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December 20, 2010

Ontario Energy Board  
P.O. Box 2319  
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Attention: Ms. Kirsten Walli, Board Secretary

Re: Consultation on Regulated Price Plan Time-of-Use Pricing  
Board File: EB-2010-0364

I have reviewed the white paper prepared by The Brattle Group and entitled: *Assessing Ontario's Regulated Price Plan*, dated December 8<sup>th</sup>, and offer the following comments for consideration:

- On page 2, paragraph 3 reads: *"Each defining characteristic of Ontario's TOU rate was benchmarked against industry best practices. These best practices were identified through a review of more than 50 TOU rates already in deployment by utilities in North America and abroad. ..."*

A "best practice", by definition, is a method, process, activity, incentive, or reward that is believed to be more effective at delivering a particular outcome than any other technique, method, process, etc. when applied to a particular condition or circumstance. However, as the term has become more popular, there has been a linguistic drift to the point where the term is little more than a business buzzword used to describe *"a standard way of doing things that many organizations can use"*. For example, the accounting profession would formerly often refer to the Generally Accepted Accounting Principles as *"best practices"* instead of *"standard practices"*.

If the original meaning of the term *"best practices"* is to be preserved, and one recalls that the provincial government introduced *"smart meters"* and *"time-of-use electricity pricing"* as a strategic CDM initiative (as opposed to a means for reducing cross-subsidization within the residential and small business customer classes), then the *"best practice"* with respect to TOU rates will be those TOU rates that yield the greatest CDM outcome for the least effort (e.g. customer education cost).

In reviewing the contents of the referenced Federal Energy Regulatory Commission (FERC) staff report entitled: *"Assessment of Demand Response & Advanced Metering – 2008"*, I was expecting to find some tabulation of utilities

with residential TOU rates ranked from “*most effective*” to “*least effective*” with respect to their demand response achievements. Instead I found statements such as (on page 37) “*Most utilities do not routinely track or estimate actual peak load reductions for customers on time-based rates, ...*”, and information (on page 13) indicating that demand response is a motivator in only about 10% of the AMI installations. Most utility business cases for AMI only include anticipated demand response benefits in their cost-benefit business cases to make up the gap that is not covered by operational benefits from the AMI.

In short, I’m not convinced that there is anything in the referenced FERC report that provides any insight whatsoever into the parameters of a “*best practice*” or “*best of breed*” time-of-use rate structure. Similarly, I’m unconvinced that the parameters given in Figure 3 of The Brattle Group report are indicative of “*best practice*” TOU rates – if anything, the cited parameters may be indicative of “*standard practice*” in TOU design.

When the former Energy Minister Dwight Duncan stated in 2005 that the McGuinty government was “*striving to make Ontario a leader in conversation*”, surely he meant adopting “*best of breed*” TOU rates (even if they had to be pioneered in Ontario) as opposed to accepting mediocrity (i.e. standard practice) from other jurisdictions.

- Page 3 is a discussion of Ontario’s existing RPP-TOU rate structure in comparison to what I would question as “*best practices*”. The most important parameter that is missing throughout the entire report is the “end use residential or small business customer”. Customers will respond to TOU rates, but only if the rate structure is both (i) intuitive and (ii) readily understood.

The unfortunate truth is that time-of-use rate structures tend to be designed by academics, regulators, and utility rate designers – all familiar with the intricacies of the Ontario wholesale electricity marketplace - with little or no consideration given to the end user who unfortunately has little understanding of electricity let alone the electricity marketplace. The rationale often presented by these same parties is that a consumer education program can overcome this challenge.

