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ASSOCIATION OF
POWER PRODUCERS
OF ONTARIO

APPrO Submission in EB-2009-0077
Comments on Proposed Amendments to the Distribution System Code

July 7, 2009

As the trade association representing most of the electricity generators in Ontario, the Association of Power Producers of Ontario (APPrO) appreciates this opportunity to comment on the Distribution System Code (DSC) amendments proposed by the Ontario Energy Board (OEB) with respect to distribution connection cost responsibility. APPrO commends the OEB for taking the initiative to resolve the core questions in a thoughtful and well-organized fashion.

APPrO and in particular its renewable generator members looking to invest further in Ontario support the OEB assigning priority to the government policy initiatives regarding the facilitation of renewable generation under the Green Energy and Green Economy Act 2009 (GEA). APPrO's members have a strong interest in the costs and conditions under which future generation facilities will connect to distribution systems in Ontario.

APPrO has been concerned about distribution connection cost responsibility for several years. The organization and its members have observed on a number of occasions that the approach to cost responsibility can be fundamentally determinative for generators, in many cases making the difference between a new generation investment being viable or not.

1. The Proposed DSC Amendments

The OEB is proposing to amend the cost responsibility arrangements between a distributor and a generator in order to accommodate the implementation of the Government's policy objectives regarding renewable generation. The DSC currently identifies two types of costs (connection and system) which are both paid by the connecting generator. The proposed amendment would introduce a new cost type

referred to as "renewable enabling improvements" and allow for more equitable sharing of system expansion and improvement costs.

The OEB's proposal represents a major change in the approach to cost responsibility because it would transfer a substantial portion of connection costs from generators to distributors and help to create the conditions for increased certainty in development costs for new generation. APPrO recognizes that this is more than a minor adjustment and that it is intended to support relatively ambitious policy goals of the provincial government, particularly with respect to the incorporation of many more renewable generators than currently are connected to the system. Ontario's distribution systems have not generally been designed with the connection of large numbers of generators in mind. As a result the costs of expansions and improvements to accommodate new generation connections may be considerable in many cases. It is therefore reasonable to expect that there would be significant efforts by the OEB and distributors to ensure that consumers are protected from undue costs related to these investments.

APPrO strongly supports the introduction of a sharing mechanism but believes that the principle can be made more consistent with provincial policy objectives by treating the distribution system as a network asset and applying cost responsibility consistent with the approach taken for transmission network developments. Under this approach, expansion costs for distribution infrastructure required to meet GEA requirements and to provide shared system benefits to load and generator customers would be fully paid by the Distributor and be recovered through a provincial mechanism or distribution rates, up to the amount of the cap. The same treatment would apply for costs above the cap if they are part of an approved infrastructure plan, or found to be acceptable in the course of a rapid and systematic prudence review before the plan is approved. This approach would be consistent in principle with the cost responsibility approach proposed by the OEB for pre-approved or mandated infrastructure.

2. The basis for province-wide pooling of costs

APPrO is of the view that the type of distribution reinforcements under consideration are required by the GEA and generally will benefit all consumers in the province since, in addition to producing distribution system benefits, the new infrastructure investments facilitate the provision of benefits to the energy market, the environment and the local economy, similar to the benefits generally associated with distributed generation.

The GEA is a broad government policy initiative that mandates reinforcement of distribution systems for the purpose of accommodating more renewable energy, energy efficiency and smart grid investments wherever the opportunities may occur on the systems. The intent of this policy direction extends well beyond conventional system planning requirements and includes many broad social and economic objectives that go well beyond what has been considered normative in terms of inclusion in the rate base. The system modifications being contemplated are expected to benefit most, if not all, ratepayers. This proceeding is partly to determine in what cases those costs should be shared amongst broader groups of customers. It is APPrO's view that in general, the

costs of distribution system investments related to renewables, efficient load-following generation, and smart grid development, produce benefits well beyond the generator, particularly over time, and that their costs, accordingly, should be rate based in general as long as certain standards of prudence are met.

There are a small number of cases in which a project that is fundamentally uneconomic would become financially viable purely because the costs of its distribution connection were reduced by a rate basing mechanism. It is appropriate that there be a safeguard to identify such cases and prevent rate-basing of such uneconomic initiatives. Such a mechanism could be designed to be quicker and more certain than the cost-sharing and cap system as currently proposed would be in many cases.

