

Energy

Q. What is the Industrial Conservation Initiative (ICI) and how does it provide benefits to the electricity system?

Response

The Industrial Conservation Initiative (ICI) is a demand response program and cost allocation mechanism. It has been in place since 2011.

The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours. This benefits companies financially. It also benefits the electricity system by reducing the need for peaking generation, which reduces system costs that would otherwise need to be recovered from all Ontario ratepayers.

The ICI is a voluntary program and eligible consumers are able to opt in or out in June of each year. Today, there are about 1,100 companies enrolled in the program across a variety of sectors.

Through the program, the consumers who contribute the least to peak demand pay a smaller portion of costs associated with electricity generation, conservation and demand management programs.

In other words, ICI participants are charged Global Adjustment (GA) in proportion to their contribution to the top five system peak hours in a year.

Global Adjustment

Before I go any further, I think it would be best to provide a very brief overview of what the Global Adjustment (GA) is.

The Global Adjustment (GA) is a mechanism that recovers certain electricity system costs. GA is calculated by the Independent Electricity System Operator (IESO) based on the difference between the market price for electricity and amounts owed to generators to ensure they can recover their fixed costs. The Global Adjustment also recovers the costs of running conservation programs in the province.

The market price for electricity, known as the Hourly Ontario Energy Price (HOEP), is calculated each hour and represents the marginal cost of producing power at that time. If HOEP is lower than a generator's regulated or contracted rate, Global Adjustment makes up the difference. When market prices exceed these contracted and regulated costs, suppliers have to pay back the difference.

As a result, the Global Adjustment varies from month to month, responding to changes in the HOEP. Generally speaking, when HOEP is lower, GA is higher, and vice versa. The GA is also impacted when new projects come in to service, contract payments take effect, or as a result of changes in demand. The combination of the HOEP and GA represent the total commodity cost of electricity.

All consumers pay GA, but there is variation in how different types of customers are charged. Most customers, that is anyone not enrolled in the ICI, pay a volumetric charge. This means that they pay the same GA rate on every kilowatt-hour consumed. If you're a typical residential consumer, for example, the GA is built into the price of a kilowatt-hour of power that you see on your bill. In some cases the GA shows up as a separate line item on their bill.

However, participants in the ICI program are charged GA based on the proportion of their electricity demand compared to the total provincial electricity demand in the top five system peak hours in a year. If a consumer is assessed to be responsible for one per cent of Ontario's peak demand in those five highest hours, they will be charged for one per cent of total GA costs each month through the next year. Peak hours depend on a number of factors, such as time of day, time of year, and the weather.

ICI participants manage their GA costs by consuming less during peak hours. So they work to forecast when system peak hours will occur, and then work to reduce consumption during those hours. They can respond using any number of strategies, such as changing the operating profiles of industrial equipment.

Benefits of Industrial Conservation Initiative (ICI)

The Industrial Conservation Initiative provides a number of system benefits. First, because ICI provides a reduction in Ontario peak demand, it helps defer the need to build expensive new peaking generation facilities in the longer term, reducing costs for all ratepayers across the province: residential, commercial and industrial.

By keeping peak system demand as low as it can be, we are making the system more cost-effective for all ratepayers into the future.

Second, it better aligns consumer prices with the consumer's contribution to total system costs. Consumers who are drawing electricity from the system at times of peak demand in the province pay a larger proportion of the costs.

Simply put, ICI is fair because it is designed to match each customer's share of costs with their contribution to those costs.

Lastly, through lower industrial prices, the ICI works to retain manufacturing load in the province, meaning that these manufacturers continue to contribute towards fixed system costs that would otherwise be borne by remaining consumers.

The ICI helps industrial consumers lower their electricity prices by one-third on average. It helps them to remain competitive and focused on creating jobs for Ontarians across the province.

Thanks in part to the ICI, industrial electricity prices in Ontario are lower than the average price in the rest of the Great Lakes region, according to the U.S. Energy Information Administration.

We have been taking steps to make sure that Ontario businesses are aware of the program and how it can help them improve their competitiveness and keep providing jobs. We have partnered with the Ontario Chamber of Commerce (OCC) to ensure that all Ontario businesses are aware of the benefits of this program. OCC is leading the campaign to raise awareness amongst Ontario consumers.

History of Industrial Conservation Initiative and Expansions

Since ICI was introduced in 2011, it has undergone changes to respond to customer demand.

At first, the ICI was available to consumers with peak demand above five megawatts (MW). In July 2015, this was extended to consumers operating in select sectors with average monthly peak demand greater than 3 MW. These sectors included the mining, refrigerated warehousing, greenhouses and data processing sectors.

In January 2017, we further expanded the program to include more than one thousand customers with monthly peak demand greater than one megawatt. In addition, sector restrictions were removed and smaller industrial, institutional and commercial businesses were eligible to participate.

As part of Ontario's Fair Hydro Plan, the ICI has been expanded again to include smaller manufacturers and greenhouses with peak demand between 500 kW and 1 MW. Newly eligible participants would have begun to see the impact on their July 2017 bills.

Prior to the 2017 expansions, there were approximately 300 ICI participants. As I mentioned earlier, right now there are approximately 1,100 participants, many of which would not have previously been eligible but realized they could benefit their organizations by opting in to the program.

Expanding participation in the ICI program has reduced electricity demand during peak periods, and it has reduced electricity bills for new ICI participants who are able to reduce their electricity demand during peak demand periods.

ICI Effectiveness and Results

The ICI has been very successful at reducing peak electricity demand. In fact, our system operator estimates that this program reduced peak demand by about 1,300 MW in 2016. That's about 6 per cent of Ontario's peak electricity demand, and is equivalent to the peak electricity demand of

a city roughly the size of Mississauga. It's about twice as much as the output of Halton Hills Generating Station west of the Greater Toronto Area.

The Ministry of Energy is focused on both meeting demand for electricity and taking costs out of the electricity system wherever possible. Reducing peak demand has played an important role in both of these objectives.

Thanks in part to lower peak demand, the contracts for several Non-Utility Generator (NUG) facilities have recently ended and these facilities have not been re-contracted.

In addition, the second round of the large renewable procurement process (LRP II) and the Energy-from-Waste Standard Offer Program have been suspended, which is expected to save up to \$3.8 billion in electricity system costs relative to the 2013 forecast.

Future expected reductions in peak demand due to the ICI are also factored into the cost forecasts included in the recently released 2017 Long-Term Energy Plan.

The Industrial Conservation Initiative is about fairness for all consumers – large and small. We made the policy decision that it makes sense for electricity consumers to pay for electricity system costs proportionally to their contribution to the incurrence of those costs.

Further, the ICI program will continue to play an important role in helping us bring down total system costs, which will put downward pressure on electricity bills for everyone moving forward.

Conclusion

The Industrial Conservation Initiative (ICI) benefits electricity consumers by reducing demand at peak periods, helping to reduce the need to build more peaking electricity generation in the long-term.

Our electricity system is planned to ensure we have enough generation to meet peak demand.

By keeping peak system demand as low as it can be, we can avoid building costly new generation.

This makes the system more cost-effective for all ratepayers.

Our system operator estimates that this program reduced peak demand by about 1,300 megawatts in 2016 – the peak electricity demand of a city roughly the size of Mississauga.

The Ministry of Energy continues to monitor and report on the impact of the ICI program on the electricity system, including reductions in peak demand and impacts on all classes of electricity consumers.

The results of the ICI program can be seen in monthly Independent Electricity System Operator (IESO) reports and the quarterly Ontario Energy Report.