Dionisio Rivera Consulting
1013-15 Baif Blvd.
Richmond Hill, ON L4C 5N7
Tel: 416-824-8073
dionisio.rivera@live.com

By Email and RESS

June 6, 2014

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
2300 Yonge Street, 27th Floor
Toronto, ON M4P 1E4

Re: Rate Design for Electricity Distributors (EB-2012-0410)
- Submissions of the SIA

Dear Ms. Walli,

On April 3, 2014, the Ontario Energy Board ("OEB") issued a Draft Report of the Board and corresponding notice concerning a consultation on Rate Design for Electricity Distributors. The Sustainable Infrastructure Alliance of Ontario (the "SIA") has been accepted as an intervening party to this proceeding, and provides the attached submissions for the OEB's consideration.

Sincerely,

[original signed by]

Dionisio Rivera

Rate Design for Electricity Distributors (EB-2012-0410)
Submissions of the Sustainable Infrastructure Alliance of Ontario

June 6, 2014

Overview

The SIA appreciates the opportunity to comment on the Draft Report of the Board regarding Rate Design for Electricity Distributors (the "Report"), and strongly supports the OEB's initiative to evolve distribution rate recovery so as to more accurately and transparently reflect the true cost drivers of operating and maintaining utility distribution systems. The SIA notes that the Report outlined several intended objectives – stability and predictability of bills, improved consumer literacy, consumer tools for energy management, distributor productivity, reduced regulatory costs, and advancement of public policy. These objectives can be broadly grouped into two general categories – consumer benefits and distributor efficiency – both of which the SIA strongly endorses.

As noted in the results of the OEB's surveys, there has often been much confusion on the part of consumers as to what part of the bill is paying for which service within the energy delivery chain.[1] When distribution charges are measured in kWh, this issue is further complicated, as customers can confuse the variable portion of the distribution charges with their commodity consumption. Given the general complexity of electricity bills, aligning the distribution portion such that it accurately and logically reflects the true cost drivers of electricity distribution is a very sensible initiative. Regardless of the specific methodology chosen, the SIA believes that the customer objectives will all be met, or at least significantly improved, by a move towards a fixed rate methodology.

Similarly, and perhaps to an even greater extent, the SIA believes that a fixed rate methodology will lead to significant efficiency improvements to distributor operation and regulation. As noted in the Report, the existing rate structure is not favourable aligned with the OEB's current

[1] Draft Report of the Board, page 12.

incentive and efficiency objectives (e.g. with increased electricity usage leading to increased distributor revenue, despite no direct increase in underlying costs drivers)[2]. From an administrative perspective, removing the need to undertake, file, review, approve, and manage load forecasts and LRAM claims should notably reduce the time and resources required by both the distributor and the regulator. In addition, a rate methodology more aligned with public policy objectives (and notably not in conflict with public policy objectives – as with the volumetric rate and current distributor CDM programs) will naturally lead to a more efficient distribution system overall.

Proposed Rate Designs

The Report presents three specific options for consideration - a single fixed monthly charge, a fixed monthly charged based on the size of the electrical connection, and a fixed monthly charge based on use during peak hours. In attempting to select the optimal rate methodology, the SIA submits that the key consideration is the appropriate balance between the accuracy and fairness of a customer's billing determinant, and the ease and simplicity of calculating it. That is, the methodology should be both simple (such that it is easily understood and would allow customers to manage their bills) and accurate (in that it should reasonably accurately and fairly reflect the varying contributions of individual customers to the total distribution costs).

A rate methodology that is simple, easy to explain, and easy to understand will allow the OEB's customer oriented set of objectives to be met. Simplicity is also fairly well correlated with ease of implementation. The SIA defers to the expertise of the utilities, but it is very likely that an exceedingly accurate manner of determining a distribution rates would be relatively more complex, costly to implement, and require extensive data management on the part of the utility. For example, a process involving frequent rate re-categorizing or a large number of rate tiers would likely be excessively complex for its intended purpose.

