       | 1,287.7 | 58,926        | 1,289.4  | 2             | 115.3         | 212           | 23,181.4    | 547,017       | 1,966.5 | 25,147.9                      | 4,004                    |
| 2019-2020 | 9,844.6  | 103           | 3,732.2   | 20,487        | 3,962.8    | 66,114        | 3,422.9     | 408,826       | 1,279.9 | 58,825        | 1,293.0  | 2             | 117.2         | 212           | 23,652.6    | 554,900       | 2,050.4 | 25,703.0                      | 4,093                    |
| 2020-2021 | 9,953.4  | 103           | 3,755.8   | 20,885        | 3,984.3    | 66,622        | 3,491.1     | 415,749       | 1,273.0 | 58,698        | 1,296.5  | 2             | 118.2         | 212           | 23,872.3    | 562,604       | 2,061.4 | 25,933.7                      | 4,118                    |
| 2021-2022 | 10,037.0 | 104           | 3,770.2   | 21,283        | 4,003.8    | 67,120        | 3,556.9     | 422,689       | 1,269.2 | 58,577        | 1,299.7  | 2             | 120.1         | 212           | 24,056.8    | 570,320       | 2,086.7 | 26,143.5                      | 4,148                    |
| 2022-2023 | 10,311.3 | 104           | 3,808.7   | 21,680        | 4,019.4    | 67,578        | 3,620.9     | 429,614       | 1,265.8 | 58,465        | 1,302.9  | 2             | 121.7         | 212           | 24,450.6    | 577,989       | 2,107.0 | 26,557.7                      | 4,210                    |
| 2023-2024 | 10,535.1 | 104           | 3,824.7   | 22,052        | 4,031.8    | 68,019        | 3,703.6     | 436,477       | 1,263.9 | 58,376        | 1,306.2  | 2             | 123.6         | 212           | 24,788.9    | 585,575       | 2,116.3 | 26,905.3                      | 4,261                    |
| 2024-2025 | 10,695.3 | 105           | 3,884.2   | 22,350        | 4,045.6    | 68,518        | 3,797.6     | 443,245       | 1,259.6 | 58,313        | 1,309.5  | 2             | 124.6         | 212           | 25,116.4    | 593,077       | 2,107.6 | 27,224.0                      | 4,305                    |
| 2025-2026 | 10,956.6 | 105           | 3,906.8   | 22,649        | 4,061.6    | 69,035        | 3,877.5     | 450,028       | 1,254.5 | 58,239        | 1,312.8  | 2             | 126.6         | 212           | 25,496.2    | 600,602       | 2,117.1 | 27,613.3                      | 4,372                    |
| 2026-2027 | 11,194.6 | 105           | 3,894.3   | 22,947        | 4,078.4    | 69,559        | 3,952.5     | 456,748       | 1,250.2 | 58,172        | 1,316.0  | 2             | 128.2         | 212           | 25,814.1    | 608,077       | 2,145.5 | 27,959.6                      | 4,422                    |

**Growth Rates (%)**

|             |      |      |      |      |      |      |      |      |       |       |       |      |       |      |      |      |       |      |      |
|-------------|------|------|------|------|------|------|------|------|-------|-------|-------|------|-------|------|------|------|-------|------|------|
| 10/11-15/16 | 4.6% | 2.1% | 4.1% | 5.3% | 1.9% | 2.5% | 1.0% | 3.3% | -0.4% | 16.0% | -0.6% | 0.0% | -1.8% | 0.0% | 2.8% | 4.4% | -1.9% | 2.4% | 2.4% |
| 5/6-15/16   | 3.1% | 2.6% | 4.2% | 5.1% | 1.7% | 2.0% | 2.2% | 2.5% | -0.6% | 7.3%  | -0.3% | 0.0% | -0.1% | 0.0% | 2.4% | 3.0% | 1.2%  | 2.3% | 2.1% |
| 16/17-21/22 | 1.9% | 0.7% | 1.6% | 2.0% | 0.7% | 0.8% | 1.7% | 1.8% | -0.6% | -0.2% | 0.3%  | 0.0% | 1.5%  | 0.0% | 1.4% | 1.5% | 1.9%  | 1.4% | 1.4% |
| 16/17-26/27 | 2.1% | 0.4% | 1.1% | 1.7% | 0.5% | 0.8% | 1.9% | 1.7% | -0.5% | -0.2% | 0.3%  | 0.0% | 1.4%  | 0.0% | 1.4% | 1.4% | 1.2%  | 1.4% | 1.3% |

