



**Ontario Energy Board**

Commission de l'énergie de l'Ontario

# **Green Energy and Green Economy Act, 2009 Implementation**

Board Staff Presentation to Electricity Distributors

**August 2009**

# Overview of Workshop

8:30 – 9:00	A	Registration / Breakfast
9:00 – 9:30	B	Conservation Plans & OEB Approved programs Low-Income Energy Assistance Program (LEAP)
9:30 – 10:00	C	Distribution Infrastructure Initiatives - Planning
10:00 – 10:30 Break		
10:30 – 11:00	D	Smart Grid Development
11:00 – 11:30	E	Generation Connection Process
11:30 – 12:00	F	Cost Responsibility for Connection of Renewable Generation
12:00– 1:00 Lunch		
1:00– 1:30	G	Distributor-Owned Generation
1:30 – 2:00	OPA	OPA Presentation microFIT/FIT
2:00– 2:30 Break		
2:30 – 3:00	H	Proposed Retail Settlement Code Amendments on Billing and Settlement
3:00 – 3:30	I	Monitoring & Reporting
3:30– 4:00	Closing	Question & Answer / Wrap Up & Next Steps



# Overview of OEB's work on GEGEA

- Chair's Statements on initiatives related to infrastructure investment
- Infrastructure Development & Planning for Renewable Generation
  - Proposed DSC Amendments on Connection Cost Responsibility for Renewable DG
  - Proposed RSC and DSC Amendments for FIT/micro-FIT billing & settlement
  - Proposed Distributed Generation Connection Process Reforms
  - Proposed TSC Amendments on Transmission Connection Cost Responsibility
  - The Regulatory Treatment of Infrastructure Investment for Transmitters and Distributors
- Distribution System Planning Guidelines

# Conservation Plans and OEB-Approved Programs



- Section 27.2 added to OEB Act to allow Minister to direct OEB to establish CDM targets to be met by electricity distributors
- Section 27.2 contemplates that:
  - Directive may require targets to be specified as condition of licence with or without a hearing
  - Distributors may meet their targets through OPA-contracted or Board-approved programs
- Funded through Global Adjustment Mechanism (“GAM”) and not distribution rates

- OEB considering the criteria and tests used by Ontario Power Authority (“OPA”) for:
  - Assessing cost-effectiveness
  - Establishing a standardized framework for evaluation, measurement and verification (“EMV”) and for reporting
  - Review of the performance incentive mechanism

- Under new target-based regime, rules will be required to address CDM plans, program approval, EMV and reporting
- Board may issue CDM Code, in accordance with notice and comment process set out in OEB Act

- General and administrative provisions
- CDM plan requirements
  - Requirements for mix of CDM programs
    - OPA-contracted & OEB-approved programs
    - All rate classes targeted
    - Low-income programs
    - Coordination with the OPA and other agencies
    - Annual Reporting
- Board-approved CDM programs
  - Filing requirements

- Cost-effectiveness tests (propose to adopt OPA protocols)
- Accounting treatment
  - Cost allocation
  - Variance accounts
- Program evaluation (propose to adopt OPA protocols)
- Performance incentives

- Initial filing of the distributor's CDM plan reviewed for completeness
- Review CDM plan and programs for compliance with CDM Code
- Distributors will be required to provide an overview of the progress towards targets as part of annual report
- Plans posted on distributor's and OEB's website

- For programs to be approved by OEB:
  - Template(s) to be completed that reflect(s) the filing requirements
  - Review for compliance with CDM Code (e.g. cost-effectiveness and OPA duplication)
  - Direction to IESO for GAM funding

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Follow link on main page to “Conservation and Demand Management”

# Low-Income Energy Assistance Program (LEAP)



# Background

- July 2, 2008 - Board initiated consultation to gain a better understanding of low-income energy issues and to consider the need for, and nature of, measures that could address the challenges facing low-income energy consumers in Ontario.
- March 10, 2009 - Board issued a “*Report of the Board: Low-Income Energy Assistance Program*” (or LEAP), which describes the 3 components of LEAP:
  1. Emergency financial (bill) assistance
  2. More flexible customer service rules (bill payment, disconnection notice, security deposits)
  3. Targeted conservation (CDM & DSM)
- May 11, 2009 - Board announced formation of 2 working groups to address Conservation & Financial Assistance components of LEAP.

# Mandate of the Working Groups

## FINANCIAL ASSISTANCE (FAWG)

- To propose framework for the delivery of financial assistance to low income energy consumers.
  - Framework includes eligibility and screening, intake, promotion and outreach, delivery, reporting, funding (dispersion of funds), partnerships with social service agencies
- To consider the need for, and structure of, a permanent coordination function to administer LEAP.

## CONSERVATION (CWG)

- Provide advice to the Board on:
  - Short-term (2010) natural gas framework for low-income DSM
  - Long-term (beyond 2010) natural gas framework for low-income DSM
- Framework includes program eligibility and screening methods, low-income DSM portfolio budget and targets, shareholder incentive structure, appropriate DSM programs for low-income consumers (general characteristics).

# Working Group Membership

FINANCIAL ASSISTANCE	CONSERVATION
Coalition of Large Distributors (CLD)	City of Toronto
Consumers Council of Canada (CCC)	Coalition of Large Distributors (CLD)
Cornerstone Hydro Electric Concepts (CHEC)	Cornerstone Hydro Electric Concepts (CHEC)
Direct Energy	Direct Energy
Enbridge Gas Distribution	Electricity Distributors Association (EDA)
Housing Help Association of Ontario	Enbridge Gas Distribution
Hydro One Networks	Green Communities Canada
Low Income Energy Network (LIEN)	Green Energy Coalition (GEC)
Ministry of Energy and Infrastructure	Hydro One Networks
Neighbourhood Information Post	Low Income Energy Network (LIEN)
Peterborough Distribution Inc.	Ministry of Energy and Infrastructure
Salvation Army Centre of Hope	Ontario Power Authority
Union Gas	Social Housing Services Corporation
United Way Toronto	Union Gas
Vulnerable Energy Consumers Coalition (VECC) / Energy Probe	Vulnerable Energy Consumers Coalition (VECC) / Energy Probe



## 1. **Emergency financial (bill) assistance**

- Report on framework summarizing the recommendations of FAWG to be completed by facilitator (IndEco Strategic Consulting).

