ONTARIO ENERGY BOARD

May 2025

Discussion Paper

Performance Incentive Mechanisms

Advancing Performance-based Rate Regulation

EB-2024-0129

Ontario

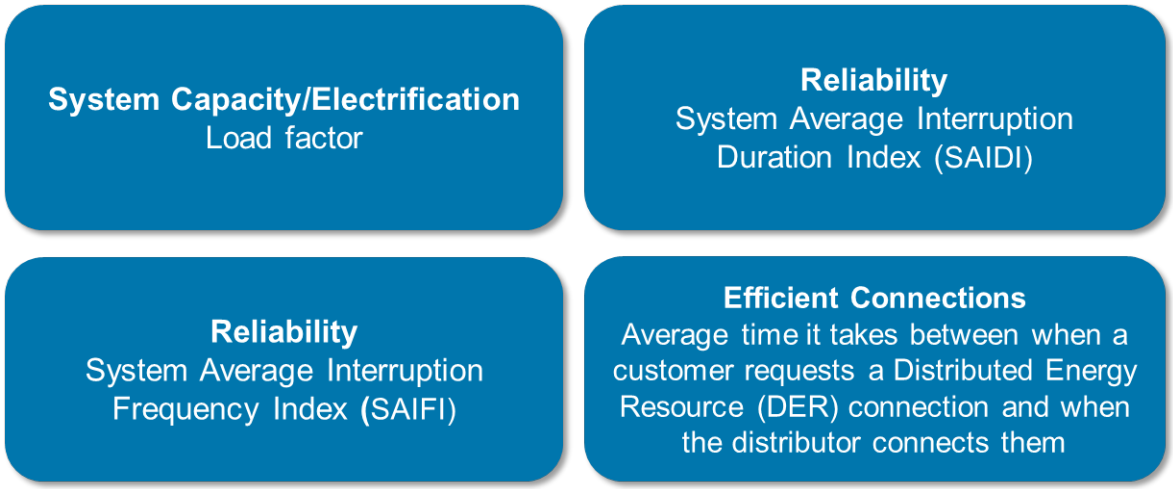
Ontario Energy Board

EXECUTIVE SUMMARY

The Ontario Energy Board (OEB) launched the Advancing Performance-Based Regulation (APBR) consultation to strengthen the link between what electricity distributors earn and the achievement of outcomes consumers value, such as cost effectiveness, reliability and customer service, while ensuring alignment with government policy.

This Staff Discussion Paper presents draft performance incentive mechanisms (PIMs) developed under this consultation for stakeholder review and feedback.

The four proposed PIMs are:



It is anticipated that one or more PIMs will be implemented as a result of this consultation. The PIM(s) would only apply to electricity distributors in Ontario. PIMs for other rate-regulated utilities may be considered later.

Although implementation details will need to align with the final PIMs, the OEB is proposing the following high-level implementation process for stakeholder consideration:

- Initial individualized targets, penalties and rewards will be established for PIMs through further consultation with stakeholders via working groups (leveraging targets already developed through other OEB consultations). This would take place as a second phase of this APBR-PIMs consultation.
- PIMs will be implemented on a rolling basis, at each distributor's next rebasing. Depending on the PIMs, this may start in 2026 for 2027 rates.
- Deferral accounts will be used to track and disburse penalties and rewards each year as part of Incentive Rate-setting Mechanism (IRM) filings.
- Going forward, targets will be updated, consistent with the established methodology, as part of rebasing applications.

Table of Contents

1.0 INTRODUCTION

1.1 Purpose

This Staff Discussion Paper presents proposed PIMs for stakeholder review and feedback. The proposed PIMs have been developed based on:

- The jurisdictional scan developed earlier in the consultation and supplementary research on PIMs implemented in other jurisdictions not covered by the jurisdictional scan.
- Stakeholder feedback from the November 19, 2024, consultation meeting.
- A review of the outcomes consumers value from customer surveys filed as part of recent cost-of-service applications filed by electricity distributors.
- Examination of related OEB initiatives and processes.

This paper describes each PIM, including a rationale for their inclusion, and the pros and cons of each one. The proposed PIMs are presented in a way to provide stakeholders with an opportunity to offer input on all aspects of the proposed PIMs. For transparency and to support stakeholder feedback, this paper also presents PIMs that were considered but not included. The paper also provides a high-level overview of the proposed process for implementing the PIMs.

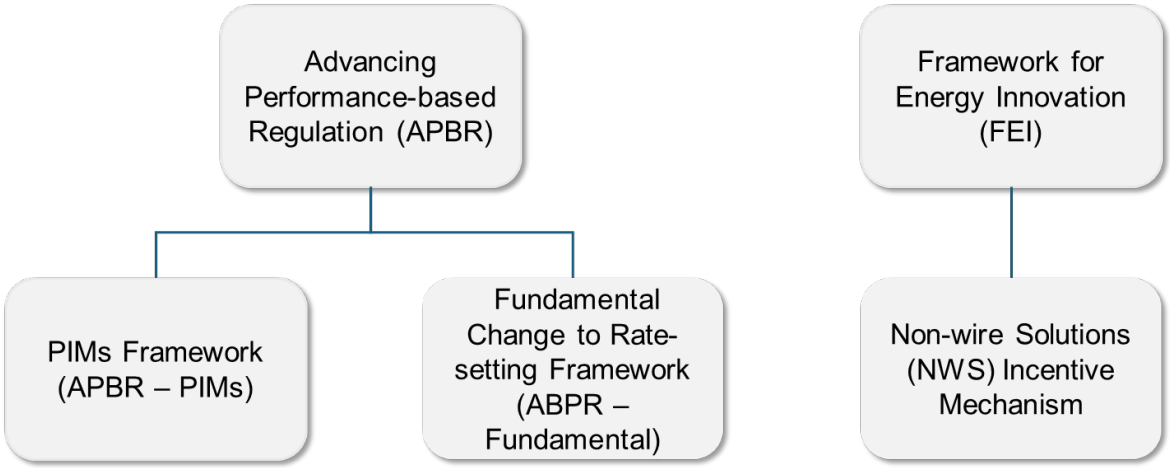
It is anticipated that at least one or more PIMs will be implemented as a result of this consultation. The PIM(s) would only apply to electricity distributors in Ontario. PIMs for other rate-regulated utilities may be considered at a later date.

This paper has been prepared with input and support from the project consultants, Christensen and Associates.

1.2 Context

The development of PIMs for electricity distributors is one part of the APBR consultation (EB-2024-0129) that the OEB is undertaking. The other part, as can be seen in Figure 1 below, is considering whether a fundamental change to rate regulation is required. This work is taking place in parallel. This paper only covers the APBR-PIMs portion of the APBR consultation.

Figure 1: APBR Workstreams and Related Initiative



Along with the APBR initiative, the OEB will be further defining the incentives available to distributors for the use of non-wires solutions. This work builds on the Framework for Energy Innovation (FEI) project and in particular the Filing Guidelines for Incentives for Electricity Distributors to Use Third-Party Distributed Energy Resources (DERs) as Non-Wires Alternatives as well as a subsequent November 2023 webinar.

The APBR-PIMs work also ties to many other OEB initiatives and processes. A description of how these projects intersect can be found in the Background section of this report. The OEB has reviewed each of these initiatives and processes to determine whether they will impact the development of the proposed PIMs.

1.3 Objectives

The overall objective of the APBR-PIMs work is to:

> ***Strengthen the link between what electricity distributors earn and the achievement of outcomes consumers value, such as cost effectiveness, reliability and customer service, while ensuring alignment with government policy.***

In addition to this overall objective, there are also other secondary objectives informing the development of PIMs. These secondary objectives are listed below and were developed based on the current Ontario context, OEB analysis and written feedback from stakeholders.

- **Reliability** – Continuous supply of electricity to consumers. As the energy transition advances, Ontario's regulatory framework should acknowledge the critical role of reliable electricity.

- **Resiliency** – With climate change and electrification, electricity distributors need to ensure their system can withstand, respond to and quickly recover from major power disruptions. This includes rare and extreme events, such as ice storms and tornadoes. Resiliency is closely related to reliability; a resilient system enhances overall reliability

by ensuring that disruptions have a minimal impact on continuous service to customers.

- **Customer Service/Satisfaction** – Electricity distributors interact with customers regarding billing, service disruptions, account management, energy usage and information about services, all while aiming to deliver an efficient experience through various communication channels like phone, online platforms and in-person interactions.

- **Efficient connections** – Efficient access to the electricity distribution system (for example, for new housing or DERs) is important to all prospective customers.

- **System capacity/Electrification** – Responding to forecasts that project a two- to three-fold increase in overall system capacity requirements, thereby ensuring the grid can handle future demand growth from continued electrification. This will require expanding and making better use of system capacity. It could also involve smart grid technologies and digital solutions to manage the need for capacity, improve system operations and enhance customers' interaction with the grid.

- **Cost control/efficiency** – Enhance the distributor's cost efficiency over time.

- **Affordability** – Ensure that electricity remains affordable, allowing consumers to manage their energy costs without compromising other essential living expenses.

Less emphasis was placed on developing PIMs addressing the secondary objectives of cost control/efficiency and affordability as these objectives are addressed by other OEB regulatory and rate-making tools. For example, in Ontario, the X-factor is a component of the rate-setting formula, designed to incentivize distributors to improve efficiency and productivity. The X factor includes the Stretch Factor, which operates like a PIM for productivity. The Stretch Factor is more favourable for utilities that perform better than their expected costs based on the Ontario electricity distributors industry Total Cost Benchmark and less favourable to those that perform worse. The purpose of the Stretch Factor is to incent productivity by emulating the effects of competition on companies' productivity for Ontario electricity distributors. Distributors that perform better than the industry benchmark see a lower stretch factor in the I-X formula, thereby providing them with a tangible incentive to improve efficiency. Work is underway to update the Total Cost Benchmark methodology. This work will take place over the 2025 calendar year and involve methodological and data changes to update benchmark values.