- 1) All forecasted energy values are normalized to reflect 30-year average weather patterns.
- 2) All forecasted peak values are potential; peak shavings are not included. All historical peaks are actuals with peak shavings and interruptibles included.
- 3) The demand side management (DSM) energy and peak demand saving as identified by SaskPower's DSM department are reflected in the forecast above.
- 4) The number of accounts is the average for the year as required for rate design and revenue forecasting.





**TABLE A2**

**2017 (FISCAL) DSM ADJUSTED GRID ONLY LOAD FORECAST**

2017 FISCAL Q1

**ENERGY SALES AND NUMBER OF ACCOUNTS**

| Year      | POWER    |               | OILFIELDS |               | COMMERCIAL |               | RESIDENTIAL |               | FARM    |               | RESELLER |               | CORPORATE USE |               | TOTAL SALES |               | LOSSES  | TOTAL ENERGY REQUIREMENTS GWh |
|-----------|----------|---------------|-----------|---------------|------------|---------------|-------------|---------------|---------|---------------|----------|---------------|---------------|---------------|-------------|---------------|---------|-------------------------------|
|           | GWh      | # of Accounts | GWh       | # of Accounts | GWh        | # of Accounts | GWh         | # of Accounts | GWh     | # of Accounts | GWh      | # of Accounts | GWh           | # of Accounts | GWh         | # of Accounts |         |                               |
| 2005-2006 | 6,555.6  | 78            | 2,293.9   | 11,599        | 3,182.2    | 50,194        | 2,442.3     | 293,834       | 1,327.6 | 29,319        | 1,259.9  | 2             | 100.1         | 210           | 17,161.6    | 385,236       | 1,677.3 | 18,838.9                      |
| 2006-2007 | 6,772.3  | 78            | 2,438.9   | 12,248        | 3,260.1    | 50,637        | 2,581.8     | 296,415       | 1,277.9 | 28,894        | 1,301.8  | 2             | 110.2         | 210           | 17,743.0    | 388,484       | 1,780.1 | 19,523.1                      |
| 2007-2008 | 6,866.5  | 78            | 2,545.4   | 13,092        | 3,278.2    | 51,140        | 2,678.5     | 303,125       | 1,323.6 | 28,504        | 1,287.3  | 2             | 109.3         | 210           | 18,088.9    | 396,151       | 1,873.1 | 19,961.9                      |
| 2008-2009 | 6,710.6  | 78            | 2,780.9   | 13,639        | 3,346.0    | 51,633        | 2,773.1     | 309,033       | 1,306.6 | 28,429        | 1,276.6  | 2             | 105.9         | 210           | 18,299.7    | 403,024       | 1,787.8 | 20,087.5                      |
| 2009-2010 | 6,252.1  | 82            | 2,769.8   | 14,314        | 3,385.5    | 52,243        | 2,816.3     | 315,082       | 1,344.1 | 28,327        | 1,262.6  | 2             | 110.4         | 210           | 17,940.8    | 410,260       | 1,832.1 | 19,772.8                      |
| 2010-2011 | 7,076.0  | 91            | 2,824.9   | 14,756        | 3,426.1    | 53,789        | 2,903.6     | 320,712       | 1,281.2 | 28,236        | 1,262.7  | 2             | 108.2         | 210           | 18,882.7    | 417,796       | 2,076.3 | 20,959.0                      |
| 2011-2012 | 7,293.9  | 97            | 2,906.6   | 15,133        | 3,408.8    | 53,663        | 2,889.0     | 328,233       | 1,293.6 | 36,754        | 1,238.8  | 2             | 105.9         | 210           | 19,136.7    | 434,092       | 1,920.6 | 21,057.2                      |
| 2012-2013 | 7,583.3  | 100           | 3,359.2   | 16,728        | 3,560.5    | 55,606        | 2,969.0     | 351,643       | 1,144.6 | 61,914        | 1,261.4  | 2             | 117.3         | 210           | 19,995.3    | 486,203       | 2,173.5 | 22,168.8                      |
