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Staff Report to the Board on Demand-Side Management and Demand Response

Comments of the Power Worker's Union

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1. Introduction

The Power Worker's Union ("PWU") has retained Elenchus Research Associates to, on its behalf, provide comments to the Ontario Energy Board ("Board") on Staff's report ("Staff Report") to the Board entitled Demand-Side Management and Demand Response in the Ontario Energy Sectors.

In its November 10th, 2003 written representation to the OEB's consultation on the delivery of demand side management ("DSM") and demand response ("DR") activities in the Ontario energy sectors the PWU presented two over-arching principles as guiding its input:

- Cost of DSM should not exceed benefit to cost bearer.
- DSM should not impact the regulated sector's financial viability.

In this submission, we first address the overall consideration of these principles in the Staff Report, and then provide comments on the separate recommendations in the Staff Report.

2. Cost of DSM not to exceed Benefit to Cost Bearer

In adhering to the principle that cost of DSM should not exceed the benefit to the cost bearer, costs recovered from an energy consumer should not exceed the benefits determined on an energy supply-side basis, and costs recovered from distribution ratepayers should not exceed the benefits assessed on a distribution system basis. While the principle is not explicitly stated in the Staff Report, it appears to be implicit in the rationale for the funding of DSM and initiatives through a non-by passable consumption charge (kWh). As well, we assume that the statement that "consumers would resent an increase in distribution rates without a demonstrable benefit" (Page 24, Paragraph 2, Last sentence) reflects this principle. In putting forward its recommendations to the Minister, the Board might consider making a clear statement on this principle.

3. DSM should not Impact the Regulated Sector's Financial Viability

A distribution company must meet its revenue requirement in order to maintain its service quality. Therefore DSM should not impact the distributors' financial viability and regulators should ensure that the distributors remain whole. Implementation of this principle requires a lost revenue adjustment mechanism ("LRAM") to cover revenue requirement shortfall related to DSM activities. Alternatively, the distributor would need approval for rate adjustments. A distributor's revenue requirement covers costs related to its existing plant in place to serve customers, and do not decline in response to DSM activities. The consequence of a revenue requirement shortfall is foregoing system maintenance, which will compromise service quality and reliability. This would be counter to the OEB's mandate to protect customers with respect to quality and reliability of service. Consistent with this mandate, the OEB has approved DSM LRAM's for both Enbridge Gas Distribution and Union Gas.

With regard to DSM and DR activities related to least-cost planning and system optimization, the Staff Report recommends that there be no provisions for DSM variance accounts or LRAM's. There is, however, acknowledgement "that DSM/DR activities sponsored by the Central Agency might be so successful that throughput is significantly eroded during a multi-year performance-based regulatory (PBR) term" and that rate relief may need to be considered by the Board in such cases. This, however, falls short of the proactive implementation of the principle that will preclude a crisis rate relief approach, and that will provide the distributors with some certainty in carrying out system maintenance, operations and planning.

In keeping with its approach to holding gas distributors whole with regard to DSM activities, and consistent with its mandate of protecting customers with respect to quality and reliability of service, the Board should make an explicit statement on the adoption of this principle and include it in its recommendations to the Minister. There needs to be recognition by the Board in its recommendation to the Minister that rates will need to be adjusted to address the impact of

DSM. The statement must be made that while DSM can lower bill amounts, DSM does result in transmission and distribution rate increases.

4. Recommendation on Policy Direction

The recommendation is for a "hybrid framework using both market-based and public-policy approaches" for the delivery of DSM and DR activities.

The Staff Report states that under regulated pricing "moving to efficient levels of demand depends on public policy and regulatory oversight". While it is not explicitly stated, we assume that this statement applies to the approach the Board might take in developing future pricing strategies for Standard Supply Service (SSS) that would lead to conservation and efficient energy usage. This approach is reasonable to the extent that the pricing strategy might reflect the actual energy price signal.

