

**Ontario Energy
Board**

**Commission de
l'énergie
de l'Ontario**



CONSERVATION AND DEMAND MANAGEMENT REQUIREMENT GUIDELINES FOR ELECTRICITY DISTRIBUTORS

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1. Background and Overview

The Board first approved Conservation and Demand Management (“CDM”) programs for electricity distributors in 2004. CDM activities and results have continued to evolve and expand since that time, becoming a more important part of energy policy in Ontario.

The current CDM Framework, which delivered results predominately from province-wide programs developed and funded by the Ontario Power Authority (“OPA”)¹ in cooperation with electricity distributors, will end on December 31, 2014.

To support the current CDM framework, the Board developed and issued the CDM Code for Electricity Distributors (the “CDM Code”) on September 16, 2010. The CDM Code sets out the obligations and requirements with which electricity distributors must comply in relation to the CDM targets set out in their licences for the January 1, 2011 to December 31, 2014 CDM target period. The CDM Code was created in response to a Directive dated March 31, 2010 by the Minister of Energy and Infrastructure (the “2010 Directive”) pursuant to sections 27.1 and 27.2 of the *Ontario Energy Board Act, 1998* (the “Act”).

The Board also developed and issued Guidelines for Electricity Distributor CDM activities on April 26, 2012 (the “2012 CDM Guidelines”) to provide more specific guidance on certain provisions in the CDM Code and what evidence should be filed by distributors in support of an application for Board-Approved CDM programs. In addition, the 2012 CDM Guidelines provide details on the lost revenue adjustment mechanism (“LRAM”) related to CDM programs implemented under the CDM Code.

In December 2013, the Government of Ontario released its Long-Term Energy Plan (“LTEP”) that among other priorities encourages conservation and reinforces the policy of considering conservation first in planning processes. Under the LTEP, conservation will be used to lessen the need for new supply and demand-response initiatives will be used to meet peak demand requirements.

¹ Where references to the OPA remain in these guidelines it is for activities occurring prior to January 1, 2015. Beginning January 1, 2015, all functions of the OPA will be those of the Independent Electricity System Operator (“IESO”).

Resulting from the LTEP, the Board received a Directive on March 31, 2014 from the Minister of Energy pursuant to sections 27.1 and 27.2 of the Act (altogether, the "Conservation Directive") requiring the Board to take steps to promote CDM including amendments to the licences of electricity distributors and the establishment of CDM Requirement guidelines (the "2015 CDM Guidelines").

The Conservation Directive sets out the elements to be included in the 2015 CDM Guidelines including the annual review and publishing of verified results, details of what activities are to be included or excluded as part of CDM and that lost revenues should not be a disincentive for distributors in meeting their CDM requirements. The Board has also determined that the 2015 CDM Guidelines will include the Board's expectations with respect to coordination and integration between electricity and natural gas and putting conservation first into distribution planning.

A new framework to achieve 7 terawatt-hours of electricity savings between 2015 and 2020 has been developed by the OPA working with electricity distributors. With this new framework distributors will assume greater leadership in the development of new programs. The additional guidance provided within the 2015 CDM Guidelines will complement the 2015-2020 CDM Framework developed by the OPA and distributors. Conservation opportunities will be provided to customers and available to distributors to ensure both end-user usage and utility systems are as efficient as possible.

This document sets out the Board's guidance with respect to the relevant areas of electricity conservation applicable for all CDM and related initiatives beginning in 2015. The CDM Code and related 2012 CDM Guidelines will remain applicable for all activities related to the current 2011 to 2014 CDM Framework.

1.1 To Whom these Guidelines Apply

The 2015 CDM Guidelines apply to all licensed electricity distributors that have a CDM requirement included in their licence.

2. Timeframe

The 2015 CDM Guidelines are effective January 1, 2015 and are applicable in relation to CDM programs beginning January 1, 2015.

3. Requirements

As required by the Conservation Directive, the Board is amending the electricity distribution licences of all electricity distributors to include a condition that requires the distributors to make CDM programs available to each customer segment in their service area. These programs will either be Province-Wide Distributor CDM Programs or Local Distributor CDM programs and funded by the Independent Electricity System Operator (“IESO”)². The amended licences will be issued by December 31, 2014. Failure to provide CDM programs consistent with the CDM requirement included in a distributor’s licence may result in remedial action taken by the Board.

Pursuant to the Directive, the Board is also required to report annually on CDM results. As part of an agreement with the OPA, distributors will be required to report annual CDM results to the new IESO. To facilitate compliance with the Directive, the Board has amended the licences of all distributors to include a requirement for distributors to report these CDM results in accordance with the agreement. The Board will also amend the licence of the IESO to require it to report all distributor CDM results to the Board.