| 2013-2014 | 7,903.1  | 101           | 3,393.3   | 17,621        | 3,723.9    | 56,528        | 3,256.8     | 361,877       | 1,377.6 | 60,805        | 1,279.2  | 2             | 99.0          | 210           | 21,032.9    | 497,144       | 1,899.3 | 22,932.2                      |
| 2014-2015 | 8,393.4  | 101           | 3,578.9   | 18,485        | 3,764.3    | 42,722        | 3,220.7     | 276,572       | 1,348.3 | 59,228        | 1,248.6  | 2             | 99.7          | 210           | 21,653.9    | 397,320       | 1,850.0 | 23,504.0                      |
| 2015-2016 | 8,876.5  | 101           | 3,453.3   | 19,126        | 3,760.6    | 60,946        | 3,047.3     | 377,916       | 1,255.4 | 59,397        | 1,222.8  | 2             | 98.5          | 210           | 21,714.4    | 517,698       | 1,886.8 | 23,601.2                      |
| 2016-2017 | 9,114.4  | 101           | 3,475.1   | 19,293        | 3,857.9    | 64,325        | 3,254.7     | 385,656       | 1,310.9 | 59,151        | 1,282.1  | 2             | 110.8         | 210           | 22,405.9    | 528,738       | 1,900.7 | 24,306.5                      |
| 2017-2018 | 9,375.7  | 101           | 3,573.0   | 19,691        | 3,906.7    | 64,873        | 3,304.7     | 393,260       | 1,308.4 | 58,987        | 1,285.8  | 2             | 112.8         | 210           | 22,866.9    | 537,123       | 1,933.3 | 24,800.2                      |
| 2018-2019 | 9,503.7  | 102           | 3,673.9   | 20,089        | 3,931.4    | 65,393        | 3,353.0     | 400,584       | 1,287.7 | 58,926        | 1,289.4  | 2             | 114.5         | 210           | 23,153.5    | 545,306       | 1,964.1 | 25,117.6                      |
| 2019-2020 | 9,844.6  | 103           | 3,732.2   | 20,487        | 3,955.0    | 65,901        | 3,403.7     | 407,663       | 1,279.9 | 58,825        | 1,293.0  | 2             | 116.3         | 210           | 23,624.7    | 553,190       | 2,048.0 | 25,672.7                      |
| 2020-2021 | 9,953.4  | 103           | 3,755.8   | 20,885        | 3,976.5    | 66,409        | 3,471.9     | 414,586       | 1,273.0 | 58,698        | 1,296.5  | 2             | 117.4         | 210           | 23,844.4    | 560,894       | 2,059.0 | 25,903.4                      |
| 2021-2022 | 10,037.0 | 104           | 3,770.2   | 21,283        | 3,996.0    | 66,907        | 3,537.6     | 421,526       | 1,269.2 | 58,577        | 1,299.7  | 2             | 119.3         | 210           | 24,028.9    | 568,609       | 2,084.3 | 26,113.2                      |
| 2022-2023 | 10,311.3 | 104           | 3,808.7   | 21,680        | 4,011.6    | 67,365        | 3,601.6     | 428,451       | 1,265.8 | 58,465        | 1,302.9  | 2             | 120.9         | 210           | 24,422.7    | 576,277       | 2,104.6 | 26,527.4                      |
| 2023-2024 | 10,535.1 | 104           | 3,824.7   | 22,052        | 4,024.0    | 67,806        | 3,684.4     | 435,314       | 1,263.9 | 58,376        | 1,306.2  | 2             | 122.8         | 210           | 24,761.1    | 583,865       | 2,113.9 | 26,875.0                      |
| 2024-2025 | 10,695.3 | 105           | 3,884.2   | 22,350        | 4,037.8    | 68,305        | 3,778.4     | 442,082       | 1,259.6 | 58,313        | 1,309.5  | 2             | 123.8         | 210           | 25,088.5    | 591,367       | 2,105.2 | 27,193.7                      |
| 2025-2026 | 10,956.6 | 105           | 3,906.8   | 22,649        | 4,053.8    | 68,822        | 3,858.2     | 448,865       | 1,254.5 | 58,239        | 1,312.8  | 2             | 125.7         | 210           | 25,468.4    | 598,891       | 2,114.7 | 27,583.1                      |
| 2026-2027 | 11,194.6 | 105           | 3,894.3   | 22,947        | 4,070.6    | 69,346        | 3,933.2     | 455,585       | 1,250.2 | 58,172        | 1,316.0  | 2             | 127.4         | 210           | 25,786.3    | 606,367       | 2,143.1 | 27,929.4                      |