## 2. **More flexible customer service rules**

- Revised proposed code amendments to be issued for stakeholder comment in September.

## 3. **Targeted conservation (CDM & DSM)**

- Report on short-term DSM framework summarizing the recommendations of Conservation Working Group to be completed by facilitator (IndEco Strategic Consulting).

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Follow link on main page to “Low Income Consumers Consultation”

# Distribution Infrastructure Initiatives – Planning



# Legislative Change to the OEB Act

- *Green Energy and Green Economy Act, 2009* adds new section 70 (2.1) creating a deemed licence condition for all distributors requiring them to prepare plans:
  - in the manner; and
  - at the times
  - mandated by the Board
- To date the Board has set Guidelines for the manner but has not yet required anyone to file

# Objectives of Distribution Planning Guidelines

- Board issued initial Guidelines on June 16, 2009 with the following objectives:
  - Increasing regulatory predictability regarding Board's expectations for planning
    - Set preliminary Guidelines for distribution system plans
  - Enabling appropriate investments
    - Establish accounting and advance funding mechanisms
  - Reducing regulatory risk regarding cost recovery
    - For advance investments
  - Streamlined and efficient processes

# Expectations for Planning

- Preliminary Guidelines issued to guide distributors in initial planning for renewable connection and/or smart grid development in the near term
- The Board expects all distributors:
  - To actively examine the need for system investments and other expenditures to accommodate renewable generation facilities; and
  - To ready themselves for the preparation and filing of plans.
- Require as part of the initial plan:
  - Cost estimates
  - Basis for forecasts
  - OM&A amounts
  - Capital investment amounts

- Initial Planning Guidelines cover the following:
  - Principles
  - Plan Elements
    - Executive Summary
    - Current Assessment
    - Longer-term Outlook and Objectives
    - Near-term Activities (Yr 1-3)
    - Longer-term Activities (Yr 4-5)
  - Plan Approval
  - Reporting

# Sample Plan Requirement

- A distributor should provide a table, similar to the one below, which categorizes its anticipated near-term activities and their cost as being related to the accommodation of renewable generation and/or the development of a smart grid.
- The same information should be provided for longer-term activities, if known. If not known, include a qualitative assessment of the activities (including a description of the types of projects and anticipated spending).

Activity		Year 1		Year 2		Year 3	
		Capital	Expense	Capital	Expense	Capital	Expense
Project A	Renewable						
	Smart Grid						
Project B	Renewable						
	Smart Grid						

# Enabling Appropriate Investments

- Establish accounting and advance funding mechanisms to enable spending on appropriate renewable connection and smart grid investments
- Deferral Accounts for Qualifying Investments
  - Establishment of new deferral accounts
    - for OM&A costs
    - for capital costs
    - can be used prior to plan approval
- Funding Adders for Qualifying Investments
  - Allow distributors to apply for a funding adder to obtain advance funding

- 1531-Renewable Connection Capital Deferral Account
  - “Renewable Enabling Improvements”
- 1534-Smart Grid Capital Deferral Account
  - Demonstration Projects
- 1532-Renewable Connection OM&A Deferral Account
  - OM&A related to 1531
  - preparing a distribution system plan
  - CIS changes for automated FIT settlement
- 1535-Smart Grid OM&A Deferral Account
  - OM&A related to 1534 and smart grid studies
  - planning
  - education and training
  - preparing a distribution system plan

# Proposed Definitions of Investment Types

## Investment type

### Connection Assets:

- Dedicated facilities to connect a customer to the existing main distribution system. Not expected to be shared by other users.

### Expansions, including:

- rebuilding single-phase to three-phase to the generation facility location
- rebuilding an existing line with larger size conductor to the generation facility location
- rebuilding or overbuilding an existing line to provide an additional circuit to the generation facility location
- converting a lower voltage line to operate at higher voltage

### Renewable enabling improvements:

- Accommodating 2-way electrical flows
- Electrical protection facilities
- Voltage regulating equipment
- Protection against islanding (transfer trip or equivalent)

# Reducing Regulatory Risk Regarding Cost Recovery

- Prudence of investments identified in sufficient detail in Board-approved plans will not be revisited in later proceedings except in relation to material deviations
- Deferral accounts
  - Potentially dispose of balances as part of rate proceedings
  - Continue use of deferral accounts over IRM periods
  - Annual review and decision (EDDVAR)
    - IRM – Group 2 case by case
    - Rebasing – review and disposition

# Streamlined and Efficient Processes

- Utilities are developing a single system so treating investments in isolation does not make sense
- Over time, generation connection and smart grid plans should be integrated with conventional investment planning to ensure consistency and efficient review
  - Investment to connect generation and develop a smart grid should be planned with investment to meet growth and for system refurbishment (asset management)
  - Investment should be aligned with forecasts of required capacity

- **Distribution infrastructure planning**
  - Hydro One Networks Inc. has submitted Green Energy Plan as part of cost of service rate filing (EB-2009-0096)
  - Use the information gathered from review of the first plans to prepare more definitive guidance for subsequent filers
    - Get stakeholder comments on the form of initial plans
    - Prepare draft revised Guidelines
    - Distribute draft revised Guidelines for comment
  - Over the coming months the Board:
    - Expects smart grid regulatory framework to be developed
    - Will monitor distributors for spending and plan development
    - Will consult on refinements to Guidelines
  - The Board will release revised Guidelines by year end