Note: Those readers that are uncertain as to the knowledge base of the average consumer with respect to the electrical distribution industry will find the “Powerwalking” videos created by Bill LeBlanc of E-Source particularly enlightening. Refer to the E-Source website at URL:: <http://www.esource.com/video/powerwalking/default.asp>

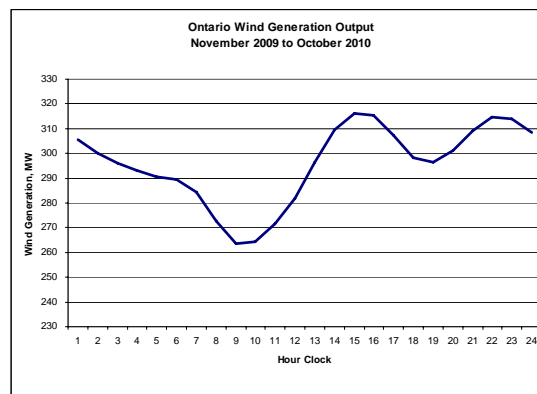
The average consumer believes that they have adequately contributed to the culture of conservation by turning off the lights in unoccupied rooms; doesn’t understand why the summer peak period extends from 11:00 am to 5:00 pm when their peak air conditioning usage is in late afternoon; doesn’t understand why there is a double peak in the winter when they don’t even have electric heat nor know anyone in their social circle that does; don’t understand why there are on-peak price periods in spring and fall when neither air conditioning nor electric heat is being used by consumers, etc. In short, little about the existing RPP-TOU rate structure is intuitive to the average end-use customer, and the industry has to accept the harsh reality that the average end-use customer is busy, electricity is

seldom a priority in their lives, and most education has to be delivered in sound bites.

Note: Customers that don't intuitively understand RPP-TOU rates and the concept that RPP-TOU is intended to generate the same revenue as the previous tiered rate structure will tend to maintain that this is simply another government scheme to generate more money.

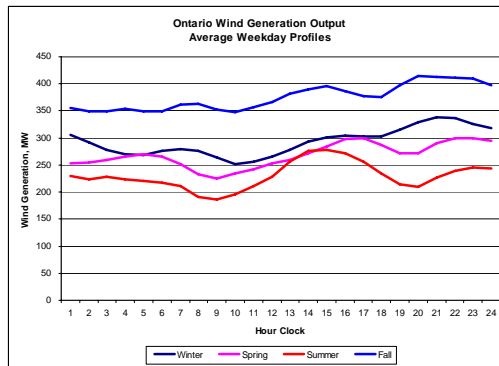
I would argue that society would be better served by a TOU rate structure that is imperfect, but is intuitive and readily understood by the average end-use customer – and hence has significant participation rates, than one more closely aligned with perfection, but complex and that fails to achieve its intended purpose of load-shifting and energy conservation. As such, I would argue that if TOU rates are to achieve their intended objective, it is imperative to involve consumer focus groups in the design of such rate structures, and the industry should be prepared to sacrifice perfection for a rate design that is both intuitive to the end-use customer and that can be explained in simple sound bites.

- On page 4, in paragraph 3, The Brattle Group appear to dismiss the reported outcomes from some unidentified (or maybe these are the pilot projects referred to on page 8 of the report) but recent TOU pricing pilot projects, i.e. changes in overall electricity consumption verses perhaps expected load-shifting response. I don't really find such outcomes surprising, but rather indicative of the premise that the average end-use residential consumer really doesn't understand electricity or the electricity marketplace. As such, they undertake energy actions that they guess to be consistent with the objectives of the pilot project that may in fact not be consistent (e.g. energy conservation versus load-shifting).
- On page 5, within paragraph 3 is the statement *"This decision to reallocate wind and solar costs to the peak period could be justifiable based on the idea that these two resource types are most likely to be generating electricity at high output levels during peak hours (i.e. when it is sunny and/or windy), and therefore they would be compensated during these hours."* Unfortunately the assumption concerning wind energy in Ontario isn't supported by the facts.