4. CDM Programs

Section 3(ii) of the Conservation Directive defines CDM as follows:

CDM shall be considered to be inclusive of activities aimed at reducing electricity consumption and reducing the draw from the electricity grid, such as geothermal heating and cooling, solar heating and small scale (i.e., <10MW) behind the meter customer generation. However, CDM should be considered to exclude those activities and programs related to a Distributor’s investment in new infrastructure or replacement of existing infrastructure, any measures a Distributor uses to maximize the efficiency of its new or existing infrastructure, activities promoted through a different program or initiative undertaken by the Government of Ontario or the OPA, such as the OPA Feed-in Tariff (FIT) program and micro-FIT Program and activities related to the price of electricity or general economic activity.

² Where references are made to the IESO throughout this document, it is in relation to CDM activities on or after January 1, 2015.

The Board adopts this definition of CDM for the purpose of distributors meeting their CDM requirement pursuant to the Conservation Directive. Beginning January 1, 2015, two types of CDM programs will begin to be rolled out in the market: Province-Wide Distributor CDM Programs and Local Distributor CDM Programs, all funded by the IESO.

In Section 4.1 below, the Board provides further guidance to distributors on additional funding through distribution rates that may be pursued to fund CDM and as required to defer infrastructure investments.

4.1 Applications for Rate-Funded Activities to Defer Distribution Infrastructure

In support of conservation first in infrastructure planning for electricity, the Board is establishing a policy that will permit electricity distributors to seek distribution rate funding for the purpose of avoiding or deferring infrastructure. While it is expected that the majority of CDM programs funded through the IESO will alleviate and assist with system constraints, the Board understands there may be some unique circumstances that will require distributors to apply for approval for distribution rate funded CDM programs and other initiatives to address local distribution system constraints.

Distributors may apply to the Board for funding through distribution rates to pursue various activities such as CDM programs, demand response programs, energy storage programs and programs reducing distribution losses for the purpose of deferring the capital investment for specific distribution infrastructure. Any such application must include a consideration of the projected effects to the distribution system on a long-term basis.

Applications can be filed at any time. The Board expects that as part of its long-term planning processes, a distributor will consider applications for CDM programs to defer distribution infrastructure. The distributor should explain the proposed program in the context of the distributor's five-year Distribution System Plan ("DSP") or explain any changes to its system plans that are pertinent to the program. The infrastructure to be deferred must be for those areas of the distribution system where growth is anticipated and potential constraints have been identified.

There are four types of activities contemplated by the Board for funding through distribution rates:

- a) CDM programs that target distributor-specific peak demand (kW) reductions to address a local constraint of the distribution system. In addition to peak demand reductions, this type of program may also result in energy (kWh) savings or reduction in the draw from the electricity system through eligible generation behind the meter.

Energy savings (kWh) from a CDM program funded through distribution rates would not be eligible to contribute towards the distributor's CDM target or for the incentives administered by the IESO.³ In the event that the distributor seeks to enhance a Local Distributor Province-Wide CDM Program currently being funded through the IESO with additional rate funding to be used to address distribution system issues, the distributor will only receive credit for savings that result from the program relative to the contribution of funds provided by the IESO.

Before applying to the Board for CDM funding to defer distribution infrastructure, distributors should confirm that the proposed program is not eligible for funding from the IESO.

- b) Demand response programs whose primary purpose is peak demand reduction in order to defer capital investment for specific distribution infrastructure. These programs are expected to save peak demand or enhance system integrity and reliability in a specific area of the distribution system.

A distributor may also use a demand response program funded through distribution rates to participate in demand response initiatives of the IESO. Any revenues associated with this participation will be treated as a revenue offset used to lower distribution rates. Given the IESO's lead role in evolving demand-response programs in the province, distributors are

³ The Conservation Directive specifically states that the CDM target must be met through programs funded through the OPA.

expected to notify the IESO of their proposed demand response program before applying to the Board for funding.

- c) To improve the efficiency of the distribution system and reduce distribution losses. The Board is of the view that programs that address distribution losses can improve the efficiency of the distribution system and can result in conservation of electricity and peak demand reductions to the benefit of customers.
- d) Energy storage programs whose primary purpose is to defer specific capital spending for the distribution system.

The Board intends to amend the Chapter 5 Filing Requirements for Consolidated Distribution System Plans and the Chapter 2 Filing Requirements for Electricity Distribution Cost of Service Rate Applications in due course to provide further details on what should be filed in support of an application for CDM funding to defer distribution infrastructure.