The counterpoint to simplicity is accuracy (i.e. ensuring that the chosen rate methodology is a true and fair reflection of the costs being charged to any one customer). An option that is very simple may not provide sufficient accuracy to determine that proper and fair costs are being allocated to any one particular customer. The SIA submits that at least some level of

[2] Draft Report of the Board, page 16.

differentiation and allocation would be appropriate to reflect the varying characteristics of individual customers.

Proposal 1: Single Monthly Charge

While very simple and easily understood, the SIA submits that a fixed monthly charge option may be too simplistic - clearly benefiting those with high demands (who attract more distribution costs by nature of requiring higher distribution capacity) at the expense of those with relatively lower demands. While having one fixed charge would be a very clean and simple approach, the SIA does not believe that it would be a fair manner in allocating costs across a rate class, particularly given the variability in demand levels between customers.

Proposal 2: Charge Based on the Size of the Electrical Connection

The SIA believes that the proposal to use the size of a customer's electrical connection is significantly hindered by implementation and operational concerns. Given that this type of data is currently not tracked by utilities, there is an issue in terms of costs of implementation, as well as operational implementation (i.e. transitional delays). More importantly, the SIA is concerned that the connection size may not be an accurate proxy as to a customer's current contribution to distribution costs. Conceivably, there could be many customers who do not use the installed capacity of their connection. Similarly, customers could move to a property with a connection based on the prior customer's requirements (inheriting an oversized connection, for example). It would not be practical to expect customers to continuously retro-fit their connection to adjust the capacity in order to minimize their distribution rates. Such a process, in an attempt to establish a billing efficiency, creates a substantial engineering inefficiency. In other words, once installed, capacity should not need to be removed simply because it is not being used.

Proposal 3: Charge Based on Use During Peak Hours

The SIA submits that of the three options the proposal based on use during peak hours has the most merit. Ultimately, peak demand is the fundamental driver of distribution costs, and as such, peak consumption/demand (in some form) should be the billing determinant used in establishing distribution rates.[3] The SIA's sole concern with the proposal as framed is its complexity. Using a stratum instead of hard boundaries between tiers is not a particularly customer friendly

[3] Draft Report of the Board, page 13.

approach and does not lend itself well to communication or energy management (since customers would not have firm targets through which they could switch tiers). Similarly, using consumption during peak hours as a proxy for demand during peak hours unjustifiable continues to use a consumption measure to reflect a demand parameter. The SIA would suggest that if peak demand is the identified cost driver, then some measure of peak demand should be used as the billing determinant.

Proposed Adjustments to Peak Hours Methodology

The SIA submits, subject to any implementation concerns regarding the calculation of peak demand that may be noted by utilities, that a preferred option would be that of using some modified version of Proposal 3. For the OEB's consideration, the SIA suggests two potential modifications that it believes should be considered to maintain the merits of the consumption during peak hours methodology while simplifying its design, strengthening its link to peak demand, and improving its customer appeal.

First, the SIA would favour a peak monthly demand (during peak TOU hours), averaged over a period of one year – as opposed to consumption during peak hours during a utility's seasonal peak (i.e during a select 3-month window) as proposed in the Report. This annual calculation would maintain a stronger link to peak demand, and avoid the need to continue to use a consumption metric as a proxy for demand. It would also allow for a consistent approach across the entire province (such that utilities with different seasonal peaks could have a consistent calculation), while the expanded inputs used in the calculation (12 peak demand reads) would allow for an averaging effect that would mitigate against the possibility of unfair categorization (i.e. it would prevent a customer from being "unlucky" in having one particularly high demand day). It could also be operationally preferable, avoiding some of the challenges identified in Appendix C of the Report regarding the current configuration of distributors' billing systems to identify a specific (non-annual) consumption time range not linked to a billing cycle.[4]

