

PUB/GAC - 1 Reference: Chernick Evidence p.35 of 101

- a) Please identify potential options for Manitoba Hydro to collect income information and determine eligibility for discounted lower income rates, with reference to successful practices in other jurisdictions.
- b) If Manitoba Hydro is to rely on customers applying for lower income rates and providing income eligibility evidence on a regular (e.g. annual) basis, please comment whether the revenue risk shifts from unexpectedly more customers participating to unexpectedly fewer customers participating.

Response:

- a) It is Mr. Chernick's understanding that Manitoba Hydro currently determines LICO-125 qualification to establish eligibility for the Affordable Energy Program (AEP). For those customers already qualified for the AEP, eligibility for the LICO rate should be automatic. For other customers, Manitoba Hydro can follow the practice that it currently follows for the AEP.

As for determining continuing eligibility, Mr. Chernick understands that Manitoba's Employment & Income Assistance program (part of Manitoba Department of Families), reported to the bill affordability working group that they have their clients give permission for the CRA to send the income lines from their annual tax return. Manitoba Hydro could follow a similar procedure, or rely on the EIA to certify eligibility.

Mr. Chernick has not conducted a survey of other jurisdictions. He is aware that some utilities use eligibility for government programs as eligibility criteria for utility programs.

- b) The "revenue risk" in this case would be that Manitoba Hydro collects more than was expected in the rate case, due to lower enrollment in the LICO rate program. That would result, all else equal, in Manitoba Hydro having higher retained earnings, which may result in a lower rate increase in the next GRA.

PUB/GAC - 2 Chernick Evidence p.38 of 101; Coalition/MH I-89

Preamble: April DDH are higher than October DDH, as shown in the response to Coalition/MH I-89.

Request: Please confirm whether the Electric Space Heating initial block should be as proposed (100 kWh for April and 250 kWh for October) or should different initial blocks be considered.

Response:

Other initial blocks could be considered. Mr. Chernick picked those block sizes to avoid having many customers with usage ending in the block. The data in GAC/MH I-1 suggest that bills rendered in the spring (which include winter usage) should have a larger discounted block than bills rendered in the fall (which include summer usage). This is not inconsistent with Mr. Chernick's proposal for blocks based on usage in the seasons covered by each bill.

PUB/GAC - 3 Reference: Chernick Evidence p. 39 of 101

Please provide the increase in energy rate if the \$44.5 million in lost revenues from the electric space heating rate were to be recovered from only non-LICO residential customers.

Response:

As stated on p. 32, line 23 of Mr. Chernick's testimony, the increase to the non-LICO residential energy rate would be about 0.8¢.

PUB/GAC - 4 Reference: Chernick Evidence p.40 of 101; PUB/MH I-125c; PUB/MH II-58

- a) Please recalculate Table 6 assuming the previous interim 3.36% rate increases are approved as final.
- b) Provide a table or tables of annual bill impacts in monthly consumption increments of 250 kWh (from 250 kWh to 7000 kWh per month) for each of the rate design proposals shown in Table 6:
 - LICO-125
 - Electric Space Heating
 - LICO-125 Electric Space Heating
 - Non-LICO Residential
- c) Please provide a table of bill impacts using the consumption figures and load factors in Manitoba Hydro's GRA Appendix 9.6 for the following customer classes and consumptions. Assume interim August 1, 2017 rates as the starting point and include Manitoba Hydro's proposed rate increases for April 1, 2018, with the recovery rates proposed by Mr. Chernick in Table 6 of his evidence.
 - General Service Small <50kVA
 - General Service Small 100kVA
 - General Service Medium 1000kVA
 - General Service Large 50,000kVA
- d) Provide a table of annual bill impacts in the same form as (b) but assume that the

reduced revenue from the LICO-125 and Electric Space Heating rate design proposals is recovered only from the Residential class.

- e) Please show the reduced revenue resulting from each of the rate design proposals and estimate the total revenue that would be collected from Residential customers and from General Service customers based on the proposed recovery rates.
- f) Please clarify whether the non-LICO residential tail block rate should be 8.921¢/kWh as at line 11 or should be 8.909 ¢/kWh as in Table 6.