4.2 On-bill Financing

The Board acknowledges that some energy efficiency and conservation initiatives require significant investments from customers. In order to increase the accessibility of these technologies and encourage more customers to participate in CDM programs that can result in long-term energy savings, distributors should explore how to provide financing-related options, displayed directly on the electricity bill, for qualified customers.

5. Conservation in Distributor Planning Processes

5.1 Regional Planning and Integrated Regional Resource Planning (“IRRP”)

In its Report of the Board - A Renewed Regulatory Framework for Electricity (“RRFE”), the Board concluded that regional planning was required to ensure that regional issues and requirements are effectively integrated into electric distributor and transmitter planning processes, and indicated that it would establish a process in order to move to a more structured approach to regional planning. There are a number of critical points in the regional planning process that tie in with the conservation first policy. First, when regional needs are determined, the distributor’s forecast of demand will incorporate their

detailed CDM plans. Thus, at the onset of a regional planning process, the impact of planned CDM initiatives are taken into account, leading to a more informed decision making process regarding potential future regional needs. In subsequent stages to be led by the IESO, CDM is considered first among the alternative potential solutions to address a regional need. As a consequence, the intent is that wires and/or generation investments will only be implemented as the regional solution where CDM is not a viable option. Full details of the regional planning process are included in a report prepared by an industry working group established by the Board entitled “Final Planning Process Working Group Report to the Board”⁴.

Following the Board’s endorsement of the regional planning process discussed above, the Board amended a number of its regulatory instruments (codes, filing requirements and licence conditions) to:

- Establish clear accountabilities in relation to transmitters, distributors and the OPA within the context of the regional planning process;
- Incorporate strict timelines into the process to ensure the solutions (e.g., CDM, wires, etc.) are implemented in a timely manner;
- Require distributors to submit a regional plan in support of their applications to demonstrate regional requirements have been taken into account and all options (including CDM) have been appropriately considered⁵; and,
- Ensure the appropriate information is filed to support applications to the Board for rates or leave to construct transmission lines.

CDM will therefore play a key role throughout the regional planning process. Available CDM options will help determine if it is necessary to consider other solutions to meet regional needs.

5.2 Distribution System Planning

Under the RRFE, distributors are expected to file a five-year distribution system plan with the Board. Such plans should incorporate capital investments that address the forecast future needs of their service territory, including demand growth, infrastructure renewal and replacement, and operational performance. The distributor’s CDM plans and commitments to deliver CDM related reductions are integral to the distribution plan,

⁴ [Final Planning Process Working Group Report to the Board, May 17, 2013](#)

⁵ Under the amended Filing Requirements, where a regional plan has not yet been completed or it was determined regional planning was not necessary, distributors will be required to file other documentation to demonstrate regional requirements have been appropriately taken into account.

impacting the need for some asset investments, and mitigating other growth factors. These forecasts not only inform the distributor's plans, but are integrated into the regional planning process discussed above, where potential upstream impacts are assessed.

A distributor's distribution system plan may be modified as a result of the outcome of a regional planning process. For example, in the IESO led IRRP process, it may be determined that enhanced CDM by regional distributors is the preferred solution to avoid or delay upstream capital investments and, as a consequence, the related rate impacts. Thus, a distribution system plan may incorporate additional CDM initiatives that address regional as well as the local CDM plans and commitments of the distributor.

5.3 Amendments to Filing Requirements

In relation to the above planning processes, the Board provided guidance to distributors in two chapters of its Filing Requirements for electricity distribution rate applications; specifically, how to document the expected impact of CDM and other related initiatives on their demand forecast (Chapter 2) and, by implication, their 5-year distribution system plan (Chapter 5).

The Board released a new version of its Chapter 2 of the Filing Requirements for Electricity Cost of Service Applications in July 2014. Section 2.5.2.1 of these filing requirements now includes an expectation of the Board that distributors will have considered CDM and other related initiatives as one of the options to defer the need for infrastructure investments.

Also in July 2014, the Board issued revised Chapter 4 Filing Requirements for Electricity Transmission Applications under Section 92 of the Act for leave to construct transmission lines. Section 4.3.2.3 of these filing requirements now includes a requirement for rate-regulated applicants to demonstrate to the Board that regional issues, including CDM measures and alternatives, have been appropriately considered and addressed in developing the applicant's infrastructure investment proposal.

6. Coordination and Integration with Natural Gas Demand Side Management Programs

In order to provide customers with a better overall program experience, the Board expects electricity distributors, where appropriate, will work closely with

natural gas distributors and the IESO in coordinating and integrating electricity conservation and natural gas demand side management (“DSM”) programs. By doing so, the Board expects program efficiencies to be achieved in design, delivery, marketing, and education areas, amongst others. An integrated approach is expected to reduce costs and be more effective for consumers.

