Sudbury Algoma Integrated Regional Resource Plan

DRAFT

Forecast Methodology Document
July 16, 2026

Connecting Today.
Powering Tomorrow.

1. Demand Outlook and Methodology LDCs

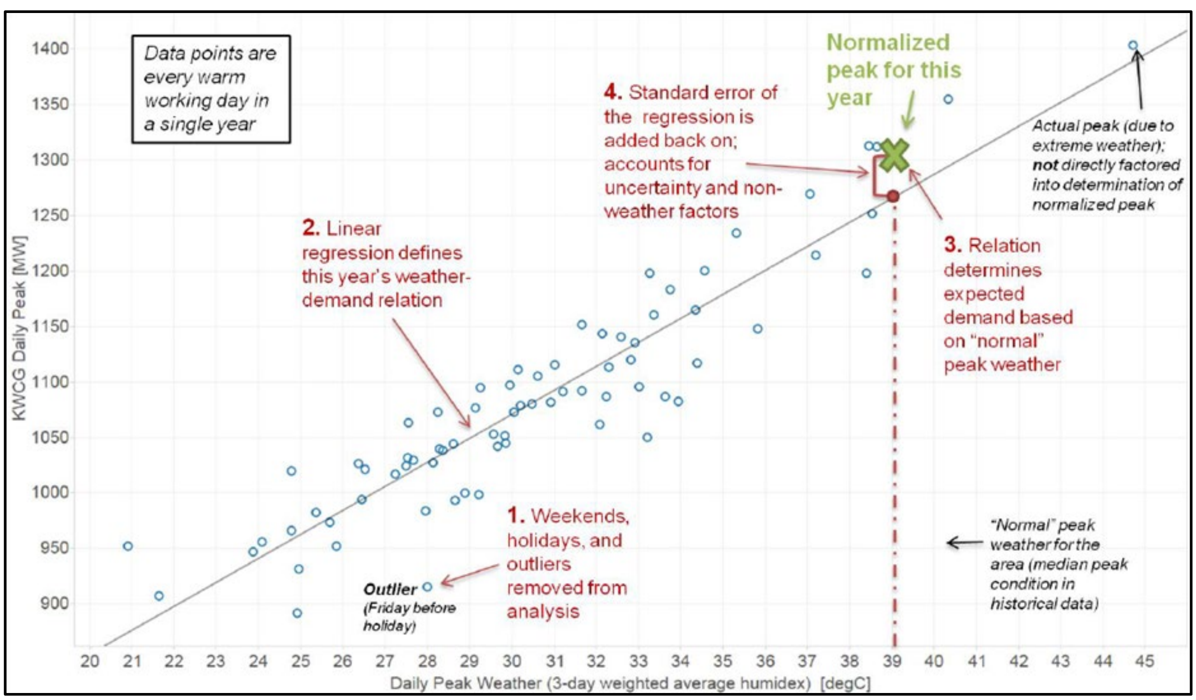
This section describes the methodologies used to develop the LDC demand forecast (peak) for the Sudbury-Algoma Region IRRP studies. Forward-looking estimates of electricity demand were provided by each of the participating LDCs and informed by the forecast base year and starting point provided by the IESO. The sections that follow describe the weather correction methodology, the approaches and methods used by each LDC to forecast demand in their respective service area, the conservation and distributed generation (DG) assumptions.

1.1 Method for Accounting for Weather Impact on Demand

Weather has a large influence on the demand for electricity, so to develop a standardized starting point for the forecast, the historic electricity demand information is weather-normalized. This section details the weather normalization process used to establish the starting point for regional demand forecasts.

First, the historical loads were adjusted to reflect the median peak weather conditions for each transformer station in the area for the forecast base year (i.e., 2025 for the Sudbury-Algoma IRRP). Median peak refers to what peak demand would be expected if the most likely, or 50th percentile, weather conditions were observed. This means that in any given year there is an estimated 50% chance of exceeding this peak, and a 50% chance of not meeting this peak. The methodological steps are described in Figure 1 and were undertaken for both the summer and winter seasons.

Figure 1: Method for Determining the Weather-Normalized Peak (Illustrative)



The station-level 2025 median weather summer and winter peaks were provided to each LDC. This data was used as a starting point from which the LDCs could develop 20-year gross median demand forecasts using their preferred methodologies (described in the next sections).