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# Smart Grid Development



- GEA provides for the implementation of a smart grid for distribution and transmission
- *Electricity Act, 1998* defines smart grid as:
  - Advanced information exchange systems and equipment that when utilized together improve the flexibility, security, reliability, efficiency and safety of the integrated power system, and distribution systems, particularly for the purposes of,
    - Enabling increased renewable generation
    - Expanding demand response, price information and load control
    - Accommodating the use of emerging technologies
    - Other objectives prescribed by regulation

- Regulations may specify:
  - Roles and responsibilities of the various parties for development of the smart grid
  - Time frames for implementation of the smart grid
  - Standards for communications and any other aspects of smart grid operation

# Smart Grid Legislation

## *Ontario Energy Board Act, 1998*

- New Board objective “to facilitate the implementation of a smart grid”
- New deemed licence conditions for distributors and transmitters:
  - to prepare plans for development and implementation of smart grid as mandated by the Board
  - to make the investments for development and implementation in accordance with the approved plan or as mandated by the Board
- Minister may direct the Board to take steps to implement smart grid

# What does the smart grid mean for distributors?

- Using new technology and information systems to expand the capability of the distribution systems
  - Increased awareness of the operation of the system
  - Potential for improved reliability, more automated systems
  - Managing the benefits, impact and effects of renewables on distribution systems

# What does the smart grid mean for distributors?

- New technologies for the distribution system that expand the opportunity for consumers to manage their energy use:
  - New load control technologies
  - In-home energy management systems
  - Providing consumers with information
- Providing the base for emerging technologies such as:
  - Electric vehicles
  - Energy storage

- Minister has indicated that the Government will provide further definition of the expectations for smart grid
- The Board will facilitate smart grid development within context of the legislation and Government policy
- Distributors focus on developmental work until smart grid expectations are clear

- **Planning Guidelines**
  - Provide for smart grid development expenditures – capital and O&M
  - Details of accounts and mechanism for recovery already explained earlier
  - Planning guidance focuses on developing an understanding of smart grid applications by distributors – not full implementation or new R&D

- Smart grid spending to focus on understanding smart grid implications for your system:
  - System studies – situational assessments
  - Resource development – training, education
  - Demonstration projects – new technologies
    - Sharing of information and results
    - Develop understanding of the system and information technology potential

- Next stage of Planning Guidelines and requirements will include further direction once Government policy announced
  - Consultations on revised Guidelines this fall
- Learn from distributor projects
  - Some smart grid demonstration projects underway
- More to come

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# Generation Connection Process



- Proposed Amendments to the DSC Generation Connection Process [EB-2009-0088]
  - In response to the *Green Energy and Green Economy Act, 2009* new objective for the OEB to promote renewable generation
  - To support the OPA Feed-In-Tariff Program for procurement of renewable generation
  - Original proposed amendments issued May 14, 2009; revised proposed amendments issued August 10, 2009
- Objectives of the Proposed Amendments
  - To allow for those projects that are ready, willing and able to proceed to obtain a capacity allocation to connect
  - To ensure that those projects that are granted a capacity allocation to connect do move forward and do not impede others

# Proposed Amendments to the Distribution System Code

- Move from a first-come / first serve queuing approach to a capacity allocation / ability to connect approach
- Incorporates Connection Application / Connection Impact Assessment (CIA) prerequisites
  - Capacity must be available to support the proposed connection
    - On existing or approved infrastructure
    - On the distributor's system as well as on up-stream systems [host distributor; TS; transmission system]
  - Proposed in-service date must be within 3 years [5 years for water power projects] of initial application date or in accordance with the timelines in an OPA contract
  - Projects must be able to demonstrate site control
  - Projects must provide full technical information required by the distributor to complete the CIA study

# Proposed Amendments to the Distribution System Code (Cont'd)

- Requires a stronger commitment at the time of execution of the Connection Cost Agreement (CCA)
  - Connection Cost and Capacity Allocation deposits
    - A Connection Cost Deposit equal to 100% of estimated allocated cost to connect payable on execution of the CCA
    - A Capacity Allocation Deposit equal to \$20,000 per MW payable on execution of the CCA [Not applicable to OPA FIT projects]
    - An Additional Capacity Allocation Deposit of \$20,000 per MW payable 15 months after execution of the CCA if the project is not yet connected to the distribution system [Not applicable to OPA FIT projects]

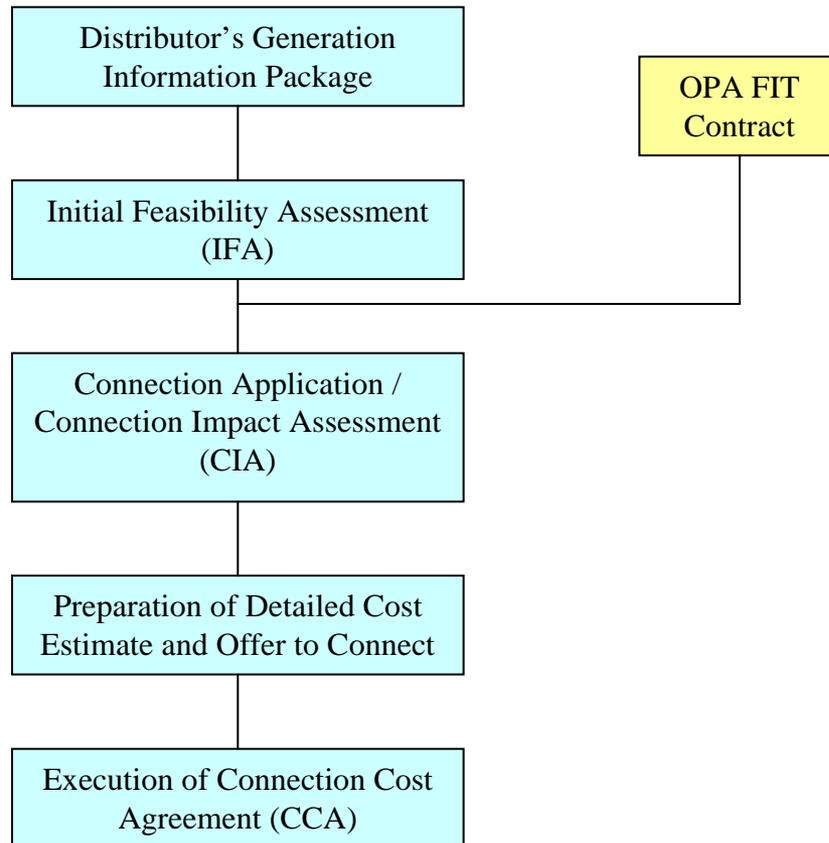
# Proposed Amendments to the Distribution System Code (Cont'd)