The Board is of the view that coordination is most appropriate to take place at the design stage of a program while integration is most appropriate during the delivery stage of a program. Coordination efforts should ensure consistent program design including areas such as definition of goals, marketing, training, customer rebates and metrics. Integration should achieve consistency in delivery services of a program, which in most instances will result in a central delivery agent providing both electricity and natural gas offering. Coordination and integration should be a primary consideration when electricity distributors are designing and developing all program offerings to reduce overall program costs, enhance the reach of all programs to a greater number of customers, ensure that customers receive the same information regarding energy conservation and energy efficiency upgrades, achieve efficiencies in customer participation and allow for greater possibilities to transform the market.

The Board is of the view that it is likely most beneficial for electricity distributors to pursue coordinated and integrated efforts with the gas utilities’ DSM programs when designing and delivering low-income, market transformation, and mass market programs, as well as home/building retrofits that target a number of opportunities and will result in long-term savings. These programs require consistency in messaging, operations and the involvement of many parties. In order to ensure all are striving for the same goal, it is very important that electricity distributors make their best efforts to coordinate their activities with the gas utilities and provide this information to the IESO.

7. Lost Revenue Adjustment Mechanism ("LRAM")

The Board is undertaking a policy consultation with respect to a new rate design structure for electricity distributors. A rate design that relies on a fixed charge for recovering electricity distribution costs is being considered to better respond to changing demands being placed on the electricity system.

The Conservation Directive⁶ states that:

Lost revenues that result from Province-Wide Distributor CDM Programs or Local Distributor CDM Programs should not act as a disincentive to Distributors in meeting their CDM Requirement.

Distributors with variable distribution rates are currently compensated for reduced consumption due to conservation programs using a lost revenue adjustment mechanism (“LRAM”). With an LRMA, a distributor can recover revenues it has lost in the past because a CDM program has lowered customers’ consumption levels. The LRAM is a retrospective adjustment as a distributor recovers these lost revenues through higher distribution rates in a future period. A fixed charge approach can support conservation and net metering for customer-owned renewable generation by removing disincentives for distributors to promote and deliver CDM programs and eliminating any need for the current limits on net metering in the Board’s Distribution System Code. Further, fixed rate design will eventually eliminate the reliance on an LRAM to address any disincentive for a distributor to promote CDM.

The Board has not yet issued its final Rate Design Report. To ensure that lost revenues from CDM programs do not act as a disincentive, the Board will continue the current LRAM mechanism at this time. This mechanism consists of the mandatory use of an LRAM variance account (“LRAMVA”) to track both the amounts included in a distributor’s load forecast for conservation and the final, verified savings of the distributor’s conservation programs. Details of the LRAMVA can be found in the existing 2012 CDM Guidelines and the Chapter 2 and Chapter 3 Filing Requirements for Electricity Distribution Rate Applications.

As part of the [Report of the Board: Updated Policy for the Lost Revenue Adjustment Mechanism Calculation: Lost Revenues and Peak Demand Savings from Conservation and Demand Management Programs](#), May 19, 2016, (the LRAMVA Report) the Board updated its policy related to lost revenues from peak demand (kW) savings. In the Report the Board determined that:

⁶ Section 3(iii)

- Distributors should multiply the peak demand (kW) savings amounts from energy efficiency programs included in the IESO Final Results by the number of months the IESO has indicated those savings take place throughout the year (generally all 12 months).
- No peak demand (kW) savings from Demand Response (DR) programs should generally be included within the LRAMVA calculation. A distributor that wants to present empirical evidence to support DR savings in the LRAMVA can only do so as part of a cost of service or Custom IR application
- Distributors can use the information included within the IESO-approved 2015-2020 CDM plan when developing its CDM manual adjustment for load forecast purposes.

Distributors should refer to the LRAMVA Report for all the details related to including peak demand (kW) savings in the LRAMVA calculation.

Distributors should continue to rely on the LRAMVA to track and dispose lost revenues that result from approved CDM programs between 2015 and 2020.

The LRAMVA is symmetrical and will ensure that the distributor does not benefit to the detriment of ratepayers if actual lost revenues are less than the forecasted amount that has been approved by the Board.

8. Reporting

The Board will annually review and publish the verified results of each distributor's Province-Wide Distributor CDM Programs and Local Distributor CDM Programs and report on the progress of distributors in meeting their CDM requirement. The verified results will be provided to the Board annually by IESO.