

22<sup>nd</sup> Floor – 360 Portage Avenue • Winnipeg Manitoba Canada • R3C 0G8 Telephone / N° de téléphone : 204-360-3633 • Fax / N° de télécopieur : 204-360-6147 ofernandes@hydro.mb.ca

August 19, 2016

Mr. D. Christle Secretary and Executive Director Public Utilities Board 400-330 Portage Avenue Winnipeg, Manitoba R3C 0C4

Dear Mr. Christle:

RE: MANITOBA HYDRO'S 2015 COST OF SERVICE METHODOLOGY REVIEW – WRITTEN REPLY SUBMISSION ON ISSUES NOT SUBJECT TO ORAL HEARING

As per the Revised Hearing Timetable issued by the Public Utilities Board ("PUB") in Order 84/16, please find attached Manitoba Hydro's Written Reply Submission on Issues Not Subject to Oral Hearing.

Should you have any questions with respect to the enclosed, please contact the writer at 204-360-3633 or Janelle Hammond at 204-360-4161.

Yours truly,

MANITOBA HYDRO LAW DIVISION

Per:

**ODETTE FERNANDES** 

Legal Counsel

Att.

# MANITOBA HYDRO'S REPLY SUBMISSION WITH RESPECT TO ISSUES NOT SUBJECT TO ORAL EVIDENCE 2015 COST OF SERVICE METHODOLOGY REVIEW

### **INDEX**

1.0	Introduction	1
2.0	Coal Generation	1
3.0	Customer Service Costs	3
4.0	Subtransmission	4
	4.1. Functionalization of Subtransmission	5
	4.2. Exclusion of a Portion of Distribution Load from the Allocation of Subtransmi Costs	
	4.3. The Appropriate Allocator for Subtransmission Costs	8
5.0	Distribution Classification of Poles and Wires	9
	5.1. Allocation of Demand-Related Distribution Cost	10
6.0	Marginal Cost	11

### 1.0 INTRODUCTION

2

1

- 3 The following is Manitoba Hydro's reply to written submissions of the Manitoba Industrial
- 4 Power Users Group ("MIPUG"), The Consumers Association of Canada/Winnipeg Harvest
- 5 ("Coalition"), the Green Action Centre ("GAC"), the City of Winnipeg ("COW") and the
- 6 General Service Small ("GSS") and General Service Medium ("GSM") Classes filed August 12,
- 7 2016, in accordance with the timeline established by the Public Utilities Board ("PUB") in Order
- 8 84/16.

9

- 10 Manitoba Hydro notes that a number Interveners have provided comments on topics which
- overlap between the issues subject to written submissions and issues subject to the oral hearing,
- such as suggested updates to data, studies and the COS model. In order to provide a fulsome
- 13 response and avoid duplication between matters in the written and oral processes, Manitoba
- 14 Hydro will reply to these issues in its September Reply Submission.

15

16

### 2.0 COAL GENERATION

17

- 18 Manitoba Hydro has previously indicated that the improved precision arguably gained by the
- 19 exclusion of coal from the allocation to Dependable Exports is trivial when looking at the
- 20 increased complexity associated with the creation of an additional generation pool (Manitoba
- 21 Hydro Written Submission, August 12, 2016, page 2).

22

- 23 MIPUG does not appear to accept this rationale and appears to misunderstand Manitoba Hydro's
- 24 position:

25

- 26 "There also appears to be no rationale to consider coal generation costs to be
- 27 insufficiently large to merit specific consideration. If that were the case, there would be
- 28 no basis to overturn the past Board-approved methodology." (MIPUG Written
- 29 Submission, August 12, 2016, page 1-3)

1 Manitoba Hydro's perspective is not that the overall cost of Coal Generation (\$29M) is

immaterial and as such a separate allocation is not needed, but rather that the potential over-

assignment of Coal costs to Dependable Exports (\$4.5 million) is not significant (Manitoba

Hydro Written Submission, August 12, 2016, page 2). In the context of Manitoba Hydro's

overall revenue requirement of \$1.8 billion (PCOSS14) and total export revenue of \$345 million

6 this amount is not significant.