5. Recommendations for Implementing DSM Activities

The recommendation on the implementation of DSM activities over looks a group of significant potential participants: the distribution companies. The distribution companies are the inter-phase with the energy consumers. The established relationship with their customers, allows the distributors, or their channel partners to obtain program take-up more readily than a service company that works independently of the distributors. In addition, through their customer service and billing functions, the distributors have familiarity with their customers' energy usage that gives them the ability to set realistic DSM targets. The distributors' input therefore is key in the development of a realistic province-wide target. The establishment of realistic targets, and the requirement for the distributors to carry out DSM as a regulated activity, provides a good basis for a successful and sustainable DSM approach.

The establishment of a Central Agency charged with the design and development of programs, and screening, monitoring and evaluation rules will provide consistency in DSM activities and ensure that central issues such as standards and market transformation initiatives are covered. The recommendation that the Central Agency should also be charged with the delivery of DSM however is an inferior option to assigning the DSM delivery responsibility to the distributors.

A Central Agency designing and developing programs as well as rules on DSM, and distributors delivering DSM programs ensures consistency in the delivery of DSM by the distributors while ensuring that only programs that are suitable for the distributor's service area are implemented. Since distribution companies collectively cover all areas of the province where electricity and natural gas is distributed, full coverage can easily be obtained through the distributors. In addition, the needs of regional stakeholders can readily be identified by the local distribution company in the manner that Enbridge Gas Distribution and Union Gas do currently.

While some electricity distributors may not have carried out DSM activities in recent years, in the early to mid 1990's, Ontario Hydro's Energy Management function designed and developed DSM programs and involved the distributors in the delivery of some programs by preparing kits that the distributors used in implementing the programs. The concept of DSM therefore is not unfamiliar to the electricity distribution companies.

As indicated in Section 3, the distributors must be kept whole in order to maintain distribution system service quality and reliability. Involving the distributors in the implementation of DSM activities allows them to assess the impact of DSM on their operations and revenue and consider it in their short and long-term system and financial planning process. Further, the distributors will require robust evidence to support the impact of DSM activities in their rate applications to the OEB, which they are unlikely to obtain if they are not involved in the implementation of the DSM programs.

The Staff Report states that if a "utility is to pursue energy efficiency for social benefits, then the utility may need to get large incentive payments and revenue protection to overcome business conflicts. This compensation comes directly from consumers." While revenue protection is a given if distribution service quality and reliability is to be preserved, the necessity of incentive payments, if DSM activities are treated as a regulated distribution service is not. Union Gas has carried out DSM in the absence of an incentive mechanism such as the SSM. However, if enhanced performance through incentives is desired, the possibility of using incentives for distribution utilities based on distribution savings that would see costs consistent with the benefits to the cost bearers should be considered.

The DSMVA and LRAM are not incentive mechanisms, but are mechanisms that ensure that the distributor remains whole and provide the distributors with some certainty in its system maintenance and operations planning process in the absence of which long-term planning would suffer. Having the Central Agency establish rules on a LRAM will avoid controversy in its use. If DSM is treated as a regulated distribution service and the distributor is provided with revenue protection, there will be no "business conflict". Further, it would not be inconsistent with the restriction of business activities that attempts to make distributors neutral to market forces as suggested in the Staff Report. It would be similar to the distributors' responsibility of providing SSS as a regulated service.

The Staff Report identifies concern with distribution companies integrating their DSM/DR programs into marketing strategies for building load and retaining customers and states that these competing goals subordinate the goal of conservation. It would seem that if a distributor manages to retain a customer, the energy source, augmented with DSM must be the economic choice for the customer. Retaining customers through DSM in cases where the option is the customer leaving the province or going bankrupt would appear to be a good thing, not only for the customer, but also for the province's economy and its citizens. From a regulatory perspective, as long as the DSM programs are not offered/implemented in an undue discriminatory manner, there should be no concern.

While it is important to establish the right framework for the delivery of DSM, it is equally important to provide the greatest assurances possible to customers that installation of related equipment is accomplished in accordance with safety standards. This is particularly true since there is every indication that DSM-related installations will increase dramatically in the near future as part of the government's policy of addressing supply issues through widespread support of load reduction mechanisms. An important measure of public acceptance will be the extent to which these installations are completed in a manner that complies with established safety regulation.