**Growth Rates (%)**

|             |      |      |      |      |      |      |      |      |       |       |       |      |       |      |      |      |       |      |
|-------------|------|------|------|------|------|------|------|------|-------|-------|-------|------|-------|------|------|------|-------|------|
| 10/11-15/16 | 4.6% | 2.1% | 4.1% | 5.3% | 1.9% | 2.5% | 1.0% | 3.3% | -0.4% | 16.0% | -0.6% | 0.0% | -1.9% | 0.0% | 2.8% | 4.4% | -1.9% | 2.4% |
| 5/6-15/16   | 3.1% | 2.6% | 4.2% | 5.1% | 1.7% | 2.0% | 2.2% | 2.5% | -0.6% | 7.3%  | -0.3% | 0.0% | -0.2% | 0.0% | 2.4% | 3.0% | 1.2%  | 2.3% |
| 16/17-21/22 | 1.9% | 0.7% | 1.6% | 2.0% | 0.7% | 0.8% | 1.7% | 1.8% | -0.6% | -0.2% | 0.3%  | 0.0% | 1.5%  | 0.0% | 1.4% | 1.5% | 1.9%  | 1.4% |
| 16/17-26/27 | 2.1% | 0.4% | 1.1% | 1.7% | 0.5% | 0.8% | 1.9% | 1.7% | -0.5% | -0.2% | 0.3%  | 0.0% | 1.4%  | 0.0% | 1.4% | 1.4% | 1.2%  | 1.4% |

- 1.) All forecasted energy values are normalized to reflect 30-year average weather patterns.
- 2.) The demand side management (DSM) energy and peak demand saving as identified by SaskPower's DSM department are reflected in the forecast above.
- 3.) The number of accounts is the average for the year as required for rate design and revenue forecasting.