7

9

10

11

12

2

3

4

5

8 MIPUG further inappropriately states that Manitoba Hydro's view should then be that it would

be acceptable to assign virtually all coal costs to the Export Class as per 116/08. Accepting \$4.5

million as a tradeoff in order to simplify and improve the understandability of the cost allocation

methodology does not equate to assigning the bulk of the costs associated with Coal Generation

against the Export class which is not appropriate due to The Climate Change and Emissions

13 Reductions Act, C.C.S.M. c. C135.

14

16

17

18

19

20

Mr. Bowman's comparison of a specific consideration for Coal to the treatment of the Uniform

Rate Adjustment or the Affordable Energy Fund based on the size of their respective revenue

requirements is also flawed. As demonstrated below, it is not only the amount but also the nature

of the costs that affect the class revenue cost coverage ratios, both of which must be weighed

against trade-offs in complexity and understandability when selecting the most appropriate

allocation methodology.

21

22

The following table provides the RCC changes compared to PCOSS14-Amended.

23

24

2526

27

28

29

1	
1	

Customer Class	Coal to	Eliminate
	Domestic	URA**
	Only*	
Residential	0.0%	-1.8%
General Service - Small Non Demand	0.0%	0.2%
General Service - Small Demand	0.0%	1.3%
General Service - Medium	0.0%	1.6%
General Service - Large 0 – 30 kV	0.0%	1.6%
General Service - Large 30-100 kV	-0.1%	1.6%
General Service - Large >100 kV	-0.1%	1.6%
Area & Roadway Lighting	0.1%	-0.6%

<sup>\*</sup> COALITION/MH I-63a

### 3.0 CUSTOMER SERVICE COSTS

As noted in Manitoba Hydro's Written Submission of August 12, 2016, Manitoba Hydro uses a weighted allocator for Customer Service Costs that is based on estimates of the efforts various departments devote to each customer class, which are then weighted by the budget for each area. MIPUG's Written Submission of August 12, 2016 argues that the GSL30-100kV and GSL >100kV classes should be excused from the allocation of \$1.2 million of general customer service costs on the basis that it has an insufficient understanding of how or why these costs have been allocated to these classes (MIPUG Written Submission, August 12, 2016, page 5-5).

The MIPUG Written Submission (page 5-4) argues that services such as line locates are "not relevant to large industrials, who make use of none of these services". The majority of costs associated with line locates and Safety Watches are for contractors doing work on public streets and roadways. This work is done on behalf of all customers and it is appropriate that all customers, including GSL customers, share in these costs. Manitoba Hydro has committed to reviewing the C10 allocator in conjunction with the preparation of its next PCOSS (Manitoba Hydro's Written Submission, August 12, 2016, page 19) in order to verify that the shares attributed to all customer classes are reasonable. As such, it would be inappropriate to exclude any class from a subset of these costs in advance of this review.

<sup>\*\*</sup> MIPUG/MH I-11a

Page 4 of 12

1 2

### 4.0 SUBTRANSMISSION

Manitoba Hydro's Cost of Service Study identifies the Subtransmission function as consisting of lower voltage (66 kV and 33 kV) subtransmission lines, the low voltage portion of the substations and a share of communication equipment, administration buildings, general equipment, and substation transformers in stock. These facilities are required to bring the power from the common bus network to specific load centres (Appendix 3.1 of Manitoba Hydro's

9 December 4, 2015 Submission, page 23).

Manitoba Hydro classifies Subtransmission costs as 100% Demand, allocated to all classes except General Service Large > 100 kV (as this class does not make use of these facilities because it is served at voltages higher than 100 kV) on the basis of non-coincident demand ("NCP"). The 2012 Christensen review noted that demand related classification is common throughout the industry and that "industry practice suggests that either CP or NCP demands may be appropriate – selection is an empirical issue." It is also a longstanding industry practice that customers served at higher voltages are not allocated costs of lower voltage systems (as noted for example in the NARUC Electric Utility Cost Allocation Manual, page 73).

In the current proceeding, Mr. Chernick, on behalf of GAC, accepts the classification of Subtransmission as Demand-related, but does not accept its functionalization separate from grid transmission and does not accept class NCP as the allocator. No other intervener has taken a firm position that is contrary to Manitoba Hydro's current approach. In its Written Submission, the Coalition notes that Manitoba Hydro should be directed to fully address the question as to whether subtransmission lines are used as an economic alternative to transmission (Coalition Written Submission, August 12, 2016, page 18).