Once the 20-year, median peak demand forecasts were submitted to the IESO, the normal weather forecast was adjusted to reflect the impact of extreme weather conditions on electricity demand, and forecast demand savings from CDM and contracted DG were accounted for. The studies used to assess the adequacy and reliability of the electric power system are generally required to be based on extreme weather demand – typically the expected demand under the hottest (or coldest) weather conditions that can be reasonably expected to occur.

1.2 Greater Sudbury Hydro: Gross Forecast Methodology and Assumptions

Greater Sudbury Hydro (GSH) has provided a 20 year reference and high growth forecast by Transformer Station (TS) that includes reference case and high case forecasts for:

- Baseline household growth (HG),
- Proposed large connections (speculative loads),
- Electric vehicle load impacts (EV), and
- Building electrification load impacts (BE).

The sub-forecasts incorporate peaking seasons, coincidence factors, station load weights and load factors to produce a robust and comprehensive gross peak demand forecast for GSH.

Peaking Seasons include Summer (June, July, August, September) and Winter (November, December, January, February).

Coincidence factors were applied to translate forecasts at the total system level to the Clarabelle and Martindale TSs for the HG, EV and BE sub-forecasts. This ensures that coincident peak loads were adjusted appropriately at each level to avoid overestimation.

Station Load Weights to allocate total HG, EV and BE sub-forecasts to the TS level station load weights were determined based on a combined weighting of historical weather-corrected station peak demand from the IRRP LDC template and residential customer connections.

Load Factors were applied to convert the forecast from an annual average load estimate to a seasonal peak load estimate. This ensures peak load demand is accurately reflected and adjusted appropriately to avoid underestimation. Seasonal Load Factors ranged from 61% (winter) to 77% (summer) across both seasons.

$$Summer\ or\ Winter\ Peak\ Load = \frac{Average\ Load}{Load\ Factor}$$

1.2.1 Forecast Methodology and Assumptions – Customer Segmentation

Customer segmentation has been developed and evaluated separately for the Martindale and Clarabelle TSs. The analysis categorizes load across customer classes (Residential, Commercial, and Industrial).

Customer segmentation has been performed on historical load data for each TS. Reflected in the completed LDC load forecast template is a historical snapshot (end of 2025) based on existing connections and current kW/connection values.

Assumptions

- The segmentation was conducted across three major customer classes: residential, commercial (aligned with the OEB's General Service < 50 kW definition), and industrial (aligned with the OEB's General Service ≥ 50 kW definition).[1]
- Annual average consumption per connection/customer was derived from numbers of customers and annual energy consumption from OEB.[2]
- Load factor adjustments by customer type were derived from GSH historical load data and range from 61% to 77% - this range was used to estimate the differences between residential peak load (strong ramps to peak load occurring during certain periods of the day) and industrial peak load (peak load closer to average load). Peak loads were assigned a 61%, 69%, 77% load factor to residential, commercial and industrial, respectively.

Methodology

Customer segmentation reflected by percentage of the historical peak load snapshot by customer class, which is calculated by annual kW/connection.

$$Customer\ Segmentation_{Customer\ Class}|TS = \frac{Peaking\ Load\ in\ Customer\ Class(MW)_{Customer\ Class}}{Total\ Peaking\ Load(MW)_{TS}}$$

Additionally, segmentation (%) is analyzed at the Transformer Station feeder level (for Martindale and Clarabelle) within the GSH service area. The number of connections by customers class is listed in the table below:

Table 1 | Number of Connections by TS

Connection Count	Residential	Commercial	Industrial
Martindale	20,626	2,542	261
Clarabelle	17,617	1,321	121

The peak load impact (kW/connection) is determined by averaging the kW/connection calculated most recent annual electricity consumption data (2024) and the distribution of customer types, followed by an adjustment using the appropriate load factor. The workflow and parameters can be explained by the table below as follows:

[1] Ontario Energy Board: https://app.powerbi.com/view?r=eyJrIjoiZjBhODRlYmMtOGJlYy00N2I4LThmMDktYzFkMDQ2ODQ1ZTM5IiwidCI6Ijc0MTNjMjNjLWE3MjUtNDEzNC04OTQ2LTExMGZmMWUyZDBlNiJ9

