

ONTARIO ENERGY BOARD

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# NON-WIRES SOLUTIONS GUIDELINES FOR ELECTRICITY DISTRIBUTORS

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Ontario  
Energy  
Board

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# 1 INTRODUCTION

## 1.1 Purpose and Applicability

This document, the *Non-Wires Solutions Guidelines for Electricity Distributors* (NWS Guidelines), provides Ontario Energy Board (OEB) guidance on the role of non-wires solutions (NWSs)<sup>1</sup> for rate-regulated electricity distributors, taking into account current and previous provincial conservation and demand management (CDM) frameworks and addressing the treatment of NWSs in distribution rate applications.<sup>2</sup> Certain aspects of the NWS Guidelines are also relevant to rate-regulated transmitters and natural gas distributors.<sup>3</sup>

The NWS Guidelines replace the OEB's [\*Conservation and Demand Guidelines for Electricity Distributors\*](#) (CDM Guidelines).<sup>4</sup> The change in name reflects the fact that non-wires solutions to address system needs can encompass a broader range of solutions than traditional conservation and demand management, including, but not limited to, third-party distributed energy resources such as energy storage and distributed (embedded) generation.

The NWS Guidelines are effective immediately. Chapter 3 of the NWS Guidelines includes references to use of the OEB's *Benefit-Cost Analysis Framework for Addressing Electricity System Needs* (BCA Framework) by distributors when assessing the economic feasibility of NWSs to address defined electricity system needs. Once the first phase of the BCA Framework is finalized and issued, distributors should use the BCA Framework for all project planning activities going forward, this includes new projects and projects in early stages. Recognizing that distribution system planning may be at a relatively advanced stage for applications scheduled to be filed in 2024 or 2025, the OEB's expectation is that all rate applications filed in 2026 should be fully consistent with the BCA Framework. Distributors filing rate

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<sup>1</sup> Also known as non-wires alternatives (NWAs).

<sup>2</sup> Provincial CDM frameworks are discussed in section 1.2.

<sup>3</sup> Chapter 4 on addressing regional needs through NWSs, and chapter 9 on co-ordination with natural gas demand-side management programs, respectively.

<sup>4</sup> EB-2021-0106, December 20, 2021.

applications in 2024 or 2025 are strongly encouraged to use the BCA Framework, particularly for applications requesting funding for an NWS.

In all other respects, rate applications filed by electricity distributors are expected to be fully consistent with the NWS Guidelines, or to provide an explanation for any divergence.<sup>5</sup> The OEB will take account of the NWS Guidelines in its review of rate applications; however, the NWS Guidelines are not binding on the OEB's determination, which will also take into account the unique circumstances of a distributor's application.

Elements of the NWS Guidelines (or the previous CDM Guidelines) relevant to distribution rate applications are also incorporated into Chapters 2, 3, and 5 of the OEB's *Filing Requirements for Electricity Distribution Rate Applications* (the [Filing Requirements](#)).

The NWS Guidelines will be updated in the future as needed to account for relevant new developments.

## 1.2 Provincial CDM Frameworks

In recent years, provincial electricity CDM activity has been implemented primarily through CDM frameworks established by directives from the Minister of Energy, with program activity overseen by the Independent Electricity System Operator (IESO). CDM activity under these frameworks has been funded through the Global Adjustment charge, paid for by all Ontario electricity customers, and not through distribution rates.

The NWS Guidelines address a distributor's role and interaction with both the current provincial CDM framework (the 2021-2024 CDM Framework) and the wind-down of previous CDM frameworks.<sup>6</sup>

The 2021-2024 CDM Framework was established by a [directive](#) issued on September 30, 2020 from the Minister of Energy, Northern Development and Mines to the IESO, and amended by a [second directive](#) issued to the IESO

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<sup>5</sup> Cost of service filers for 2025 rate applications have discretion in whether to align their applications with the 2021 CDM Guidelines or the new NWS Guidelines.

<sup>6</sup> At the time of writing, a provincial post-2024 CDM framework has not yet been established. The Ministry of Energy has sought public input to inform post-2024 CDM programming through the Environmental Registry of Ontario ([ERO # 019-7401](#)). The IESO's [2021-2024 Conservation and Demand Management Framework Mid-Term Review](#) (December 2022) also considers and makes recommendations for post-2024 CDM programming.

on September 29, 2022. The IESO's [updated 2021-2024 Conservation and Demand Management Framework Program Plan](#) (updated 2021-2024 CDM Plan) provides an overview of the CDM programs to be delivered by the IESO in response to the Minister's directives.

Under the 2021-2024 CDM Framework, CDM program funding, design, and delivery is centralized under the IESO. Programs focus on meeting electricity system needs, including through provincial peak demand reductions and targeted approaches to address regional and local system needs. The Minister's directives state that programs will be targeted to those who need them most, including commercial, industrial, institutional and on-reserve First Nations consumers, as well as low-income and income-eligible consumers. The updated 2021-2024 CDM Plan provides a breakdown of program budgets and energy savings and peak demand targets expected to be achieved through the four-year framework.

The September 2022 Minister's directive also states that the government is supportive of electricity distributors taking the lead on CDM opportunities eligible for distribution rate-funding under the OEB's CDM Guidelines (now the NWS Guidelines), and requests the IESO to support, where possible, distributors' CDM {NWS} applications to the OEB for rate-funding that are in the best interest of Ontario electricity ratepayers and program customers. An IESO-LDC CDM Working Group is examining approaches to funding programs with both bulk and local system benefits.

The 2021-2024 CDM Framework follows two previous CDM Frameworks. The Conservation First Framework (CFF) was originally intended to run from January 1, 2015 to December 31, 2020, but was revoked as a result of the Minister of Energy, Northern Development and Mines' [directive](#) of March 20, 2019. An Interim Framework was established that took effect from April 1, 2019 to December 31, 2020.

