Comments

EB-2005-0317
Cost Allocation Review: Staff Proposal on Principles and Methodologies

These comments have been prepared by Wayne Clark of SanZoe Consulting, Inc. as a consultant to the Association of Major Power Consumers of Ontario.

Where detailed comments are not provided, this is because comments were not invited (Sections 2 & 3), the item is not particularly impactive on AMPCO's members, or we are in general agreement with the proposal as worded.

However, we qualify our comments by noting that the information filings will inevitably present surprises, inconsistencies and a few counter-intuitive results. When this happens, some changes will likely be needed and with the Board's forbearance, AMPCO would like to provide additional comment once the filings are submitted. Likely, other stakeholders would wish for the same opportunity.

General Comments

AMPCO's specific interest in cost allocation is the large user class. This group of customers is small in number, but large in terms of impact on LDCs. Because of their large individual power use, large users are also much more susceptible to minor shifts in cost allocation than are individual small users. To this end, we are sensitive to allocation factors that transfer small costs away from small users individually, since the aggregate of hundreds or thousands of such transfers inevitably must be to transfer significant cost to a very small number of large users.

Large users also use LDC assets and services differently from other classifications, both in technical areas such as demand profiles and in services such as metering. In this respect, we are sensitive to simple approached that may fail to reflect the actual costs caused by large users.

Finally, we believe it is in the interests of all customer classes that cost allocation be as accurate as possible. In this way, customers experience the proper price signal when making investment and consumption decisions. To this end, some of our comments attempt to contribute on aspects of cost allocation outside of the Large User class.

Detailed Comments (by section number):

1.2 Scope of the Review

The scope statement should include one or more explicit statements of the cost allocation principle(s) underlying the filing requirements.

We believe the over-arching principle being followed in this proposal is to that cost allocation follows cost causality, but an explicit statement of principle would be helpful, as a reference whenever interpretation of the filing instruction is needed.

1.5.1 Purpose of Proposal
Suggest modifying the first sentence to say "The Board will establish a common cost allocation methodology *based on cost causality*,,,,,,"

1.5.3 Rate Classification Information
While comment was not invited at this time, we do not believe the definition for the large user class has been fully examined. If distinctiveness from other classes and homogeneity of asset use within a class are appropriate tests, the Large User class should likely have a lower threshold for entry, likely around or below 3000 kW.

1.8 Filing Process
AMPCO fully supports that the informational filing be made public. From the ratepayer's perspective, this is one of the most important aspects of this process.

5.2 Direct Allocation Methodology
AMPCO continues to believe that the 100% test is excessively onerous and that, at the least, LDCs should have the freedom to use a proportionate (specific) allocation when a rate classification is the dominant user of an asset.

Most LDCs have very few large users and in these cases, the simplest approach to an accurate cost allocation would often be to simply determine the assets serving the large user and allocate an appropriate share to that user.

6.2.2.2 Definition of Secondary
6.2.2.3 Definition of Primary
6.2.2.4 Definition of Bulk
Guidance should be provided with respect to the assignment of transformer and transformer installation assets to Secondary, Primary or Bulk. Engineers usually view these assets in terms of their primary (high side) voltage, since this drives most of the engineering specification and system design activity. However, from a functionalisation perspective, the secondary (low side) voltage is the more appropriate guide, since this is what determines the customer loads that can be served.

For example, a distributing station is built to supply the primary system and so should be seen as a primary asset for cost allocation purposes. Likewise, "line" or "distribution" transformers serve only secondary loads and should be functionalized as secondary for cost allocation purposes.

6.2.2.4 Definition of Bulk

The reference to footnote 5 at the end of the third paragraph seems to be in the wrong place. It should probably be in 6.2.2.2 – Definition of Secondary.

We are concerned about the potential exemption from defining bulk assets in a "fully – integrated" system. Distribution systems are generally designed on hierarchical principles with sectionalization of failed components in order to optimize reliability, not on "full integration." Integrated systems are much more costly and only justified where there are very high customer densities. Technically, only network systems (e.g., the Ontario grid or the Toronto Hydro secondary network) are fully integrated and those only at the operating voltage level of the network. Any distributor claiming that they have no bulk assets in the meaning of this clause should be required to both define "fully – integrated" and then illustrate how this applies to their system.