### 4.1. Functionalization of Subtransmission

- GAC opines that "sub-transmission is an integral part of the Transmission system, reduces Manitoba Hydro's cost and should be functionalized, classified and allocated with all other load related transmission" (GAC Written Submission, August 12, 2016, page 3). Manitoba Hydro disagrees that Subtransmission plays an identical role to Transmission for the following reasons:
  - 1. The key distinction between Transmission and Subtransmission roles is the significant system wide reliability role played by Transmission. High voltage meshed systems provide a network of alternative paths to sustain system level reliability under various conditions including contingency events; essentially, system-level contingency events are supported by the entirety of the high voltage network. Subtransmission, on the other hand, is a matter of comparatively local, non-meshed transport service, performed with radial facilities. Flows on the transmission system change in response to load changes anywhere on the system; flows on a particular subtransmission system do not vary with load in other parts of the system (Manitoba Hydro Written Submission, August 12, 2016, page 5).
  - 2. There are almost no customers served from the Subtransmission system that do not also make use of the main grid transmission system. Only 26 km (of approximately 7700 km) of Subtransmission lines are served directly from generation.
  - 3. The inclusion of Subtransmission costs in the Transmission function as recommended by GAC removes the need for any distinction between GSL>100 kV and GSL 30-100 kV and effectively treats them as if they incurred the same cost, which they do not.
- 4. Cost and load data is available, accurate and complete for separate COS treatment of Transmission and Subtransmission.
- 5. Inclusion of Subtransmission in the Transmission function would suggest that both the Dependable Export Class and the General Service >100 kV class should be allocated a share of the cost of facilities which they do not and cannot use. With respect to the Export Class, Mr. Chernick agrees that it should not be allocated any of these costs (Intervener Workshop, June 22, 2016, Tr.:628-629). However, GAC believes it is appropriate to

- adopt an approach to functionalization which would lead to such an allocation, absent an arbitrary decision to treat Exports differently from GSL>100 kV.
- 6. Contrary to the implication in GAC's Written Submission (page 6), for utilities that do not specifically identify a Subtransmission function, it cannot be automatically inferred that they treat these voltages in an identical fashion to main grid Transmission. There may be a variety of reasons utilities do not explicitly functionalize Subtransmission, including that utilities may sub-functionalize their Transmission according to type of use, materiality reasons or alternatively, these costs may be included in the Distribution function. Further, there is ample regulatory precedent for separating Subtransmission from Transmission which is best summed up by the quote from the NARUC Cost of Service Manual (found in Mr. Bowman's Rebuttal Evidence, pages 16-17).

1 2

In summary, Manitoba Hydro views that its treatment of Subtransmission is well founded, recognizes well accepted cost causation principles, and supports its overall rate structure and regulatory practice. Manitoba Hydro does not expect that further study or analysis will be more instructive and submits that the current treatment should be retained as there is sufficient evidence on the record of the current proceeding to support this treatment.

# **4.2.** Exclusion of a Portion of Distribution Load from the Allocation of Subtransmission Costs

If a separate Subtransmission function is retained, GAC's Written Submission indicates that a portion of the loads of classes served at Distribution voltages should be exempt from responsibility for Subtransmission cost (GAC Written Submission, August 12, 2016, pages 3-4). Manitoba Hydro disagrees for the following reasons:

1. The full costs of Subtransmission facilities are not avoided by serving distribution directly off transmission.

- 1 GAC asserts that because approximately 1/3 of distribution loads bypass subtransmission, all of
- 2 that cost should be exempted from customers taking service at the distribution level. Whether or
- 3 not distribution level customers are served from the subtransmission system, Manitoba Hydro's
- 4 facilities take power at transmission voltage in order to make it available at distribution voltage.
- 5 In these cases, Manitoba Hydro may have avoided the cost of subtransmission facilities (lines
- and lower voltage substations) but it still has incurred cost to transform from a higher voltage.

- 8 In addition, costs are incurred on the transmission system that would not have been incurred
- 9 absent a decision to take power at transmission voltage directly into the distribution system.
- 10 These costs are incurred on the high voltage side of the substations. Today these costs are
- properly functionalized as Transmission, because they support the transmission system, but they
- would not have been incurred absent a decision to connect the distribution system directly to
- 13 transmission.

14

2. COS utilizes average and not individual customer costing.

1516

17

18

- A separate Subtransmission function in which costs are allocated to all customers who take service below (but not above) may not be an exact match with all load flows. For example, a
- 19 residential customer may be served right off of a transmission line with a simple transformation,
- yet this residential customer will be costed as if his/her load traveled through the distribution
- 21 function. Because of the overall ratemaking framework that Manitoba Hydro operates which
- 22 pools as reasonably as possible similarly situated customers in groups that take similar service
- 23 and which impose similar costs, it is appropriate that all distribution level customers share
- 24 Subtransmission costs (or the alternate costs incurred to transform high voltage power to
- distribution level power) because all distribution customers require this service.