- Execution of the CCA within 6 months of receiving a capacity allocation
- Scheduled in-service date must be within 3 years / 5 years of initial application date, or in accordance with an OPA contract
- Requires generators to complete their engineering design and provide detailed electrical drawings to the distributor at least 6 months before the proposed in-service date or as required by the distributor

# Proposed Amendments to the Distribution System Code (Cont'd)

- Deals with projects that already have a capacity allocation
  - Proponents must pay Connection Cost and Capacity Allocation deposits if they wish to proceed with their project
    - Projects with a CCA - within 60 days of being notified by the distributor
    - Projects without a CCA - may be allowed additional time [eg: if post-CIA 12 month time limit not yet reached or a required SIA is not yet completed]
  - Distributors must notify proponents of these requirements within 60 days of the amendments coming into force

# Generation Connection Process under Proposed Amendments



- The Distributor's Generation Information Package [Section 6.2.3]
  - An added requirement to include the basis for feeder and substation technical capacity limits associated with the connection of generation [eg: feeder design current carrying capacity and substation transformer reverse flow capability]
- The Initial Feasibility Assessment (IFA) [Section 6.2.9.1]
  - An added requirement to provide, upon request, information about the amount of additional accumulated generation that can be accommodated on specific feeders and/or substations

- **The Connection Application / Connection Impact Assessment (CIA) [Section 6.2.4.1]**
  - This step now occurs after OPA has issued its FIT Contract [except in the case of MicroFIT]
  - Project prerequisites have been incorporated
- **Capacity Allocation [Section 6.2.4.1]**
  - Distributors will now allocate capacity only after all CIA's / technical reviews have been completed [host distributor CIA; transmitter TS review]

- **Removal of allocated capacity [Section 6.2.4.1]**
  - If existing projects do not pay deposits in the time allotted
  - If there is a material change to the generation project that cannot be accommodated within the initial CIA / capacity allocation
  - If a CCA is not executed within 6 months of receiving a capacity allocation
  - If proponents default on the terms and conditions of an executed CCA
  - If proponents default on an OPA Contract

- **Cost Estimates and Offer to Connect [Section 6.2.12 / 6.2.16]**
  - No change from existing requirements
  - For small size generation facilities, distributors shall provide the CIA, detailed cost estimate and offer to connect within:
    - 60 days if no system reinforcement or expansion is required
    - 90 days if system reinforcement or expansion is required
  - For mid-size or large generation facilities,
    - CIA to be provided within 60 days for mid-size or 90 days for large generation facilities
    - Detailed cost estimates and offer to connect to be provided within 90 days of receipt of payment or 30 days after receipt of comments from a transmitter or host distributor
- **Connection Cost Agreement (CCA) [Section 6.2.18]**
  - New mandatory terms and conditions added

- Comments on Revised Proposed Amendments are due on August 28
- Board will review comments received and issue further materials in September

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# Distribution System Code

## Cost Responsibility for Connection of Renewable Generation



- **New OEB Objective**
  - “To promote the use and generation of electricity from renewable energy sources in a manner consistent with the policies of the Government of Ontario, including the timely expansion or reinforcement of transmission systems and distribution systems to accommodate the connection of renewable energy generation facilities.”

- **New Deemed Licence Condition**
  - Requires transmitters and distributors to file plans as mandated by the Board for expansion or reinforcement of their respective systems to accommodate the connection of renewable energy generation facilities.
  - Requires transmitters and distributors to expand or reinforce their respective systems in accordance with Board-approved plans or as otherwise mandated by the Board.

- The OEB has proposed amendments to the Distribution System Code to address cost responsibility for the connection of renewable generation [EB-2009-0077]

## Current Approach to Cost Responsibility

- Current framework: generator that connects to a distribution system is responsible for paying all of the costs of connecting its generation facility to the distribution network, including any costs associated with distribution and transmission system upgrades beyond the connection point that are required to accommodate the generation facility.

# Proposed Amendments: Types of Connection Investments

- The OEB is proposing to revise its approach to assigning cost responsibility between a distributor and a generator
- Responsibility based on type of investment
- Three types of connection investments proposed:
  - Connection Assets (generator responsible)
  - Expansions (distributor/generator responsible)
  - Renewable Enabling Improvements (distributor responsible)

- **Proposed Revised Definition of Connection Assets**

“a portion of the distribution system that (a) is used to connect a customer to the existing main distribution system and (b) is not, at the time of construction, reasonably expected to connect any other customer to the main distribution system, and consists of the assets between the point of connection on a distributor’s main distribution system and the ownership demarcation point with that customer”

- The generator will continue to be responsible for the cost of the connection assets.