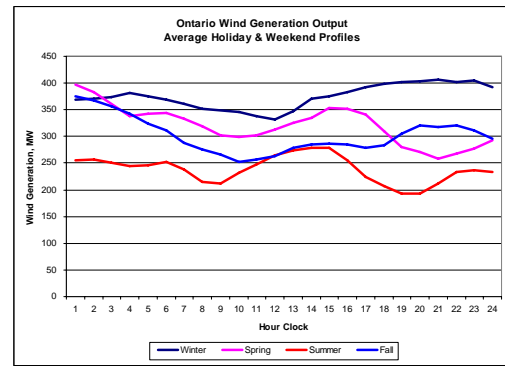


**Figure 1, Composite Wind Generation Output**

We've downloaded Wind Generation Output data from the IESO website<sup>1</sup> for the period November 1, 2009 to October 31, 2010. The average hourly output is depicted in Figure 1 above.



**Figure 2, Average Weekday Wind Generation Profile**



**Figure 3, Average Weekend & Holiday Wind Generation Profile**

Figure 2 shows the average weekday composite wind generation output over the same period, by season. Figure 3 shows the same information, but for weekends and holidays.

Figure 2 is probably the most relevant for the discussion at hand. It should amply demonstrate that there is no basis in fact for recovering the cost of wind generation during peak periods only. Although the output of individual wind turbines is well known to be erratic, the energy production from the overall provincial population of wind turbines, on average, seems to have a composite seasonal profile much like a base-load generator.

Note: The authors concede that one of this shortcomings of the above analysis is that as time progresses, more wind generation is coming online (i.e. the combined nameplate ratings of all the in-service wind turbines over the study period of November 2009 to October 2010 wasn't constant, but rather increased) and this would affect the results presented above. A better approach, if the information had been readily available would have been to normalize the wind turbine output using the composite nameplate ratings of all in-service turbines.

Note: The authors have further assumed that all the wind turbines are receiving financial compensation under an OPA Feed-In Tariff contract (at 13.5¢ per kWh), and so their revenue profile (i.e. the money to be collected via Global Adjustment) would match their average generation profile.

- On page 8, The Brattle Group report identifies four (4) rate options. One element that is missing from the discussion is the implementation of “critical peak pricing”. At the outset, the Ministry of Energy stipulated that critical peak pricing was to be an essential function of the Advanced Metering Infrastructure, although to date there has been no implementation of critical peak pricing.
- On page 3, The Brattle Group report correctly observes: “It should also be noted that only the generation charges vary by time-of-use in the RPP design. While this mutes the strength of the price signal with respect to a customer’s total bill (in

<sup>1</sup> Refer to page “Wind Power in Ontario” on IESO website at URL:: <http://www.theimo.com/imoweb/marketdata/windpower.asp>

*which transmission and distribution charges are not time varying), this is often an unavoidable attribute of cost-based TOU rate design".* London Hydro notes that whereas the present ratio of commodity rates (5.1 ¢/kWh / 8.1 ¢/kWh / 9.9 ¢/kWh) or 1:1.6:1.9 might appear to make load shifting technologies an easy sell to consumers, when one considers the uplift charges (delivery, regulatory, HST, etc.), the real end-user costs at 10.59 ¢/kWh / 14.12 ¢/kWh / 16.24 ¢/kWh or 1:1.3:1.5 isn't nearly as compelling, i.e. the investment in technology to move on-peak load to shoulder periods or off-peak periods has a very long return-on-investment on tighter price ratios.

London Hydro is hopeful that the comments offered herein will be received as constructive – our hope is that they will serve to strengthen (as opposed to diminish) the substance of the report. It is imperative that the Ontario Energy Board / Ministry of Energy take whatever time is necessary to define a “best in breed” TOU rate structure the first time. It won't serve the CDM industry or the end-use customers to introduce something to the marketplace for the sake of expediency and then constantly modify or tweak the TOU structure.

Yours truly,

LONDON HYDRO INC.

Gary Rains, P.Eng.  
Director of Energy Management Programs

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