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June 12, 2015

**To: All Rate-Regulated Electricity Distributors
All Participants in Consultation Process EB-2012-0383
All Other Interested Parties**

**Re: Review of Cost Allocation Policy for Unmetered Loads
OEB File No. EB-2012-0383**

Issuance of New Cost Allocation Policy for Street Lighting Rate Class

The purpose of this letter is to outline the Ontario Energy Board's (OEB's) new policy regarding the cost allocation for two major types of street lighting configurations, namely, one-device-per-connection (1:1) systems, and multiple-device-per-connection (daisy-chain) systems. A new "street lighting adjustment factor" will be used to allocate costs to the street lighting rate class for primary and line transformer assets. The street lighting adjustment factor replaces the "number of connections" allocator. The OEB will implement the policy changes during either a distributor's cost of service or custom incentive rate-setting (Custom IR) application, with a few exceptions as discussed below.

As a related matter, effective immediately the OEB is narrowing the revenue to cost ratio policy range for the street lighting rate class from the range of 70%-120% to 80%-120%. This change is consistent with views expressed in the [Report of the Board: Review of Cost Allocation for Unmetered Loads](#) (Unmetered Loads Report), issued December 19, 2013.

Background

On August 21, 2014, the OEB announced that it was launching a review of the cost allocation for different types of street lighting configurations. The OEB engaged Navigant Consulting Limited (Navigant) to examine the utility and municipality assets, and associated costs, required to serve the various street lighting configurations. As well, Navigant was tasked with assessing the existing methods used to allocate costs and to propose changes to the cost allocation methodology in order to improve the cost allocation to the various street lighting configurations.

Navigant solicited input from a number of distributors, municipalities, and other industry associations in addressing the key objectives of the study. The Navigant study, [Cost Allocation to Different Types of Street Lighting Configurations](#), has been posted on the OEB's website.

In parallel with the Navigant study, the OEB reconvened the Unmetered Loads Working Group to review and provide feedback on the recommendations proposed by Navigant.

Navigant Study Findings and Recommendations

Navigant's research and analysis showed that street lighting has an equivalent impact on the primary and line transformer assets of the distribution system, regardless of the street lighting configuration. This is because the primary system assets are designed to meet peak load demand and street lighting customer class demand is not considered in design considerations for peak load because it is not material enough to affect primary system design. As a result, the Navigant study recommends adjustment to the number of connections used for the cost allocation of the primary system and line transformer costs using a "street lighting adjustment factor" that more accurately reflects the equivalent use of assets by both types of street lighting configurations.

The street lighting adjustment factor is calculated as the ratio of (i) the four highest monthly non-coincident peak demands (NCP4) for the residential customer class divided by the number of residential customers, and (ii) the NCP4 for the street lighting customer class divided by the number of streetlight devices.

Navigant also found that the secondary assets (excluding line transformers) and their usage are not the same for the two types of street lighting configurations. The degree and amount of asset ownership by distributors is usually lower for daisy-chain systems than 1:1 systems. The purpose of the secondary system also differs from the primary system in that the secondary has a greater focus on making customer connections, while the primary is more concerned with serving peak load. The Navigant study concluded that the existing cost allocation methodology and the use of the number of connections to allocate secondary costs (excluding line transformers) is reasonable. The Navigant study also proposed that distributors could file for the use of a separate adjustment factor with respect to secondary assets if there is evidence that it would result in a more suitable allocation of secondary assets or a component of the secondary assets to street lighting.

The table below provides Navigant's estimate of the change in distribution cost allocation expected for each of the various customer classes under different connection ratios.

Change in Cost Allocation	LDC Connection Ratio		
	Below 3:1	3:1 to 10:1	Above 10:1
Customer Class *			
Residential	0% - 2%	0% - 1%	(0)%
GS <50	1% - 3%	0% - 2%	(0)%
GS>50-Regular	1% - 3%	0% - 2%	(0)%
Large Use	2% - 4%	0% - 3%	(0)%
Street Lighting	(70)% - (50)%	(50)% - (0)%	0% - 15%
Other	2% to 4%	0% - 3%	(0)%

* The cost allocation to each customer class varies with the proportion of primary/secondary and line transformer assets needed to provide service.