[2] Ontario Energy Board: https://app.powerbi.com/view?r=eyJrIjoiZjBhODRlYmMtOGJlYy00N2I4LThmMDktYzFkMDQ2ODQ1ZTM5IiwidCI6Ijc0MTNjMjNjLWE3MjUtNDEzNC04OTQ2LTExMGZmMWUyZDBlNiJ9

Table 2 | Peak Load Impact by Customer Class

Connection Count	Annual Load Impact (kW/Connection)	Load Factor	Peak Load Impact (kW/Connection)
Residential	0.98	61%~77%	1.61
Commercial	3.62	*We assume that industrial load is flatter, resulting in the application of a higher load factor, followed by commercial and then residential loads.	5.26
Industrial	85.58		110.87

1.2.2 Forecast Methodology and Assumptions - Household Growth

Reference Forecast

Projected customer impacts were modeled based on household projections derived (and adjusted for the GSH service area) from the *City of Greater Sudbury Official Plan*[3], increasing from the 2026 projection of 45,660 households to a total of 49,874 households by 2045[4] (a total of 4,214 additional households) and was based using the 2021 census value of 44,430 households[5].

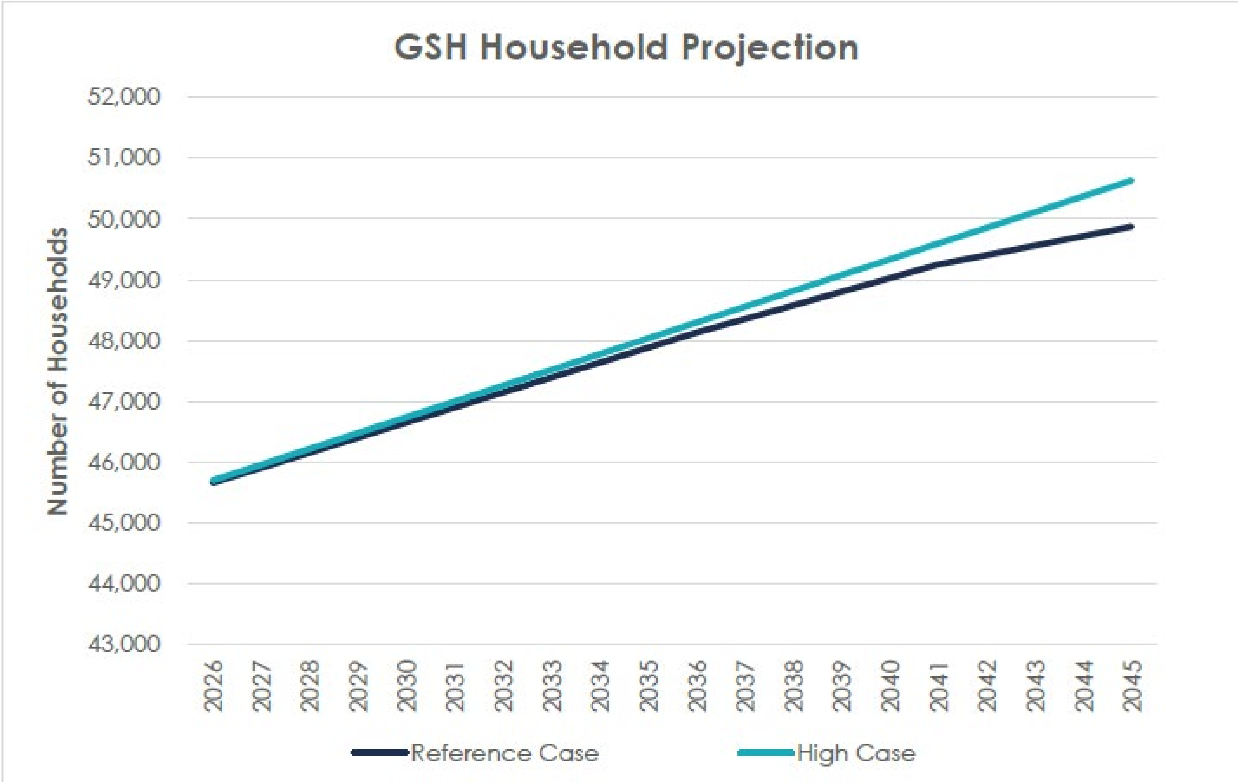
High Growth Forecast

Projected customer impacts were modeled based on household projections derived (and adjusted for the GSH service area) from the *City of Greater Sudbury Official Plan*, increasing from the 2026 projection of 45,660 households to a total of 50,632 households by 2045[6] (a total of 4,972 additional households) and was based using the 2021 census value of 44,430 households[7].

