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.

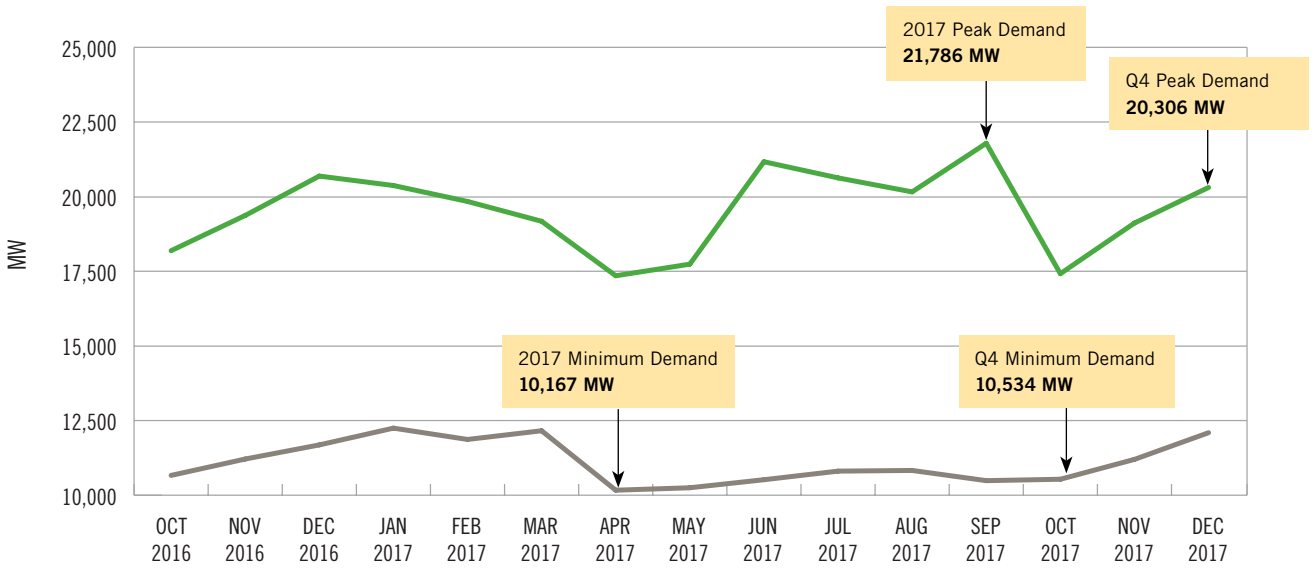
Growth in embedded solar and wind generation capacity and on-going conservation initiatives reduce the need for energy from the bulk power system, while also putting downward pressure on peak electricity demands.

Ontario Grid-Connected Peak Demand – as of end of Q4

21,786 MW

set in Q3 – September 25, 2017, 6:00 pm EDT

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 2018	22,002	24,458
Winter 2018-19	21,352	22,157
Summer 2019	21,965	24,338

Source: IESO 18-Month Outlook

Ontario Grid-Connected Energy Demand

Year	Q4 Total (TWh)
2017	33.6
2016	33.16
2015	32.7
2014	34.47
2013	35.58
2012	34.76
2011	34.26

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
2017	132.1	-4.9
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	-0.35

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

Source: IESO Power Data, Demand Overview