## 2 TYPES OF DISTRIBUTION RATE-FUNDED NON-WIRES SOLUTIONS

NWSs potentially eligible for distribution rate funding include those that reduce instantaneous electricity demand (measured in kilowatts or kilovolt-amperes) on a utility's distribution system, or a portion of that system.<sup>7</sup>

As discussed in chapter 3, distribution rate-funded NWSs are expected to address a specific system need, at the distribution level or the regional level. As system needs are often driven by peak electricity demand, it is anticipated that many NWSs may be designed to reduce peak demand. NWSs may also be geotargeted to the portion of the distribution system that is experiencing a need/constraint.

Examples of NWSs that distributors may consider for the purpose of addressing system needs include:

- Energy efficiency programs
- Demand response programs
- Programs that improve the efficiency of the distribution system and reduce distribution losses
- Energy storage (in front of or behind the meter)
- Generation (in front of or behind the meter)
- Managed charging of electric vehicles

This list is not intended to be exhaustive, in order to provide latitude for new and innovative NWSs.

NWSs may include non-distributor owned, behind-the-meter solutions, where the cost (and benefit) of the solution may be shared between the distributor and another party. In such cases, any request for funding through distribution rates must be supported by the value proposition to the distributor's customers.

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<sup>7</sup> These activities may also reduce overall electricity consumption (measured in kilowatt-hours).

Distributors are expected to take into account the IESO's CDM programs, and ensure that any proposed distribution rate-funded NWS is not duplicative of IESO programs, in order to avoid marketplace confusion and ensure the prudent use of customer funds. The OEB will ultimately determine if a proposed distribution rate-funded NWS is in the public interest and results in just and reasonable rates. Distributors are encouraged to discuss any concerns with the IESO regarding potential duplication prior to applying for distribution rate funding.

## 3 ROLE OF NON-WIRES SOLUTIONS IN DISTRIBUTION SYSTEM PLANNING

### 3.1 System Planning

The NWS Guidelines support an approach to system planning, at the regional and local levels, that requires consideration of the role of NWSs in meeting system needs.

Distributors are required to incorporate consideration of NWSs into their distribution system planning process by considering whether a distribution rate-funded NWS may be a preferred approach to meeting a system need, thus avoiding or deferring spending on traditional infrastructure.<sup>8</sup>

Key steps distributors are encouraged to take to meet this objective include:

- When assessing system needs, providing sufficient lead time to enable consideration of NWSs.
- Defining the types of system needs where NWSs have the greatest potential to meet the system need.
- Ensuring a process is in place to consider NWSs as a potential solution for these types of system needs and to compare NWSs to traditional wires solutions.

A distributor's distribution system plan should describe how it has taken NWSs into consideration in its planning process. The degree of consideration of NWSs in meeting system needs should be proportional to the expected benefits, and will likely vary across distributors, taking into account the size and resources of a distributor. NWSs will not be a viable alternative for all types of traditional infrastructure investments. Distributors are encouraged to take account of learnings from NWSs that have been undertaken by other electricity distributors, in Ontario or elsewhere.

Distributors are required to document their consideration of NWSs when making investment decisions on electricity system needs with an expected capital cost of \$2 million or more as part of distribution system planning,

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<sup>8</sup> As discussed further in chapter 4, this may include addressing a regional system need, even if the NWS activities take place at the distribution level.



excluding general plant investments. A distributor should first conduct a pre-assessment to identify whether there is a reasonable expectation that an NWS may be a viable approach to meeting an identified need. The binary screening criteria and technical evaluation stage used in Enbridge Gas's Integrated Resource Planning (IRP) Framework<sup>9</sup> and the IESO's [Integrated Regional Resource Plans: Guide to Assessing Non-Wires Alternatives](#) may be useful guides as to pre-assessment considerations relevant to the consideration of NWSs. Currently, the OEB is not establishing a mandatory format or requirements for the pre-assessment stage. It is expected that the degree of consideration of NWSs will vary depending on the system need, as some system needs may be clearly unsuitable for NWSs. Electricity distributors must provide a rationale for all infrastructure investment decisions with an expected capital cost of \$2 million or more where NWSs were not considered and/or those situations where NWSs were considered, but a BCA analysis was not conducted due to a pre-assessment finding. Should the pre-assessment conclude that an NWS is a viable approach to meeting an identified need, a distributor should proceed with completing a BCA and documenting the results, to assess its economic feasibility, as described in the BCA Framework.

Under the [Distribution System Code](#),<sup>10</sup> if a distributor must construct new facilities to its main distribution system or increase the capacity of existing distribution system facilities in order to be able to connect a specific customer or group of customers, the distributor must perform an economic evaluation (using the methodology specified in the Distribution System Code) to determine if the future revenue from the customer(s) will pay for the capital cost and on-going maintenance costs of the expansion project. If it will not, a capital contribution will be required from the connecting customer(s). Distributors are also encouraged to consider NWSs for system needs that

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<sup>9</sup> Sections 5.2 and 5.3 of the [IRP Framework](#). More generally, distributors may also take account of other relevant learnings from the OEB's [Decision and Order](#) establishing an IRP Framework for Enbridge Gas Inc. (EB-2020-0091, July 22, 2021), and subsequent efforts to implement the IRP Framework. The IRP Framework provides direction on the OEB's requirements as Enbridge Gas considers alternatives to traditional pipeline infrastructure, including demand-side alternatives such as geotargeted energy efficiency and demand response, to meet its system needs. The IRP Framework addresses many of the same topics relevant to the role of NWSs in electricity distribution system planning, such as needs identification, comparison and evaluation of alternatives, and cost recovery. Updates on Enbridge Gas's implementation of natural gas IRP are provided at: <https://engagewithus.oeb.ca/irp>.

<sup>10</sup> Section 3.2

are driven by specific customers and funded by customer capital contributions, where there is a reasonable expectation that an NWS may reduce the total cost and required customer capital contribution. Distributors should take into consideration expressed customer preferences, including a preference and willingness to pay for a traditional infrastructure solution instead of any proposed alternatives.