Data Sources and Assumptions

Figure 2: Household Projection in Greater Sudbury Area

[3] City of Greater Sudbury, "City of Greater Sudbury Official Plan," 2026
[4] Melissa Riou Planning Services, "Population Projections Report," Finance and Administration Committee, Sudbury, 2023
[5] Statistics Canada, "2021 Census Profile," 2021
[6] Melissa Riou Planning Services, "Population Projections Report," Finance and Administration Committee, Sudbury, 2023
[7] Statistics Canada, "2021 Census Profile," 2021



- Summer and Winter Peak Load factors – GSH Historical Data.
- kW per connection by customer class from OEB energy consumption dashboard.[8]
- Growth in the commercial and industrial sectors is captured in baseload values and in large connections forecast.

Methodology

GSH's projected baseline customer growth is based on incremental household numbers, applying a constant load impact factor throughout the forecasting period.

$$Baseline\ Customer\ Growth(MW) = \frac{(\Delta Household_t |\ 2025)(Unit) \ * \ Peaking\ EUI_{Peaking\ Season}(kW/Unit)}{1000}$$

*Peaking seasons includes summer and winter

*($\Delta Household_t$ | 2025) stands for the incremental number of households based on 2025 level for year t from 2026 to 2045.

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[8] Ontario Energy Board:
https://app.powerbi.com/view?r=eyJrIjoiZjBhODRlYmMtOGJlYy00N2I4LThmMDktYzFkMDQ2ODQ1ZTM5IiwidCI6Ijc0MTNjMjNjLWE3MjUtNDEzNC04OTQ2LTExMGZmMWUyZDBlNiJ9

1.2.3 Forecast Methodology and Assumptions – Proposed Large Connections

The proposed large connections forecast predicts peak load impacts from the growth in commercial/industrial and large residential customers from proposed connections at both Clarabelle TS and Martindale TS. These loads manifest as customer growth in addition to the baseline household growth values and were put through a framework to adequately account for risked peak load contributions derived from proposed and/or estimated total transformation values. All data surrounding the individual large loads was from GSH's connections list.

Industrial expansion, Large Multi-Unit Residential and Commercial/Industrial archetypes of less committed developments were included based on their estimated loading within the high case. This inclusion of additional speculative loads within the high case accounts for incremental additional load impact compared to the reference case (Table 3). All data surrounding the individual large loads are from GSH's connections list.

Table 3 | Large Proposed Connections (Speculative Loads) on each TS across the Reference Case and High Case Scenarios

System Condition	Martindale TS	Clarabelle TS
Reference Forecast	• Commercial/Industrial Development (2.5 MW) • Large Commercial/Industrial Development (2.5 MVA + 5 MW) • Commercial/Industrial Development (3.3 MW) • Three New Multi-Unit Residential Buildings (3 x 1 MVA) • Commercial/Industrial Manufacturing (2.5 MW) • Large Commercial Development (2.5 MVA) • Long Term Care (1.5 MVA) • Hotel (1.5MVA) • Commercial/Light Industrial (1.5 MVA) • New Commercial/Industrial Customer (2.0MW) • Industrial Park Expansion (3.5 MW)	• Large Multi-Unit Residential Development (5 MW) • Multi-Unit Residential Development (3 X 1 MVA) • 17-Bypass Industrial Park (2.5 MVA) • Downtown Event Centre (2 X 3.0 MVA) • Hospital Expansion (2 MW)
High Growth Forecast (in addition to the connections in the Reference Case)	• Industrial Expansion (5 MW) • Commercial/Industrial Development (2.5MW) • Large Multi-Unit Residential (2 x 4 MVA)	

Data Sources and Assumptions

- Listed connection dates represent earliest practical service dates, not necessarily first material peak contribution dates.
- Project loads were projected to ramp to full load over time based on customer class and project scale.
- Aggregation from project to TS accounts for coincidence factor.
- Seasonal load factors are generic to customer classes and sourced from GSH historical load data.
- Projects can be categorized into committed and uncertain categories, with uncertain projects having reduced load values.
- A power factor of 0.93 was assumed to convert transformation (MVA) to load impact in MW.