Another example of an OEB tool aimed at encouraging better cost performance is Activity- and Program-Based Benchmarking (APB). The OEB expects to engage stakeholders to assess proposed changes to APB over the 2025 calendar year. This initiative will support prudence reviews by providing transparency and enabling comparison of unit and program costs. See Table 1 in Section 2.2 Other OEB Activities for more information about these projects and the other OEB initiatives and processes related to this APBR-PIMs work.

2.0 BACKGROUND

This chapter provides a description of the work completed to date on the APBR consultation and an overview of the OEB initiatives and processes that may impact the APBR-PIMS work.

2.1 Work to Completed to Date

The OEB was asked in a November 2023 Letter of Direction to consider whether utilities' remuneration based on traditional capital infrastructure deployment remains the most cost-effective model. The Minister of Energy asked the OEB to take steps to consider what changes may be required to ensure timely investment is made to support the right outcome and that a report back on this work incorporate a review of models deployed in other jurisdictions.

The Letter of Direction also endorsed the OEB's plan, as outlined in the Distribution Sector Resilience, Responsiveness and Cost Efficiency Report, to develop a performance incentive regime that considers aspects such as customer service, resilience or managing peak loads to defer distribution system needs, and working with the sector to develop principles, generic designs and other criteria for performance incentives.

Figure 2: Timeline of Work Completed on the APBR Consultation

As can be seen in Figure 2, in response to this direction, the OEB retained Christensen and Associates to undertake a jurisdictional scan on utility remuneration. Christensen and Associates' report reviewed utility remuneration models, including the use of PIMs, in five jurisdictions: Australia, California, Hawaii, New York and Great Britain.

This jurisdictional scan, along with an OEB covering memo, formed the report back to the Minister of Energy and Electrification in September 2024. In the covering memo, the OEB presented three conclusions regarding opportunities for changes to Ontario's utility remuneration model:

1. Diverse remuneration approaches may be used to achieve fundamentally similar goals. As there are no one-size-fits-all solutions to create the right incentives for utilities, a made-in-Ontario solution is needed.

2. The current rate-setting framework provides the OEB with the opportunity to, at minimum and on a short timeline, introduce PIMs. PIMs can strengthen the link between what utilities earn and the achievement of outcomes that consumers value.

3. PIMs have had only limited success in motivating optimal non-traditional utility activities, and there is no assurance that PIMs alone in Ontario will optimize the potential benefits of demand management, DERs and other non-wires solutions. It is possible that a more fundamental change will be required. Comprehensively reconsidering the fundamental approach to rate regulation may provide a more complete and enduring realization of desired outcomes in the long run. However, fundamental change would require lengthier, more complex design and implementation processes.

These conclusions led the OEB to develop two approaches to advancing performance-based rate regulation for electricity distributors in Ontario:

1. **Short term** – Incorporating PIMs into the OEB's existing rate-regulation framework as a natural extension of the OEB's rate-setting framework (APBR-PIMs)

2. **Long term** – Examining whether a new rate-setting framework not premised on a rate-base rate-of-return is required (APBR-Fundamental)

In November 2024, the OEB held a stakeholder meeting during which the OEB presented:

- The results of the jurisdictional scan.
- The OEB's conclusions drawn from the jurisdictional scan.
- The proposed short- and long-term approaches to advancing PBR.

Stakeholders were given the opportunity to ask questions and provide comments during the meeting. Following the meeting, stakeholders were asked to provide written comments. These comments have been summarized in Appendix B of this report and have been used to inform the proposed PIMs presented herein.

This paper only covers the short-term approach to advancing PBR, which is incorporating PIMs into the OEB's existing rate-regulation framework. As stated in the introduction, whether to proceed with a fundamental change to rate regulation is being considered in parallel to this PIMs work.

2.2 Other OEB Activities

The APBR-PIMs consultation potentially overlaps with many OEB initiatives and processes. A description of these initiatives and processes are presented in Table 1 below. Each of these were considered in the development of the proposed PIMs presented in this paper. Those initiatives and processes with no impact on the APBR-PIMs are still included in the table to demonstrate all of the initiatives and processes that were considered in the development of the proposed PIMs.

Table 1: OEB Initiatives and Processes Considered in the Development of the Proposed PIMs

OEB Initiatives and Processes	Objective	Impact on APBR – PIMs (yes/no)	Description of Impact, if Applicable	Timing
Activity- and Program-based Benchmarking (APB) (EB-2018-0278)	To continue to introduce new utility data metrics to improve analysis and drive down utility program costs and improve productivity.	No		Consultation initiated in October 2018 and work is ongoing.
DER Connections Review (EB-2019-0207)	To address barriers to the connection of DERs, and where appropriate, standardize and improve the connection process. The most recent phase of the consultation is focused on enabling higher DER penetration by exploring different approaches to address local capacity constraints, simplifying connections for small DERs and assessing cost responsibilities for DER connections. This phase is also reviewing issues related to electric vehicle charging connections and system capacity mapping.	Yes	Direct impact. Any PIMs related to DERs will take into consideration outputs from this consultation.	Consultation initiated in 2019, and work is ongoing.
Distributor Spending Pattern Analysis (SPA) (EB-2025-0108)	To examine distributors' spending patterns (Operations, Maintenance and Administration and Capital expenditures) to identify where changes to rate regulation or incremental incentives are warranted.	No		Work on SPA to be completed in the calendar year 2025.
Distribution System Operator (DSO) Capabilities (EB-2025-0060)	To develop a policy framework to set expectations for electricity distributors regarding the development of DSO capabilities. Developing DSO capabilities can provide new means of ensuring reliable and cost-effective distribution services at the same time as enhancing opportunities for DERs.	No		Consultation initiated in January 2025.

OEB Initiatives and Processes	Objective	Impact on APBR – PIMs (yes/no)	Description of Impact, if Applicable	Timing
Framework on Energy Innovation (FEI) (EB-2021-0118)	To facilitate the deployment and adoption of innovative and cost-effective solutions, including DERs, in ways that enhance value for consumers. It set out the OEB's policies and next steps regarding the integration of DERs in the province's electricity distribution systems.	Yes	Direct impact. Any PIMs related to DERs will take into consideration outputs from this consultation.	Consultation took place between March 2021 and March 2023.
Framework for Energy Innovation 2.0: Non-Wires Solution Incentives (Margin on Payments) (EB-2025-0083)	To further encourage deployment of non-wire solutions by establishing parameters for incentives to use third-party DERs (originally established in FEI).	Yes	Indirect impact. The development of this incentive will be complement ary to the PIMs developed as part of this APBR-PIMs consultation.	Initiative to take place in 2025.
Generic Proceeding – Cost of Capital and Other Matters (COC) (EB-2024-0063)	To consider the methodology for determining the values of the COC parameters and deemed capital structure to be used to set rates for electricity transmitters and distributors, natural gas utilities and Ontario Power Generation.	No		Decision was issued March 27, 2025.
Incremental Capital Module Review (ICM) (EB-2024-0236)	To update the ICM based on experience with ICM applications and stakeholder feedback.	No		This consultation was initiated in August 2024 and work is ongoing.
Reliability and Power Quality Review (RPQR) (EB-2021-0307)	The objectives are to: - Enhance distributor accountability through improvements in reliability reporting and	Yes	Direct impact. PIMs related to reliability, resiliency	Consultation initiated in November 2021. Performance

OEB Initiatives and Processes	Objective	Impact on APBR – PIMs (yes/no)	Description of Impact, if Applicable	Timing
	collecting/reporting of power quality - Encourage continuous improvement through performance benchmarking - Increase transparency through collecting customer-specific reliability information - Support investment decisions through development of reliability analytics that link reliability to utility planning and rate applications.		and power quality will build on the work completed under the RPQR consultation.	targets will be applied to distributors' performance scorecards when they submit rebasing applications, starting with applications filed in 2026, for determination of rates effective in 2027.
Reporting and Record Keeping Requirements (RRRs) and Performance Scorecards (EB-2022-0267)	To provide performance reporting and identify trends in areas that may drive sector improvement.	Yes	Direct impact. PIMs will strive to employ existing metrics tracked and reported through the RRR and Performance Scorecard process. Any new metrics used to measure the PIMs will be added to RRRs and Performance Scorecards.	Electricity distributors file RRR data and the OEB posts the Performance Scorecards annually. The OEB conducts a yearly consultation to gather feedback on ways to modernize and streamline the RRRs.
System Expansion for Housing Developments Consultation	To undertake a review of distribution system expansion connection and revenue horizons to facilitate Ontario's growth objectives without burdening ratepayers.	No		Consultation initiated in April 2024 and work is ongoing.

OEB Initiatives and Processes	Objective	Impact on APBR – PIMs (yes/no)	Description of Impact, if Applicable	Timing
(EB-2024-0092)				
Total Cost Benchmarking Review (TCB) (EB-2010-0379)	To update the TCB methodology.	No		Work on this portion of the TCB Review to be completed calendar year 2025.
Vulnerability Assessment and System Hardening (VASH) (EB-2024-0199)	To develop policies and a framework to address the following: - Incorporate climate resiliency into distributor asset and investment planning activities - Engage in a regular assessment of the vulnerabilities in distribution systems and operations in the event of severe weather - Prioritize value for customers when investing in system enhancements for resilience purposes.	Yes	Direct impact. A Value of Lost Load methodology is being developed as part of the VASH consultation. Some PIMs may employ a Value of Lost Load in the development of penalties and/or rewards.	The VASH consultation was initiated in June 2024. Stakeholders are expected to be engaged on the development of the Value of Lost Load methodology in spring 2025.

3.0 APPROACH TO PIM DEVELOPMENT

This chapter describes the approach used to develop the proposed PIMs, including the definition of PIM employed, the inputs used to develop the proposed PIMs and the criteria used to develop and evaluate the PIMs.

3.1 Definition of PIM

A PIM is a regulatory tool that ties financial incentives to identified targets. Scorecard metrics, which already exist in Ontario, provide information on various dimensions of service quality but do not directly affect a distributor's revenue. These metrics could be transformed into PIMs by attaching revenue recovery to the outcomes of these metrics. However, not all of the

current Performance Scorecard metrics align well with the criteria for PIMs as outlined in Section 3.3 below.