**TABLE A3**

**2017 (FISCAL) NON - GRID LOAD FORECAST**

2017 FISCAL Q1

**ENERGY SALES AND NUMBER OF ACCOUNTS**

| Year      | COMMERCIAL |               | RESIDENTIAL |               | CORPORATE USE |               | TOTAL SALES |               | LOSSES <sup>1)</sup> | TOTAL ENERGY REQUIREMENTS GWh |
|-----------|------------|---------------|-------------|---------------|---------------|---------------|-------------|---------------|----------------------|-------------------------------|
|           | GWh        | # of Accounts | GWh         | # of Accounts | GWh           | # of Accounts | GWh         | # of Accounts | GWh                  |                               |
| 2005-2006 | 7.1        | 194           | 18.1        | 996           | 0.3           | 2             | 25.5        | 1,192         | 4.1                  | 29.6                          |
| 2006-2007 | 8.5        | 194           | 18.2        | 1009          | 0.3           | 2             | 27.0        | 1,205         | 1.8                  | 28.8                          |
| 2007-2008 | 6.9        | 201           | 17.1        | 1032          | 0.4           | 2             | 24.3        | 1,235         | 2.4                  | 26.7                          |
| 2008-2009 | 5.9        | 186           | 18.5        | 1,027         | 0.4           | 2             | 24.8        | 1,215         | 4.1                  | 28.9                          |
| 2009-2010 | 6.6        | 188           | 19.6        | 1,041         | 0.3           | 2             | 26.5        | 1,231         | 4.1                  | 30.6                          |
| 2010-2011 | 7.5        | 194           | 20.0        | 1,043         | 0.4           | 2             | 27.9        | 1,239         | 2.9                  | 30.8                          |
| 2011-2012 | 7.3        | 200           | 18.6        | 1,053         | 0.4           | 2             | 26.2        | 1,255         | 2.4                  | 28.6                          |
| 2012-2013 | 7.5        | 206           | 19.5        | 1,105         | 0.4           | 2             | 27.4        | 1,313         | 1.6                  | 29.0                          |
| 2013-2014 | 7.4        | 213           | 19.2        | 1,163         | 0.6           | 2             | 27.2        | 1,378         | 2.7                  | 29.9                          |
| 2014-2015 | 7.6        | 213           | 20.0        | 1,163         | 0.6           | 2             | 28.2        | 1,378         | 2.9                  | 31.1                          |
| 2015-2016 | 7.5        | 213           | 19.3        | 1,163         | 0.8           | 2             | 27.6        | 1378          | 1.6                  | 29.2                          |
| 2016-2017 | 7.8        | 213           | 19.2        | 1,163         | 0.8           | 2             | 27.9        | 1,378         | 2.4                  | 30.3                          |
| 2017-2018 | 7.8        | 213           | 19.2        | 1,163         | 0.8           | 2             | 27.9        | 1,378         | 2.4                  | 30.3                          |
| 2018-2019 | 7.8        | 213           | 19.2        | 1,163         | 0.8           | 2             | 27.9        | 1,378         | 2.4                  | 30.3                          |
| 2019-2020 | 7.8        | 213           | 19.2        | 1,163         | 0.8           | 2             | 27.9        | 1,378         | 2.4                  | 30.3                          |
| 2020-2021 | 7.8        | 213           | 19.2        | 1,163         | 0.8           | 2             | 27.9        | 1,378         | 2.4                  | 30.3                          |
| 2021-2022 | 7.8        | 213           | 19.2        | 1,163         | 0.8           | 2             | 27.9        | 1,378         | 2.4                  | 30.3                          |
| 2022-2023 | 7.8        | 213           | 19.2        | 1,163         | 0.8           | 2             | 27.9        | 1,378         | 2.4                  | 30.3                          |
| 2023-2024 | 7.8        | 213           | 19.2        | 1,163         | 0.8           | 2             | 27.9        | 1,378         | 2.4                  | 30.3                          |
| 2024-2025 | 7.8        | 213           | 19.2        | 1,163         | 0.8           | 2             | 27.9        | 1,378         | 2.4                  | 30.3                          |
| 2025-2026 | 7.8        | 213           | 19.2        | 1,163         | 0.8           | 2             | 27.9        | 1,378         | 2.4                  | 30.3                          |
| 2026-2027 | 7.8        | 213           | 19.2        | 1,163         | 0.8           | 2             | 27.9        | 1,378         | 2.4                  | 30.3                          |