The Feed in Tariff (FIT) program as mandated by the GEA and planned by the OPA includes a number of safeguards against development and rate-basing of uneconomic generation. From an overall policy perspective, it would be preferable to ensure that, once a generation proposition is in the FIT pipeline or has a customer-driven power purchase agreement, it would not generally experience a great deal of additional uncertainty over its ability to secure a distribution connection. Outside of exceptional cases, if there are significant benefits to customers, then the cap on cost sharing of distribution costs should not be necessary.

The cost of distribution system expansions can be justifiably applied to the full rate base in most cases for a number of reasons:

a) Because it benefits customers on the system beyond the immediate proponents of the generation project by increasing capacity and/or reliability of the grid
b) Because it increases the use of renewable energy
c) Because it improves the environmental performance of the system as a whole by increasing energy efficiency
d) Because it contributes to the development of a smart grid.

There are in fact very few cases where a generator will have a power purchase contract that would not produce one or more of these benefits to a significant extent.

Of course there will be specific instances where distribution expansions will be too expensive to justify, given the extent of the benefit that is likely to result. While from a policy perspective it is important to make the incorporation of additional renewable generation relatively easy, in some cases the expansion costs will be out of proportion to the benefits.

In order to protect ratepayers from imprudent costs, APPrO proposes an interim review option be made available until such time as the relevant distributor has an approved infrastructure plan in place. The review would ensure that any costs added to the rate base in the absence of an approved infrastructure plan are considered prudent from a regulatory perspective.

Throughout this submission it is assumed that generators will continue to pay the full cost of their own connection facilities, on the basis of shallow connection costs, as is the case today.

3. Special circumstances faced in this proceeding

The OEB faces unique challenges in this proceeding because the decision will be made at the same time as significant change is underway in two major areas which could impact the context for the proposed amendments. Since the GEA has provided for province-wide recovery of distribution system reinforcement costs, the proposed cost responsibilities for expansions could soon be more generally defined as shared system costs. Secondly, where the approved infrastructure plans of distributors provide for expansions, cost responsibilities could be more generally defined as distribution-related. Both of these factors could greatly alleviate the need for a cap on cost-sharing of generation connections.

Until the province-wide recovery mechanism is finalized and the local infrastructure plans are approved it will be difficult for generators to proceed with investment plans because of the uncertainty. For this reason, it will be necessary to reconsider the options from a generator perspective, when further information is available on how the province wide cost-recovery mechanisms and infrastructure plans will operate in practice. APPrO's comments and emphasis in this proceeding will likely require reassessment when further information on these two factors is available.

APPrO believes that the operations designed to support the Ontario Power Authority's Economic Connection Test (ECT) under the FIT program will provide a great deal of useful information about the viability of a given generator connection application. The ECT will assess the impact of the proposed connection on the electrical grid at a high level and will take into account the interaction between a range of proposed expansions and improvements triggered by GEA qualifying facilities, other generators and loads. APPrO expects that this information will assist distributors when considering a given generator connection application and provide relevant input for the OEB to determine the overall efficiency and system benefit of the related infrastructure investment.

4. APPrO recommendations

a) *Province-wide cost recovery*

APPrO strongly supports the sharing of cost recovery between local distribution ratepayers and provincial ratepayers as envisioned in the GEA. Cost-efficient renewable generation would not be possible without a provincial cost-sharing mechanism which will allow system development costs to be shared by electricity customers across the province, rather than being paid for exclusively by local

distribution customers. The purpose and rationale for such cost-sharing is similar to that of the Feed In Tariff (FIT) program, and is in fact integrally related to the FIT program. The allocation of cost recovery should recognize the system-wide benefits shared by all electricity consumers across the province and the benefits accruing specifically to distribution ratepayers in terms of service, reliability and upstream charges avoided by their distributor for wholesale market and transmission services.

b) *The use of a cap on cost sharing of system expansions*

APPrO supports the proposed changes to the DSC in general and commends the OEB for bringing forward substantive improvements in the regulatory system that would be in accord with the latest changes in public policy and programs. However, APPrO has one concern regarding inefficient incentives that may be introduced through broad application of the expansion cost cap, especially before approved infrastructure plans are in place.