For the purposes of this consultation, the following definition of a PIM is proposed:

> ***A revenue adjustment mechanism that ties financial rewards or penalties to the achievement of pre-defined targets.***

To meet this definition, the distributor must have a measurable target, and it must be possible to recognize the achievement of this target using publicly available information when rates are set for the next year. In addition, the financial penalty or reward associated with achievement of (or failure to achieve) the target must be known in advance[1].

One question about the design of PIMs is whether to make the financial incentive a reward, a penalty or financially symmetric — meaning that the PIM offers a reward for positive achievement and a penalty for sub-par achievement. Note that this symmetry does not necessarily mean the penalty and reward values are equal, just that both a penalty and reward can be applied. One approach to answering this question is to offer a reward if distributors have not been expected to produce the outcome in the past, since the cost is not reflected in rates, and a penalty if the distributor is already expected to provide the outcome. For each of the proposed PIMs, presented in the next chapter of this paper, whether the PIM should be reward-only, penalty-only or symmetrical is provided based on this approach.[2]

3.2 PIM Inputs

The proposed PIMs presented in this paper were developed using the following inputs:

- The jurisdictional scan developed earlier in the consultation and supplementary research on PIMs implemented in other jurisdictions and not covered in the jurisdictional scan.
- A review of outcomes consumers value from recent electricity distributor cost-of-service applications. A summary of this review can be found in Appendix A of this paper
- Stakeholder feedback from the November 19, 2024, consultation meeting and related materials. A summary of this stakeholder feedback can be found in Appendix B of this paper.
- Examination of related OEB initiatives and processes.

[1] The OEB also has the authority to set Service Quality Requirements (SQRs) and impose administrative penalties if those requirements are not met. While these bear some conceptual resemblance to PIMs, PIMs are more mechanistic whereas enforcement of SQRs (like other provisions of codes/rules/orders) follows the inspection and enforcement process set out in the *OEB Act*.

[2] There was limited agreement amongst stakeholders on the most appropriate PIMs structure. Twelve stakeholders commented directly on the structure of the PIMs. Four stakeholders said the PIMs should be symmetrical while another four said the PIM structure should be reward-only. The remaining four stakeholders provided other suggestions, including that the structure should depend on the PIM being measured.

3.3 Criteria for PIMs Development

A clear set of criteria for the development and evaluation of PIMs has not been widely adopted across jurisdictions that operate under PBR. However, OEB staff have developed the following criteria for selecting and evaluating the draft PIMs presented in this paper. These criteria were developed based on a review of criteria employed in other jurisdictions, the unique context of the Ontario electricity distribution system (e.g., large number of distributors of varying sizes) and feedback from stakeholders in the written comments. Each criterion carries an equal weighting:

- **Consistency** – The PIM is consistent with the existing rate framework and takes into consideration other ongoing OEB initiatives.
- **Distributor control** – The PIM tracks outcomes that electricity distributors have means to influence.
- **Existing data** – Where outcomes align, the PIM uses/builds on existing data measured by electricity distributors and reported to the OEB.
- **Outcome** – The PIM is consistent with an outcome that consumers of electricity distributors value.
- **Policy alignment** – The PIM addresses policy goals or priorities not adequately addressed through existing regulatory tools/policies.
- **Proportionality** – The PIM is consistent with the OEB's statutory duty to set just and reasonable rates. The PIM has rewards and penalties proportionate to the value provided by the achievement of a PIM target (accounting for costs of administering a PIM).
- **Ratepayer benefits** – The PIM provides benefits to ratepayers.
- **Regulatory burden** – The PIM does not cause a large increase in administrative burden for electricity distributors and stakeholders.
- **Simplicity** – The PIM is simple, measurable and transparent.

As seen in Appendix B, these criteria are consistent with considerations that stakeholders said to keep in mind when developing PIMs. Most stakeholders that commented on criteria agreed that simplicity, transparency and measurability were the most important considerations. Other considerations that stakeholders thought the OEB should keep in mind when developing PIMs included: supportive of government policy, in direct control of the utility, specific and targeted, appropriately impacts utility behaviour, clear and compelling case for a PIM, appropriately sized incentives and symmetrical in structure.

3.4 Application of PIMs

The OEB proposes that the draft PIMs presented in this paper apply to all electricity distributors in Ontario. This uniformity is suggested for a number of reasons, including that the proposed PIMs are applicable to all consumers in Ontario, there are only a small number of PIMs proposed, and the PIMs are relatively simple in design and application.

In written comments submitted in January 2025, stakeholders expressed concern about the uniform implementation of PIMs. However, this proposed application of PIMs to all distributors does not necessarily mean blanket uniformity, as it is proposed that individualized PIM characteristics (e.g., targets, incentive levels) will be developed.

Some stakeholders said that electricity distributors should be able to suggest their own custom PIMs. The OEB proposes that all electricity distributors be subject to the "standard" PIMs developed through this consultation, but they will continue to be allowed to put forward additional custom PIMs as part of a cost-of-service application. These custom PIMs would be subject to the same regulatory scrutiny as all utility proposals in their applications and assessed against the same criteria used in this consultation (e.g., simplicity, ratepayer benefits and policy objectives). One stakeholder group also suggested that the OEB provide overarching guidelines or criteria to ensure consistency in how distributors develop and justify custom PIM proposals. The OEB will not be providing guidance on custom PIMs in this phase of the consultation (the development of a PIMs framework) but may consider guidance on the development of custom PIMs as part of a future consultation.

4.0 PROPOSED PIMs

This chapter presents the proposed PIMs for consideration. For each PIM, the characteristics of the PIM are presented along with the rationale for its inclusion and the pros and cons. An evaluation of the PIM against the selection criteria is also provided. The proposed PIMs are presented in such a way as to provide as much information as possible about their design, demonstrate transparency in the development process and give stakeholders an opportunity to offer input on each PIM's characteristics. This chapter also presents other PIMs not included in the list of proposed PIMs. These PIMs are provided to highlight the alternatives that were considered.

For each of the proposed PIMs, the following information has been provided:

- **Objective** – The secondary objectives the PIM aims to achieve. These secondary objectives are outlined in the introduction to this paper.
- **Outcome** – The outcome the PIM aims to achieve. These outcomes are intended to align with outcomes that consumers value.
- **Metric** – The unit of measurement that will be used.
- **Structure and Target** – The structure of the PIM (e.g., reward/penalty) and the target

for the PIM (the specific value the utility is trying to meet). For each of the proposed PIMs, it would be premature to develop the specific target value. To facilitate stakeholder comment, as much information as possible about the target has been provided at this stage; for example, whether the target will be individualized to each electricity distributor or how it might otherwise be set. The proposed methods for setting targets are presented in Section 5.1 of this paper.

- **Time Frame and Frequency** – The implementation time frame (e.g., immediately, phased-in, proposed year of implementation, etc.) and the frequency of measurement and updates (e.g. annual measurement, target updated at each rebasing, etc.). Again, it is too soon in the PIM development process to provide details on the proposed time frame and frequency for the PIMs. However, as much information as possible has been provided for stakeholders to respond to. A more detailed description of the proposed implementation timeline can be found in Section 5.4 of this paper.

- **OEB Foundation** – The OEB initiative the PIM builds on, if applicable (e.g., RRRs, RPQR etc.).

- **Similar PIMs** – The jurisdictions that have employed similar PIMs, if applicable.

- **Rationale** – The rationale for the proposed PIM.

- **Pros** – The advantages/opportunities that may arise from the implementation of the proposed PIM.

- **Cons** – The disadvantages/consequences that may arise from the implementation of the proposed PIM.

4.1 PIM 1 – System Utilization

Table 2 below provides an overview of the proposed PIM related to the objective of system capacity/electrification. This PIM is designed to incent more efficient use of electricity distribution systems by providing a financial reward for aligning the electricity demand in each hour with the maximum capacity of the system. This means that in periods where demand is typically lower than maximum capacity, additional demand is encouraged. In periods where demand is typically at maximum capacity, load is reduced or shifted. Over time, this reduces the ratio between peak and average demand, resulting in more cost-efficient, right-sized distribution system infrastructure. As overall load is forecasted to increase, efficient use of system assets is important to keeping costs down. Load factor is equal to the total energy delivered over a specified period (kWh) divided by the product of the total hours in the period and the maximum capacity of the system (kW).

The rationale for proposing this PIM includes:

- Load factor is a conceptually simple metric.

- Providing a financial reward to distributors would allow them to make economic decisions about how to invest in increasing system load factor. The PIM is proposed to be reward-only so that electricity distributors that don't have the leeway to affect load factor (e.g., less substantial DER penetration or customers with high peak demand) are not penalized.

- The PIM encourages the use of DER solutions (including demand management and storage) to reduce peak load as a strategy to improve load factor. Further encouraging use of DERs as a means of providing cost-effective service aligns with the Ontario government energy policy[3].

- The PIM provides an incentive to build an efficiently sized distribution system.

- An improved load factor could reduce distribution system costs.

It is recognized that there are disadvantages to implementing a PIM measuring load factor, including that electricity distributors do not have control over all aspects of the load factor of their systems. However, as stated above, this PIM is proposed to be reward-only to provide electricity distributors the opportunity for a financial reward for improvements in load factor, while not penalizing distributors for influences on load factor they are not able to control. This means, however, that distributors may also be rewarded for factors outside of their control (e.g., a customer with a large peak load leaving the service territory).

Another disadvantage of this PIM is that the required load factor metric is not currently reported by electricity distributors through the RRR process. Presently, winter and summer monthly non-coincident peak demand is reported but the required yearly peak demand is not. This additional requirement is not expected to result in a material change to distributor record keeping activities but may result in a marginal increase in reporting requirements.
Some of the activities that distributors could undertake to improve the load factor of its system include:

- Grid modernization investments, including improving load management or enabling greater DER use to manage system peaks.