The NWS Guidelines enable distributors to seek distribution rate funding for NWSs for the purpose of meeting identified distribution system needs or regional needs.

Conservation and energy efficiency activities that would only benefit participating customers (e.g., by providing incentives for energy-efficient equipment for the sole purpose of reducing the electricity bills of participating customers) but do not address a distribution system need or a regional need would not be considered an NWS from the distributor’s perspective and are not eligible for distribution rate funding.<sup>11</sup>

The OEB has also made a distinction between the use of distributed energy resources by distributors as NWSs to address a system need, and integration investments made by distributors to enable adoption of distributed energy resources by consumers for their own purposes.<sup>12</sup> Integration investments of this nature would not be considered NWSs and are not the subject of these NWS Guidelines.

### 3.2 General Evidentiary Requirements for Non-Wires Solutions

The OEB will evaluate requests for NWS funding consistent with the OEB’s approach to evaluating other proposed expenditures in a rates application, for which evidence is provided in the distribution system plan (DSP). The level of detail filed by a distributor to support a proposed NWS should be proportional to the materiality of the investment. The OEB’s evaluation

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<sup>11</sup> This reference is not intended to predetermine the OEB’s approach to any subsequent proposal related to “Stream 2” CDM activities arising from the work of the IESO-LDC CDM Working Group, as referenced in the [November 29, 2023 Letter of Direction](#) from the Minister of Energy to the OEB. It is anticipated that these Stream 2 CDM activities would have both bulk and local system benefits.

<sup>12</sup> OEB Letter, [Re: Capital Funding Requests for DER Integration Investments Between Rebasing Applications for Distributors on Custom IR](#), October 10, 2023

criteria for proposed distribution system investments that meet the defined materiality threshold for a distributor are described in Chapter 5 of the Filing Requirements, as is the supporting evidence that distributors should file for proposed projects.

However, several evidentiary requirements set out below are specific to NWSs.

A distributor should explain the proposed NWS in the context of the DSP, including providing details on the system need that is being addressed, any infrastructure investments that are being avoided or deferred as a result of the NWS, and the prioritization of the proposed NWS relative to other system investments in the DSP.

A distributor should provide evidence as to why the proposed NWS is the preferred approach (alone or in combination with an infrastructure solution) to meeting a system need, including an assessment of the projected benefits to customers relative to cost impacts. Distributors should follow the requirements of the BCA Framework, which outlines the methodology that distributors are to employ when assessing the economic feasibility of NWSs to address defined electricity system needs, and the supporting information that should be filed related to this benefit-cost analysis (BCA). The BCA Framework also requires distributors to file this information if a BCA including NWSs was conducted when considering the best approach to address a system need, but a traditional infrastructure solution was ultimately selected.

Any proposal for a ratefunded, distributor-owned NWS must demonstrate that a distributor has meaningfully explored contracting services from non-utility owned distributed energy resources (DERs) – including providing sufficient lead time for third-party DER solutions to be identified and implemented – and doing so is either not feasible or less cost-effective.

In the case of an NWS that is driven by a specific customer and funded by a customer capital contribution, the distributor should provide details on engagement with the customer on options, the economic evaluation with the capital contribution, and the customer's preference.

The business case for an NWS may also include consideration of costs and benefits upstream of a distributor (e.g. a distribution NWS intended to

address a regional need), or realized by another party. In such cases, the OEB would expect that the proposed approach to cost-sharing between the distributor and the other party/parties would be informed by this analysis. Additional guidance regarding proposed NWSs by distributors to address regional needs is provided in chapter 4.

### 3.3 Timing of NWS Applications

#### Applications Within Rebasing

Distributors on Price Cap IR or Custom IR rate-setting methodologies are strongly encouraged to make funding requests for any proposed NWSs as part of cost-based (rebasing) rate applications, where possible. The rebasing application process and evidentiary requirements<sup>13</sup> enable the OEB to assess the proposed NWS and funding request in the context of the system needs identified in the distributor's distribution system plan, and to incorporate forecast impacts of NWSs on the distributor's revenue requirement and load forecast.

Distributors using the Price Cap IR rate-setting methodology may also propose, as part of their cost of service application, NWSs that are expected to come into service during the subsequent Price Cap IR term, similar to the approach used for Advanced Capital Module (ACM) projects. As with ACM projects, the need for and prudence of these projects will be assessed during the cost of service application, based on the information in the Distribution System Plan.

#### Applications Outside Rebasing

The OEB will consider applications for NWSs outside of rebasing applications, if necessary. Such an application may be required if the proposed NWS would have rate impacts prior to rebasing:

- to address a system need that is currently unfunded

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<sup>13</sup> The OEB has specific Filing Requirements for cost of service rate applications (chapter 2 of the Filing Requirements). Rate applications by utilities using the Custom IR rate-setting methodology are expected to be informed by the cost of service Filing Requirements.

- to address a previously identified system need and replace an infrastructure solution for which funding is built into existing rates
  - this may result in an increase or decrease to rates for differences in project costs or rate treatment between the original solution and the NWS

Circumstances that may warrant an application outside of a rebasing application could include:

- time-sensitive opportunities that would be lost if waiting until rebasing (e.g., procurement of incremental resources to meet local distribution system needs through the IESO's Local Initiatives Program)
- new opportunities to pursue NWSs under the NWS Guidelines that were not viable or permitted under the previous version of the CDM Guidelines that was effective at the time of a distributor's most recent rebasing
- a joint application from multiple distributors to address a regional need

The option to file a request for funding for NWSs outside of rebasing is available to distributors using any rate-setting methodology (Price Cap IR, Custom IR, Annual IR Index). Distributors using the Price Cap IR or Annual IR Index rate-setting methodologies may choose to file a request for funding for NWSs outside of rebasing either as part of an incentive rate-setting mechanism (IRM) application, or as a stand-alone application, while distributors using the Custom IR rate-setting methodology may file a request for funding for NWSs outside of rebasing either as part of a Custom IR update application, or as a stand-alone application. In either case, it is expected that an application requesting funding for NWSs would be heard by a panel of Commissioners, not by an employee of the OEB under [delegated authority](#).

