

**MINISTER'S DIRECTIVE TO THE ONTARIO ENERGY BOARD ON
CONNECTION OF NEW GENERATION TO LOCAL DISTRIBUTION SYSTEMS
(RP-2003-0113)**

BACKGROUND DOCUMENT

INTRODUCTION AND OBJECTIVES

The Board received a Directive from the Minister of Energy under Section 27.1 of the *Ontario Energy Board Act, 1998* (the "Act") on June 18, 2003. The Directive requires the Board to review and enhance licence conditions to address the need for standardization, consistency and clarity with regards to procedures and requirements for facilitating connection of new generation facilities to distribution systems. The Directive requires the Board to complete this activity in a manner suitable for implementation by no later than November 30, 2003.

The purpose of this document is to provide background and identify preliminary Issues for consultation in fulfilling the Minister's Directive to the Board on connection of new generation to local distribution systems (LDCs). This document initiates consultations on connection requirements and processes that would facilitate net metering and the connection of new generation to local distribution systems.

The Directive provides also for the implementation of section 70 (6.1) which states that: "the licence issued to a distributor shall contain conditions governing the connection of generation facilities to the distribution system, including the maximum cumulative generating capacity from generators to whom the regulations made under clause 88(1)(g.1) apply that the distributor must allow to be connected to the distribution system." The government has indicated that it may issue regulation(s) under section 88(g.1) to address net metering requirements.

As the Distribution System Code (DSC or Code) already contains many prescriptive elements pertaining to the connection of generation to a distribution system, it is the Board's view that the reasonable and expedited approach to meeting the requirements of the Directive would be through amendments to the DSC. Distributors are required to comply with the DSC. Therefore amendments to the DSC effectively amend the licence conditions of distributors. The DSC sets the minimum conditions that a distributor must meet in carrying out its obligations to distribute electricity under its licence and the *Energy Competition Act, 1998*. Amendments must be complied with by distributors.

The Board will begin consultations with stakeholders in August 2003, and will be proposing amendments to the Distribution System Code by October 2003 which will be subject to a formal notice and comment process. Consultations will focus on connection

processes and requirements, including level of prescriptiveness, technical requirements, degree of standardization, consistency and clarity of connection procedures, and the time frame required for connection of a generator to the distributor's distribution system.

OTHER INITIATIVES

There are several initiatives currently underway by various parties that relate to the connection of new generation to the distribution system. For example:

1. At the provincial level, the government of Ontario has taken several measures, including tax incentives, to encourage investments in new, especially clean, generation. Bill 210 supports grid interconnection and net metering from alternative or renewable sources of energy. The provincial government has also appointed the Electricity Conservation and Supply Task Force to study the province's long-term electricity needs. The task force will make recommendations to the government and will be organizing public consultations. Commissioner of Alternative Energy, Steve Gilchrest, announced a Green Power Standard which would require Ontario's electricity system to secure an additional one per cent of its current electricity needs from renewable sources in each of eight years starting in 2006.
2. At the national level, the MicroPower Connect Technical Committee (MPC TC) is working on nation-wide harmonized technical requirements for safe and reliable connection of small generators of electrical power to the electrical grid. The MPC TC has reviewed a number of off grid-interconnection standards and has developed a draft "national" grid-interconnection guideline which particularly addresses static inverter-based technologies targeted at photovoltaic systems, wind generators, micro turbines and fuel cell technologies.

The stakeholder consultation for this Directive will focus on the set of issues and resolutions relating to connection of new generation that can reasonably be addressed through amendments to the DSC.

ISSUES FOR CONSULTATION

Distribution System Code

1. The DSC already provides guidance and requirements on the connection process. The goal is to provide clarity and consistency for all parties through the connection process. In terms of the connection process:
 - What needs to be added?
 - What alternatives should be considered?
 - What are the implications to all parties?
 - What are appropriate timelines for each step in the connection process?