Methodology

$$Peak_{t,\,Season,\,Customer\ class} = MVA * PF * Utilization_{season} * Ramp_t * Coincidence\ factor_{season,\,customer\ class}$$

Utilization Factor: How much of a customer's estimated capacity that they will see in terms of peak load. A standard 2/3 utilization planning factor was used to estimate risked peak load impact.

Table 4 | Seasonal Utilization Factors for Proposed Large Connections

Season	Utilization Factor
Summer	66.67%
Winter	66.67%

Customer Coincidence Factor: This was used to account for how much of that customer's peak load shows up at the TS peak from the project level.

Commercial/Industrial coincidence factors were calculated using average coincidence factor across all classes and assumed large residential coincidence factors of 95% for both seasons.

Table 5 | Seasonal Coincidence Factors for Proposed Large Residential & Commercial/Industrial Developments

Season	Residential	Commercial / Industrial
Summer	95%	95%
Winter	95%	84%

Projected ramping of peak load impacts by customer class are shown in the table below.

Table 6 | Projected Ramping of Peak Load Impact for Proposed Large Residential & Commercial/Industrial Developments

Customer Clas	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Residential	0.1	0.25	0.35	0.55	0.65	0.75	0.85	1
Commercial / Industrial	0.5	0.8	0.9	1	1	1	1	1

1.2.4 Forecast Methodology and Assumptions – Electric Vehicles

The electric vehicle (EV) forecasts the load impacts of the electrification of light-duty vehicles and DC Fast Charging (DCFC) stations across Greater Sudbury. Light duty vehicle load impact is modeled based on a historical average ratio of vehicle to person, using Greater Sudbury population growth forecasts and historical EV registration numbers of Ontario. The growth in DCFC stations was also proportional to the projected population growth.

Reference Forecast

The Greater Sudbury Community Energy and Emissions Plan[9] has electric vehicle sales/adoptions targets (for the 80% reduction medium scenario) anchored to the now repealed Federal Government's zero emission vehicle sales target of 100% by 2035. To create a scenario reflective of current policy and moderate/medium reference type growth, load Impacts due to electric vehicles were modeled assuming a 10-year delay of existing federal zero emission vehicle (ZEV) targets[10]:

- 15% of new light-duty sales will be ZEV by 2035.
- 45% of new light-duty sales will be ZEV by 2040.

High Growth Forecast

The Greater Sudbury Community Energy and Emissions Plan[11] contains electric vehicle sales/adoption targets (for the 80% reduction medium scenario) anchored to the now repealed Federal Government's zero emission vehicle sales target of 100% by 2035. To create a scenario reflective of current policy and high scenario type growth, load impacts due to electric vehicles were modeled based on increased adoption relative to existing federal zero emission vehicle (ZEV) targets[12]:

- 75% of new light-duty sales will be ZEV by 2035.

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[9] City of Greater Sudbury - PowerNow, "Greater Sudbury Community Energy and Emissions Plan," 2019

[10] Government of Canada, "Canada's Electric Vehicle Availability Standard," 19 12 2023: https://www.canada.ca/en/environment-climate-change/news/2023/12/canadas-electric-vehicle-availability-standard-regulated-targets-for-zero-emission-vehicles.html

[11] City of Greater Sudbury - PowerNow, "Greater Sudbury Community Energy and Emissions Plan," 2019

[12] Government of Canada, "Canada's Electric Vehicle Availability Standard," 19 12 2023: https://www.canada.ca/en/environment-climate-change/news/2023/12/canadas-electric-vehicle-availability-standard-regulated-targets-for-zero-emission-vehicles.html

- 90% of new light-duty sales will be ZEV by 2040.