The basis for our concern is that an unchallenged claim of a "fully integrated" system could be used by a distributor to improperly allocate assets to customers that receive no benefit from them.

6.2.3.2 Adjusting Load re Bulk, Primary and Secondary
This comment will be repeated with regard to Appendix 6.1. The proposal as written needs a glossary of all the abbreviations and acronyms being used, in order to make it accessible to non–experts.

7.4.3 Filing Questions
We suggest the first question should be clarified thus: "Does the distribution system have a large downtown *secondary* network system if the distributor is an urban utility?" It is the specific existence of a secondary network, with its attendant cost and specialized technology that differentiates a few utilities (Toronto, Ottawa) from others that may simply have dense primary distribution systems with advanced controls.

This change would remove the possibility that someone could confuse their standard distribution system with a networked system.

7.5.1 Background – PLCC Adjustment
7.5.2 PLCC Adjustment in Filings
The need for a PLCC adjustment to prevent over-allocation of demand is accepted. However, as constructed, the effect of assigning 0.4 kW evenly to all classes will result in an over-allocation of demand to customers that do not use secondary assets.

This will result because of the nature of the load serving constraints of any system, including hypothetical minimum systems. At primary and bulk delivery voltages, the load serving capacity at a particular level of the minimum system design is defined by the current carrying capacity of the smallest standard conductor that would be used.

The 0.4 kW PLCC adjustment translates into 1.67 amperes of secondary current for a residential customer on standard service, roughly appropriate for this customer. A similar allowance for a large user receiving service at 27.6/16 kV would suggest a PLCC

adjustment of approximately 140kW. Accepting that bulk delivery systems operate at 13.8kV and up, a rough saw-off might be around 100kW.

Put another way, the PLCC of a minimum system increases with voltage and with the number of phases providing service to the customer.

Without making an adjustment such as is suggested above, the PLCC adjustment would have the unintended consequence of allocating demand inappropriately to those customer classifications that do not use all tiers of the distribution system.

8.5.2 Separate Treatment of Each Rate Class and Subclass For Cost Allocation Purposes

The proposed treatment of diversity does not appear to reflect actual system loading behaviour and in turn will break the connection between cost causality and cost allocation.

Diversity is accommodated in system design by considering both the statistical and real demand of all the loads served by a specific asset, such as a line transformer or primary conductor. Statistical diversity, such as with multiple residences on a single transformer, results in that unit being sized smaller than the arithmetic sum of the peak loads it will serve.

Likewise, actual diversity advantages are obtained between classes when their load patterns are considered. For example, a feeder supplying both electrically heated cottages and a water park would be sized on the understanding that both load types would not peak concurrently. More commonly, diversity between small factory loads and residential or commercial loads is considered when sizing primary assets.

While inter-class diversity benefits all customers with reduced asset costs overall, the lack of recognition of this in cost allocation brings the potential for less populous classifications to receive an over-allocation of asset – related cost.

Unmetered scattered loads generally have no diversity within their sub-class, but photo – actuated USLs in summer peaking LDCs should receive a significant diversity credit, since they are not on at system or feeder peak.

9.3.2.2 Allocation of Meter Capital Costs

A sentence should be included to the effect that meter capital costs are not to be allocated to customers that own their own meters. This will eliminate the possibility of meter capital costs being inappropriately allocated to customers that own their own meters (e.g., wholesale market participants).

Similarly, LDCs should be cautioned against allocating meter costs to customers that have been required to pay the cost of their meters.

9.3.4.2 Allocation of CDM Costs

We suggest that a supplemental question be asked to determine how CDM spending is being distributed among rate classifications and generally. This will enable the Board and intervenors to evaluate whether the proposed allocation method is equitable.

12.2 Substation and Secondary Transformation Ownership Unit Costs
AMPCO supports the development of a more accurate credit for those customers who own their own transformation and associated downstream assets, but are in classifications where the ownership arrangement may be mixed.

However, we believe the best long term solution is to remove the need for allowances. This could be accomplished by a combination of LDC policy rationalization and development of more homogenous classifications, whereby all members of a classification either do or do not own their transformation assets. In this way, allowances would not need to be estimated and the risk of cross subsidy would be avoided.

Appendix 6.1
It would be useful if a text description of the Classification Allocators was provided.

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