

February 9, 2004

To: Ontario Energy Board
Attention: Paul Pudge, Assistant Board Secretary
Email: boardsec@oeb.gov.on.ca
Fax: 416 440 7656

Re: RP-2003-144: Staff Report to the Board – Demand-Side Management and Demand Response in the Ontario Energy Sectors

From: NRGGen Inc.
Address: 29 Commercial Road, Suite 202
Toronto, ON M4G 1Z3
Email: john.thomson@nrgen.com
Fax: 416 365 7712

Dear Sirs/Madam,

NRGGen Inc. is pleased to provide the following response to the OEB Staff Report to the Board on Demand-Side Management and Demand Response in the Ontario Energy Sectors. NRGGen is an Ontario-based company providing real-time, automated demand response solutions to electrical energy consumers of Ontario.

In general, we are very encouraged by this report. In particular, we are encouraged by the level of attention demand-side management and demand response are now getting from the OEB, the government and other related industry bodies. Our research over the past year and a half, in partnership with the University of Waterloo, has clearly demonstrated that demand response and demand-side management are critical to the success of deregulated energy markets.

We support the goals of the OEB staff report to realize the emergence of a conservation culture in Ontario's energy markets. We support the goals of the report to realize the implementation and adoption of DSM and DR programs.

We believe that many market fundamentals need to be addressed and quickly in order to help these programs realize their objectives, primarily in the form of a clear, comprehensive energy policy from the government. We believe the government needs to remove itself from the operation and regulation of the market. We believe that an open, transparent market, with fluctuating wholesale pricing is critical to the long term goals of the report. Further, we believe that the market should be setup in a manner that clearly distinguishes between the roles of:

- price – market operator
- scheduling – system operator
- program oversight – central agency

- regulation – regulatory body
- overarching policy – government

In this structure, suppliers and consumers will interact through bidding systems whether directly or through aggregators, brokers or other agents.

We believe that demand response should be allowed to occur naturally. The adoption rate can be accelerated through the government and related bodies involvement in education and communication to the demand-side of the market of the challenges and options available to them.

We agree that the overall market should bear the cost of implementing and realizing the benefits of DSM and DR initiatives. Separate consumption based fees to support program administration makes sense. Using tax dollars does not. Further we do not believe that artificial incentives are the correct way to manage these programs, whether through regulated pricing or market-specified price thresholds for demand response. Rather, we believe that the natural dynamics of market-based pricing should be exploited to support these initiatives. Further, load curtailment should be given equal, if not preferential, treatment as a source of ‘supply’.

Following are some additional comments on the report and related subjects.

1. Market Definition

While not addressed in detail in this report, the underlying market structure is critical to implementing successful demand-side management and demand response programs. In today’s political climate, especially in light of Bill 210 of November 2002, tremendous uncertainty exists as to the future structure(s) of Ontario’s electricity markets. Not only do the mechanisms for DSM and DR depend on the nature of these structures but the rate of adoption of DSM/DR programs is very much dependant both on the structure and the certainty behind them. Consumers will not invest in technologies or even subscribe to programs if there is uncertainty of their long term implementation.

We believe that to achieve the desired goals of conservation through DSM and DR to support a healthy electricity market in Ontario will require an open, transparent competitive market with a robust wholesale pricing mechanism. Artificially regulated pricing structures, particularly for the industrial/commercial sector, will negatively impact the adoption of these programs throughout the province. The absolute price of electricity is far less important in this context than the impact of price change. Anecdotally, during our direct sales of automated demand response services, we have found that the receptivity of our target clients increases dramatically through the delivery of real-time price signals that illustrate the volatility of price. In essence, price volatility is in effect a motivator towards conservation.

To support demand response in the province, the market should openly support bidding from the demand-side, whether directly or indirectly through aggregators,

brokers or other agents, as noted in the report. In this manner, reduction of load could be seen as valuable a source of supply as actual generation. Historically, emphasis has been placed on large industrial consumers as the only real participants in such bidding programs. With the advent of internet-based communication and control technologies that tie market pricing together with load management, smaller consumers can be as material a participant as the their larger peers.

Variability in price must be delivered to all end consumers in manner as close to the actual price as possible. For wholesale consumers, already subject to the fluctuating spot price, this price mechanism must stay in place. For retail consumers, our colleagues at the University of Waterloo contend that their research supports the concept of using the same wholesale rates structures as well. However, in Ontario's political climate that may not be supported. At a minimum, pricing should reflect time-of-day and seasonal changes as reflected in the wholesale pricing structures.

2. Governance

We believe that the energy market in Ontario is overly subject to the influences of politics. To achieve a properly dynamic market, in which demand is responsive to the market, government must allow the market to function free of direct intervention. Government, as noted in the report, should be focused on overarching policy with independent oversight through an appointed regulator.

3. Definition of terms

The report makes note of the variety of definitions in use for demand response and demand side management. To properly address these issues, a common set of definitions are required.

