

Comments on CD Howe E-brief – “Plugging into Savings: A New Incentive-Based Market Can Address Ontario’s Power-Surplus Problem”

On July 19, 2011 CD Howe released an e-brief report with recommendations on how to address surplus energy in the Ontario electricity market. The basic recommendation of the report was to promote the concept of *“paying the generators who operate under existing fixed-price contracts to reduce output, when doing so would save money for the system as a whole”* through *“the creation of market incentives”*. The report proposes that this could be accomplished through the creation of a ‘dispatch down market’; similar to Alberta, in which generators could bid in a price to curtail their output.

Current Market Structure

The paper suggests *“that negative prices occur in Ontario when producers with fixed price contracts or inflexible facilities produce electricity even when demand is very low”* and that *“the IESO could reduce or eliminate consequences of surplus electricity generation by facilitating a market that created incentives for these generators to reduce output when the electricity is not needed”*

These concepts may have merit from an academic viewpoint, however an examination of the practicality of implementing their recommendations in the context of the current structure of Ontario’s nearly fully contracted electricity supply market suggests there is little opportunity or benefit at this time.

The current market structure, absent of contracts, has the appropriate market incentives through negative pricing, to drive generators to reduce their output at low or negative prices. If the contracts were restructured to provide more exposure to the market price, generators would be incented to reduce their output when wholesale prices are low or negative.

Currently, most OPA contracts either;

- a) expose generators to wholesale market price signals - preserving incentives not to generate when wholesale market prices are low or negative (e.g. CES contracts for gas-fired facilities) or;
- b) have provisions for curtailment to compensate generators for foregone energy when they reduce their output in global oversupply situations along with some exposure to negative pricing signals (e.g. FIT).

One of the few exceptions in the portfolio of OPA contracted generators are those facilities (primarily wind power) operating under RES agreements, particularly those signed under the RES I and II procurements. Although these contracts have an incentive to offer at a floor price, under the current IESO market rule structure, they are not forced to reduce their output at that floor price. The IESO is in the process of instituting market rule changes that will enable the dispatch of these facilities.

Dispatch Down Market

The authors' suggestion is to create *"a market in which, at times of excess electricity generation, fixed-price generators would be offered payments to reduce their output, with the amount offered being less than the cost to the system of accepting their power at the contract price"*, similar to the Dispatch Down Service (DDS) in Alberta.

With the suite of generators largely under contract in Ontario, the number of players which could be expected to participate in a 'dispatch down market' at any benefit to Ontario is extremely limited.

The opportunity cost for low marginal cost generators such as wind and solar is expected to be close to their contract price, it is therefore currently in their interest to operate regardless of the market price. And it is highly unlikely that such generators would accept lower payments for curtailing output through a market mechanism such as a "dispatch down market". At best, a dispatch down market would achieve curtailment objectives at the same (or marginally lower) costs as would the contractual provisions. At worst, and perhaps more likely, the dispatch down market would clear at a higher price and would result in higher costs to the Ontario electricity consumers than could have been achieved through contractual mechanisms. The least cost and environmentally prudent dispatching of OPA contracted renewable resources, given the current contract form, can best be accomplished through IESO Market Rule amendments rather than the creation of a separate 'dispatch down market'.

Other generators that provide significant electricity supply in Ontario that are not currently contracted by the OPA include regulated OPG assets (nuclear and hydroelectric) and Non-Utility Generators (NUGs) who have contracts with the Ontario Electricity Financial Corporation (OEFC).

There are technical and environmental limitations to curtailing OPG regulated assets (length of shutdown for nuclear and water management for hydroelectric), especially for the short term oversupply situations for which the dispatch down market is proposed. Putting these limitations aside, there would presumably be little opportunity for system cost savings under a regulated model with low marginal cost producers as the same fixed costs would be recovered against a lower output which would lead to higher per unit prices.

The only group of generators that one could reasonably expect to provide system cost savings under a dispatch down market mechanism would be higher marginal cost producers that are currently shielded from market pricing signals under fixed price contracts. In Ontario, this group of generators would be made up of NUG contract holders. It is important to note, that many NUG contract holders are CHP facilities, whose appetite and ability to participate in a dispatch down market would be limited by their thermal restrictions. Currently, the IESO and the OEFC have a process which curtails the NUG contract holders in times of significant forecasted surplus through an economic assessment. In addition, the OPA, under a November 2010 directive, is in the process of negotiating with NUG facilities as their contracts expire. The OPA contracts for NUG facilities are being designed to provide incentives for responsiveness to market price signals. It is expected that the majority of the NUGs will be transitioned from their existing contracts by 2018 either to OPA contracts or exposed to market prices directly if not contracted by the OPA. It is highly unlikely that a dispatch down market, which would presumably be confined to this group of generators, would be implemented prior to the completion of contract negotiations.

It is also our understanding that almost all of the OPA's contracts for generation allow the OPA to claw back payments related to capacity and energy products (the amount of the claw back is dependent on the contract) and therefore the generator's incentive to participate in the "dispatch down market" would be significantly reduced.

Ontario and Alberta

As an additional comment, the hybrid market structure of Ontario being quite different than the market structure in Alberta makes it extremely difficult to adopt a similar approach. A key component being that Alberta does not have negative pricing, which without the contract structures that exist in Ontario, would provide the appropriate market incentive to remediate surplus conditions. In addition, the Dispatch Down Service (DDS) in Alberta is used only when a unit is constrained on to maintain system security and the market price is less than a set reference price (12.5 times the gas spot price), or a long lead time generating asset is required to be directed on to solve a short fall condition, two very different situations than global oversupply.

Alberta's DDS does not allow a DDS direction to be activated on a generator who is in the same area as a generator who has been constrained off. This is a valid argument as you would have two generators both economic, but constrained off, one receiving a DDS payment and one not. This same argument holds in Ontario, as one generator would likely be receiving CMSC and one a DDS payment. With this restriction, a dispatch down market could not be used solve local surplus issues. The DDS payments in Alberta are paid by all source assets on the system at the time when a generator is dispatched down, and could include those generators who are following a DDS. If Ontario was to adopt a similar payment approach, those generators, who currently have contracts with the OPA, would surely request reimbursement for this additional cost through their contracts, which would only add to the Global Adjustment paid by consumers. If Ontario did not adopt this approach, the likely alternatives would all result in an additional payment by the consumer.

The paper goes on to suggest that *"generators and the provincial agencies with whom they have contracts would make bids and offers on an hourly basis for payment to reduce output."* Provincial agencies that hold contracts currently do not have the ability or knowledge to bid into a market. This cost of building and operating this market at two provincial agencies, in addition to the requirement of building, dispatching and settling a new separate market at the IESO, would be a significant additional cost to the ratepayer which would have to be seriously considered.

Conclusions

The current Ontario market has the appropriate market incentives to mitigate surplus, provided the contract holders are exposed to low and negative prices. The least cost and environmentally prudent dispatching of Ontario's contracted resources, given the current contract form, can best be accomplished through IESO Market Rules rather than the creation of a separate 'dispatch down market'. It is highly likely that the intensive time requirements to initiate, stakeholder, build and garner sufficient participation in such a market would greatly exceed the current contract terms and forecasted surplus conditions.