Response:

- a) See table below.

	MH proposed	LICO-125 All	Non-LICO ESH	LICO-125 ESH	Non-LICO IBR
Basic Charge	\$8.08	\$0	\$0	\$8.08	\$7.82
First Block	8.196¢	4.196¢	4.196¢	4.196¢	7.93¢
Remainder	8.196¢	8.196¢	8.196¢	8.196¢	8.352¢
First Block kW.h					
Summer	—	500	—	500	500
Spring	—	500	150	650	500
Fall	—	500	250	750	500
Winter	—	500	500	1,000	500
Recovery rate	Recovery from:				
	Non-LICO residential (NLR)	\$0.00966			
	All non-LICO, non-SEP	\$0.00246			
	Non-discounted NLR kWh		\$0.00407		
	Non-discounted non-LICO		\$0.00096		

- b) See Attachment MH/Chernick I-10.
- c) See Attachment PUB/GAC 1-4c.
- d) See Attachment PUB/GAC 1-4d.
- e) See Attachment PUB/GAC 1-4c. Assuming that the revenue recovery is spread over all classes (other than SEP, LICO and the discounted block for ESH), the recovery for LICO would be about \$12.8 million from residential \$37.5 million from GS; and for ESH, the recovery would be \$4.6 million from residential and \$14.7 million from GS.
- f) The value should be 8.925¢/kWh in both places.

Preamble: Mr. Chernick suggests that the LICO-125 rate discount could be funded by all non-lower income ratepayers and not just those in the Residential class.

Request: In light of the revenue to cost coverage ratios that indicate Residential customers are covering 95% of the costs allocated to the Residential class, please explain whether it is appropriate to further reduce the RCC for the Residential class at the expense of other classes whose RCCs may be in excess of 105%.

Response:

Mr. Chernick does not believe that PCOSS18 provides much clarity regarding the costs attributable to each class. He is therefore not unduly perturbed by the reported RCCs. In Mr. Chernick's LICO rate proposal, the non-LICO residential rates would rise; if the PUB believes that the public interest is served by reducing the energy burden , bringing those customers

PUB/GAC - 6 Reference: Chernick Evidence Pages 38 and 40 of 101; PUB/MH I-125c;
PUB/MH II-58

- a) Please calculate the lost revenues and recovery rates if the lower income rates are provided to customers with energy burdens in excess of i) 6% and ii) 10% instead of LICO-125 customers. Customer numbers and consumption by energy burden are available in PUB/MH I-125 and PUB/MH II-58.
- b) Please provide a table of bill impacts using the consumption figures and load factors in Manitoba Hydro's GRA Appendix 9.6 for the following customer classes and consumptions. Assume interim August 1, 2017 rates as the starting point and include Manitoba Hydro's proposed rate increases for April 1, 2018, with the recovery rates calculated in (a).
 - General Service Small <50kVA
 - General Service Small 100kVA
 - General Service Medium 1000kVA
 - General Service Large 50,000kVA

Response:

- a) Mr. Chernick has not performed this analysis. It is not clear how many assumptions would be needed to transform the data in the cited responses into estimates of consumption. If possible, he will conduct this additional analysis and file it with the PUB.
- b) See (a)

PUB/GAC - 7 Reference: Chernick Evidence Page 41 of 101; PUB MFR 61 Attachment
Pages 25 and 26 of 149

Preamble: "To the extent possible, Manitoba Hydro should attempt to mitigate bill effects on heating customers through efficiency, rather than discounts. Specifically, Hydro should develop a PowerSmart program to ensure that new electrically heated homes are super-insulated and use the most efficient applicable heat pumps, dramatically reducing heating costs. Eligibility for the discounted heating tariff by new customers should be conditioned on participation in the superinsulation program. In addition, Hydro could also use an aggressively marketed high-incentive PowerSmart program to retrofit superinsulation, envelope sealing and heat pumps for the existing heating customers, allowing the heating rate to be phased out."

Request:

Please identify the improvements that Manitoba Hydro should make to its Home Insulation Program and Affordable Energy Program as described in PUB MFR 61 Attachment 1 pages 25 and 26 of 149 in order to achieve “superinsulation” levels.