- 27 It is therefore not correct to conclude that distribution customers should be exempted from
- 28 Subtransmission costs as GAC argues. Manitoba Hydro continues to believe its method of using
- 29 all distribution load in the allocation of Subtransmission is reasonable, logical and appropriate
- and should be retained.

Page 8 of 12

### 4.3. The Appropriate Allocator for Subtransmission Costs

3

2

4 Manitoba Hydro allocates the Demand-related Subtransmission costs on the basis of class NCP.

- 5 This is a standard industry practice, although, as Christensen Associates has noted, class
- 6 Coincident Peak (CP) is also used by some utilities.

7

- 8 GAC is recommending that Manitoba Hydro change its allocator for Subtransmission cost to CP
- 9 based on an estimate of class contribution to the peak loads on the subtransmission lines (GAC
- Written Submission, August 12, 2016, page 4).

11

- Manitoba Hydro does not dispute that the costs of these facilities are related to peak load on the
- lines. However, as Christensen Associates has also noted, whether class system CP or NCP is a
- better estimate of subtransmission peak loads is an empirical matter (CA Report dated June 8,
- 15 2012, filed as Appendix 5 of Manitoba Hydro's December 4, 2015 Submission, page 16) and
- Manitoba Hydro does not have the data or infrastructure to resolve this issue empirically. Mr.
- 17 Chernick's analysis (Rebuttal of Paul Chernick, August 5, 2016, page 30) is not helpful because
- 18 it uses weighted monthly system peaks, not substation peaks and, in effect, assumes its
- 19 conclusion that CP is superior.

20

- 21 Manitoba Hydro's rationale for the use of NCP is that at lower levels in the system (e.g.
- subtransmission as compared to transmission) class loads peak at different times than they peak
- 23 at the common bus so that class peaks coincident with overall system peak are not likely to
- 24 represent the class contribution to peaks on the subtransmission or distribution facilities. In
- 25 general, the further downstream on the system, the less likely is coincident peak to reflect the
- actual time of peak loading on these lower voltage systems.

- For example, substations in the Central Winnipeg area (for which accurate peak load measures
- are available) peak mostly during the winter but at a variety of times, with the most common
- 30 times being January in the mid to late morning or late afternoon (GAC/MH I-13). While most

subtransmission facilities serve a variety of classes, the variety may be quite different from the class mix at overall system peak. Some subtransmission systems will serve predominantly industrial load, others different mixes of residential and commercial load. One would expect a Central Winnipeg subtransmission to be significantly influenced by commercial loads, while rural subtransmission would be more influenced by residential and agricultural loads which tend to peak at different times. As such, different subtransmission systems throughout the province peak at different times and reflect, at least in part, the different distributions of class loads among these systems.

Intuitively, Manitoba Hydro believes also that there is a tie to local reliability provided by subtransmission distinct from system-wide reliability provided by the transmission system and NCP vs CP allocation. Specifically, NCP allocation for Subtransmission aligns well with greater load diversity at subtransmission voltages. For this reason, CP demand allocation for (high voltage) reliability – driven by concerns of system-wide coincident peak demands – does not appear to fit with subtransmission.

No evidence has been provided in this proceeding to demonstrate that CP provides a superior measure of cost causation in the allocation of Subtransmission and Distribution costs. Manitoba Hydro submits that NCP is accepted within the industry and should be retained unless and until infrastructure and data are available to demonstrate otherwise.

### 5.0 DISTRIBUTION CLASSIFICATION OF POLES AND WIRES

Manitoba Hydro classifies Distribution Poles and Wires as 60% demand related and 40% customer related. GAC argues for a 100% demand classification as "Distribution lines (poles, conductors, cable and conduit) are installed due to load" (GAC Written Submission, August 12, 2016, page 4).

Manitoba Hydro has addressed this matter in its Rebuttal Evidence and Written Submission (page 10). Manitoba Hydro is of the view that these facility costs are not driven only by load

requirements of customers. In fact, many utilities incorporate a customer component into both Poles and Wires and Distribution Transformers on this basis. Distribution radial facilities are put in place in order to provide, jointly, interconnection services and peak load service. The facilities are sized (designed) and driven by expectations for number of customers and total peak load. So, if the number of interconnection services (number of customers) were reduced by half – e.g. facility was reduced by approximately half – the impact/reduction on total facility costs is substantial – perhaps lower by 40%. On the other hand, if total loads were to be cut by half, the effects on total poles and wires costs are far less – likely a reduction of 0-10%. In fact, the total cost of Poles and Wires is hardly peak-load related, in isolation, of the customer share of total costs. Further, attributing the total cost of Poles and Wires to peak load only denies any role that interconnection and transport play in the delivery of power to distribution customers.