The OEB will apply the principles of materiality, need, and prudence to distributor requests for funding for NWSs between rebasing applications. The

details of how to apply these principles will be addressed within the context of specific applications.<sup>14</sup>

To demonstrate need, a distributor should identify the system need being addressed within the context of the distributor's distribution system plan (including a targeted update to the distribution system plan), the incrementality of costs relative to what is built into existing rates, and (for distributors using Custom IR or Price Cap IR rate-setting methodologies) an explanation of why the NWS was not included in the most recent rebasing application.

### 3.4 Cost Recovery

Cost recovery for NWSs included as part of rebasing rate applications will generally be addressed through the updated base rates set in that proceeding.

The default treatment of costs and the approach to utility remuneration is the same for NWSs as for other distribution system expenditures. Distributors should assign costs for NWSs to capital expenditures or to operating expenses in accordance with their capitalization policy.<sup>15</sup> Proposed NWSs can therefore potentially include a capital expenditure component, if consistent with a distributor's capitalization policy and subject to the OEB's approval. Distributors should address any considerations regarding allocation of the cost of NWSs to customer classes, and rate design.

For NWSs included in cost of service rate applications that are expected to come into service during the subsequent Price Cap IR term, the cost of service application should include the forecasted costs of the NWS, but cost recovery (rate riders) will be addressed during a subsequent Price Cap IR application. Similar to the approach used for ACM projects, if the updated

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<sup>14</sup> The OEB's [Advanced Capital Module report](#) (EB-2014-0219, *Report of the Board: New Policy Options for the Funding of Capital Investments: the Advanced Capital Module*. September 18, 2014) establishes criteria for materiality, need, and prudence that distributors proposing amounts for recovery for capital projects by way of an ACM or an Incremental Capital Module (ICM) must meet. However, there are some key differences between ACM/ICM projects and NWSs (e.g., the likelihood that the cost recovery approach for an NWS may include both capital and OM&A costs; the lack of an ACM/ICM option for utilities using the Custom IR and Annual Index IR rate-setting methodologies).

<sup>15</sup> Chapter 2 of the Filing Requirements requires distributors to file their capitalization policy with the OEB as part of cost of service applications.

cost projection for the NWS is materially different than the amount pre-approved in the prior cost of service application (i.e.,  $\pm 30\%$  difference in costs), the distributor will be required to re-file the business case for the activity.

For applications for NWS funding filed outside of rebasing, distributors should propose an approach for cost recovery (including issues of cost allocation and rate design) and identify whether any funding to address the identified system need is already included in existing rates. This will assist the OEB in determining, on a case-by-case basis, whether the proposed spending is incremental and should be eligible for cost recovery.

Distributors proposing to use third-party DERs as NWSs are also eligible, under the OEB's Framework for Energy Innovation, to apply for an incentive mechanism. This may require establishing a deferral account to record amounts to fund earned incentives, to be reviewed and disposed of at a later date. Distributors applying for an incentive mechanism related to their use of an NWS should follow the OEB's filing guidance for incentive proposals.<sup>16</sup>

A distributor may also have an opportunity for its NWSs to earn revenues through the IESO's wholesale markets, reducing the costs that need to be funded through distribution rates. If applicable, a distributor should describe its proposed approach to these revenues in its application. A distributor may request full cost recovery and indicate that any revenues earned through IESO markets will be treated as a revenue offset used to lower distribution rates, or an alternative approach that considers the allocation of risk between the distributor and its customers. Depending on circumstances, the latter approach may improve the business case for a rate-funded NWS.

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<sup>16</sup> [Filing Guidelines for Incentives for Electricity Distributors to Use Third-Party DERs as Non-Wires Alternatives](#), March 28, 2023.



## 4 Distributor Non-Wires Solutions to Meet Regional Needs

### 4.1 Background

Regional electricity system planning supports a reliable supply of electricity to Ontario's 21 planning regions. Regional planning looks at the unique needs of each region, and considers conservation, generation, transmission and distribution, and innovative resources to meet these needs.

The OEB endorsed a formalized [regional planning process](#) in 2013 involving transmitters, distributors, and the IESO that has been implemented across the province.

Should the initial steps in the regional planning process identify a need with a broader regional impact where NWSs (transmission-connected or distribution-connected) are potential options to address this need, NWSs and wires solutions will be further assessed through an Integrated Regional Resources Plan (IRRP). An overview of the current approach for evaluating NWSs in IRRPs is presented in the IESO's [Integrated Regional Resource Plans: Guide to Assessing Non-Wires Alternatives](#) (May 26, 2023).<sup>17</sup>

The role of NWSs in the regional planning process has also been informed by the work of the Regional Planning Process Advisory Group (RPPAG) in the OEB's Regional Planning Process Review, which was completed in August 2023.<sup>18</sup> In November 2021 (in advance of a broader report with recommendations to improve the regional planning process), the [RPPAG provided recommended changes](#) to the CDM Guidelines to the OEB to address potential barriers to CDM {NWS} measures in regional planning. The OEB considered these recommendations (as well as comments from other stakeholders on this topic) in developing the 2021 CDM Guidelines, and the relevant content is now included in this chapter of the NWS Guidelines.

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<sup>17</sup> The approach described here may also be of assistance to distributors in developing their approach to considering NWSs for local distribution system needs with no regional impact, which are part of distribution system planning (chapter 3 of the NWS Guidelines) and are not assessed through an IRRP.

<sup>18</sup> EB-2020-0176. The [Regional Planning Process Review Overview of Outcomes](#) (October 5, 2023) summarizes the documents amended or created as outcomes of this consultation.



Additional relevant guidance arising from the Regional Planning Process Review subsequent to the issuance of the 2021 CDM Guidelines, related to cost responsibility and incorporating forecasts of NWS activity into regional load forecasting, is further discussed below in subsections 4.3 and 4.4.