- Distributor-administered demand management programs for high peak demand customers.

- EV managed charging programs.

- Procurement of storage by electricity distributors to be used on its system.

These activities generally align with the OEB's expectations for distributors related to DER integration and use set out in the FEI Working Group Report.

[3] Ontario's Affordable Energy Future: The Pressing Case for More Power, October 2024

Table 2: Characteristics of the Proposed System Utilization PIM

Secondary Objective	Outcome	Metric	Structure & Target	Time frame & Frequency
System Capacity/ Electrification	Incent more efficient system utilization	Load factor $\frac{Total\ consumption\ \left[\frac{kWh}{yr}\right]}{(Peak\ demand\ [kW]) * \left(8760\ [\frac{hours}{yr}]\right)}$	Reward-only Target set based on distributor historical performance	Implemented in rebasing applications filed no earlier than 2027 for 2028 rates Annual measurement through RRR process
OEB Foundation	**Similar PIMs**	**Rationale**	**Pros**	**Cons**
N/A	Hawaii, New York, Australia	1) Aligns with the Ontario government energy policy[4] and could address interest in non-wires solutions 2) Could reduce system costs	1) Simple metric that allows distributors to make economic decisions to invest in increasing system load factor, but does not punish distributors that do not have leeway to affect load factor (e.g., less substantial DER penetration) 2) Provides an incentive to build an efficiently-sized distribution system	1) Distributors do not have control over all aspects of their load factor 2) OEB reporting requirements would need to be updated to implement this PIM

As seen in Table 3 below, when evaluated against the nine design criteria, the system utilization PIM scores well against the criteria of consistency, simplicity, policy alignment and ratepayer benefits. This PIM earns a lower rating against the criteria of regulatory burden and existing data as the required load factor metric is not currently reported through existing OEB processes. However, as stated above this additional requirement is not expected to result in a

[4] Ontario's Affordable Energy Future: The Pressing Case for More Power, October 2024

material change to distributor record keeping activities but may result in a marginal increase in reporting requirements.

As can also be seen in the table below, system utilization is not completely in distributors' control and proportionality is yet to be determined as the level of the financial incentive has not been set. As can be seen in Appendix A, the objective of improving system capacity/electrification is also not an outcome that consumers value highly at this time, as they may not understand the cost savings that a more efficient system will provide.

Table 3: Performance of the System Utilization PIM against the Design Criteria

Design Criteria	Performance Against Criteria	Explanation/description
Consistency	Aligns well with criteria	This PIM does not build on any existing OEB initiatives. However, it is compatible with other OEB initiatives including the Framework for Energy Innovation 2.0: Non-Wires Solution Incentives (Margin on Payments) project and the DSO Capabilities consultation, as developing DSO capabilities can provide new means for ensuring reliable and cost-effective distribution services by introducing more tools and capabilities to reduce peaks and control load.
Distributor control	Aligns somewhat with criteria	Not all aspects of system utilization are in electricity distributor control, although more tools (non-wires solutions) are becoming available, including grid modernization technologies that allow distributors to manage their systems and address peaking issues through load shifting.
Existing data	Aligns somewhat with criteria	The information required to report load factor is tracked by electricity distributors, but load factor is not a reporting requirement.
Outcome	Aligns somewhat with criteria	System capacity/electrification is not one of the top outcomes that consumers value at this time. Please refer to Appendix A for a description of the outcomes that consumers value.
Policy alignment	Aligns well with criteria	This PIM aligns with the Ontario government energy policy[5] in encouraging/enabling the use of DERs.
Proportionality	TBD	Proportionality will be determined when the specific incentive levels are set. Proportionality will be

[5] Ontario's Affordable Energy Future: The Pressing Case for More Power, October 2024

		taken into consideration when setting incentive levels.
Ratepayer benefits	 Aligns well with criteria	This reward-only PIM has the potential to reduce system costs through reduced peaks and increased asset utilization, thereby providing a long-run benefit to ratepayers.
Regulatory burden	 Aligns somewhat with criteria	The load factor metric is not currently reported through RRR process. Therefore, these processes will have to be updated, to add a new reporting requirement.
Simplicity	 Aligns well with criteria	The PIM is simple, measurable and transparent, and allows electricity distributors the ability to make economic decisions on how to best utilize its distribution system.

4.2 PIM 2 – SAIDI

SAIDI, a reliability index used by electricity distributors, is the average cumulative outage duration for each customer served.

Table 4 below provides a summary of the characteristics of the proposed SAIDI PIM.

The rationale for proposing this PIM includes:

- Reliability is an outcome that consumers value. As seen in Appendix A, reliability was cited in consumer surveys and by stakeholders in their written comments as one of the top outcomes that consumers value. In addition, as seen in Appendix B, the most common outcome that stakeholders indicated that PIMs should be tied to was reliability.
- There is a strong foundation to build on. A methodology and timeline for setting SAIDI targets has already been established as part of the RPQR consultation. The addition of a financial penalty is a logical next step to improve electricity distributor reliability.
- A SAIDI PIM would not be unique to Ontario. SAIDI PIMs have been implemented in other jurisdictions including New York, Hawaii and Australia.[6]
- As electrification advances, having reliable electricity service will become increasingly important to consumers.

[6] Whether these reliability PIMs have been a success is difficult to say with any certainty. However, New York has had a reliability PIM for eight years. In Australia, a reliability PIM has been in place since 2006, measured by a combination of SAIDI, SAIFI and Momentary Average Interruption Frequency Index (MAIFI). According to the Australian Energy Regulator, between 2006 and 2020, the average duration of outages was reduced by 26 minutes (18 per cent) and the frequency of interruptions declined. Hawaii is evaluating its first generation PBR framework in place since 2021, which includes penalty-only SAIDI and SAIFI PIMs.

Despite this strong rationale, the OEB recognizes there are risks to implementing a SAIDI PIM. These risks include that electricity distributors do not have control over all aspects of reliability and a PIM tied to SAIDI may encourage excessive distributor spending to improve reliability beyond what consumers are willing to pay for. Some of these risks and stakeholder concerns will be mitigated by the enhanced approach to setting reliability performance targets outlined in a January 2025 letter from the OEB. OEB staff will continue to review additional reliability data submitted by distributors, such as interruption cause codes and feeder reliability, to evaluate the potential for additional reliability PIMs that address specific reliability issues.

As seen in Appendix B, some stakeholders also explicitly stated that PIMs should not be tied to the outcome of reliability, saying that reliability can largely be improved (if desired) through OEB communication of expectations and approval of well substantiated applications for investment to improve reliability.

Table 4: Characteristics of the Proposed SAIDI PIM

Secondary Objective	Outcome	Metric	Structure & Target	Time frame & Frequency
Reliability	Improve electricity distributor reliability	SAIDI	Penalty-only, based on Value of Lost Load Individualized electricity distributor targets based on comparison with peers	Consistent with RPQR process: Targets and penalties established starting in 2026 during cost-of-service process for each distributor
OEB Foundation	**Similar PIMs**	**Rationale**	**Pros**	**Cons**
1) RRR – SAIDI measured annually 2) RPQR – consistent with the outcomes of the RPQR stakeholder consultation 3) VASH – May employ a Value of Lost Load methodology based on the methodology established as part of the VASH consultation	New York, Hawaii, Australia	1) Reliability is an outcome that consumers value 2) There is a strong foundation of OEB work for developing a PIM 3) Reliability is a PIM used in other jurisdictions 4) Reliability is increasingly important as electrification advances	1) PIM is consistent with the outcomes of the RPQR stakeholder consultation 2) SAIDI is already measured through the RRR process and reported on the OEB electricity distributor Performance Scorecard	1) Electricity distributors do not have control over all aspects of reliability 2) PIM may encourage excessive spending in attempt to improve reliability

As shown in Table 5 below, when evaluated against the nine design criteria outlined earlier, the SAIDI PIM scores well against each of the design criteria except for distributor control and ratepayer benefits. In addition, proportionality has yet to be determined as the level of the financial incentive has not been set.

Table 5: Performance of the SAIDI PIM Against the Design Criteria

Design Criteria	Performance Against Criteria	Explanation/description
Consistency	 Aligns well with criteria	Builds on multiple OEB initiatives including RPQR consultation, VASH consultation and RRR and Performance Scorecard processes.
Distributor control	 Aligns somewhat with criteria	Although not all aspects of reliability are in distributor control, distributors have tools to influence reliability outcomes and RPQR has considered this in the methodology for setting targets.
Existing data	 Aligns well with criteria	Uses existing data measured by electricity distributors and reported to the OEB.
Outcome	 Aligns well with criteria	Reliability is an outcome that consumers value. Please refer to Appendix A for a description of the outcomes that consumers value.
Policy alignment	 Aligns well with criteria	Maintaining or improving SAIDI is increasingly important in the context of electrification.
Proportionality	TBD	Proportionality will be determined when the specific incentive levels are set. Proportionality will be taken into consideration when setting incentive levels.
Ratepayer benefits	 Aligns somewhat with criteria	Ratepayers may benefit from improved reliability. However, there is a risk that a PIM may encourage excessive distributor spending, and therefore rates, in an attempt to improve reliability.
Regulatory burden	 Aligns well with criteria	Does not cause large increase in regulatory burden for parties as metric is already tracked and reported.
Simplicity	 Aligns well with criteria	The PIM is simple, measurable & transparent. SAIDI is an internationally recognized standard and is currently measured by Ontario electricity distributors and reported publicly by the OEB.

4.3 PIM 3 – SAIFI

The table below provides an overview of the proposed SAIFI PIM. SAIFI is commonly used as a reliability index by electricity distributors. This index measures the average number of times that a system customer experiences an outage during the year or a given time period.

The rationale and characteristics of the SAIFI and SAIDI PIMs are the same but presented separately here for clarity.