Manitoba Hydro maintains that it is entirely reasonable to include a customer component in Poles and Wires. When combined with Distribution Transformers (which are classified 100% Demand-related), Manitoba Hydro treats nearly 70% of these combined costs as demand-related. Further, a case could be made that there is a customer component to Distribution Transformers which would reduce the amount of demand-related classification, not increase it to 100%, as GAC argues. Manitoba Hydro's classification of Distribution costs is conceptually sound, is supported by its Consultant, Christensen Associates and also is supported by current and well accepted industry practice. Manitoba Hydro believes the Board has sufficient evidence as well as its own judgment to conclude on this matter.

### 5.1. Allocation of Demand-Related Distribution Cost

Manitoba Hydro uses class NCP to allocate demand related cost of Distribution (a similar rationale as used with Subtransmission). As previously discussed, the further downstream on the system, the less likely is coincident peak to reflect the actual time of peak loading on these lower voltage systems.

- 1 While Manitoba Hydro accepts GAC's recommendation that the preferred allocator for these
- 2 facilities would be class contribution to the peak loads on those facilities, Manitoba Hydro does
- 3 not currently or in the foreseeable future have the metering infrastructure to determine the hours
- 4 when these facilities peak nor does it have the class loads specific to the individual substations.
- 5 Further, to use such a technique might also require that the accounting cost of a specific facility
- 6 be tracked along with the peak load for the facility. Accordingly, NCP is recommended as a
- 7 preferred substitute for contribution to the diverse range of peaks on the many distribution
- 8 systems throughout the province.

- Manitoba Hydro notes the comments and suggestions regarding Distribution-related matters put
- 11 forth by the Coalition in the Appendices to its Written Submission. Manitoba Hydro has
- 12 reviewed these matters and notes that, in large part, these matters have been addressed by
- 13 Manitoba Hydro in its Written Submission and/or as part of this proceeding. For clarity of the
- 14 record, Manitoba Hydro has provided Attachment 1 to this Reply Submission, where Manitoba
- 15 Hydro's perspectives can be found.

16

### 6.0 MARGINAL COST

18

17

- 19 GAC references a directive contained in Order 117/06 (GAC Written Submission August 12,
- 20 2016, page 3) related to Manitoba Hydro including supplemental information with respect to
- 21 Marginal Cost of Service, and requests that the PUB re-iterate this directive.

- 23 It should be noted that GAC's Written Submission does not incorporate any discussion of the
- evolution of this matter subsequent to the issuance of Order 117/06. In fact, Manitoba Hydro
- 25 provided a Marginal Cost of Service as part of the 2008 GRA. The PUB concluded, in Order
- 26 116/08, that the Marginal Cost of Service analysis prepared required refinement. In Order
- 27 150/08, flowing from Manitoba Hydro's Review and Vary Application regarding 116/08, the
- 28 PUB agreed with Manitoba Hydro (page 51) that its directive was unclear and stated that
- 29 Manitoba Hydro meet with Board Staff and/or Advisors. That meeting occurred November 24,
- 30 2009, the outcome of which was Manitoba Hydro alternatively agreeing to undertake an external

Page 12 of 12

1 review of its embedded Cost of Service Methods. That review was completed, and its external

consultant, Christensen Associates, provided its advice in their 2012 Report, including discussion

regarding marginal cost of service.

4

5

6

7

8

9

10

11

12

13

14

2

3

In its response to CA's Report dated June 8, 2012 (Appendix 4 of Manitoba Hydro's December 4, 2015 Submission, page 17), Manitoba Hydro acknowledged that Marginal Cost of Service

may be instructive to rate determination in parallel with traditional embedded cost of

service. Manitoba Hydro stated that it was not prepared to engage in enhancements or

modifications to the marginal cost by class previously prepared in the absence of specific

direction of the PUB as to what modifications are required. Manitoba Hydro views its

requirement flowing from Order 150/08 as satisfied. Manitoba Hydro notes, however, that it

routinely provides the PUB with marginal cost data by function (Generation, Transmission and

Distribution) and it also incorporates marginal cost concepts within its embedded cost of service

study, in particular the use of a weighted energy to classify and allocate generation related

15 embedded cost.