**Growth Rates (%)**

|             |      |      |       |      |       |      |       |      |        |       |
|-------------|------|------|-------|------|-------|------|-------|------|--------|-------|
| 2008 - 2013 | 0.0% | 1.9% | -0.7% | 2.2% | 15.5% | 0.0% | -0.2% | 2.1% | -11.2% | -1.1% |
| 2003 - 2013 | 0.5% | 0.9% | 0.7%  | 1.6% | 9.8%  | 0.0% | 0.8%  | 1.5% | -9.0%  | -0.1% |
| 2014 -2019  | 0.0% | 0.0% | 0.0%  | 0.0% | 0.2%  | 0.0% | 0.0%  | 0.0% | -0.2%  | 0.0%  |
| 2014 - 2024 | 0.0% | 0.0% | 0.0%  | 0.0% | -0.1% | 0.0% | 0.0%  | 0.0% | -0.1%  | 0.0%  |

1) Losses are calculated by taking the difference between Total Energy Requirements and Total Sales. The Total Sales and Total Energy Requirements are forecasted numbers.

# TABLE A4

## 2017 (FISCAL) Q1 LOAD FORECAST

2017 FISCAL Q1

### INSTANTANEOUS SYSTEM PEAK DEMAND FORECAST

| Year | Historical |           | Most Likely Calendar Peaks |           | Potential Calendar Peaks |           |
|------|------------|-----------|----------------------------|-----------|--------------------------|-----------|
|      | Winter MW  | Summer MW | Winter MW                  | Summer MW | Winter MW                | Summer MW |
| 2005 | 2,954      | 2,639     |                            |           |                          |           |
| 2006 | 2,946      | 2,706     |                            |           |                          |           |
| 2007 | 2,960      | 2,879     |                            |           |                          |           |
| 2008 | 2,969      | 2,834     |                            |           |                          |           |
| 2009 | 3,194      | 2,773     |                            |           |                          |           |
| 2010 | 3,231      | 2,750     |                            |           |                          |           |
| 2011 | 3,162      | 3,070     |                            |           |                          |           |
| 2012 | 3,195      | 3,053     |                            |           |                          |           |
| 2013 | 3,314      | 3,187     |                            |           |                          |           |
| 2014 | 3,543      | 3,161     |                            |           |                          |           |
| 2015 | 3,561      | 3,377     |                            |           |                          |           |
| 2016 |            |           | 3,718                      | 3,446     | 3,867                    | 3,507     |
| 2017 |            |           | 3,800                      | 3,480     | 3,960                    | 3,591     |
| 2018 |            |           | 3,845                      | 3,564     | 4,004                    | 3,626     |
| 2019 |            |           | 3,930                      | 3,585     | 4,093                    | 3,712     |
| 2020 |            |           | 3,953                      | 3,610     | 4,118                    | 3,734     |
| 2021 |            |           | 3,980                      | 3,664     | 4,148                    | 3,762     |
| 2022 |            |           | 4,040                      | 3,708     | 4,210                    | 3,818     |
| 2023 |            |           | 4,089                      | 3,746     | 4,261                    | 3,864     |
| 2024 |            |           | 4,131                      | 3,804     | 4,305                    | 3,904     |
| 2025 |            |           | 4,195                      | 3,848     | 4,372                    | 3,965     |
| 2026 |            |           | 4,243                      | 3,885     | 4,422                    | 4,010     |

#### Growth Rates (%)

|             |      |      |      |      |      |      |
|-------------|------|------|------|------|------|------|
| 2010 - 2015 | 2.0% | 4.2% |      |      |      |      |
| 2005 - 2015 | 1.9% | 2.5% |      |      |      |      |
| 2016 - 2021 |      |      | 1.4% | 1.2% | 1.4% | 1.4% |
| 2016 - 2026 |      |      | 1.3% | 1.2% | 1.4% | 1.4% |

#### Notes:

- Most Likely Peaks are based on the actual weather experienced at the time of the system peaks over the last 5 years.
- The Potential Winter peak is based on sustained cold weather occurring in the first 3 weeks of December.
- The Potential Summer Peak is based on sustained hot weather occurring in July.
- The Demand Side Management (DSM) system peak demand savings as identified by SaskPower's Customer Services Division are reflected in the forecast.