Table 6: Characteristics of the Proposed SAIFI PIM

Secondary Objective	Outcome	Metric	Structure & Target	Time frame & Frequency
Reliability	Improve electricity distributor reliability	SAIFI	Penalty-only, based on Value of Lost Load Individualized electricity distributor targets based on comparisons with peers	Consistent with RPQR process: Targets and penalties established starting in 2026 during cost-of-service process for each distributor
OEB Foundation	**Similar PIMs**	**Rationale**	**Pros**	**Cons**
1) RRR – SAIDI measured annually 2) RPQR – consistent with the outcomes of the RPQR stakeholder consultation 3) VASH – May employ a Value of Lost Load methodology based on the methodology established as part of the VASH consultation	New York, Hawaii, Australia	1) Reliability is an outcome that consumers value 2) There is a strong foundation of OEB work for developing a PIM 3) Reliability is a PIM used in other jurisdictions 4) Reliability is increasingly important as electrification advances	1) PIM is consistent with the outcomes of the RPQR stakeholder consultation 2) SAIFI is already measured through the RRR process and reported on the OEB electricity distributor Performance Scorecard	1) Electricity distributors do not have control over all aspects of reliability 2) PIM may encourage excessive spending in attempt to improve reliability

Like SAIDI, when evaluated against the nine design criteria, the SAIFI PIM scores highly against each of the design criteria except for distributor control and ratepayer benefits. Once again, proportionality is yet to be determined as the level of the financial incentive has not been set.

Table 7: Performance of the SAIFI PIM Against the Design Criteria

Design Criteria	Performance Against Criteria	Explanation/description
Consistency	Aligns well with criteria	Builds on multiple OEB initiatives including RPQR consultation, VASH consultation and RRR and Performance Scorecard processes.
Distributor control	Aligns somewhat with criteria	Although not all aspects of reliability are in distributor control, distributors have tools to influence reliability outcomes and RPQR has considered this in the methodology for setting targets.
Existing data	Aligns well with criteria	Uses existing data measured by electricity distributors and reported to the OEB.
Outcome	Aligns well with criteria	Reliability is an outcome that consumers value. Please refer to Appendix A for a description of the outcomes that consumers value.
Policy alignment	Aligns well with criteria	Maintaining or improving SAIFI is increasingly important in the context of electrification.
Proportionality	TBD	Proportionality will be determined when the specific incentive levels are set. Proportionality will be taken into consideration when setting incentive levels.
Ratepayer benefits	Aligns somewhat with criteria	Ratepayers may benefit from improved reliability. However, there is a risk that a PIM may encourage excessive distributor spending, and therefore rates, in an attempt to improve reliability.
Regulatory burden	Aligns well with criteria	Does not cause large increase in regulatory burden for parties as metric is already tracked and reported.
Simplicity	Aligns well with criteria	The PIM is simple, measurable & transparent. SAIFI is an internationally recognized standard and is currently measured by Ontario electricity distributors and reported publicly by the OEB.

4.4 PIM 4 – Efficient DER Connections

Table 8 below presents the characteristics of the proposed efficient DER connections PIM. This PIM is designed to incent timely connections of DERs to distribution systems. One rationale for proposing this PIM is that there is a strong foundation to build on. During the DER Connections Review, stakeholders said the rules regarding the time frames and cost responsibility for DER connections were unclear and that technical requirements were undefined. In response, the OEB amended the Distribution System Code (DSC) to clarify the rules around connection of DERs to local electricity distribution systems. The addition of financial incentives around these connection timelines is a logical next step to providing clear and consistent connection timelines for consumers.

Another rationale for proposing this PIM is that it aligns with government policy[7]. The inclusion of this proposed PIM is also consistent with stakeholders' view that PIMs should be tied to government policy objectives. Some stakeholders specifically suggested a PIM related to timely connection of DERs in written comments submitted in January 2025.

The OEB acknowledges that there are disadvantages to implementing a PIM related to connecting DERs, including that electricity distributors do not have control over all aspects of the connection process. However, these delays may be mitigated in the final PIM design by, for example, excluding delays caused by customers. In addition, while DER connection timeline requirements from the OEB do exist (e.g., in the RRR and DSC) the time taken to connect a DER may not be tracked and reported by electricity distributors in a way that is sufficient to support the implementation of a DER connections PIM. Any additional tracking and reporting requirements introduced will increase regulatory burden.

Table 8: Characteristics of the Proposed DER connection PIM

Secondary Objective	Outcome	Metric	Structure & Target	Timeframe & Frequency
Efficient Connections	Incent timely connection to DERs	Average time it takes between when a customer requests DER connection and when the distributor actually connects them	Reward-only or symmetrical Targets set based on policy goals	Implemented in rebasing applications filed no earlier than 2027 for 2028 rates Annual measurement through RRR process
OEB Foundation	**Similar PIMs**	**Rationale**	**Pros**	**Cons**
1) DER Connections Review 2) FEI	Hawaii	1) There is a strong foundation of OEB work for developing a PIM 2) Aligns with government policy	1) Relatively easy to measure 2) Aligns with government policy	1) Electricity distributors do not have control over all aspects of DER connections

[7] Ontario's Affordable Energy Future: The Pressing Case for More Power, October 2024

			3) PIM suggested by stakeholders in written comments 4) Consistent with stakeholders' views that PIMs should be tied to government policy objectives	2) May not be tracked and reported by electricity distributors in a way that is sufficient to support the implementation of a PIM

As seen in Table 9 below, when evaluated against the nine design criteria, the DER connection PIM scores well against the criteria of consistency, simplicity and policy alignment. However, this PIM scores lower against the criteria of regulatory burden and existing data as despite existing requirements, this metric may not be tracked and reported in a way that is sufficient to support the implementation of a DER connections PIM. Like the other proposed PIMs, the connection of DERs is not completely in distributors' control and proportionality is yet to be determined as the level of the financial incentive has not been set. In terms of ratepayer benefits, this PIM provides a direct benefit only to those customers who seek to connect DERs, but does provide an indirect benefit to all customers in that it may make DERs more attractive, feasible, less uncertain. In addition, efficient connections to the electricity system is not an outcome that all consumers value highly at this time, but this may increase as the use of DERs becomes more prevalent.

Table 9: Performance of the DER connection PIM against the PIM design criteria

Design Criteria	Performance Against Criteria	Explanation/description
Consistency	Aligns well with criteria	Builds on multiple OEB initiatives, including the DER Connections Review, which addressed barriers to the connection of DERs and where appropriate, standardized and improved the connection processes. This PIM also builds on the FEI consultation, which set an expectation for distributors, not only to use DERs for non-wires solutions, but also to enable integration of DERs where customers want to adopt them for their own reasons.
Distributor control	Aligns somewhat with criteria	Not all aspects of DER connection are in the control of electricity distributors
Existing data	Aligns somewhat with criteria	Despite existing requirements, this metric may not be tracked and reported in a way that is sufficient to support the implementation of a DER connections PIM.
Outcome	Aligns somewhat with criteria	Efficient connections are not an outcome that all consumers value highly at this time.

Design Criteria	Performance Against Criteria	Explanation/description
Policy alignment	 Aligns well with criteria	This PIM aligns with the Ontario government energy policy[8] in encouraging/enabling the use of DERs.
Proportionality	TBD	Proportionality will be determined when the specific incentive levels are set. Proportionality will be taken into consideration when setting incentive levels
Ratepayer benefits	 Aligns somewhat with criteria	This PIM provides a direct benefit to only those who seek to connect DERs, but also provides an indirect benefit to all customers in that it may make DERs more attractive, feasible, less uncertain, etc. This PIM may however increase distributor spending on connections to meet PIM targets.
Regulatory burden	 Aligns somewhat with criteria	Despite existing requirements, this metric may not be tracked and reported in a way that is sufficient to support the implementation of a DER connections PIM therefore increasing regulatory burden.
Simplicity	 Aligns well with criteria	The PIM is simple, measurable and transparent.

4.5 Other PIMs Considered

Additional PIMs that were considered are presented in Table 10 below, along with the reason they were not included.

Table 10: Other PIMS Considered

Policy Objective	Metric	Reason Not Included
Reliability	Feeders Experiencing Sustained Interruptions	Only some electricity distributors track this metric as its collection is voluntary. Reliability is already measured by SAIDI and SAIFI metrics.
Resiliency	Customers Experiencing Long Interruption Durations	Difficult to conclude which aspects of restoration are attributable to electricity distributors. SAIDI and SAIFI provides similar information but at a system level.

[8] Ontario's Affordable Energy Future: The Pressing Case for More Power, October 2024

System Capacity – DERs	kW capacity of grid services acquired	Electricity distributors are not in control of how many of their customers wish to connect DERs, which directly impacts their ability to acquire services from DERs. Distributor programs and procurements alone may be insufficient to justify deployment of DERs. An alternative system capacity metric related to system utilization is proposed that will capture peak load management related to DERs.
System Capacity – Peak load reduction	Reductions from baseline weather normalized coincident system peak in MW	An alternative system capacity metric related to system utilization is proposed.
System Capacity – Line losses	Reduced line losses	A study conducted by Hydro Ottawa indicated that the cost to reduce line losses generally exceeds the benefit to customers. Therefore, there is a risk that such a PIM would not provide net benefits to customers.
Resiliency/Customer Service	Difference between average estimated time of restoration and actual restoration time	The OEB is not planning a metric for average time to restore yet. More data is required to ensure that the metric would not drive the wrong behaviour by encouraging the distributor to delay its estimated time of restoration until it's sure it can meet it. This would result in customers getting information too late.
Efficient Connections	Average time frame between when a customer requests a new electricity connection for housing and when the distributor actually connects them	This PIM may be redundant as there are already certain timeline requirements for customer connections. This PIM does not address the underlying issue of speeding up housing connections, which research and stakeholder feedback suggests occurs before connection requests and involves collaboration between developers and distributors.

There was uncertainty whether the housing connection PIM, presented in the table above, should be rejected at this stage of the APBR-PIMs consultation. Like the DER connections PIM, the housing connection PIM has a strong policy rationale, is consistent with stakeholders' views that PIMs should be tied to government policy objectives, and was proposed by some stakeholders in written comments.