New Cost Allocation Policy for Street Lighting

The OEB adopts the recommendations included in the Navigant study for the allocation of costs associated with the different street lighting configurations. The OEB believes that Navigant's recommendations achieve a number of desirable outcomes. The recommendations are pragmatic in that they are easy to implement, provide for distributor-specific adjustments, and provide a timely resolution to the issue identified in the Unmetered Loads Report.

Any change in costs allocated to street lighting customers will have an effect on the costs allocated to other distribution customers, and the resultant distribution rates. The table below provides a range of bill impacts for residential customers based on various connection ratios. The rate impact to residential customers from this change in policy is expected to be less than 1% on a total bill impact basis for any distributor.

Street Lighting Connection Ratio	Estimated Change in Street Lighting Cost Allocation, Increase/(Decrease)	Estimated Total Residential Bill Impact, Increase/(Decrease)
Less than 3:1	(70)% to (50)%	less than 1%
3:1 to 10:1	(50)% to 0%	less than 1%
Greater than 10:1	0% to 15%	negligible decrease

Revenue to Cost Ratios

As a separate matter, the Unmetered Loads Report communicated the OEB's intention to narrow the revenue to cost ratio policy range for the street lighting rate class when there is greater certainty and understanding with respect to the costs associated with serving the

street lighting rate class.¹

The Navigant study provides a sound assessment of the assets and costs associated with serving the street lighting rate class. The OEB is of the view that with the implementation of the new cost allocation policy for street lighting, the revenue to cost ratio policy range for street lighting should be narrowed from the current 70%-120% to 80%-120%. The new revenue to cost range for the street lighting rate class will be equivalent to the existing range applicable to sentinel and unmetered scattered load classes. This change in policy is effective immediately.

Implementation Matters

The OEB is in the process of updating the Cost Allocation Model to incorporate the computation of the street lighting adjustment factor and associated allocation factors. The updated model will be issued on or about the time that the OEB issues an update to the *Filing Requirements for Electricity Distributor Rate Applications*.

Consistent with past practice, the OEB will implement the changes to street lighting cost allocation policy only through cost of service and Custom IR applications. Where the OEB has addressed the matter of adjustments to street lighting cost allocation and/or rate design in a prior decision, adjustments consistent with the decision will be made in subsequent mechanistic incentive rate-setting mechanism (IRM) applications or as part of a Custom IR annual update.

Distributor Load Profiles

A number of members of the Unmetered Loads Working Group expressed concern that load profiles used for cost allocation should be updated for all customer rate classes. Specific to the street lighting class, certain members cited advances in technology, particularly with respect to LED devices and adaptive controls for street lighting infrastructure as having a significant effect on street lighting load profiles. Load profiles used by most distributors are based on work that was coordinated by the OEB and completed by Hydro One Networks² in 2006.

There may be merit in updating load profiles to be more reflective of an individual distributor's circumstances. The OEB expects individual distributors to be mindful of material changes to load profiles and to propose updates in their respective cost of service or Custom IR applications when warranted. The OEB does not plan to lead a generic update of distributor load profiles, as it did previously.

¹ EB -2012-0383, Report of the Board, dated December 19, 2013, p.19.

² [Appendix B](#) and [Appendix C](#) of the [Elenchus Research Associates Report](#), dated May 17, 2013.

The OEB would like to acknowledge the important contributions of the Unmetered Loads Working Group to this new cost allocation policy for the street lighting rate class.

All enquiries regarding issuance of the Navigant study and this OEB letter should be directed to Industry Relations Enquiry at: IndustryRelations@ontarioenergyboard.ca

Sincerely,

Original Signed By

Kirsten Walli
Board Secretary