**TABLE A5**

**2017 (FISCAL) GRID ONLY LOAD FORECAST**

2017 FISCAL Q1

**Summary of Base and DSM Adjusted Forecasts**

| Year    | Grid Only Energy Requirements (GWh) |               |            |       |              | Interval Calendar Peak (MW) |               |            |       |              | Instantaneous Calendar Peak (MW) | Demand Response Available (MW) |
|---------|-------------------------------------|---------------|------------|-------|--------------|-----------------------------|---------------|------------|-------|--------------|----------------------------------|--------------------------------|
|         | No DSM                              | DSM Savings   |            |       | DSM Adjusted | No DSM                      | DSM Savings   |            |       | DSM Adjusted |                                  |                                |
|         |                                     | Prior to 2016 | After 2016 | Total |              |                             | Prior to 2016 | After 2016 | Total |              |                                  |                                |
| 2016-17 | 24,617.8                            | 273.2         | 38.1       | 311.3 | 24,306.5     | 3,906.2                     | 109.5         | 7.2        | 116.7 | 3,789.5      | 3,874.3                          | 85.0                           |
| 2017-18 | 25,141.5                            | 273.2         | 68.1       | 341.3 | 24,800.2     | 4,004.9                     | 109.5         | 14.4       | 123.8 | 3,881.1      | 3,960.1                          | 85.0                           |
| 2018-19 | 25,489.0                            | 273.2         | 98.3       | 371.4 | 25,117.6     | 4,056.7                     | 109.5         | 28.6       | 138.1 | 3,918.6      | 4,004.5                          | 85.0                           |
| 2019-20 | 26,074.4                            | 273.2         | 128.5      | 401.7 | 25,672.7     | 4,159.1                     | 109.5         | 38.2       | 147.7 | 4,011.5      | 4,093.2                          | 85.0                           |
| 2020-21 | 26,336.1                            | 273.2         | 159.5      | 432.7 | 25,903.4     | 4,192.8                     | 109.5         | 47.7       | 157.2 | 4,035.6      | 4,117.8                          | 85.0                           |
| 2021-22 | 26,577.8                            | 273.2         | 191.4      | 464.6 | 26,113.2     | 4,232.0                     | 109.5         | 57.3       | 166.8 | 4,065.2      | 4,148.0                          | 85.0                           |
| 2022-23 | 27,024.4                            | 273.2         | 223.8      | 497.0 | 26,527.4     | 4,302.2                     | 109.5         | 66.9       | 176.4 | 4,125.9      | 4,209.9                          | 85.0                           |
| 2023-24 | 27,406.0                            | 273.2         | 257.9      | 531.0 | 26,875.0     | 4,361.9                     | 109.5         | 76.5       | 186.0 | 4,175.9      | 4,261.0                          | 85.0                           |
| 2024-25 | 27,759.6                            | 273.2         | 292.7      | 565.9 | 27,193.7     | 4,414.8                     | 109.5         | 86.1       | 195.6 | 4,219.2      | 4,305.1                          | 85.0                           |
| 2025-26 | 28,182.3                            | 273.2         | 326.0      | 599.2 | 27,583.1     | 4,489.4                     | 109.5         | 95.2       | 204.7 | 4,284.7      | 4,372.0                          | 85.0                           |
| 2026-27 | 28,559.9                            | 273.2         | 357.3      | 630.5 | 27,929.4     | 4,547.2                     | 109.5         | 103.8      | 213.3 | 4,334.0      | 4,422.2                          | 85.0                           |

**Notes:**

- DSM savings includes distribution loss savings.
- DSM savings do not include savings associated with the Internal Line Program.