The Electrical Safety Authority ("ESA") is currently mandated to provide public safety through electrical inspection and other related services. The PWU urges the Board to ensure that the role of the ESA in the implementation of DSM is clearly defined and understood. The DSM framework should also ensure the support of the Board and any public or private organizations, agencies, and other participants in DSM programs, for any additional services that the ESA may be required to provide to obtain the highest level of public safety with respect to DSM-related installations.

6. Recommendation on the Role of the Transmitter and Distributor

The recommendation that transmitters and distributors should adhere to Central Agency protocols in conducting DSM/DR activities for least-cost planning and/or system optimization is appropriate and will provide consistency in standards. The recommendation that these endeavours be carried out without the provision for a DSM variance account or LRAM requires clarification.

With regards to an incentive for the reduction of distribution system losses, the OEB might consider allowing the distributors a share of the distribution savings resulting from the reduction in system losses.

7. Recommendation of Symmetry Between Electricity and Gas

The approach of transitioning towards symmetry between electricity and gas DSM activities is reasonable. Since the gas distributors' DSM activities are generally settled through the settlement process and require Board approval, the potential concern raised in the Staff Report that gas distributors might focus on superficial project to maximize incentive payments during the three-year transition period can be prevented.

8. Recommendation for Conservation Funding

The determination of the funding level used to suggest that 0.15¢ per unit might serve as a baseline for a consumption charge to fund electricity DSM is flawed. Given that 1 kWh has an energy content of 3.6 MJ and 1 m^3 of natural gas has an energy content of 37.6 MJ, the use of Enbridge Gas Distribution's DSM cost per cubic meter of natural gas as a benchmark for the cost of electricity DSM per kWh is inappropriate. Further, the Staff Report indicates that Enbridge Gas Distribution's SSM incentive made up 28% of its DSM spending for 2001. Unless this portion of the DSM costs was excluded from the derivation of 0.15¢/m3, the derivation is not consistent with the recommendation that incentives are not to be included in a conservation charge.

The level of funding required for electricity DSM depends on many factors, prime among which is the DSM target. If there is serious intent to achieve DSM energy savings, ideally, the funding should be determined according to the budget required to meet a defined DSM goal. Basing the funding on the third tranche revenue requirement towards the distribution companies' market-based rate of return as proposed by the government undermines the electricity distribution companies' right to earn a return at a level that covers its cost of capital as well as the concept of symmetry between the gas and electricity industry. It should also be noted that the electricity distribution companies' rate of return start points varied considerably and that therefore their contributions to demand management funding would not be equitable.

The Staff Report recommendation is that the conservation charge be subject to review by a regulatory body. While the Staff Report does not identify the Board as the regulatory body, given that the Board regulates the rates and charges of the distribution companies and that, in the absence of any retail-consolidated billing, the distributors are carrying out the billing function, it can be assumed that the review would be conducted by the OEB. This would be appropriate given that the OEB approves the distributors' revenue requirements and would need to approve an LRAM or rate adjustment related to DSM and needs to be aware of DSM activities and their impact on the distribution companies.

9. Recommendations for Demand Response

The recommendation that the IMO should be responsible for the design and development of economic DR is appropriate and consistent with the IMO's current efforts on DR. Having DR paid for through the uplift charge by all consumers is also appropriate since all consumers stand to benefit from DR activity.

10. Recommendation on Demand Response in Retail Market

While the Staff Report recommends time-differentiated SSS prices it also states that there is no demonstrated economic justification for mass deployment of interval meters. Offering time-differentiated SSS prices without the metering that will allow individual customers to benefit from load shifting lacks incentive for load shifting and renders the time-differentiated rates ineffective. The Staff Report states that there is evidence available that consumers who are conservation minded would make changes based on pricing signals. Given this evidence, the Board should recommend that time-of-use rates be made available as an option for designated customers that are willing to pay for the incremental cost of interval metering in their distribution rates to gain access to time-of-use rates.

11. Recommendation for Consumer Education

Other than the OEB sending out information in energy bills and the Central Agency looking at the activities of market participants already providing consumer-education tools to the public, the distributors, the inter-phase with the consumers, is not put forward for the significant contribution they can make in consumer education. This would be a significant lost opportunity in the goal for successful and sustainable DSM and the Board should recommend the involvement of the distributors in consumer education.