The report also notes that some components of DSM/DR are not strictly tied to goals of energy conservation or efficiency. In fact, DSM/DR are primarily directed at achieving market stability, price stability and a more stable link between demand and price. In that context, distributed generation is as important a response tool as load management or curtailment. Many industrial and some commercial consumers will not realize an effective response mechanism if use of on-site generation facilities are not factored into the response programs.

4. Importance of Day Ahead Pricing in Demand Response

As noted above, many industrial and commercial consumers have limited ability to react in real-time to changes in price, thus limiting the ability of these consumers to effectively participate in any meaningful way to price changes. If prices were available in advance, i.e., through a day-ahead market or through price forecasting, these consumers would be able to undertake the necessary planning and scheduling to support their response to price. Further, if they were able to communicate this planned response to the market, the market would in turn be better equipped to plan its demand/supply balance.

5. Incentives

In a natural market, the incentives to respond will be tied directly to availability of supply and to price. The consumer is incented to respond relative to their sensitivity to price and availability: i.e., consumers change their buying behaviour in relation to these factors – if supply is scarce, prices trend upwards and consumers may decide to delay or cancel their purchase and/or seek an alternative source.

Availability of the information related to supply and price are, therefore, critical to the success of DSM/DR programs. Demand response, by definition, involves the purchaser of the commodity reacting to changes in price by reducing/increasing their consumption relative to the current price signals. Our observations of the demand curves in Ontario seem to suggest that price is already becoming having an impact on actual load vs its predicted levels.

6. Role of the IMO in DSM/DR

We believe that in an open competitive market, the market operator should not be charged with directing demand based on artificial price signals. For example, the report recommends that the IMO undertake a transitional responsibility to direct load based on a preset price threshold, for example \$18 per MWh. We believe this approach will in fact reduce the rate of adoption to these programs. Most industrial / commercial consumers we have met with are interested in responding to price, but want to make the determination for themselves with respect to both the price thresholds and the timing of their response. In fact, many of our customers have already identified several price thresholds at which they would undertake varying degrees of load reduction.

This natural response mechanism can be exploited in the market by allowing these companies, either directly or through a third-party aggregator or agent, to bid their response profiles through existing market channels. In this manner, their load response is rated equally to other forms of supply and they obtain the financial benefit inherent in the existing market prices. Under this plan, policy should be instituted to favour load curtailment over supply in competing bid situations – i.e., if 10 MW of load curtailment is available at 6 cents, competing with generation supply at the same price, the load curtailment should be given preference where possible.

Obviously, paying for load curtailment bears a price. Unlike supply, where the supplier receives payment from consumers on a consumption rate basis, the purchaser of load curtailment is the market itself. In this regard, the recommendations to include a conservation charge based on consumption or use of the uplift charges to settle these amounts would be appropriate.

7. Communication between Demand-Supply-Market and other participants

For the purposes of this response, the communication referenced here relates to price, demand and supply information. At this time, most industrial/commercial clients feel they are on the receiving end of a one-way communication channel. i.e., beyond their consumption data, demand-side entities feel they do not have much in the way of a return communication link. It is our contention that providing channels for

communication of demand-side information on a proactive basis will have a significant impact on all the objectives set out for DSM and DR. Individual loads and aggregators of load, not just distributors, should be able to be more proactive in communication their needs as well as their abilities to respond. This would include bidding programs for load curtailment and, ideally, bidding programs (e.g. through a day-ahead market) for demand needs.

8. Importance of Private Enterprise in the Ontario Market

Private enterprise, independent of existing supply-side entities (e.g., Distributors, Transmitters, etc), must be encouraged to participate in the market to assist in the development and delivery of DSM and DR initiatives. This can be achieved by ensuring that incumbent entities, including distributors and transmitters, are not provided preferential access to funds or clients. While the most successful programs will involve all the customer touch points, we believe that customers require choice and that can only be achieved in a truly open and competitive marketplace.

9. Education

The majority of industrial / commercial clients we have met over the past several months are largely uninformed about Ontario's energy markets. We have had clients paying hundreds of thousands of dollars per month believing they were the beneficiaries of the price cap implemented in November 2002. Many, if not most, are unable to interpret their energy bills. Almost all are unaware of the issues and options available to them outside of signing some form of fixed price contract.

The Government and its related bodies must undertake a diligent and comprehensive program of education. This should be targeted as much to the industrial/commercial sectors as residential. Without education, it is left to the individual suppliers of services to educate their prospective clients on the issues as well as the solutions.

This not only slows down the rate of adoption of programs and incentives but also leaves the crafting of the message to groups that have self-serving interests.

Thank-you for the opportunity to respond to this report. We at NRGGen are encouraged by the Board's efforts with respect to DSM and DR and believe that, given time, an open, deregulated competitive energy market can mature into a healthy and efficient agent of change in the Ontario energy markets.

Sincerely,

John C. Thomson
CEO, NRGGen Inc.