- **Proposed Revised Definition of Expansion**

“an addition to the main distribution system in response to a request for additional customer connections that otherwise could not be made, for example, by increasing the length of the main distribution system, but in respect of a renewable energy generation facility excludes a renewable enabling improvement”
- **Other Examples of Expansions**
  - Upgrades from single-phase to three-phase
  - Rebuilding a line with a larger size conductor
  - Rebuilding an existing line to provide an additional circuit to the generator
  - Converting a lower voltage line to higher voltage

# Proposed Cost Responsibility for Expansions

- Expansion costs up to and including \$90,000/MW of Generation Facility Capacity to be allocated to the distributor
  - Expansion costs above \$90,000/MW to be allocated to the generator unless the expansion is in a Board-approved plan, in which case all of the expansion costs are allocated to the distributor
  - Upstream upgrades to the system of a host distributor or of a transmitter are not to be included in the cap calculation. The OEB proposes that upstream costs triggered by a specific generation connection on the distribution system would continue to be paid for by the generator

# Renewable Enabling Improvements

- **New Definition:**

“a modification or addition to the main distribution system identified in section 3.3.2 that is made to enable the main distribution system to accommodate generation from renewable energy generation facilities”
- **Section 3.3.2 identifies the following:**
  - modifications or additions to allow for and accommodate 2-way electrical flows, as opposed to radial flow
  - modifications to, or the addition of, electrical protection equipment
  - modifications to, or the addition of, voltage regulating equipment
  - the provision of protection against islanding (transfer trip or equivalent)
- **Costs for Renewable Enabling Improvements are proposed to be allocated to the distributor**

# Planned New Distribution Infrastructure

- The OEB expects that investments to accommodate the connection of renewable energy generators identified in a Board-approved investment plan will be for the benefit of the broader customer base
- The costs of these investments are therefore proposed to be allocated to the distributor

# Cost Responsibility by Investment Type

Investment Type	Current Cost Responsibility	Proposed Cost Responsibility
<p>Connection Assets</p> <ul style="list-style-type: none"> <li>- Dedicated facilities to connect a customer to the existing main distribution system.</li> <li>- Not expected to be shared by other users.</li> </ul>	Generator	Generator
<p>Expansions, including:</p> <ul style="list-style-type: none"> <li>- Rebuilding single-phase to the generation facility location</li> <li>- Rebuilding an existing line with larger size conductor to the generation facility location</li> <li>- Converting a lower voltage line to operate at higher voltage</li> </ul>	Generator	<p><b>When investment not contained in a Board-approved plan or otherwise approved or mandated by the Board :</b></p> <ul style="list-style-type: none"> <li>- For costs up to cap: Distributor</li> <li>- For costs above cap: Generator</li> </ul> <p><b>When investment contained in a Board-approved plan or otherwise approved or mandated by the Board:</b> Distributor</p>
<p>Renewable enabling improvements:</p> <ul style="list-style-type: none"> <li>- Accommodating 2-way electrical flows</li> <li>- Electrical protection facilities</li> <li>- Voltage regulating equipment</li> <li>- Protection against islanding</li> <li>- (transfer trip or equivalent)</li> </ul>	Generator	Distributor

- With respect to expansions that are associated with an application to connect, the assignment of cost responsibility as set out in the Proposed Amendments would, if adopted, apply only to the extent that the expansion relates to an application to connect made after the date on which the Proposed Amendments come into force.

- The *GEGEA* will introduce a mechanism whereby Board-approved costs incurred by a distributor to make an “eligible investment” for the purpose of connecting or enabling the connection of a “qualifying generation facility” to its distribution system may be recovered through contributions payable by all consumers throughout the Province

# Status of Proposed Amendments

- Proposed amendments were released for stakeholder comment on June 5
- Comments were due on June 30
- 28 comments received from a variety of stakeholders, including:
  - Ontario Power Authority (“OPA”)
  - Ontario Ministry of Agriculture, Food and Rural Affairs (“OMAFRA”),
  - Representatives of distributors, generators, ratepayers and Aboriginal communities.

# Status of Proposed Amendments

- Comments received from stakeholders covered a number of issues:
  - assets and facilities that would fall into the three investment categories
  - level and basis of the expansion cost cap
  - treatment of upstream costs
  - administration of rebates to an initial generator in the event that unforecasted customers subsequently connect to assets for which it made a capital contribution
  - contestable work
- Comments are being reviewed by the Board
  - May result in revisions to the proposed amendments

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# Distributor-Owned Generation



- The Board is currently developing guidelines for accounting requirements for distributor-owned generation facilities.
- The guidelines will identify ownership options and accounting treatments for each option

# Background on GEGEA

- The GEGEA will amend section 71 of the OEB Act by adding the following:
  - (3) Despite subsection (1), a distributor may own and operate,
    - a renewable energy generation facility that does not exceed 10 megawatts or such other capacity as may be prescribed by regulation and meets the criteria prescribed by regulation;
    - a generation facility that uses technology that produces power and thermal energy from a single source that meets the criteria prescribed by regulation; or
    - an energy storage facility that meets the criteria prescribed by regulation.

# Potential Ownership Scenarios for Ownership of Generation Facilities

- Generation Facility Owned by an Affiliate
- Generation Facility Owned by Distributor

# Generation Facility Owned by an Affiliate

- Affiliates of distributors are currently permitted to own and operate generation facilities; this situation will not be altered by the GEGEA.
- If an affiliate owns and operates a generation facility, existing regulatory oversight and current rules would apply, including the requirement for compliance with the Affiliate Relationships Code (ARC) for Electricity Distributors and Transmitters.

- **Sample of Requirements**
  - A utility should ensure accounting and financial separation from all affiliates and maintain separate financial records and books of accounts.
  - Where a utility shares information services with an affiliate, all confidential information must be protected from access by the affiliate.
  - A utility may provide loans, guarantee the indebtedness of, or invest in the securities of an affiliate, on an aggregated basis over all transactions with all affiliates, up to 25 percent of the utility's total equity.

- **Accounting Requirements**
  - The allocation of costs that should be followed by the regulated utility and its affiliates in developing its policies and procedures for allocating the cost of transactions, products or services between the regulated utility and its affiliates.

- **Accounting and Reporting Requirements**
  - All direct and allocable costs between regulated and non-regulated lines of business, services or products should be traceable on the books of the regulated utility to the Uniform System of Accounts (USoA).
  - Annual reporting of certain affiliate transaction information and record-keeping requirements for other affiliate transaction information.