Secondly, and in conjunction with using peak monthly demand, the SIA also believes that it would be far more simple and informative to customers to be able to identify a firm demand range (e.g. <2.5kW, 2.5-4kW, etc) that would be used to categorize all ratepayers across the

[4] Draft Report of the Board, Appendix C, page 10.

province into rate tiers, rather than using a defined utility specific consumption "stratum" (as proposed in Appendix C to the Report). While a tiered demand stratum can be used to establish the initial demand boundaries such that the appropriate demand ranges can be identified, insisting on an even annual distribution would be a needlessly complex approach from the perspective of the customer. An annually shifting "consumption during peak hours" target unique to each utility will for all intents and purposes be invisible to customers (i.e. it would be far easier to inform a customer that they are paying a certain tiered rate because their average peak demand was within a defined band, rather than telling them that their consumption during peak hours was within the middle 70% of customers – within their utility's service area - without actually informing them where in that grouping they stand or how far they have to go to move to a lower or higher tier)[5].

The other advantage of using peak demand averaged over the course of a year (rather than consumption during peak hours) would be a potentially significant reduction in the volatility of customers moving between tiers, mitigating the concern that "if hard boundaries are enforced and customers follow the incentive to move into lower groups, either revenue will fall or the charge for each tier will have to rise."[6] While certainly true to some extent, the SIA believes that any changes to a monthly peak demand averaged over a period of one full year will not be significant to the extent of causing material changes in revenue or requiring adjustments to the rates of each tier. Customer groupings defined by peak demand averaged over a period of one year and subdivided into a limited number of tiers (the SIA suggests three) would likely be relatively stable. Any variances between customers shifting along the boundaries would be more akin to the variances in customer numbers versus those forecast by the distributor, which are also not subject to any corrective adjustment. While the SIA does not possess the data to make a definitive conclusion on this point, it submits that if the OEB sees merit in this approach, further analysis could be undertaken to determine the level of variability in demands of customers between years (i.e. to quantify the extent to which customers would actually shift between tiers upon reclassification and the extent to which the targeted number of customers in each tier would vary from year to year). As noted above, the SIA suspects these variances to be fairly limited.

[5] The SIA notes that the tiered RPP rate was structured in exactly this same way. However, while commodity consumption and cost is highly volatile and subject to true-up adjustments, peak demand is unlikely to result in significant variances requiring similar corrective measures.
[6] Draft Report of the Board, Appendix C, page 10.

Overall, in reflecting the balance between simplicity and accuracy explained earlier, the SIA submits that a three tiered solution, with fixed tier demand boundaries, using average annual peak monthly demand would be preferable as a general indicator of a customer's relative contribution to distribution costs, and by extension, a preferred methodology for determining a customer's monthly distribution rates.

Alignment of Proposed Designs with Board Objectives

The Report notes several objectives that the OEB hopes to achieve with the introduction of the new rate structure: stability and predictability of bills, consumer literacy, consumer tools for management of costs, improved distributor productivity, reduced regulatory costs, and advancement of public policy objectives. The SIA submits that any step towards a fixed rate structure, regardless of specific methodology, will allow the OEB to meet, or at least make positive steps towards meeting, all of these objectives. However, the mechanics of the ultimate methodology will likely determine the degree towards which each of these objectives can be achieved. Primarily, the issue will become one of trade-offs between simplicity and accuracy. A more simple methodology (e.g. one fixed monthly charge) will lead to greatly increased predictability, literacy, and distributor efficiency, but may not be as positive in helping customers manage their costs or may not be entirely aligned with public policy objectives. On the other hand, a methodology more focussed on accuracy (e.g. peak consumption/demand) may better reflect cost causality, allow customers to better manage their costs, and be fully aligned with policy objectives (such as a reduction in seasonal peak demand), but be relatively less helpful in improving consumer literacy and advancing stability and predictability of electricity bills.

