Ontario Energy Board

Comments of the Independent Electricity System Operator to the OEB's on the Standard Offer Program for Eligible Distributed Generation – Staff Discussion Paper

Introduction

The IESO supports efforts to facilitate development of a small clean or renewable generation (distributed generation or DG) resources in Ontario through the Standard Offer Program (SOP). Among other benefits, the IESO believes that the distributed generation sector can provide timely response to resource adequacy concerns, reduce transmission congestion, reduce system losses, and help meet environmental policy objectives.

The format of the IESO response will follow the layout of the discussion paper.

Generators

As a supporter of DG, the IESO has revised the market mules to ease the requirements for those wishing to participate in the IESO-administered markets[1]. The changes permit reduced revenue metering requirements[2] for embedded generators less than 2 MVA or that produce less than 17 GWh annually. In addition, the IESO amended the market rules to allow a lesser performance standard for telemetry for DG facilities seeking to operate in the IESO-administered markets as dispatchable and as operating reserve providers. These changes have already permitted one DG project to enter the IESO-administered markets since the rules became effective in September of 2005. With these

[1] For clarification purposes, the IESO requires generators to become market participants if the generator is connected to the IESO-controlled grid (ICG), participating in the IESO-administered markets, or conveys power on the ICG. Since the SOP is directed at contractual arrangements with embedded generators in the distribution system, these generators are not required to become market participants.
[2] See Market Rules Chapter 6, Section 4.6.

provisions in mind, the SOP should not preclude suppliers from concurrent participation in the IESO-administered market, or opting out of the SOP to participant in the market.

Connection

The IESO agrees that DG can provide benefits to the system by reducing losses and congestion on the transmission system. The IESO estimates that transmission losses are approximately 3% or 750 MW when the IESO-controlled grid (ICG) is heavily loaded[3]. The addition of DG in certain areas of the province would provide more benefit than in other locations. The IESO is willing to assist the OEB and LDCs to include the necessary drivers in the SOP for optimum plant siting while ensuring the safety and reliability of the ICG and distribution systems.

The IESO proposes that the industry hold a technical conference involving the OEB, OPA, transmitters, LDCs, DG manufactures and developers to discuss the technical requirements for interconnection, facility siting, benefits[4], and various connection options[5].

System Information

As suggested in Section 3.3 the lack of information on the distribution system is a potential barrier to DG development. The IESO has developed a transparent Connection Assessment (CA) process where the results are publicly posted for review by other

[3] Based on modelling with 2005 configuration with Ontario demand of 25,000 MW. During off-peak times the losses will be substantially reduced due to the nature of electricity flows.
[4] The current framework within the market does not permit embedded generators that are non-market participants to provide ancillary services. It is the LDC's responsibility as a market participant to maintain quality electrical connections to the ICG. It may be possible for the LDC could explore alternative avenues with a DG to supply some of theses ancillary services to the LDC. For example, rather than installing fixed capacitor banks to provide reactive support, the LDC could make arrangements with the connected DG to provide support where feasible in consideration of technical requirements and economics.
[5] The IESO would like to explore potential issues with multiple DG connections that are less than 10 MVA with the LDCs and DG industry. The IESO is considering the requirement that any DG causing the aggregate generator ratings embedded within a transformer station to exceed half of the station's minimum loading to become a connection applicant. The IESO expects that limitations within the distribution system (i.e., fault levels, etc.) would likely be reached prior to the IESO's proposed CA amendment.

potential developers. The IESO recommends a similar process for distribution connections whereby the LDC's results of distribution impact assessment for a DG projects are publicly posted. This information will provide DG developers with information on potential problems and benefits within a distribution system.

The IESO's Connection Assessment process also allows qualified non-IESO staff, contracted by the applicant, to perform the required studies. The study results in the report are reviewed by the IESO. A similar process for distribution connections could ease the potential burden on the LDCs.

Connection Process

The IESO has extensive experience in developing and maintaining a Connection Queue. As such, the IESO is willing to share our experiences and provide related assistance to the OEB and LDCs on SOP Queuing issues.

Assistance to the SOP

The IESO maintains a webpage that is assisting potential RFP applicants in understanding the process involved in connecting to the ICG or distribution systems in Ontario. The IESO is willing to provide similar support to the SOP, if desired. The IESO has made a similar offer in our submission to the OPA.

Conclusion

The IESO supports efforts to develop a vibrant distributed resource sector and commits to support these efforts to the extent afforded by its mandate. There are a number of initiatives completed, underway or being considered to enhance and evolve the Ontario markets and regulatory structure, where synergies exist to create the necessary framework for the development of the distributed generation sector.

Contact Information

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