# Generation Facility Owned by a Distributor

- A distributor may choose to own and operate certain generation facilities directly as part of its utility business.
- Costs would not be recovered through rates and a return would not be earned on the investment.
- The investment project would be debt and/or equity financed.
- The distributor may enter into a feed-in tariff (FIT) contract with the Ontario Power Authority (OPA)

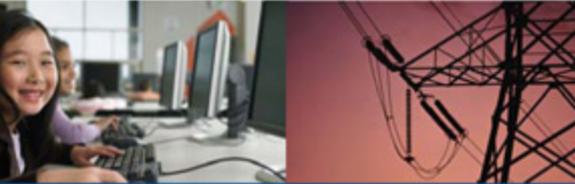
- **Accounting Requirements**
  - There will be an expectation that:
    - There should be a segregation of generation activities from the distributor's rate-regulated activities.
    - A distributor should follow the accounting procedures to ensure that information reported for rate setting purposes relates only to the distributor's rate-regulated business and does not include the assets, liabilities, revenues and costs associated with its non-rate regulated activities.

- **Accounting Requirements**
  - There will be an expectation that:
    - The segregation of information requires the use of specified accounts to record generation activities.
    - The distributor will continue to provide financial information on a “stand alone” rate-regulated basis in order to support the distribution rate setting and other requirements of the Board.
    - The distributor should allocate direct costs and a proportional share of indirect costs (such as payroll burden) to its generation business activities.

- **Accounting Requirements**
  - There will be an expectation that:
    - The distribution ratepayers should not be liable for non-rate regulated costs.
    - The distributor should document and maintain records of its fully allocated costing methodology for generation activities under the USoA.
    - The distributor will use the appropriate asset, liability, shareholders' equity, revenue and expense accounts and sub-accounts to record transactions associated with distributor-owned generation facilities.

## For more information, contact:

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ONTARIO POWER AUTHORITY

August 2009



# OPA Update – FIT / microFIT

# Presentation Overview

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- LDC role in the FIT Program
  - Pre-meeting with potential renewable generators
  - Distribution Availability Test
  - Economic Connection Test
  - Connection Impact Assessment
- Getting ready for the FIT Program
- Getting ready for the microFIT Program

# FIT vs. microFIT

- The FIT Program is divided into two streams – FIT and microFIT

<b>FIT Program Stream</b>	<b>microFIT Program Stream</b>
Small, medium and large renewable energy projects  Generating over 10 kW of electricity.	Very small renewable projects such as home or a small business installations  Generating 10 kW or less.

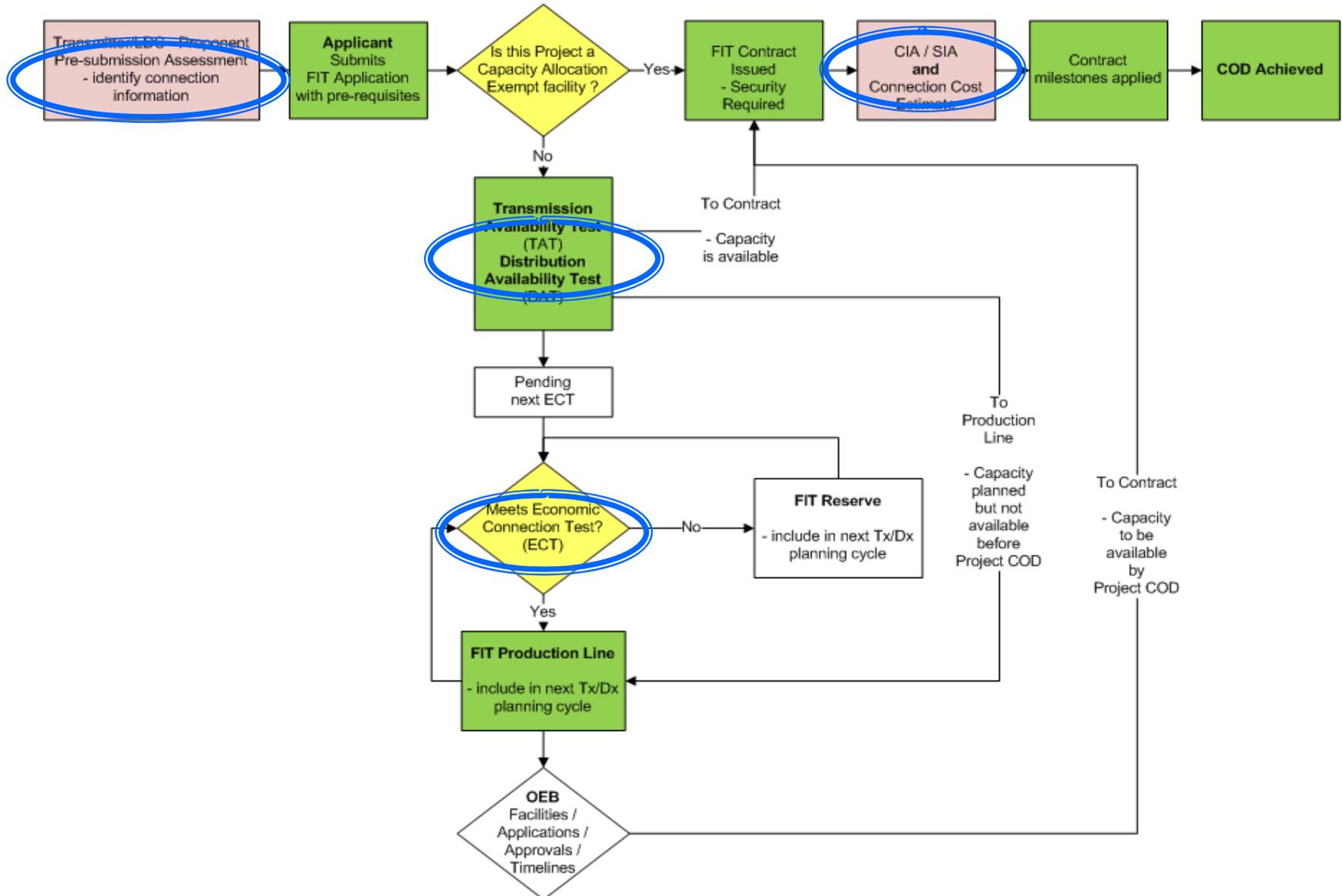
- The microFIT program is highly simplified and the contract issuance process is different from the FIT program

