

# Electricity Demand

Electricity demand is generally shaped by several factors that have differing impacts – those that increase demand (population growth, economic change), those that reduce demand on the grid (conservation, embedded generation) and those that shift demand (time-of-use rates, the Industrial Conservation Initiative). The impact of each of these factors on electricity consumption varies by season and time of day.

Even as the Ontario economy has moved beyond the 2008 recession, demand has remained flat. This trend is expected to continue as capacity and energy margins remain adequate and can be attributed in part to the successful implementation of conservation initiatives.

Growth in embedded solar and wind generation capacity and on-going conservation initiatives reduce the need for energy from the bulk power system, while also putting downward pressure on peak electricity demands.

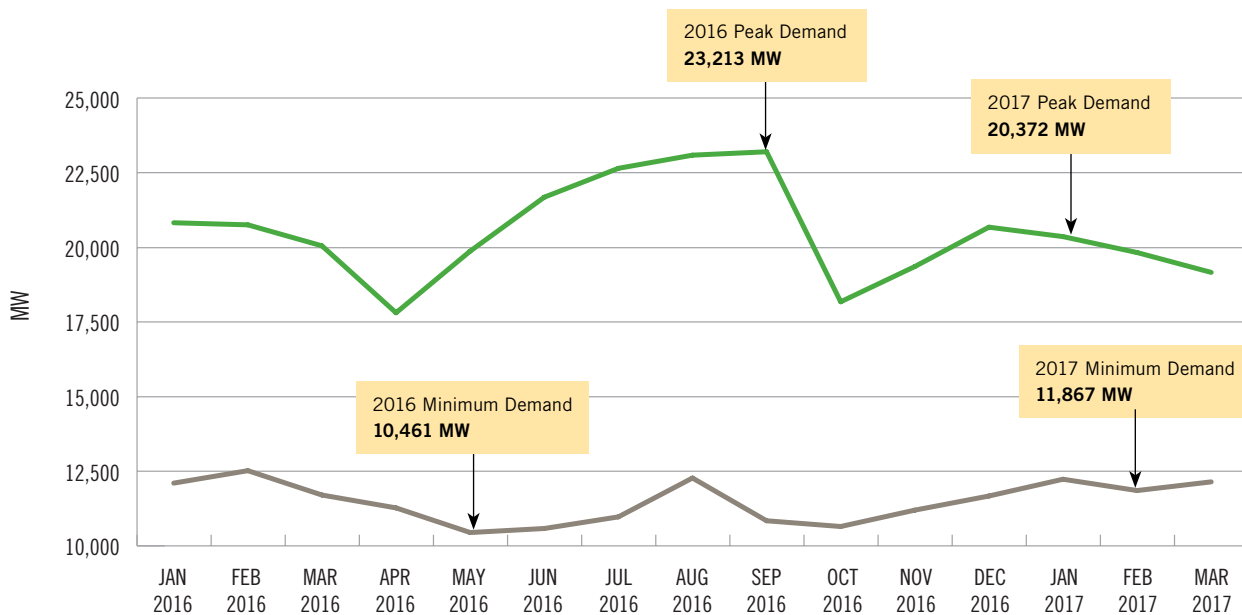
## Ontario Grid-Connected Peak Demand – as of end of Q1

# 20,372 MW

set in Q1 – January 9, 2017, 6:00 pm EST

In Q1 2017 we have seen a milder winter with lower demand, down by 2.4%, when compared to Q1 in 2016.

## Ontario Monthly Peaks and Minimums



Source: IESO

## Forecast Demand Peaks

The demand for electricity on the provincial grid is forecast on a rolling 18-month basis. An assessment is done to assure the adequacy of the existing and proposed generation and transmission facilities to meet demand needs. The chart below presents normal weather forecasts, representing a typical peak for the time of year, and extreme weather forecasts that reflect severe weather conditions. The impacts of time-of-use rates and the Industrial Conservation Initiative – which incent customers to reduce demand in peak demand hours – are also factored into the demand forecast in this report.

Season	Normal Weather Peak (MW)	Extreme Weather Peak (MW)
Summer 2017	22,493	24,880
Winter 2017-2018	21,727	22,884
Summer 2018	22,381	24,709

Source: IESO 18-Month Outlook

## Q1 Ontario Grid-Connected Energy Demand

Year	Total (TWh)
2017	34.31
2016	35.16
2015	37.47
2014	38.35
2013	36.60
2012	35.81
2011	37.43

Note: Total does not include the impact of embedded generation to reduce demand.

Source: IESO Power Data, Demand Overview

## Historical Totals – Annual Ontario Grid-Connected Energy Demand

Year	Total (TWh)	Change Over Previous Year
Q1 2017	33.2	
2016	137	0
2015	137	-2.8
2014	139.8	-0.9
2013	140.7	-0.6
2012	141.3	-0.2
2011	141.5	-0.4

Note: Total does not include the impact of embedded generation to reduce demand.

Source: IESO Power Data, Demand Overview