2. How prescriptive should the Code be in describing the process of connecting a new electricity generator to the distributor's local distribution system. For example:
 - Should the Code define the time frame for connection of new generation (i.e., from the time the generator requests to be connected to the time actual connection takes place, while accounting for delays caused by external factors)?
 - What is the cost charged by the distributor for connection?
3. While maintaining public safety, reliability of supply, and power quality, what are the necessary technical requirements for connecting new generation that need to be included in the Code? For example:
 - Are there differences in the connection requirements for different types of generators (e.g., renewable vs. conventional; small vs. large; urban vs. rural; net metered, etc.)?
 - What type of metering requirements are needed? Are there constraints to these requirements (e.g., Measurement Canada-approved metering technologies, reliability issues, power quality, etc.)?
4. What is the approach to balancing the responsibilities of distributors and generators?
 - What are the technical and cost implications of connecting new generation to the distributor's distribution system?
 - What are the necessary requirements that govern the connection of new generation to the distribution system such as maintenance requirements, inspections, protection requirements and operating agreements?
 - What are the connection concerns due to system or cost limitations? For example, what are the technical limitations a distributor faces when required to connect new generation and how can these limitations be mitigated?
5. A clear, well defined dispute resolution process is key to addressing potential conflicts between generators and distributor.
 - What needs to be added/included as part of this process? What other approaches can be used to address potential conflict? If disputes are resolved outside of Board processes, is there a danger that different arbitrators may result in many different rules for generation connection?

Net Metering

- Section 70 (6.1) of the OEB Act refers to the cumulative generation capacity which a distributor must allow to be connected to its distribution system:

“the licence issued to a distributor shall contain conditions governing the connection of generation facilities to the distribution system, including the maximum cumulative generating capacity from generators to whom the regulations made under clause 88(1)(g.1) apply that the distributor must allow to be connected to the distribution system.”

Since the legislation requires quantification of the maximum cumulative generation capacity that a distributor must allow to be connected to its distribution system. Input is requested on how this amount should this be derived. For example:

- What are the factors that impact the setting of this level (i.e., congestion/load areas, supply during peak vs. off-peak periods, source of electricity generation, total amount injected electricity into the distributor’s distribution system at any given point, cost of distribution system upgrades)?
- What criteria should the distributor use in a situation where small, multiple generators cumulatively having a significant load would like to be connected to its distribution system (i.e., first come - first connected, source of generation, kW capacity, etc.)?
- Should there be a single standard for all distributors across Ontario?

Appendix 1: Existing Regulatory Framework

Legislation/Regulation

The *Ontario Energy Board Act, 1998*, states that the Board, in carrying out its responsibilities in relation to electricity shall be guided by the following six objectives:

1. To facilitate competition in the generation and sale of electricity and to facilitate a smooth transition to competition.
2. To provide generators, retailers and consumers with non-discriminatory access to transmission and distribution systems in Ontario.
3. To protect the interests of consumers with respect to prices and the reliability and quality of electricity service.
4. To promote economic efficiency in the generation, transmission and distribution of electricity.
5. To facilitate the maintenance of a financially viable electricity industry.
6. To promote energy conservation, energy efficiency, load management and the use of cleaner energy sources, including alternative and renewable energy sources, in a manner consistent with the policies of the Government of Ontario.
7. To promote communication within the electricity industry and the education of consumers.
1998, c. 15, Sched. B, s. 1; 2002, c. 23, s. 4 (1).

Distributors' Licences

The obligations and responsibilities of a distributor in providing non-discriminatory access to the distribution system under the conditions specified by the DSC are outlined in a distributor's licence. These include:

- section 5 of a distributor's licence requires the distributor to adhere to the requirements of the Distribution System Code;
- section 6 requires the distributor to provide non-discriminatory access for consumers, generators and retailers and to convey electricity on behalf of such consumers, generators or retailers (this stems from section 26(6) of the *Electricity Act, 1998*);

- section 9 obligates the distributor to maintain the integrity of the distribution system;
and
- section 16 requires a distributor to have a customer complaint and dispute resolution process.

Distribution System Code (DSC)

This Code sets out the minimum conditions that a distributor must meet in carrying out its obligations to distribute electricity under its licence. All licensed electricity distributors are obligated to comply with the Code as a condition of their licence.

The Code requires the distributor, under the distributor's Conditions of Service to, at a minimum, describe the distributor's rights and obligations with respect to embedded generators and the obligations of embedded generators towards the distributor.

In particular, the Code sets out specific details about connecting generators to the distributor's distribution system.

To view the Code go to:

http://www.oeb.gov.on.ca/html/en/industryrelations/rulesguidesandforms_regulatory.htm.