APPrO believes that the cost cap as proposed would be problematic in many cases. The expansion cost cap is expected to serve as an interim sharing mechanism that will incent generators to connect to distribution systems only when the costs are below the cap, or to consider alternative connection arrangements that might be less costly including connections to the transmission network, until such time as the OEB approves the distributor's infrastructure plan.

As an alternative to the general use of the expansion cost cap as proposed, APPrO recommends that distribution expansions normally be treated like any other network investment built to accommodate system growth and expected generation connections. The same cost responsibility approach is currently used for transmission network development as outlined in the Transmission System Code, and is comparable to the expected outcome from OEB approval of the distributors' infrastructure plans. This would put connections to distribution systems on an equal footing with connections to the transmission network and remove any disincentive for generators to locate their facilities efficiently. Where the distributor or generator has a particular concern with the system cost required to connect a generator above a specified threshold (the cap), the distributor would be able to run a standard prudence review as described below.

If the application passed the prudence review, then costs above the cap would be in effect, pre-approved for inclusion in the distributor's infrastructure plan and subsequent rate basing. If it did not pass the prudence review, the generator would be responsible for a pre-specified percentage of costs above the cap, and the distributor would have the option of applying to the OEB for a specific decision holding the generator responsible for 100% of costs above the cap. These additional procedures would expedite the connection application process while allowing the distributor to guard against excessive costs being added to the rate base.

Outline of the proposed prudence review:

In order to protect ratepayers from imprudent costs, APPrO proposes an interim review option be made available until such time as the relevant distributor has an approved infrastructure plan in place. Generators, distributors and transmitters are being encouraged to share planning information with the OPA to assist with the performance of its Economic Connection Test function. With the benefit of this information, distributors would be encouraged to develop realistic options for generation connections at an early date, even before connection applications are received in some cases. With such practices in place, approximate connection costs could be available relatively quickly after a connection application is received. For any generation connection application that appears from the distributor's perspective to entail expansion costs in excess of the cost-sharing cap, at the generator's request, the distributor would conduct a standardized, time-limited prudence review, using pre-developed measures and criteria, normally within 60 days. Prudence reviews would be relatively few in number as they would only be conducted for generation proposals with a contract or in the "FIT pipeline" not for those in the "FIT reserve."

During the prudence review, design requirements for the expansion and the rationale supporting them would be made available for review by the prospective generator. Standard criteria set by the OEB would be employed in the prudence review including a relatively comprehensive set of cost and benefit measures, including for example comparison against projected average costs province-wide for comparable initiatives, and an estimate of other beneficiaries over time. OPA input would be sought in the review. If the application passed the prudence review it would be forwarded to the OEB for certification that it met requirements for subsequent incorporation into an approved distribution infrastructure plan. If the application did not pass the prudence review, a specified portion of costs above the cap, for example 80%, would be the generator's responsibility. 20% of costs would remain with the distributor to ensure that it has a stake in the process and because it would have a crucial role in setting the design requirements. If the distributor believes that paying even 20% of the costs above the cap would be excessive under the circumstances, it could request a special review by the Ontario Energy Board. The costs of such an application would be recoverable.

c) *The level of the proposed cost cap*

With respect to the level of the proposed cost cap, APPrO shares the concerns of CanWEA and OWA that the expansion cap is not representative of the actual costs that most generators will face since the $90K/MW does not reflect the average per kilometer line cost and does not include any allowance for upstream costs. Without endorsing a general application of the cost cap, APPrO supports in principle the comments of the OWA and CanWEA on its potential use, and will avoid addressing in this submission the specific issues raised by those two organizations.

In addition, it is not completely clear how the cost cap would be applied when additional connections are accommodated after the initial connection is installed. The proposed

change does not describe how rebates would be handled under this situation. Any uncertainty with respect to the calculation and application of the cap and/or the rebate procedures will lead to project delays and potential inefficient connection locations. APPrO recommends that the OEB consider the equity and administrative costs associated with implementing a cost cap under these conditions.