Data Sources and Assumptions

- Reference & High Case – Government of Canada ZEV Goals.[13]
- Ontario Historical Population – Stats Can 2016 & 2021 Census.[14]
- Ontario Historical Vehicle Counts – MTO Vehicle Population Data.[15]
- Ontario EV Data – MTO Electric Vehicles in Ontario by FSA.[16]
- Greater Sudbury Population Forecast – 2023 Populations Projection Report.[17]
- NR CAN Managed EV Demand - Electric Vehicle Charging Infrastructure for Canada.[18]
- Plug-in hybrid Utility Factor – Real World Usage of Plug-in Hybrid Electric Vehicles.[19]
- Charging Station Power Output & Zamboni Chargers – City of Greater Sudbury Fleet Electrification Plan.[20]
- Greater Sudbury DCFC Charging Stations – NRCan Electric Charging Station Locator.[21]
- Greater Sudbury will reach its population projections over the forecasting period based on numbers provided in the Populations Projections report consistent with the City of Greater Sudbury's Official Plan.
- Greater Sudbury is an average community in Ontario and the amount of Ontario historical EV's can be averaged equally with the population ratio.
- The proportion of Battery Electric Vehicle (BEV) and Plug-in Hybrid Vehicles (PHEV) making up the light duty electric vehicle (LDEV) population was taken into account with a 100% factor for load density and 40% factor applied to BEVs and PHEVs, respectively.
- Electric vehicles entering Greater Sudbury and charging their vehicles will be offset by electric vehicles departing Greater Sudbury and charging in subsequent regions, leading to minimal impact on peak load.

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[13] Government of Canada, "Canada's Electric Vehicle Availability Standard," 19 12 2023: https://www.canada.ca/en/environment-climate-change/news/2023/12/canadas-electric-vehicle-availability-standard-regulated-targets-for-zero-emission-vehicles.html

[14] Statistics Canada, "2016 Census Profile," 2021, Statistics Canada, "2021 Census Profile," 2024

[15] MTO, "Vehicle Population Data," 2026. https://data.ontario.ca/en/dataset/vehicle-population-data

[16] Government of Ontario, "Electric Vehicles in Ontario – By Forward Sortation Area," 2025: https://data.ontario.ca/dataset/electric-vehicles-in-ontario-by-forward-sortation-area

[17] Hemson Consulting, "Populations Projection Report," 2023

[18] Dunsky Energy, "Electric Vehicle Charging Infrastructure for Canada," 08 01 2025. [Online]. Available: https://natural-resources.canada.ca/energy-efficiency/transportation-energy-efficiency/resource-library/electric-vehicle-charging-infrastructure-canada

[19] P. Plotz, C. Moll, G. Bieker, P. Mock and Y. Li, "Real-World Usage of Plug-In Hybrid Electric Vehicles," The International Council on Clean Transportation, 2020

[20] City of Greater Sudbury , "Fleet Electrification Plan," 2025

[21] Natural Resources Canada, "Electric Charging and Alternative Fuelling Stations Locator," 23 12 2024: https://natural-resources.canada.ca/energy-efficiency/transportation-energy-efficiency/electric-charging-alternative-fuelling-stationslocator-map#/find/nearest

- Internal combustion engine (ICE) and LDEV retirements were assumed to occur every 15 years.
- The growth in DCFC stations will be proportional to the projected population growth.
- The number of Zamboni chargers will remain constant over the forecasting period.

1.2.5 Forecast Methodology and Assumptions – Building Electrification

The building electrification forecast integrates policy direction related to targets for electrified heating of residential homes. The model estimates electrified housing stock based on Greater Sudbury's household forecasts and applies Energy Use Intensity (EUI) for various heating systems particular to each archetype. The model also accounts for the Coefficient of Performance (COP) based on the assumed heating technology.

Reference Forecast

Load Impacts of new residential buildings were modeled based on a 10-year delay of building electrification goals from the *Greater Sudbury Community Energy and Emissions Plan*.

- 70% of new residential homes will be built to net zero standards by 2050.
- 80% of existing residential homes will be retrofitted by 2050.

High Growth Forecast

Load Impacts of new residential buildings were modeled based on the building electrification goals from the *Greater Sudbury Community Energy and Emissions Plan* and modified timelines for Canada's federal net zero goal.

- 70% of new residential homes will be built to net zero standards by 2040.
- 100% of existing residential homes will be retrofitted by 2050.