In advocating for a simplified peak demand methodology, the SIA believes that this particular methodology strikes the best balance in meeting all the OEB's objectives without favouring any one to the detriment of another. However, the SIA understands that the OEB may place higher values on certain objectives, in which case the SIA suggests that methodologies reflecting those objectives be given a proportionally weighted preference.

Additional Observations

Bill Impacts:

While the SIA expects some level of concern from those worried about the impact of a fixed rate methodology on low volume consumers, on balance the SIA respectfully submits that the change to any particular customer's bill is likely to be fairly minimal (especially if a tiered approach is selected). The SIA notes that total distribution revenues are on average 20-25%[7] of the total electricity bill, and distributors on average already recover approximately 50%[8] of their distribution costs through a fixed charge. As a result, the impact of any option is restricted to the difference (between rate methodologies) on only approximately 10-12.5% of the total electricity bill. In other words, this consultation addresses how to recover approximately 10-12.5% of total bill costs, and as such, even a potential ~10% change to the recovery of the variable distribution portion of on any one customer's bill would only result in a ~1% difference on a total bill basis. This is further reflected in the data analysis contained in Appendix C of the Report, in which a majority of customers in the sample data had a bill impact within $5 under each of the proposed methodologies. While rate impacts are certainly something that should be considered – and the SIA supports a multi-tiered approach such that both low and high demand customers continue to pay their fair share - the SIA submits that the total bill impact should be kept in perspective, particularly given the relatively limited effect of the proposals on the majority of customers.

Variable Rates as a Driver of CDM:

It is apparent to the SIA that the existence of a variable component within distribution rates can positively work as an incentive for conservation among customers willing to reduce their electricity consumption (since it allows a greater portion of a customer's bill to be affected by reduced consumption). On balance, however, the SIA does not believe that an "artificial" variable rate methodology (i.e. one that is not actually tied to variable costs) should be continued simply to advance competing CDM objectives. The SIA submits that CDM objectives should be linked to appropriate drivers and that the fully variable commodity portion of the bill is the logically proper bill element that can be reduced by a consumer's decision to use less electricity. Additionally, the conversion to a fixed rate methodology will introduce other benefits to CDM

[7] Draft Report of the Board, page 7.
[8] Draft Report of the Board, page 3.

not available under the current methodology, such as the elimination of any disincentive to distributor CDM activities and the need for resource intensive mitigation measures such as the LRAM.

Volumetric Demand Rate:

The SIA has had the opportunity to review some of the submissions of other parties to this proceeding who have advocated for some variation of a volumetric peak daily demand methodology in calculating distribution rates. The SIA notes that the concept has already been implemented in Ontario on a limited scale with several unit sub-meter providers currently utilizing this approach in billing their customers. While the SIA does not conceptually oppose consideration of such a potential methodology, it has not considered it in these submissions as it does not believe that it aligns with the OEB's current objective to pursue a fixed rate design solution.

Province-Wide Implementation:

In the Report, the OEB questioned whether or not distributors should be allowed to choose their preferred fixed rate methodology, or whether it should be consistent across the province. The SIA strongly submits that one approach should be chosen and implemented province wide. Fundamentally, it is unlikely that this consultation would produce two differing yet equally effective approaches. More importantly, having more than one approach would have a far larger detrimental effect on customer understanding and regulatory efficiency than the actual mechanics of whatever approach is ultimately chosen – with any benefits or gains ultimately tempered by the additional complexities of the existence of multiple methodologies. It would also make any rate comparisons between distributors (even directional ones) effectively impossible. The SIA would go as far as to suggest that the status quo is likely preferable to the introduction of multiple alternatives.

Synchronization with Unit Sub-Meter Providers:

The SIA respectfully urges the OEB to consider the extent to which the rate methodology considered in this proceeding could or should be applied to unit sub-meter providers. The SIA acknowledges that unit sub-metering rates are unregulated, but would be interested if the rate structure under which those rates are charged could or should be aligned, for the convenience and benefit of customers, with that mandated for use by all distributors across the province.