## 4.2 Applications to Address Regional Needs

Distributors may request distribution rate funding for NWSs at the distribution level that are intended to address (in whole or in part) regional needs. This is inclusive of NWSs where the system need being addressed (and the wires infrastructure being avoided or deferred) is entirely at the transmission level.

Distributors seeking distribution rate funding for NWSs to address a regional need should describe how their application has been informed by the regional planning process, whether the NWS has been identified as a preferred solution through this process, and whether it is supported by other participants in the regional planning process (i.e., the IESO, lead transmitter, and other participating distributors).

NWSs to address regional needs raise issues of coordinating NWS implementation and cost responsibility. If an NWS must be implemented by multiple rate-regulated distributors/transmitters to meet the regional need (otherwise a potentially more costly traditional infrastructure solution will not be avoided or deferred), and each party requires OEB approval of new spending, then the OEB will require the participants to submit a joint application, so that the OEB can review the proposed solution in its entirety.

## 4.3 Cost Responsibility for Non-Wires Solutions Addressing Regional Needs<sup>19</sup>

Even in cases where only one distributor would be implementing an NWS to address a regional need, issues of cost responsibility (i.e., allocation) may need to be addressed.

Some funding may be available through an IESO program (funded through the Global Adjustment), in cases where the NWS is aligned with the IESO's

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<sup>19</sup> This section is not intended to predetermine the OEB's approach to any subsequent proposal related to cost-sharing of "Stream 2" CDM activities arising from the work of the IESO-LDC CDM Working Group, or to guidance on cost-sharing that may be provided in future phases of development of the BCA Framework.

priorities in meeting Ontario's electricity system needs. In particular, the IESO's Local Initiatives Program (discussed in chapter 5) delivers CDM savings in targeted areas of the province, as identified through the regional planning process. Prior to applying for distribution rate funding under the NWS Guidelines, a distributor should confirm whether funding (in part or in full) is available through the Local Initiatives Program or another IESO program. As discussed in section 3.4, a distributor may also have an opportunity for its NWS to earn revenues through the IESO's wholesale markets, reducing the costs funded through distribution or transmission rates.

The OEB is then responsible for reviewing the cost and associated rate impacts of the NWS that would be borne by rate-regulated transmitters and distributors, i.e., net of any funding provided by the IESO or other sources.

Applicants requesting funding for an NWS to address a regional need should provide details on the proposed cost responsibility approach. It should be justified if it differs from the default approach discussed below. Applicants are strongly encouraged to reach agreement on the proposed cost approach to cost responsibility with any other rate-regulated distributors and transmitters that could incur costs, prior to applying to the OEB.

The OEB expects that the default approach to cost responsibility, where it involves NWSs of one or more distributors to address regional needs (net of any funding provided by the IESO), would be aligned with the approach in section 6.3 of the OEB's [Transmission System Code](#) (TSC) for transmission (wires) investments, i.e., proportional benefit. In particular, sections 6.3.13 and 6.3.15 of the TSC set out how the costs should be attributed among the distributor(s) in relation to transmission connection investments that are made to meet their needs, and section 6.3.18 of the TSC sets out how cost responsibility should be addressed in cases where the transmission connection investment also addresses a broader transmission network system need.

If a broader transmission network need is addressed, some portion of the costs for a transmission investment is attributed to the network pool, to be recovered from all transmission customers through the transmission network charge. A similar approach could apply to an NWS, including attributing a share of cost responsibility to the transmitter. Similar to the requirement

under section 6.3.18 of the TSC, distributors will need to provide confirmation from the IESO that the NWS will also address a broader transmission network need.

An [OEB staff bulletin](#) has also highlighted OEB guidance on cost responsibility where there is a local preference for a higher cost alternative solution to meet a system need, that is not the optimal (i.e., most cost-effective) solution identified in the regional plan (or distribution system plan).<sup>20</sup> This could include the use of an NWS in preference to a wires solution. In such cases, the OEB has indicated that, where such a premium solution is desired, the incremental cost of the investment should be funded through other means (e.g., by the municipal shareholder), rather than through distribution rates. Additional details are provided in the staff bulletin, such as the information a distributor should provide in its rate application.

The OEB provides flexibility for applicants to propose modifications to the default cost responsibility approach. An applicant should describe the expected local and regional benefits, and how this has informed the proposed approach to allocate the costs.

#### 4.4 Incorporating Non-Wires Solutions Into Regional Planning Forecasts

Distribution-rate funded NWSs (whether undertaken to meet local and/or regional needs) will have an impact on the regional load forecast used in the needs assessment and the integrated regional resource planning processes. As set out in sections 8.3.1 and 8.3.2 of the Distribution System Code, distributors are required to share information required to support regional planning, which may include information on their current and planned NWSs, upon request from the lead transmitter and the IESO.<sup>21</sup> Distributors are encouraged to also provide that information to other distributors in the region for the purpose of improving the accuracy of load forecasting at the regional level. The Regional Planning Process Advisory Group's [Load Forecast](#)

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<sup>20</sup> OEB Staff Bulletin, *Re: Local Community Preference for Alternative to Most Cost Effective Solution*, September 29, 2022. While the need for this guidance was identified within the context of facilitating consideration of NWSs in regional planning, the guidance in the Staff Bulletin also applies to local distribution system needs where a regional plan is not required.

<sup>21</sup> A host distributor is also required to include the related information from its embedded distributor(s).

[Guideline for Ontario](#) provides additional guidance to the IESO, transmitters and electricity distributors on the development of the demand forecasts used in the various phases of the regional planning process.<sup>22</sup> This includes guidance on how to adjust the gross demand forecast to reflect the forecast impact of NWSs undertaken by distributors and additional CDM or distributed generation undertaken by the IESO or other parties.

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<sup>22</sup> Regional Planning Process Advisory Group, *Load Forecast Guideline for Ontario: Guidance for the Development of Regional Planning Demand Forecasts*, October 13, 2022.