Data Sources and Assumptions

- Household Forecast – 2023 Population Projections Report.[22]
- Residential Household Growth by Archetype – Housing Accelerator Fund (HAF).[23]
- Space & Water Heating EUI per Archetype – NRCan Comprehensive Energy Use Database.[24]
- Summer and Winter Peak Load factors – GSH Historical Data.
- Space & Water Heating COP – NRCan Heating and Cooling with a Heat Pump.[25]

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[22] Hemson Consulting, "Populations Projection Report," 2023

[23] Greater Sudbury, "Housing Accelerator Fund," 2026. [Online]. Available: https://www.greatersudbury.ca/do-business/planning-and-development/housing-accelerator-fund1/

[24] Natural Resources Canada, "Comprehensive Energy Use Database," 2023: https://oee.nrcan.gc.ca/corporate/statistics/neud/dpa/menus/trends/comprehensive_tables/list.cfm.

[25] Natural Resources Canada, "Heating and cooling with a heat pump," 24 12 2025: https://natural-resources.canada.ca/energy-efficiency/energy-star/heating-cooling-heat-pump

- Greater Sudbury will reach its household projections over the forecasting period based on numbers provided in the Populations Projections report.
- The winter peak forecasts peak load from the electrification of space and water heating.
- The summer peak forecast peak load from the electrification of water heating.
- Space and water heating were modeled using a blended COP of 2 to account for a variety of technologies including heat pumps and resistive (primarily baseboard) heating.

1.3 Hydro One Networks Inc. Distribution: Gross Forecast Methodology and Assumptions

Hydro One Distribution services the areas of Sudbury-Algoma region that are not serviced by other LDCs, e.g., rural areas.

1.3.1 Factors that Affect Electricity Demand

Hydro One Distribution's load forecast was driven by several factors including urban development, electrification trends and economic activity. Where possible, detailed information about load growth, based on local knowledge and/or municipal/provincial energy plans, was used to augment the forecast values within the study period.

1.3.2 Forecast Methodology and Assumptions

Hydro One Distribution used both econometric and end-use forecasting to develop the load forecast provided to the IESO. A baseline forecast (MW station peak in the base year) was developed, considering such factors as normal operating conditions, coincident peak loading, and extreme weather conditions.

For the Sudbury-Algoma IRRP forecast, Hydro One Distribution used the weather-corrected peak demand levels for the station serving Hydro One customers. From the established baseline year, a growth rate (%) was applied to station demand level to provide forecast values within the study timeframe.

Assumptions included in the growth rate can be related to such factors as: Ontario GDP growth rate, housing statistics, the intensification of urban developments (i.e., MW/sq. ft); and electrification trends (e.g., more vehicles switching from gas to electrical vehicles). In the high forecast scenario, higher economic activity (e.g., higher GDP and housing activities) at the provincial and local level were assumed.

1.4 Conservation and Demand Management Assumptions

Demand side management (DSM) measures can reduce the electricity demand, and their impact can be separated into the two main categories: Building Codes & Equipment Standards, and DSM programs. The assumptions used for the Sudbury-Algoma IRRP forecast are consistent with the DSM assumptions in the IESO's 2026 Annual Planning Outlook. The savings for each category were estimated according to the forecast residential, commercial, and industrial gross demand. A top-down approach was used to estimate peak demand savings from the provincial level to the Northeast IESO transmission zone and then allocated to the Sudbury-Algoma Region. This section describes the process and methodology used to estimate DSM savings for the Sudbury-Algoma Region and provides more detail on how the savings for the two categories were developed.

1.4.1 Factors that Affect Electricity Demand

Ontario building codes and equipment standards set minimum efficiency levels through regulations and are projected to improve and further contribute to demand reduction in the future. To estimate the impact on the region, the associated peak demand savings for codes and standards by sector were estimated for the Northeast zone and compared with the gross peak demand forecast for the same zone. From this comparison, annual peak reduction percentages were developed for the purpose of allocating the associated savings to each station in the region, as further described below.