A concern with implementing a housing connection PIM is that the proposed metric does not address the underlying issue to improve the pace of housing connections. Research and stakeholder feedback through the System Expansion for Housing Developments consultation suggests that the delay in connecting occurs before connection requests and involves collaboration between developers and distributors. Without a requirement for distributors to complete the system capacity planning and building phase of the housing connection process

within a specific time period, it is perhaps premature to implement a PIM related to housing connections. It should be noted that while a housing connection PIM is not being proposed, electricity distributor performance related to customer connections is mandated through the DSC[9].

4.6 Objectives Not Directly Addressed by Proposed PIMs

As stated in Section 1.3 of this paper, less emphasis was placed on developing proposed PIMs that addressed the objectives of cost control/efficiency and affordability as these objectives are addressed by other OEB regulatory and rate-making tools. As seen in Table 10 – Other PIMs Considered, an attempt was made to develop PIMs related to each of the secondary objectives. However, the OEB recognizes that the proposed PIMs do not address the secondary objectives of customer service and resiliency.

Both the customer surveys undertaken by distributors and included in their rate applications, and stakeholder feedback, indicated that customer service is an important outcome that customers value. However, the OEB does not believe that a PIM addressing customer service is necessary at this time, as customer focus is already a performance outcome on the Performance Scorecard and distributors are generally performing well with regards to these metrics. In addition, there are enforceable customer service requirements (e.g., on-time visits, written/timely responses to complaints, etc.) in the DSC.

With regards to the resiliency objective, as stated in Section 1.3 and shown by the customer surveys, reliability and resiliency are often considered together. There are two proposed PIMs related to reliability. In addition, the OEB is undertaking a number of consultations related to resiliency. Therefore, there may be opportunities for the development of resiliency PIMs in the future, depending on the outcomes of these consultations.

5.0 IMPLEMENTATION OF THE PIMs

This chapter provides an overview of the proposed process for administering the PIMs as well as the proposed approach to setting targets and incentive levels for the PIMs. A proposed timeline for implementation is also included. This chapter is intended to provide a high-level introduction to the process for implementing/operationalizing the PIMs for stakeholder consideration and feedback. The description of the target and incentive setting, timeline and administrative process are kept intentionally generic to not presuppose the final PIMs that will be implemented. The final implementation details will be established following publication of the final PIMs framework. The OEB will work with stakeholders, including through working group(s) to develop these implementation details.

[9] The DSC sets out detailed timelines for responding to connection requests and completing connections on a timely basis once all applicable service conditions are met. In a November 2024 bulletin, OEB staff also provided guidance and expectations for licensed electricity distributors in meeting their regulatory obligations to ensure timely customer connections. These expectations will be taken into consideration by OEB staff in any compliance review or inspection regarding new load connections.

5.1 Target Setting

This section describes the proposed approaches for setting PIM targets.

When asked about targets for PIMs, stakeholders in their written comments provided a variety of responses. In general, the consumer and social interest groups agreed that the target established for a PIM should have the following characteristics: encourage continuous improvement, be set in consultation with utilities and other stakeholders, and be reviewed every one to two years. In general, the utility representatives that commented on targets said they should be utility specific and/or established by the utility, adding that any target established should not be based on benchmarking of the utilities.

A PIM administers a reward (or penalty) to a distributor for the achievement of (or failure to achieve) certain pre-determined targets. Targets must be reasonable and achievable. The determination of these targets should be based on economic principles and data. There are three general methods for setting PIM targets:

1. Based on the distributor's own past performance.
2. Based on the distributor's performance in comparison to its peers.
3. Based on quotas or levels set by policy.

Whether to use a particular one of these methods depends on the type of PIM, data availability and the details of the objectives the PIM aims to address. It is also possible that these target setting methods can be used in combination (e.g., using both the distributor's past performance and its performance in comparison to peers to set targets).

5.1.1 Based on Utility's Own Past Performance

A distributor's past performance has been used to set PIMs in other jurisdictions. A common example of this approach is to set a baseline using average historical performance, perhaps over five or 10 years of history. A threshold might then be set according to one or two standard deviations apart from this average. A threshold set according to mean and variance information assumes that past performance reflects a reasonable range of performance in the future. It also assumes that a penalty or reward is warranted when performance deviates sufficiently from historical average performance.

One reason for using a distributor's own past performance is that cross-company comparisons do not accurately reflect its unique operating conditions. Different distributors operate in different physical environments, are at different stages of their capital cycle, have different systems and serve different customer mixes. All of these factors may affect the distributor's performance relative to its peers.

Another advantage of the historical performance approach is simplicity and data availability. When comparing companies, the PIM threshold may require a regression model or some other means of controlling for certain factors. This introduces the possibility of disagreements regarding technical design, as well as data requirements that could be burdensome. Simple historical averages mitigate this problem.

However, using the distributor's own data in setting performance thresholds controls for some factors, but not all. Past performance may differ from the future as a result of system changes, even within the same distributor. For example, system upgrades might improve reliability and reduce the standard deviation of reliability measures. Conversely, changing climate conditions may reduce reliability relative to the past.

Another possible shortfall of this approach is that a distributor's past performance may be better or worse than peer companies for reasons within management's control, and as a result, this method could set penalty or reward threshold levels above or below what is reasonable. For example, if a distributor works hard to maintain a high level of reliability over time, and then a SAIDI PIM is imposed, it may be punished for good historical performance in the form of challenging target levels. Similarly, if the distributor knows that future PIM targets will be based on current performance, management has some ability to manage SAIDI levels for future benefits.

It is proposed that this past performance method be used as a basis for the System Utilization PIM (PIM 1).

5.1.2 Based on Comparison to Peers

Setting PIM thresholds according to peers involves comparing a distributor's performance on specific metrics with the average performance of similarly situated peer utilities. For example, a threshold may be set based on the current year industry average and standard deviation values, rather than the distributor's own historical average.

Targets based on cross-sectional peer performance reflect current conditions and the experience of customers served by distributors regionally. These targets may be more relevant because of the use of contemporaneous data, rather than data from five or 10 years in the past. As well, if the goal is to provide similar service quality for all customers, regardless of distributor-specific conditions, the peer benchmarking approach is a more relevant measure. Notably, where distributor-specific historical PIM thresholds offer benefits, peer-based thresholds may present corresponding drawbacks, and vice versa. Thus, whereas distributor-specific thresholds may involve some endogeneity, peer-based thresholds are strictly exogenous. This means that a distributor that performs well relative to its peers is not punished for its good performance.

Drawbacks to the peer benchmarking approach include increased complexity and the possibility that targets are not set relative to a distributor's operating conditions. Performance benchmarking across distributors requires more data and the use of more technical methods, increasing the complexity and potential administrative burden.

As part of the RPQR consultation, the OEB has established a methodology for benchmarking reliability for all Ontario's electricity distributors. This reliability benchmarking methodology aims to control for distributor-specific factors, thereby reducing one potential drawback of using this method for a reliability PIM.

The OEB proposes that this reliability benchmarking methodology, along with an examination

of the distributor's own past performance, will be used to establish the targets for any SAIDI and SAIFI PIMs (PIM 2 and PIM 3), with any PIM tied to each distributor's specific target rather than the benchmarking. This target setting methodology will be consistent with the enhanced approach to setting reliability performance targets set out in the January 2025 letter.

5.1.3 Based on Quotas or Policy

In some cases, industry standards may set PIM targets irrespective of distributor historical data or sector-wide cross-sectional data. For example, if a goal of connecting new DER customers within a certain number of days has been set, a distributor's past performance, or the performance of its peers in making these connections, may not be relevant. In such cases, data may be considered to frame the target, even if the data is not explicitly used to calculate a specific target value.

This approach may be used because of data limitations. It may also be the case that empirical information is deemed less relevant for the purposes of determining targets, as the goal is to achieve a set target regardless of current or past distributor performance. A drawback, however, is that stakeholders may dispute targets not based on concrete data.

Because past distributor-specific performance, or peer performance, may not pertain to the objective of efficient connections for DERs, it is proposed that the DER connections PIM (PIM 4) use this thresholds-based method of setting the target.

5.1.4 Determining Target Values

Setting the values for the targets will be an empirical data-based exercise undertaken by the OEB. The targets for SAIDI and SAIFI will be set by the enhanced approach for setting reliability performance targets provided in the January 2025 letter. It is proposed that the target values for other PIMs would be developed by the OEB in consultation with existing OEB working groups or a new working group established for the purposes of designing and implementing PIMs. These targets will initially be set outside of the rebasing process so as to not add regulatory burden to the rebasing proceedings.

5.2 Incentive Level Setting

As stated in the design criteria in Section 3.3, the financial reward or penalty of a PIM should be set proportionate to the value of achieving the performance outcome. The most economically efficient approach involves quantifying the marginal benefit of performance improvements to consumers, inclusive of relevant externalities, as well as the marginal cost to the distributor. The difference between this marginal benefit and marginal cost equals the net marginal benefit of crossing the PIM penalty or reward threshold. This value, applied as a financial incentive (i.e., a penalty or reward), provides an efficient market signal that will drive distributor behaviour toward socially optimal outcomes. If spending on crossing a PIM reward threshold is not worth the cost to the distributor, the distributor will forgo the effort to achieve the PIM, and will not receive the reward. Likewise, if spending on the avoidance of crossing a PIM penalty threshold exceeds the penalty amount, the distributor would opt to pay consumers the penalty amount. In either case, the outcome is economically efficient for the distributor and consumers, assuming the net benefit is calculated accurately.

Quantifying the net marginal benefit of crossing a PIM threshold requires some empirical work to evaluate the cost to distributors of achieving the performance targets and the resulting benefits of that action. For example, a PIM based on SAIDI, the benefit of improved reliability – or the harm to consumers of worse reliability – could be quantified through a Value of Lost Load methodology, if available.

The OEB proposes to conduct this empirical work to determine the incentive levels (penalty and/or reward). These incentive levels will be established in tandem with the PIM targets and both the target values and incentive levels applied when distributors submit rebasing applications. It is proposed that this incentive setting process take place outside the rebasing process as to not add regulatory burden to the rebasing proceedings.