# LDCs are partners in FIT implementation

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- FIT enables proactive investment in infrastructure in response to new generation projects
  - RESOP was constrained by existing connection resources
- Provides support for the related expenditures requested through OEB processes
  - Real projects that come forward through FIT will support business cases for expansion plans
- Provides input for LDCs developing expansion plans
  - FIT will identify areas with significant resources and interest
- Allow LDC investment in generation projects (still under development)

# FIT Program Overview



# Pre-submission Meeting

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- Before proponents apply to the FIT Program, they will meet with their LDC to discuss:
  - Present distribution system capacity
    - feeders on the system with good connection capacity, and regions where connection capacity is presently constrained
  - Plans to expand the distribution system
    - feeders on the system that have been identified for expansion and the expected timing of these upgrades
  - Connection information for their project

# Pre-submission Meeting

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- These discussions will not take into account other projects coming forward
  - applicants should be made aware that connection information and availability may change and that the final results will not be determined until the DAT
- At a high level, typical connection costs should also be identified
  - average cost per some metric (ex: \$/km)
    - not an estimate of their total costs
  - It is the applicant's responsibility to assess these typical costs with respect to their project

# Pre-submission Meeting

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- Connection information required for the FIT Application form:
  1. Proposed Connection Point
  2. Distribution feeder designation and voltage, distribution station or transformer station
  3. LDC name, GPS coordinate of the project, GPS coordinate of the proposed connection location
- Proponents may choose to **not** specify a connection point and proceed directly to the Economic Connection Test and await future distribution expansion or transmission enabler facilities

# FIT Application form – distribution-connected projects

If Project is Distribution Connected in Question 4 above and not connected to a Host Facility, Answer Questions 4.2.1 to 4.2.3iii:

4.2.1. Name of Local Distribution Company:\*  Drop down

4.2.2. Generator connecting on:   
 Single Phase  
 Three phase

4.2.3. Is your proposed connection point at a feeder or at Transformer Station or Distribution Station:\*   
 Feeder  
 Transformer Station or Distribution Station

4.2.3a. Feeder Name:\*   e.g. 22M24

4.2.3b. Connection Voltage Level in kilovolts (in kV):\*   e.g. 27.6 kV

4.2.3c. GPS coordinates of the connection point location (long / lat - Degree Decimal Format):\* 

4.2.3d. GPS coordinates of Location of Project (long / lat - Degree Decimal Format):\* 

4.2.3i. Name of Transformer Station to which the Feeder is connected:\*  Drop down box

4.2.3ii. GPS coordinates of Location of Project (long / lat - Degree Decimal Format):\* 

4.2.3iii. Name of Distribution Station to which the Feeder is connected (if applicable): 

# Distribution Availability Assessment (DAT)

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- After the FIT Application is received, the OPA will provide the application information to the applicable LDC for connection availability assessment
  - Project must first pass the Transmission Availability Test, performed by the OPA, before the Distribution Availability Test by LDC
- LDC will assess whether there is connection capacity available for a project
  - Intended to be an initial screening for capacity (not a full CIA level assessment)

# Distribution Availability Assessment (DAT)

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- The DAT will answer two questions:
  - Is there or will there be capacity at the connection point provided?
  - Are there planned, approved, or pending-approval system upgrades that will allow a project to connect and be in service by project's COD milestone?
    - if the answer is yes to either of these questions the application will go to contract

# Distribution Availability Assessment (DAT)

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- The TAT and the DAT are continuous on-demand processes
  - Both assessments to be performed within 60 days (not business days) of completed application
  - LDC will have 5 business days to complete the DAT
    - The timing of this is dependant on the LDC interface and its functionality
- Applications are assessed in sequential order
  - The subsequent application must consider the outcome of all previous applications
- Capacity allocation exempt projects will proceed directly to contract (i.e. no TAT/DAT/ECT)

# Distribution Availability Assessment (DAT)

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- The DAT could consider:
  - Existing distribution system and planned upgrades
  - Existing and committed generation facilities
  - The balance of load and generation
- Where connection capacity is available or there are plans to develop the required transmission or distribution facilities, the project will receive a FIT contract or proceed to Production Line (i.e. capacity is set aside)
- If no connection capacity is available or planned, then Projects will proceed to the next Economic Connection Test (ECT)

# ECT and Distribution System Planning

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- The ECT process assesses whether distribution system expansions required to connect FIT applicants in the FIT Reserve are deemed to be reasonable and will be included in plans
- Distribution system expansions will be evaluated by the LDC for distribution connected applications
- The costs associated with the distribution system expansions will be allocated in accordance with the Distribution System Code (DSC)

# ECT and Distribution System Planning

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- Ongoing LDC and OPA communication will be required to coordinate distribution system expansions with transmission system constraints and expansion plans
- The OPA will be looking to coordinate with planners at each respective LDC on their specific distribution expansion plans
- Both transmission and distribution upgrades associated with each FIT application will be tracked for timing of contract and Notice to Proceed (NTP) purposes

# ECT and Distribution System Planning

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- Outcomes of ECT are FIT Production Line or FIT Reserve
- FIT production line
  - Required upgrades are proceeding and approvals are being requested, if necessary
  - Contract awarded when the expansions are expected to be ready by the time the project must reach COD
  - A portion of the Application Security is at risk
- FIT reserve
  - No plans to go ahead with required upgrades at this time
  - Projects serve as inputs for future planning
  - Application Security is fully refundable

