Intelligence MEMOS

From: Blake Shaffer

To: Glenn Thibeault, Ontario Minister of Energy and Rosemarie Leclair, Chair of the Ontario Energy Board

Date: September 8, 2017

Re: **AN ONTARIO SURPRISE: A GOOD IDEA ABOUT ELECTRICITY PRICING**

There is no shortage of Ontario electricity policies to criticize, but the Ontario Energy Board's (OEB) recently announced pilot programs to test new ways to set the hourly price of electricity are a step in the right direction.

The programs all have the same goal: to better reflect the value of electricity at different times of the day. Many commodity prices vary seasonally (ever try buying peaches in December?), but electricity is unique in how much it varies hourly.

Prices in the evening peak are significantly higher than those in the morning – and getting "peakier" over time (see Figure). In 2016, the peak evening hour price was twice the daily average, while the price in the middle of the night was only one quarter the daily average.

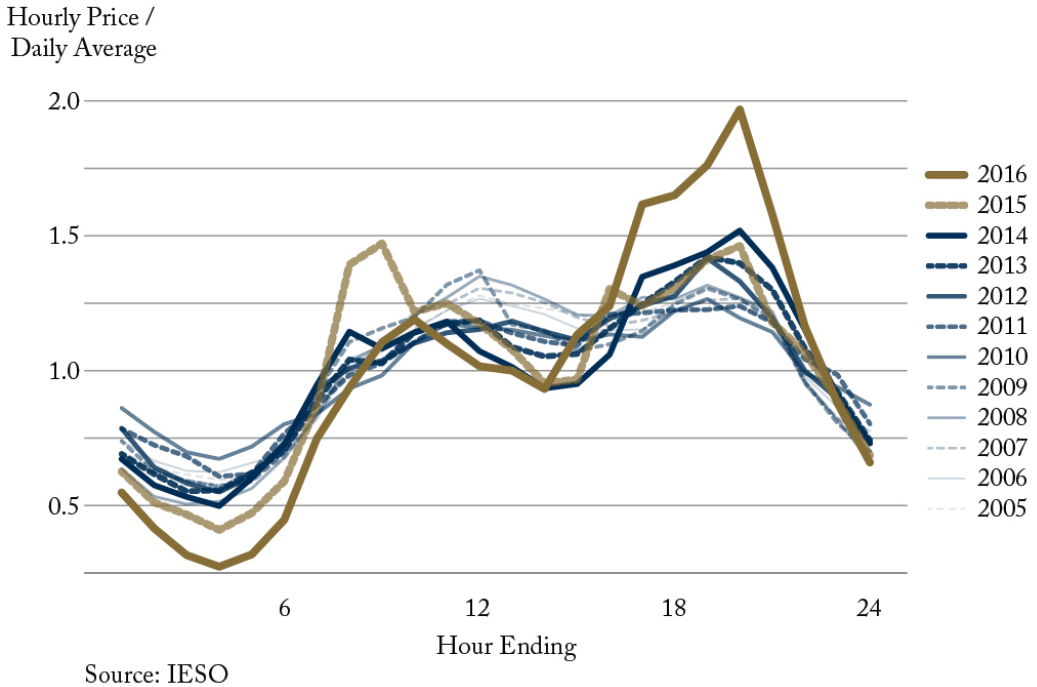
The pilot pricing plans are meant to better reflect the differences in hourly value. Want power on a hot day during the evening peak? You'll have to pay more for that. In some cases, a lot more. The tradeoff is lower prices in other hours. For some, this may make sense. From the grid's perspective, and in the absence of viable storage technology, getting consumers to conserve during peak periods avoids the alternative of having to build expensive generating capacity to meet the peak for just a few hours a year.

Will consumers shift their consumption? Most people don't sit by their thermostat adjusting their air conditioner when prices spike. Thankfully, "smart" thermostats, such as the Google Nest or Toronto-based Ecobee, can automate much of this response. Recent research has shown the combination of high peak-time prices and enabling technology can cut peak demand up to 30 percent.

Will reducing peak demand result in more electricity exports? Due to an ill-conceived procurement spree at high prices, Ontario exports a significant amount of power at a loss. Even in the peak hours Ontario is a net exporter. Curtailing demand will lead to more exports. But exports in high-priced hours are not the problem: exports all-day, every day are. If the OEB's pricing pilot was aimed at reducing consumption around the clock, the corresponding increase in exports would be cause for concern. But, the pricing pilot should allow Ontario to export more during the valuable hours, and less during the cheap ones.

The problem of meeting peak demands is not unique to Ontario. More intermittent generation coupled with higher peaks from rising temperatures make this a problem that needs solving in most grids today. California is using peak pricing to manage their peaks, where Severin Borenstein has pointed out the need to retain flexibility in plan design -- something Ontario would be well-served to consider. While peak pricing plans won't resolve all the Ontario electricity market's structural problems, looking at demand-side solutions, tried through pilots, is a smart way to go.

Shape of Ontario Electricity Market Prices



Source: IESO

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