Consistent with the gross demand forecast, 2025 was used as the base year. New peak demand savings from codes and standards were estimated from 2026 to 2045. The residential annual peak reduction percentages for each year were applied to the forecast residential peak demand at each station to develop an estimate of peak demand impacts from codes and standards. The same is done for the commercial sector. The sum of the savings associated with the two sectors are the total peak demand impact from codes and standards. It is assumed that there are no savings from codes and standards associated with the industrial sector.

1.4.2 Forecast Methodology and Assumptions

In addition to codes and standards, the delivery of DSM programs reduces electricity demand. The impact of existing and planned DSM programs were analyzed, which include the 2025 – 2027 Electricity Demand Side Management Programs, the existing federal programs, and the assumed continuation of provincial programs beyond 2027 at savings levels consistent with the current framework adjusted for gross demand growth. A top-down approach was used to estimate the peak demand reduction due to the delivery of these programs, from the province to the Northeast zone, and finally to the stations in the region.

Similar to the estimation of peak demand savings from codes and standards, annual peak demand reduction percentages from program savings were developed by sector. The sectoral percentages were derived by comparing the forecasted peak demand savings with the corresponding gross forecasts in the Northeast zone. They were then applied to the sectoral gross peak forecast of each station in the region.

1.4.3 Estimated Savings from DSM Programs

As described in the above sections, peak demand savings were estimated for each sector and totalled for each station in the region. The analyses were conducted under normal weather conditions. The resulting forecast savings were applied to gross demand to determine net peak demand for further planning analysis.

2. Demand Outlook and Methodology (Transmission Connected Wholesale Consumer)

This section describes the methodologies used to develop the transmission connected wholesale consumer demand forecast (peak) for the Sudbury-Algoma Region IRRP studies. Forward-looking estimates of electricity demand were provided by each of the transmission connected wholesale consumers.

A transmission connected wholesale consumer is an organization other than a local distribution company that is that is directly connected to the IESO-controlled grid (100 kV and above) that pull power for its own consumption. Examples include but not limited to; mines, data centers, greenhouses, large manufacturing plants, timber processing facilities, chemical processing facilities, metal processing and production facilities.

The demand of these facilities are less prone to ambient weather conditions and therefore are not weather corrected. Similarly these facilities are very sensitive to the price of electricity and therefore DSM and load displacement (DERs) are considered part of the forecast provided by the transmission connected wholesale consumer.

Other factors such as ICI curtailments, participation in demand response do reduce demand from these facilities during system wide peaks. They are not included as peaks in this planning region since they may not always coincide with those in the system peak which is dominated by Southern Ontario (due to population size). I.e. Extreme cold in Northern Ontario driving up demand in this planning region while having milder temperatures in Southern Ontario.

2.1 Existing Transmission Connected Wholesale Consumer

The majority of existing transmission connected wholesale consumers provided a 20 year peak demand forecast to the IESO for inclusion in this forecast.

Where the existing transmission connected wholesale consumer identified that the forecast did not require major facility expansions or extensions beyond useful life, the demand was included in both the reference and high-growth forecasts.

Where the existing transmission connected wholesale consumer identified that the forecast required major facility expansions and/or extensions beyond useful life, the demand was included in the high-growth forecast and was only included in the reference forecast depending on how far along the project was in terms of reaching milestones.

Power factors are consistent with values provided by the transmission connected wholesale consumer.

For the cases where existing transmission connected wholesale consumers were not able to provide a forecast, a combination of historical consumption and previous forecasts were utilized to estimate a 20 year forecast.

Power factors are consistent with historical values.

Each facility is assumed to consume 90% of the peak demand value for the coincidence forecast.

Due to confidentiality this information was aggregated and presented as a single value in the forecast.

2.2 Potential Transmission Connected Wholesale Consumer

Potential transmission connected wholesale consumers provided a 20 year peak demand forecast to the IESO for inclusion in this forecast.

Potential transmission connected wholesale consumer facilities were included in the high-growth had a valid System Impact Assessment (either in progress or completed) or technical feasibility study performed by the IESO (either in progress or completed). The potential transmission connected wholesale consumer facilities were included in the reference forecast only if the project was committed as per Market Manual 1.4.

Power factors are consistent with values provided by the transmission connected wholesale consumer.

Each facility is assumed to consume 90% of the peak demand value for the coincidence forecast.

Due to confidentiality this information was aggregated and presented as a single value in the forecast.

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