To allow for stakeholder input on incentive levels (penalties and rewards), the OEB proposes to consult with stakeholders via stakeholder working group(s). Various types of stakeholders (electricity distributors, industry associations, consumer groups, social interest groups and private companies) will be invited to be part of the working group(s) and be tasked with working with the OEB to establish incentive levels (and targets as required) for each of the PIMs.

For illustrative purposes, the table below provides examples of the incentive levels established in other jurisdictions. This information is from the jurisdictional scan developed earlier in this consultation. It should be noted that these PIMs are not the same as the ones proposed for Ontario and the administration of the PIMs (how the penalty or reward is applied) may not be consistent with what is proposed in this paper. These values are only intended to provide an illustration of the range of incentive levels found in other jurisdictions.

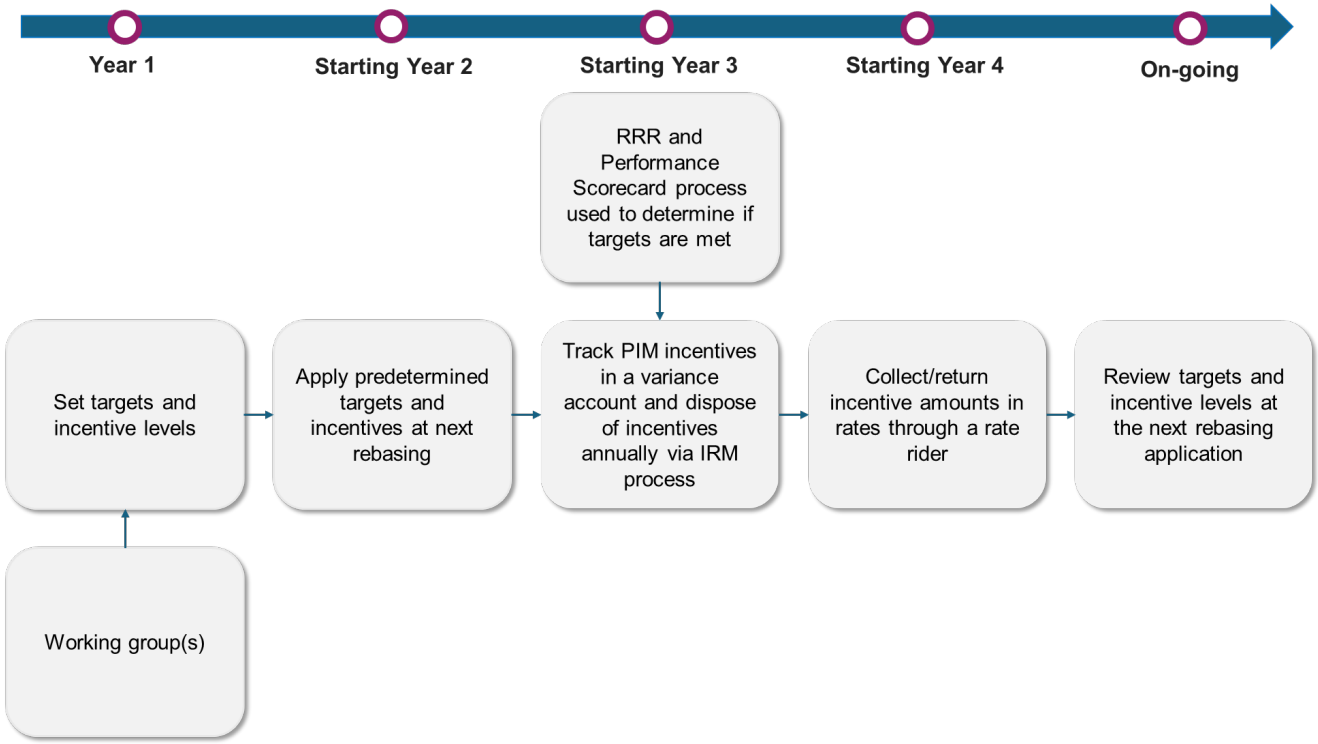
Table 11: Examples of Incentives Levels in Other Jurisdictions

Utility/Jurisdiction	PIM	Incentive level
New York (Con Edison)	Incent the company to work with DER providers and expand use of DERs.	Reward: The company will receive three to 10 basis point return on Return on Equity (US$4.356 million to US$14.518 million) if targets are met. Penalty: None.
Hawaii	SAIDI/SAIFI	Reward: None. Penalty: Maximum revenue exposure of 20 basis points on earnings.
Australia	Reliability measured by a combination of SAIDI, SAIFI and MAIFI.	Reward/Penalty: The rewards for improving reliability (and the penalties for declines in reliability) are based on the value that customers place on improved reliability. The Australian Energy Regulator conducts a Values of Customer Reliability study to determine how different customer groups value reliability. These values are updated annually based on inflation and changes in customer preferences.

5.3 Administration of the PIMs

The final step in the development of a PIM is to determine the mechanism or process by which the targets and incentives (rewards and/or penalties) are administered. A high-level overview of the proposed process for administering the PIMs is presented in Figure 3 below.

Figure 3: Administration of PIMs



10

The criteria considered when developing this proposed process were:

- **Simplicity** – The process is simple and transparent.
- **Mechanistic** – The stages in the process are automatic and/or operate in the same way during each iteration.
- **Existing process** – The process builds on existing tracking and reporting, rate-setting and accounting processes employed by the OEB.
- **Regulatory Burden** – The process does not cause a large increase in administrative burden for electricity distributors or stakeholders.
- **Ontario Specific** – Takes into consideration the unique nature of the Ontario electricity distribution sector (e.g., many distributors).

[10] Staff is of the view that, due to the predetermined and mechanistic nature of the incentives, disposition via the IRM would not require a prudence review.

It is proposed that this process will be the same for each PIM. However, each PIM may not be implemented starting at the same time. See Section 5.4 below for the proposed implementation timelines.

This proposed approach is considered more mechanistic, simplistic and less burdensome than the other possible approaches to administering targets and incentives associated with a PIM, including an adjustment to the utility's Return on Equity and a new variable in the I-X formula.

5.4 Implementation Time Frame

As seen above, it is proposed that the PIMs be implemented on a rolling basis through individual rebasing applications (rather than PIMs taking effect for all distributors on a certain date).

In their written comments, stakeholders expressed mixed views about what the appropriate timelines would be for the implementation of PIMs. However, stakeholders generally agreed that the development of PIMs and a PIMs framework takes time.

Some stakeholders (both utility and non-utility) suggested a phased approach to the development and implementation of PIMs, while other stakeholders (consumer and social interest groups) stated that it is premature to be developing PIMs and that a stakeholder working group and/or piloting is required. Other stakeholders, including social interest groups and distributors, said the implementation of PIMs should wait until a distributor rebases.

With regards to specific PIMs, the time frame for the implementation of any SAIDI and SAIFI PIMs will be consistent with the timing provided in the January 2025 letter. This letter states that targets will be applied to distributors' Performance Scorecards when they submit rebasing applications, starting with applications filed in 2026, for determination of rates effective in 2027. It is proposed that incentive levels (e.g., penalties) will also be established on this timeline and applied in tandem with the targets.

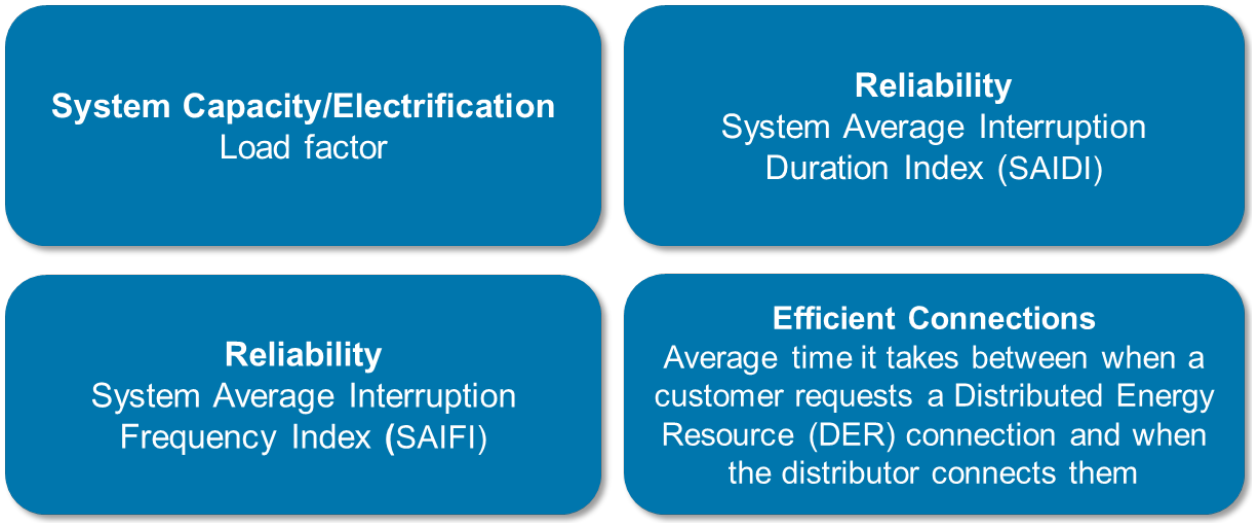
Other proposed PIMs would require more work to establish targets, data tracking and reporting requirements before they can be implemented. Therefore, it is proposed that these PIMs would be implemented in rebasing applications filed no earlier than 2027 for 2028 rates.

6.0 CONCLUSIONS AND NEXT STEPS

This paper presents proposed PIMs and a proposed implementation process for stakeholder review and feedback.

The proposed PIM(s) would only apply to electricity distributors. PIMs for other rate-regulated utilities may be considered at a later date.

The four proposed PIMs are:



These PIMs were developed based on:

- The jurisdictional scan developed earlier in the consultation and supplementary research on PIMs implemented in other jurisdictions and not covered in the jurisdictional scan.
- Stakeholder feedback from the November 19, 2024, consultation meeting and related materials.
- A review of outcomes consumers value from customer surveys as part of recent cost-of-service applications by electricity distributors.
- Examination of related OEB initiatives and processes.