# Connection Impact Assessments

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- Applicants will request CIA *after* contract has been awarded
- OPA is contemplating a requirement that the CIA is requested within 10 days of contract acceptance

# Getting ready for FIT program

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- Identifying internal staff responsibilities
- Updating your website
- Preparation for incoming calls
- Prepared to schedule meetings with proponents**
- Prepared receive requests for CIAs**
- Connection information and options
- Identifying costs, fees and account treatment
- Updating customer information systems (CIS)
- Identifying equipment and human resources
- Developing internal business processes

# Getting ready for the microFIT program

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- ❑ Identifying internal staff responsibilities
- ❑ Updating your website
- ❑ Preparation for incoming calls
- ❑ **Updating required forms**
- ❑ Connection information and options
- ❑ Identifying costs, fees and account treatment
- ❑ Updating customer information systems (CIS)
- ❑ Identifying equipment and human resources
- ❑ Developing internal business processes

## OPA Query Options – for public consumption/ LDC websites

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- Email
  - FIT mailbox ([fit@powerauthority.on.ca](mailto:fit@powerauthority.on.ca))
  - microFIT mailbox ([microfit@powerauthority.on.ca](mailto:microfit@powerauthority.on.ca))
  - OPA Information Service ([info@powerauthority.on.ca](mailto:info@powerauthority.on.ca).)
- Telephone
  - FIT Call Centre (1-888-387-3403); FSA Operators, plus OPA staff on-site for first 4 weeks; M-F 8am-8pm; S-Su tbd
  - Main OPA Reception (Local: 416-967-7474; Toll free: 1-800-797-9604) with prompts for keypad routing to Call Centre
- Fax
  - FIT and microFIT fax (1-866-833-7978) – fax delivered to FIT mailbox ([fit@powerauthority.on.ca](mailto:fit@powerauthority.on.ca))
- Website
  - <http://www.powerauthority.on.ca/fit/>
  - Online searchable Q&A facility
  - Submission of written questions



# **Billing and Settlement of FIT- Contracted Generation Proposed Retail Settlement Code and Distribution System Code Amendments**



- **New OEB Objective**
  - “To promote the use and generation of electricity from renewable energy sources in a manner consistent with the policies of the Government of Ontario, including the timely expansion or reinforcement of transmission systems and distribution systems to accommodate the connection of renewable energy generation facilities.”
- **Feed-in Tariff Program**
  - Under new s. 25.35 of the *Electricity Act, 1998* “The Minister may direct the OPA to develop a feed-in tariff program that is designed to procure energy from renewable sources.”
  - Increase in embedded retail generation expected:
    - microFIT (under 10 kW) expected to greatly increase roof-mounted Solar PV generation (expected to have an associated load)

- Proposed RSC amendments apply to FIT program only:
  - Require loads associated with FIT generators to pay energy, distribution, and NCEC based on “gross load” (*“the total amount of electricity consumed at the load customer’s premises, whether withdrawn from the distribution system or supplied by the embedded retail generator.”*)
- Proposed DSC amendment (also applies to FIT program only) for separate accounts for embedded generator and load customer regardless of meter configuration

- Proposed Amendments issued August 5
- Comments due August 26
- Comments will be reviewed by the Board:
  - May result in revisions to the proposed amendments
- Separate initiative:
  - Standard service charge for FIT-contracted embedded retail generators

For more information, contact:

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# Monitoring and Reporting



- Board wants to understand the status of distributors' implementation of GEGEA requirements
- Guidelines issued in June provided the mechanism to record costs and obtain advance funding
- Developing a reporting requirement to gather information as it relates to GEGEA activities.

## Proposed Reporting Requirements (cont'd)

- Information on planned investments related to connecting renewable energy generation
- Information on actual investments related to connecting renewable energy generation
- Connection requests
- Total MW of new and planned renewable generation
- Will coordinate information requirements with those of the OPA to minimize burden where possible

- **Dedicated resources to:**
  - Address issues/questions from industry
    - Develop FAQs to respond to generic questions
  - Coordinate with the OPA
    - Ensure appropriate agency responds
    - Will send an interim response indicating that the issue was sent to OPA when applicable
  - Monitor industry concerns and questions to identify potential policy issues

# Issues Monitoring and Resolution



**Ontario Energy Board**  
Commission de l'énergie de l'Ontario

If you are a participant in the energy marketplace and would like to seek guidance regarding compliance with a legal or regulatory obligation, or have questions on how the market operates, we encourage you to complete the form below to submit your enquiry. The OEB is committed to providing a response to these enquiries (issues or concerns) within 5 business days up to 45 days depending on the complexity of enquiry. Please note that fields marked with an asterisk ( \*) are mandatory.

Please note that we must ask for your privacy consent to determine if we have your permission to store/share your enquiry with other OEB staff or regulated utility, if necessary.

\* Privacy Consent:

## Contact Information

Company Name:

\* First Name:

Please enter first name

Phone:

Address 1:

City:

Postal Code:

\* Last Name:

Please enter last name

\* Email:

Please enter email addr.

Province:

Country:

## Licensee Information

Licensee Type:

Licensee Name:

Subject Type:



**Ontario Energy Board**  
Commission de l'énergie de l'Ontario

- Distributors can direct proponents to the page for information regarding:
  - Applying for a generator licence
  - Access to the Distribution System Code
  - Industry Links

<http://www.oeb.gov.on.ca/OEB/Industry+Relations/Information+for+Generators>

- Distributors should include information as part of generator information packages

- **Market Operations Hotline: 416-440-7604**
  - Responds to questions from the industry – generators or distributors
    - Interim response within 2 business days
    - Final response (standard) 7 days



# Wrap Up & Next Steps



- Final presentation will be posted
- OEB's dedicated Green Energy Webpage
  - All current GEGEA-related initiatives will be updated here
- EDA Fall District Meetings
- Fall Webcasts
  - Ongoing issues with GEGEA implementation, as well as TOU/Smart Meter rollout