## 5 Role of Distributors in the Local Initiatives Program

### 5.1 Background on Local Initiatives Program

The IESO's 2021-2024 CDM Plan, as updated in response to the [Minister of Energy's Amending Directive of September 29, 2022](#), includes a budget of \$139.7 million over the four-year period for the Local Initiatives Program (LIP), which will deliver CDM savings in targeted areas of the province, as identified through the regional planning process. This funding for the LIP is recovered from all Ontario electricity customers through the Global Adjustment charge.

The objectives of the LIP are to:

- Deliver 96 megawatts of demand savings and 403 gigawatt-hours of energy savings over four years.
- Demonstrate the ability to use CDM as a resource to achieve specified demand and/or energy reductions that can help address regional and/or local electricity system constraints.
- Identify how targeted CDM can be used as a resource in the service territories of local utilities to address distribution system needs.
- Be cost effective and not duplicative of current province-wide CDM programs.

The LIP is using competitive procurements and incentive adders (additional incentives layered on top of those provided by province-wide CDM programs) to acquire CDM resources.

The first phase of this program is targeting four areas:

- Richview South area in Toronto
- York Region
- Ottawa
- Belle River area in Windsor-Essex

In addition, regional adders to the IESO's province-wide Retrofit program have been introduced in some additional areas of Ontario where transmission constraints exist, as identified through the regional planning process.

The IESO indicated that it sees value for distributors in the target areas playing a partnership role in the LIP to support the development and deployment of LIP initiatives. Distributors' customers may be targeted and there is a potential for the LIP to meet local distribution system needs in addition to the regional needs. However, any costs incurred by distributors through this partnership role would not be eligible for funding from the IESO's 2021-2024 CDM Framework budget.

## 5.2 Role of Electricity Distributors and use of LIP Deferral Account

Guidance to electricity distributors related to distributor partnership in the LIP and cost recovery is provided in the OEB's [letter](#) of May 28, 2021.

The OEB established a LIP Deferral Account to enable distributors to track LIP partnership costs and seek recovery of these costs through distribution rates. The LIP Deferral Account should only be used by distributors that partner with the IESO for the LIP.

The purpose of the LIP Deferral Account is to record costs incurred by a distributor associated with the distributor's participation as a supporting partner to the IESO in the LIP. Eligible distributor costs to be recorded in this account may potentially include activities such as procurement support, providing access to data, supporting evaluation, measurement, & verification activities, and supporting marketing and outreach activities, but shall **not** include the cost of resources procured through the LIP. Upon disposition of the account, the distributor must demonstrate that any costs have been prudently incurred and are related to a LIP partnership with the IESO.

The distributor and the IESO are expected to reach agreement on the responsibilities and projected costs to be borne by each party, to avoid duplication and to ensure proposed distributor activities support the objectives of the LIP. Distributors are expected to demonstrate how their LIP

activities deliver value to their customers, at the time a distributor applies for disposition of any balance in the deferral account.

The resources that the IESO is procuring through the LIP are for the purpose of addressing needs identified through the regional planning process (discussed in chapter 4) and are not intended to specifically meet local distribution system needs. However, there may be alignment between the regional needs and local distribution system needs.

Distributors partnering with the IESO in the LIP can potentially leverage the LIP procurements to procure incremental resources to meet local distribution system needs, including integrating these resources into the distribution system. Distributors can apply for distribution rate funding for these activities, for the purpose of avoiding or deferring infrastructure. Any such application should be separate from the costs tracked in the LIP Deferral Account and can be filed with the OEB at any time, using the guidance on NWS applications provided in chapter 3.

Should the LIP continue in the post-2024 CDM Framework, the OEB will review whether the same approach will be used for distributors partnering with the IESO in subsequent phases of the LIP, based on the learnings from the first phase.

## 6 DISTRIBUTOR COSTS FOR ANCILLARY ACTIVITIES RELATED TO NWSs OR OTHER CONSERVATION ACTIVITIES

Distributor costs, including staffing costs, that are specific to a distribution rate-funded NWS (discussed in chapter 3) or to a distributor's partnership in the LIP (discussed in chapter 5) will be reviewed as part of the funding request for the NWS in a rates application, or as part of the application to dispose of eligible costs recorded in a distributor's LIP Deferral Account, respectively.

Distributors may also incur certain costs related to an ancillary role in other activities related to NWSs or conservation and energy efficiency:

- Planning work to assess potential opportunities for distribution rate-funded NWSs to meet system needs, in advance of proposing specific NWSs
- Support to a distributor's customers for conservation and energy efficiency programs delivered by IESO or other organizations
- Green Button implementation, use, and enhancement

Guidance related to cost recovery for these activities is provided below.

**System planning:** As part of the distribution system planning function, distributors will likely need to carry out some planning work to assess potential opportunities for distribution rate-funded NWSs to meet system needs, in advance of proposing any specific NWSs. Prudently incurred incremental, material costs of this nature (including staffing costs) are eligible for recovery, through the OEB's overall review of operating, maintenance and administrative expenses (OM&A) in rate applications.

**Customer support for conservation and energy efficiency programs delivered by IESO or other organizations:** Distributors may carry out minor efforts to make their customers aware of applicable conservation and energy efficiency programs delivered by other organizations, for the purpose of assisting customers (including low-income and Indigenous customers) in managing their energy bills. This could include providing information on



programs delivered by the IESO under the 2021-2024 CDM Framework, and providing any supporting information (e.g., billing data) necessary for customers to participate in these programs. Any such efforts should be limited in nature and non-duplicative of the IESO's activities.

The OEB expects that this would typically be accomplished by distributor staff in the key accounts or customer service functions. With the possible exception of LIP partnership activity (which would be addressed through the LIP Deferral Account), distributors should not request funding through distribution rates for dedicated CDM staff to support IESO programs funded under the 2021-2024 CDM Framework. The 2021-2024 CDM Framework Directive is clear that the IESO is responsible for these programs, and also gives the IESO the responsibility of providing residential and other consumers with tools, guidelines and information to build awareness of CDM measures and provide education on energy efficient practices and behaviours.