Although implementation details will need to align with the final PIMs, the OEB is proposing the following high-level implementation process for stakeholder consideration:

- Initial individualized targets, penalties and rewards will be established for PIMs through further consultation with stakeholders via working group(s) (leveraging targets already developed through other OEB consultations). This would take place as a second phase of this APBR-PIMs consultation.

- PIMs will be implemented on a rolling basis, at each distributor's next rebasing. Depending on the PIMs, this may start in 2026 for 2027 rates. Deferral accounts will be used to track and disburse penalties and rewards each year as part of IRM filings.

- Going forward, targets will be updated consistent with the established methodology, as part of rebasing applications.

Stakeholders are asked to provide feedback on these proposed PIMs and the high-level implementation process via the next steps described below:

- A stakeholder consultation meeting will be held to present and discuss the proposals presented in this paper.

- Written feedback will be requested from stakeholders following the meeting.

- Following the stakeholder meeting and written feedback, the OEB will refine the PIMs and implementation process.

- A final PIMs report (PIMs Framework) presenting the PIMs and implementation process will be issued.

Appendix A – Outcomes Consumers Value

The overall objective of the Advancing PBR-PIMs work is to strengthen the link between what electricity distributors earn and the achievement of outcomes consumers value. To determine what outcomes consumers value, the customer surveys filed as part of the most recent rate cases for the following seven electricity distributors were reviewed:

- Algoma Power Inc.
- Bluewater Power Distribution Corp.
- Essex Powerlines Corp.
- InnPower Corp.
- Synergy North Corp.
- Tillsonburg Hydro Inc.
- Toronto Hydro-Electric System Ltd.

It should be noted that a standard survey or a common definition of the outcomes are not used by electricity distributors. The outcomes that customers are asked about are often provided to respondents as a list by the electricity distributor and consumers are not able to choose or define the outcomes. In addition, the questions that distributors ask are not framed in the same way. For example, some surveys ask about outcomes with regards to areas of improvement, while others ask customers about the specific outcomes they value. These factors make comparisons between the surveys difficult. However, some high-level conclusions can be drawn from these survey results.

A review of the surveys showed that the most common outcomes that consumers value are:

- Reliability (which in some instances also included resiliency)
- Affordability/cost/price
- Customer service/experience/communication

Other outcomes that were also identified in the surveys as outcomes customers value included: environment, DERs, renewables, power quality, system efficiency, governance, new technologies/innovation, safety and compliance, and data protection.

In 2022, the OEB also conducted a survey to support its RPQR work, gathering input from Ontario residential, commercial and industrial customers about their expectations for electricity system reliability. The survey revealed that customers want a better understanding of their distributor's system reliability. Additionally, 80% of respondents stressed the importance of knowing how their distributor's reliability compares to others in Ontario. In July 2024, the OEB also conducted surveys of residential and non-residential customers to better understand their experience and expectations regarding the communications they receive from their electricity distributors throughout major weather events. The results of the surveys highlighted the importance for customers to receive timely and accurate information, enabling them to stay prepared and ensure their safety during prolonged power interruptions.

In addition to these customer survey analyses, the OEB asked stakeholders as part of their written submissions in response to the November 19, 2024, stakeholder meeting to identify which outcomes, in their opinion, consumers value. The OEB received written comments from 14 stakeholders. Four sets of comments were from electricity distributors or distributor associations, four were from consumer groups, four were from social interest groups and two were from private companies. There was general agreement among all stakeholders on which outcomes customers value, with each of the eight stakeholders that commented on this question citing affordability. This outcome was followed by reliability and customer service. Other outcomes that stakeholders stated were valued by consumers included: alignment with government policy, resiliency, safety, preparedness for the energy transition, environmental considerations, and timely and affordable utility processes and connections.

From the surveys and customer comments it can be reasonably concluded that the three most valuable outcomes to electricity distribution customers are reliability, affordability and customer service.

Appendix B – Summary of Stakeholder Feedback

On November 19, 2024, the OEB held a stakeholder meeting to discuss the actions the OEB can take to advance its performance-based approach to rate-setting. Specifically, the meeting discussed:

- The findings of a jurisdictional scan on utility remuneration models.
- The approach the OEB will take to evolving its performance-based rate regulation with PIMs.
- The need for a more fundamental, longer-term review of the OEB rate regulation regime.

Approximately 120 participants registered for this event, representing over 50 organizations, including electricity distributors, industry associations, consumer groups, social interest groups and private companies.

Stakeholders were also given the opportunity to submit written comments on these topics following the stakeholder meeting. The OEB received written comments from 14 stakeholders. Four comments were from electricity distributors or distributor associations, four were from consumer groups, four were from social interest groups and two were from private companies. All the written comments are posted on the Engage with Us webpage for this consultation.

A summary of the comments that relate to the development of PIMs is presented below. These comments are also reflected throughout this paper to demonstrate how they were taken into consideration when developing the proposed PIMs and implementation design.

Of the written submissions received, six explicitly stated they were in favour of PIMs. Those in favour generally represented consumer or social interest groups. Three of the written submissions did not explicitly comment on PIMs. One social interest group explicitly stated they were not in favour of the development and implementation of PIMs for electricity distributors as they can create excessive focus on certain activities, resulting in reduced attention to essential outcomes such as cost, reliability and customer service. While stakeholder groups representing distributors and distributor associations did not completely oppose the concept of PIMs, they emphasized the need for clarification around what objectives and policy problems any new performance-based measures would seek to address. Furthermore, these stakeholders provided very specific conditions under which a PIMs regime should be designed and implemented should the OEB decide to proceed in this direction.

Stakeholders were asked to describe the most important considerations to keep in mind when developing PIMs. Of the 10 stakeholders that explicitly answered this question, the majority agreed that simplicity, transparency and measurability were the most important considerations. Other considerations that stakeholders thought the OEB should keep in mind when developing PIMs included: supportive of government policy, in direct control of the distributor, specific and targeted, appropriately impacts utility behaviour, clear and compelling case for a PIM, appropriately sized incentives and symmetrical in structure.

Stakeholders were asked for their opinion on which outcomes consumers value the most. As described in Appendix A, there was general agreement among all stakeholders on which outcomes consumers value, with each of the eight stakeholders that explicitly commented on this question saying affordability. This outcome was followed by reliability and customer service. Other outcomes that stakeholders stated were valued by consumers included: alignment with government policy, resiliency, safety, preparedness for the energy transition, environmental considerations, and timely and affordable utility processes and connections.

Despite agreement on what outcomes consumers value, there was limited agreement on which outcomes PIMs should be tied to. Nine stakeholders commented on this question explicitly. The most common outcome stated by stakeholders was reliability (by five stakeholders, two consumer groups, two social interest groups and a private company), followed by affordability (by four stakeholders – consumer and social interest groups) and then customer service, including low-income specific considerations (by three stakeholders – consumer and social interest groups). Other outcomes mentioned by stakeholders included: government objectives, activities beyond current core utility functions or regulatory constructs, timely and affordable connections, reduction in line losses, beneficial electrification, future-proofed infrastructure, climate change mitigation and resilience. Some stakeholders also provided feedback on which outcomes they thought PIMs should not be tied to. For example, an industry association representing electricity distributors stated that PIMs should not be tied to the outcomes of affordability and reliability.

Stakeholders were asked to provide feedback on which PIM structure/design would be most suited to Ontario considering the existing rate-regulation framework. There was limited agreement among stakeholders on the most appropriate PIMs design/structure. Twelve stakeholders commented directly on the structure of the PIMs. Four of them (consumer and social interest groups) stated that the PIMs should be symmetrical while four others (electricity distributors and a private company) said the PIM structure should be reward-only. Other feedback received on PIM structure/design included:

- PIMs should build on the existing scorecards or employ a scorecard approach.
- More research and piloting is needed before the structure of the PIMs can be developed.
- Incentives should not be tied to Return on Equity.
- Incentives should impact the Incremental Review Module stretch factor.
- PIMs should have their own standalone framework.
- PIMs should be developed only at the time of rebasing.
- The structure of PIMs should depend on performance incentive being measured.

There was agreement among stakeholders that PIMs should not be applied uniformly to all electricity distributors. None of the eight stakeholders that commented on this question thought

that PIMs should only be applied to the distributors uniformly. The majority of stakeholders suggested that there should not be uniformity, while others stated that there should be some combination of uniform and non-uniform PIMs, and/or the option for custom PIMs in addition to uniform PIMs. Another stakeholder said guidelines should be provided to distributors on how to include PIMs in applications. Guidance was also suggested for how PIMs would impact mergers and acquisitions. More research and piloting were also recommended, along with the suggestion that distributors not be benchmarked as part of the development of PIMs.

When asked what the appropriate timelines would be for the implementation of PIMs, there was general agreement among the eight stakeholders that responded to this question that the development of PIMs and a PIMs framework takes time. Some stakeholders (both utility and non-utility) suggested a phased approach to the development and implementation of PIMs, while other stakeholders (consumer and social interest groups) stated that it is premature to be developing PIMs and that a stakeholder working group and/or piloting is required to develop PIMs and a PIMs framework. Other stakeholders, including social interest groups and distributors, said the implementation of PIMs should wait until a distributor rebases.

Stakeholders were asked how baseline performance levels for PIMs should be established, and how frequently targets should be reviewed. In general, the consumer and social interest groups that commented on targets agreed that the target established for a PIM should have the following characteristics: encourage continuous improvement, be set in consultation with utilities and other stakeholders and be reviewed every one to two years. In general, the distributor representatives that commented on targets stated that targets should be distributor specific and/or established by the distributor, adding that any target established should not be based on benchmarking of the distributors.

Stakeholders were asked how PIMs account for factors such as weather outside of distributor control. Few stakeholder comments were provided in response to this question. In general, the stakeholders that responded agreed that the impact of factors outside of distributor control should be accounted for and mitigated.