16 17

18

Manitoba Hydro takes the position that there is no evidentiary basis in this proceeding for a

reiteration of this directive. The focus in the current proceeding is rightly placed on resolving

19 longstanding issues in the embedded cost of service methodology.

## 2015 COST OF SERVICE METHODOLOGY REVIEW Reply Submission with Respect to Issues Not Subject to Oral Evidence

Topic	Subtopic	Appendix B Reference	Coalition Position	Manitoba Hydro Position
Common Costs	Distribution Plant - Subfunctionalization of common costs (Buildings, Communication, General Equipment and certain SCCs)	Pg 3 - Pt 4	At some point in the future, Manitoba Hydro should re-assess the sub-functionalization to ensure consistency.	Manitoba Hydro concurs and will subfunctionalize Distribution common costs based on relative operating costs in future studies.
	Functionalization of System Control Costs	Pg 5 - Pt 1	The factors used to functionalize Operating and Depreciation should be reassessed due to age.	Manitoba Hydro concurs, and intends on reviewing the weighting factors as time and resources allow.
	Functionalization of Communication Costs - Rate Base	Pg 5 - Pt 2	The factors used to functionalize rate base should be reassessed due to age.	Rate base for Communication is functionalized on the same basis as Communication Operating and Depreciation. Manitoba Hydro does not believe there are any factors used in the functionalization of Communication that need to be reviewed.
	Functionalization of Communication Costs - Depreciation & Operating	Pg 6 - Pt 1	Depreciation and Operating costs associated with Communications should be functionalized as part of the COS model to reflect changes in the initial functionalization of assets/activities.	Complete.
	Refunctionalization of Subtransmission to Transmission and Distribution	Pg 6 - Pt 3	Schedules C6 & C12 do not show re-assignment of Common Subtransmission costs and would be more transparent if incorporated in the model.	Schedules will be corrected in future studies.
	Subfunctionalization of Common SCCs, Regulated Assets, Buildindgs, Communication & Control and General Equipuipment	Pg 6 - Pt 4	Model should be refined to allow subfunctionalization of common cost to permit these costs to be re-functionalized when assets/activities re-assigned between functions.	Complete.
Customer Weightings	Customer Service General	Pg 4 - Pt 9	Customer weighting factors should be updated.	Manitoba Hydro accepts. Please see Written Submission page 19.
	Meter Reading, Meter Investment, Meter Maintenance, Billing and Collections, Service Drops	Pg 4 - Pt 11 Pg 5 - Pts 3,4 & 6	Manitoba Hydro's weighting factors should be updated.	Manitoba Hydro accepts and intends on reviewing the weighting factors as time and resources allow.
Multi-Tenant Units	Poles & Wires/Service Drops	Pg 3 - Pt 7	Customer counts should be adjusted to remove the double counting related to multi-tenant units.	Please see Manitoba Hydro's Written Submission page 19.
Primary / Secondary	Distinct functions for Primary and Secondary	Pg 3 - Pt 5	Primary and Secondary should be treated as distinct functions and Manitoba Hydro should update the split.	Manitoba Hydro accepts these recommendations. Please see Written Submission pages 12-13. MH does not object to use estimated shares to split Distribution Poles & Wires into Primary and Secondary subfunctions, rather than making an adjustment to the allocators for classes that do not use secondary distribution.
	Allocation of Primary and Secondary to Classes	Pg 4 - Pt 8	GSM allocators used for Poles and Wires needs to be adjusted to account for the different Demand /Customer classification for primary as opposed to secondary (similar to AR&L)	Adjustments to the GSL 0-30kV allocators will no longer be required with the separation of Distribution Poles & Wires into Primary and Secondary subfunctions.
Revenue	Allocation of Late Payment Revenues	Pg 2 - Pt 1	Improve Manitoba Hydro's allocation of Late Payment Revenue and Customer Adjustments by pro-rating based on historic late payment revenue by Class as opposed to total revenue.	Please see Manitoba Hydro's Written Submission pages 18-19.
	Other Revenues	Pg 6 - Pt 2	Functionalize "Other Revenue" as part of the model	Complete. Please see Manitoba Hydro's Written Submission page 20.
ARL	Weightings for Sentinel and Streetlighting	Pg 4 - Pt 13	Update the various customer related allocation factors to separate out Sentinel Lights and Street Lights	Please see Manitoba Hydro's Written Submission pages 20-21.