**Green Button:** The [Green Button regulation](#)<sup>23</sup> established mandatory requirements for electricity distributors (with certain exceptions) related to implementing the Green Button energy data standard and making energy data available in accordance with the Green Button standard. Rate-regulated electricity and natural gas distributors in Ontario were required to provide customers with access to Green Button by November 1, 2023. The OEB has worked with distributors and other stakeholders to support the implementation of Green Button including establishing and facilitating an industry-led working group and issuing guidance that focused on matters related to implementation ([Green Button Implementation | Ontario Energy Board](#)). Supporting increased conservation and energy efficiency through greater consumer access to energy data is one of the expected outcomes of Green Button implementation.

Distributors may potentially identify opportunities to enhance or leverage Green Button (beyond the mandatory implementation requirements) as part of a proposed NWS to address a system need. Any incremental costs associated with this discretionary use of Green Button can be reviewed as part of the funding request for the NWS. Distributors would be expected to

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<sup>23</sup> O. Reg. 633/21

demonstrate how the Green Button enhancements would contribute to the results achieved by the NWS.



## 7 TREATMENT OF CDM AND NWSs IN LOAD FORECAST

### 7.1 Approach to Incorporating CDM and NWSs in Load Forecast

Provincial CDM programs and distributor-led NWSs affect the electricity consumption and demand of a distributor's customers, and should be considered in a distributor's load and revenue forecasts.

The OEB provides flexibility to distributors in determining their general approach and methodology for load forecasting, which is a key input in establishing operating revenues and distribution rates.<sup>24</sup>

Within their forecasting approach, distributors are expected to determine how to incorporate the historical and forecast impacts of CDM and NWS activities into their load forecast, for the purpose of making the load forecast as accurate as possible. Distributors may also consider the *Load Forecast Guideline for Ontario* discussed in section 4.4, which focuses on developing peak demand forecasts for regional planning purposes, where appropriate.

One approach distributors may choose to adopt is to include a CDM variable in a multivariate regression, based on the historical and forecast level of savings from applicable CDM activities in a given year. Distributors may also choose to address CDM through manual adjustments outside of the methodology chosen, either multivariate regression or normalized average use per customer. Distributors may also propose that no specific CDM variable or adjustment is needed, if the distributor is of the view that the impact of CDM is suitably addressed through other correlated variables used in the load forecast, and/or embedded within historical load trends.

If a CDM variable is used, distributors should describe how the interaction with other variables used in the load forecast is addressed, to avoid double-counting the impact of CDM. This means that there may not be a one-to-one relationship between the amount of savings from CDM in a given year and the resulting impact to the load forecast.

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<sup>24</sup> General guidance on load forecasting is provided in Chapter 2 of the OEB's Filing Requirements.

If a distributor requests to use a Lost Revenue Adjustment Variance Account (LRAMVA) for new NWSs (chapter 8), it should describe how the impact of CDM/NWS activity included in the load forecast has informed the proposed LRAMVA threshold.<sup>25</sup>

## 7.2 Supporting Evidence for CDM/NWS Savings in Forecast

Distributors using a CDM variable (or related approach, including a manual adjustment) in their load forecast should provide details on what types of CDM/NWS activities are included in the CDM variable, with supporting evidence and methodology for the claimed historical and forecast reductions in electricity consumption and demand.

Distributors should describe the methodology and rationale for estimating year-over-year persistence of CDM savings, for allocating CDM savings to customer classes, and for any adjustments (e.g., half-year adjustment) to account for timing considerations regarding the CDM activities.

Distributors may include the impact of any of the following types of activities (and potentially others) as part of the CDM variable, taking into account the magnitude of the CDM savings, the level of information available on savings, and any other relevant factors:

- Historical and forecast impacts of any distribution rate-funded NWSs
- Persisting CDM impacts from the CFF and previous CDM Frameworks
- Historical and forecast impacts of CDM programs funded by the IESO through the Interim Framework and 2021-2024 CDM Framework<sup>26</sup>
- Forecast impacts of savings from future provincial CDM Frameworks (beyond the 2021-2024 CDM Framework), as projected in the IESO's

<sup>25</sup> The OEB previously developed a Load Forecast CDM Adjustment Workform (provided as an appendix to the Filing Requirements) as one approach that could be used for the calculation of the LRAMVA Threshold.

<sup>26</sup> Results through the end of 2022 from provincial CDM Frameworks are reported in the IESO's report [Making a Difference: Energy Efficiency in Ontario Conservation and Demand Management \(CDM\) Results](#). Aggregate results of provincial CDM Frameworks (including persistence of savings) are also reported in the demand forecast module of the IESO's [Annual Planning Outlook](#). Updated energy savings and peak demand targets through 2024 for programs in the 2021-2024 CDM Framework, reflecting the enhanced budget and targets from the September 29, 2022 ministerial directive, are provided in the IESO's [Update to 2021-2024 Conservation and Demand Management Framework Program Plan](#).

Annual Planning Outlook, or as more details on post-2024 CDM programming becomes available.

For persisting CDM impacts from the CFF and previous CDM Frameworks, distributors should make sure that results included in the load forecast are consistent with any results provided by the IESO at the distribution level. Where the IESO has not provided results at the distribution level, distributors should provide supporting evidence for estimated savings.

For Interim Framework and 2021-2024 CDM Framework activities, the IESO is not producing savings forecasts or tracking actual program results at the level of individual distributor service territories. If a distributor proposes to explicitly include the impact of these CDM activities in its load forecast, the assumptions and supporting evidence for the historical and forecast savings at the distributor level should be provided.