If the OEB decides to proceed with the introduction of a cost cap, APPrO recommends that the cap be raised to at least $125,000/MW to better reflect the average line costs where there are no upstream costs. An even higher cap would be required where there are upstream costs. Absent these changes, renewable projects that could proceed efficiently and cost-effectively could be deferred or shifted to less productive connection locations.

d) *Upstream costs*

The OEB paper discusses how new generation connections in one distributor could trigger upstream costs in the transmission system or a host/adjacent distributor. APPrO recommends that upstream expansion costs for connections related to OPA-approved generation contracts under the FIT program be treated as a network asset and included in the host and transmitters' rate bases. The reasons for this treatment and the safeguards against uneconomic expansions are much the same as for cost-sharing of expansion costs within the connecting distributor. There are likely to be broad benefits and any situations where this is not the case may be dealt with on an exceptional basis. Requiring generators to pay upstream costs would go against the principle of shallow connection costs and seems counter to Provincial policy on the rapid adoption of new generation and the rate basing of related adaptation costs. Cleary, the benefits of the upstream expansions accrue well beyond the generator's connection to its connecting utility.

Given the potential significance of upstream costs to some generation projects, APPrO recommends, as an alternative to rate-basing, that the expansion cost cap be increased for projects required to pay upstream costs. If the OEB decides not to change the current practice of allowing distributors to pass on upstream costs, APPrO recommends that this matter be reviewed once the provincial cost sharing mechanism has been determined.

At a minimum, APPrO maintains that the DSC amendments should cover the cost responsibility associated with upstream costs on a host distributor's system. Costs for distribution or upstream infrastructure that benefit the host distributor or provincial electricity users should not be the responsibility of the generator.

e) *Extension of comparable treatment to clean, high-efficiency generation*

High efficiency generation provides significant benefits to the province, much the same as renewable generation does. In fact, because many installations can offer flexible dispatch and load-following characteristics, new technologies in high efficiency generation can reduce the overall cost of infrastructure required to meet load and accommodate new renewable generation and utilize the available grid capacity more efficiently. APPrO recommends that the same rules and procedures proposed for connection of renewable generation apply equally to high-efficiency and clean generation, especially where there are system benefits like the reduction of capacity constraints and system losses. In addition, the category of "renewable enabling improvements" should be broadened to include qualifying clean generation and re-titled "renewable and clean generation enabling improvements."

For example, power generation projects related to high efficiency fuel cells, load-following CHP (combined heat and power), and pressure reduction on gas lines would be of great benefit to the province and to the electrical system. Even though they do not qualify as renewable, it would be appropriate for them to have access to the same kind of cost-sharing mechanisms for distribution expansion.

APPrO submits that modern CHP capacity is, for its own economic reasons, designed to be relatively maneuverable, and will dispatch off during hours when intermittent renewables are producing at high volumes and market prices are relatively low. The frequent incidence of low prices in Ontario's wholesale market has caused many CHP developers to install backup boilers to satisfy heating requirements exclusively when electricity prices are low. This kind of market-sensitive operation has the effect of making more room for renewable energy at a given level of connection capacity. The same might not be said of traditional cogeneration which would tend to produce at levels determined by its own load "inside the fence."

In addition, the facilitation of CHP helps to meet another important objective of provincial energy policy, that of increasing energy efficiency and reducing GHG emissions.

f) *Distributor infrastructure plans*

APPrO would appreciate additional clarity on the expected timing and inclusiveness of the distributors' infrastructure plans. For example, if a project is in the FIT pipeline, it could be counterproductive for there to be extended uncertainty as to whether its connection facilities are included in the distributor's infrastructure plan. Generator in-service dates under a FIT contract may not always be consistent with the timelines for distributor infrastructure investment approval. In APPrO's view, all FIT projects and efficient customer-driven generation with viable purchase contracts should be reflected in the distributor's infrastructure plan in such a way as not to affect any reasonable in-service dates provided for in the contracts. Such expectations would encourage consistency between distributors across the province in terms of inclusiveness or extent of coverage of distributors' infrastructure plans.

g) *Transitional arrangements*

Because the proposed transitional provisions state that the cost responsibility rules apply only to connection applications received after the date of the amendments coming into force, distributor-connected generators who have not yet achieved financial closing when the rules come into force should be allowed to withdraw their applications and re-apply under the new rules. To facilitate the rule change, any capacity allocation assigned to a generator and any active deposits should not be reassigned or forfeited if such a re-application is made.

h) *Further rationalization between transmission and distribution rules*

Once a province-wide sharing mechanism is established, APPrO recommends that the approach to transmission connection cost responsibility be re-examined to ensure that generation incentives are appropriately aligned with government policy. Without such consistency, it is possible that generation that could be connected to the transmission network at a lower overall cost would instead be connected to distribution where less of the costs are paid by the generator than under the current transmission rules. APPrO continues to advocate that distribution or upstream improvements that are built to meet provincial requirements or to provide system wide benefits should be treated as network assets and the associated costs should be recovered either from local ratepayers where there are benefits accruing to the connecting utility and from all Ontario ratepayers where the benefits are broader.

5. Principles applicable to rate basing of distribution reinforcements

APPrO submits that distribution reinforcements and expansions are analogous to investments in network assets on the transmission system since there is almost always broader use of the asset, with multiple beneficiaries. The planned distribution enhancements and the renewable enabling improvements under the GEA will further support this view of the distribution grid.

Based on the principle that costs should be controlled and paid for by the party or parties best able to manage them, the related distribution improvements should be designed and developed by the distributor because only the distributor is able to weigh alternative connection upgrade/expansion configurations in the light of multiple proposals and any expected upstream changes, and take action to minimize the costs and manage the upgrade/expansion efficiently. To ensure incentives are properly aligned, cost responsibility for investments designed by the distributor should reside with the distributor, subject of course to cost recovery from ratepayers at the local or provincial level.

The physical assets themselves are distribution-related and distribution-owned, rather than generation-related and generation-owned, with open access provided for all system users. On this basis the associated costs should be recovered through distribution charges, rather than through energy charges. To the extent, that these distribution assets provide province-wide benefits or are required to meet the legislated requirements of the GEA, the costs should be recovered through a provincial charge paid by all ratepayers. Public policy has mandated particular sources of energy be integrated into the system, and has not provided for distribution costs to be included in generation rates. Public policy in effect requires these costs to be shared province-wide.

In order to facilitate distribution generation connections, it is important to rapidly develop the capability within distributors to critically assess alternative design options for expansions and improvements when dealing with the likelihood of many connection applications coming forward over a given period of time. To justify the rapid acquisition of such capabilities, and to maximize the inherent incentives to meet the necessary service levels at a minimum capital cost, the primary responsibility for expansions and improvements should reside with the distributor. The OEB has effectively acknowledged this by confirming that expansions and improvements will be part of the OEB approved infrastructure plans and therefore will become the responsibility of the distributor.

In summary, APPrO's reasons for ratepayer responsibility for costs required to accommodate generation are as follows:

1. The expansions have multiple beneficiaries and are built to accommodate future load and connection requirements. They therefore are more like network assets than connection assets;
2. The distributor is better able than the generator to manage costs and the expansions because the utility can see multiple requests and alternative design options and act on them;
3. The assets are physically part of the distribution system;
4. Public policy has mandated distribution expansions and provincial cost recovery to accommodate new generation; and
5. Distributors will benefit from having incentives to acquire the internal managerial and analytical capacity to critically assess alternative design options in a holistic fashion.

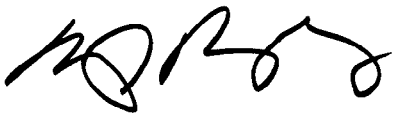
As is normal for broad-based organizations like APPrO, these comments are provided as an indication of the general view of the organization, while acknowledging that individual members of APPrO may well hold differing positions on specific points and are not bound by APPrO's submissions.

6. Conclusion

APPrO recommends that the OEB proceed with the amendments based on network treatment of all distribution and upstream expansions required to accommodate the objectives of the GEA with respect to generation connections capable of providing renewable energy and energy efficiency benefits.

If the OEB decides to proceed with the expansion cost cap, APPrO recommends setting the cap at the appropriate level to reflect at least average costs, including an additional amount where the connection involves upstream costs, and instituting a prudence review procedure for early approval of reasonable costs above the cap in advance of an approved infrastructure plan.

All of which is respectfully submitted by



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