At this time, the OEB is not specifying a mandatory methodology for calculating the impact of Interim Framework and 2021-2024 CDM Framework activities. A distributor may take account of factors such as:

- IESO forecasts or results at the provincial or zonal level
- the distributor's share of provincial peak demand and annual electricity consumption
- the distributor's share of provincial CDM savings achieved under the CFF
- the degree of fit between the offered IESO programs and the distributor's mix of customers
- additional information available to the distributor regarding program participation by the distributor's customers
- any other factors it believes to be relevant.

## 8 LOST REVENUE ADJUSTMENT MECHANISM

The 2015 CDM Guidelines included a Lost Revenue Adjustment Mechanism (LRAM) for distributors, requiring the mandatory use of a Lost Revenue Adjustment Mechanism Variance Account (LRAMVA) to track any impact of CDM not built into distribution rates. The LRAMVA tracks the difference between forecast revenue loss attributable to CDM activity embedded in rates, and actual revenue loss due to the measured impacts of CDM programs. Distributors disposed of balances (debits or credits) in the LRAMVA through claims filed as part of rate applications.<sup>27</sup> The purpose of the LRAMVA in the 2015 CDM Guidelines was to ensure that the potential for distribution revenues to be reduced due to CDM activities did not act as a disincentive to distributors to pursue or promote CDM.

In the 2021 CDM Guidelines, the OEB indicated that the use of an LRAMVA is no longer the default approach for CDM activities. The 2021 CDM Guidelines required distributors to seek disposition of all outstanding LRAMVA balances related to previously established LRAMVA thresholds as soon as possible. Most distributors have completed this step and now have a zero balance in the LRAMVA. Some of these distributors also had LRAM-eligible amounts approved on a prospective basis for future years. Distributors filing claims related to disposition of outstanding LRAMVA balances related to previously established LRAMVA thresholds should follow the detailed guidance in Chapters 2 and 3 of the Filing Requirements.

Under the current NWS Guidelines, the use of an LRAMVA may be requested by distributors for distribution-rate funded NWSs and LIP activities only, with need to be determined on a case-by-case basis. If such a request is granted, the distributor may propose to make use of the existing generic LRAMVA (Account 1568), or propose to establish a new account, with appropriate rationale and accounting details to support their proposed approach.<sup>28</sup> Distributors are not to use an LRAMVA for CDM activities funded

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<sup>27</sup> Historically, the OEB has required LRAMVA balances to be brought forth for disposition as part of cost-based applications at a minimum, however, distributors could also request disposition during the Incentive Regulation term, if the balance was deemed by the distributor to be significant.

<sup>28</sup> When distributors have brought forward applications to dispose of any previous balance in the LRAMVA in accordance with the 2021 CDM Guidelines, the OEB has not discontinued the LRAMVA, but has set a requirement that distributors must request OEB approval before making new entries.

by the IESO through the 2021-2024 CDM Framework (with the possible exception of the LIP).

As indicated in chapter 7, distributors are expected to determine how to incorporate the historical and forecast impacts of CDM and NWS activities into their load forecast, for the purpose of making the load forecast as accurate as possible, thereby reducing the likelihood of significant revenue impacts due to deviations from forecast.

Additional details on the use of an LRAMVA for distribution-rate funded NWSs or LIP activities are provided below.

**LRAM for activities funded by the IESO as part of the LIP, and NWSs funded through distribution rates:**

As indicated in chapter 7, distributors are expected to determine how to incorporate the historical and forecast impacts of these activities into their load forecast, if the activities are known at the time of rebasing. As these activities are being undertaken to address a specific system need, distributors will likely have a good understanding of the expected program savings, as these savings are being relied upon by distributors and the IESO to defer infrastructure. Therefore, it is expected that distributors will be able to estimate the impact of these activities relatively accurately in their load forecast, similar to how they are expected to forecast the impact of other system upgrades they undertake. For this reason, LRAM will not be the default approach for these activities.

However, distributors may request the use of an LRAMVA for distribution-rate funded NWSs or LIP activities on a case-by-case basis.

For distribution-rate funded NWSs (including the circumstance where a distributor seeks distribution rate funding to procure incremental resources to meet local distribution system needs through the LIP), the request for use of an LRAMVA would be considered as part of the application for funding.

If a distributor enters into a partnership with the IESO for a LIP activity in its service territory and seeks to use an LRAMVA for this activity, but is not requesting additional rate funding to procure incremental resources, the distributor should include the request for an LRAMVA within its next rate

application, whether it is a cost-based application, an IRM application, or a Custom IR update (if applicable).

In all cases where a distributor is requesting to use an LRAMVA for a distribution rate-funded NWS or a LIP activity, distributors should demonstrate the need for an LRAMVA (or similar mechanism), the proposed LRAMVA threshold, how they intend to support the tracking of lost revenues, and the nature of the documentation that they propose to provide at the time of LRAMVA disposition. The OEB generally expects that any LRAMVA would have a symmetrical approach to the treatment of lost revenues consistent with past practice.



## 9 CO-ORDINATION WITH NATURAL GAS DEMAND-SIDE MANAGEMENT PROGRAMS

Under the 2021-2024 CDM Framework Directive, the IESO is directed to co-ordinate the delivery of CDM programs with entities delivering natural gas demand-side management (DSM) programs, to the degree reasonably practicable. The OEB's IRP Framework also enables, but does not require, Enbridge Gas to work with the IESO or electricity distributors to facilitate electricity-based energy solutions to address a constraint in Enbridge Gas's system, as an alternative to projects undertaken by Enbridge Gas.

The November 29, 2023 Letter of Direction from the Minister of Energy to the OEB asks the OEB to consult with the IESO and Enbridge Gas on how electricity and natural gas low-income and residential conservation programs could be delivered through a single window.

While it is anticipated that efforts to co-ordinate natural gas and electricity conservation will be applied primarily to province-wide conservation programs, electricity distributors are encouraged to co-ordinate with entities delivering natural gas DSM programs, to the degree reasonably practicable, for any NWSs they have a role in delivering that may benefit from such co-ordination, with the goal of reducing costs and improving efficiencies.