Response:

Mr. Chernick has not conducted this analysis. The all cost-effective insulation and leak-reduction measures should be implemented, wherever possible, considering the climate and the customer benefits associated with repairing the building structure. In addition, Manitoba Hydro should maximize the number of low-income customers served.

PUB/GAC - 8 Reference: Chernick Evidence Page 43 of 101

Please identify which customer class or classes to which the recommendation to implement time of use rates applies.

Response:

Mr. Chernick would start with the Large GS customers, then the Medium GS customers and the Small GS customers with demand meters, to largely replace demand charges with time-of-use rates. Manitoba Hydro should perform cost-effectiveness analyses of the costs and benefits of installing more advanced (or “smart”) meters on the Small GS without demand meters and residential customers.

PUB/GAC - 9 Reference: Chernick Evidence Page 43 of 101

Preamble: Mr. Chernick recommends elimination of the demand charge for demand-metered General Service customers if time-of-use rates are implemented.

Request:

- a) In Mr. Chernick’s experience, please indicate how widely adopted this approach has been by other electric utilities in the U.S. and Canada.
- b) Please provide specific examples where demand charges have been eliminated for all demand-metered customers, especially in circumstances where generation remains bundled with delivery.
- c) Is the elimination of demand charges consistent with the cost causation principles regarding the COS Methodology in Board Order 164/16? If the answer is yes, please explain how demand allocators can appropriately coexist without demand charges.

Response:

- a) Most utilities retain some level of outdated and inefficient demand charges.
- b) Mr. Chernick has not done this research.
- c) Yes. Demand charges do not measure any parameter used in the PCOSS. PCOSS18 does not allocate any costs on customer maximum demand. Manitoba Hydro states that no T&D investments are planned based on customer maximum demand (MH/GAC II-14). "Manitoba Hydro does not consider individual customer maximum demands as a cost driver for any facilities in the Cost of Service Study. (MH/GAC I-26a). Manitoba Hydro is correct that the demands measured for a demand charge are not drivers of T&D investment. Time of use rates can charge higher rates in the hours that typically drive generation, transmission and distribution capacity. Demand charges cannot match costs to loads in the same way, and are neither efficient nor equitable.

PUB/GAC - 10 Reference: Chernick Evidence Page 40 of 101

Request: Please provide examples of U.S. and Canadian electric utilities that have adopted a residential rate structure that contains all the structural elements proposed in Table 6 (inverted block marginal pricing, discounted rates to LICO space heating customers, discounted rates to LICO non-space heating customers and discounted rates to non-LICO space heating customers).

In these examples, please identify:

1. The level and derivation of the discounts to low-income customers and non-low-income space heating customers
2. The criteria used to determine eligibility for low-income rates
3. The source of the funding for the subsidies (i.e., is it other residential customers, all electric non-low-income non-space heating customers or some other funding?)
4. The mechanism for recovery of subsidies from other customers (e.g., line item commodity surcharge or unidentified and blended into existing rate design).

If no such examples can be provided, please provide examples for those U.S. and Canadian electric utilities that have adopted both the low-income space heating and non-space heating discounts, including items 1-4 as noted.

Response:

Mr. Chernick has not performed this analysis.

PUB/GAC - 11 Reference: Chernick Evidence Page 44 of 101

Request:

- a) Please provide the frequency of months where customers in each rate class have the demand portion of their charges based on the 25% ratchet.
- b) Please provide percentage of customers impacted and the average number of months impacted in a year for these customers.

Response:

Mr. Chernick does not have these data. The PUB can request these data from Manitoba Hydro. If the ratchets have no practical effect, eliminating them will simplify the rate design without changing revenues.

PUB/GAC - 12 Reference: Chernick Evidence Page 45 of 101

Preamble: Mr. Chernick discusses the excessive penalization of customers using a 25% ratchet.

Request:

- a) Please explain the assumptions used in this calculation. For example, what were the demands of the other 11 months relative to the high December demand?
- b) Please provide work papers that show the calculation and assumptions used to obtain the \$39.50 additional payment for the additional December kVA demand.

Response:

- a) The demands in the other 11 months were assumed to be below the December peak.
- b) $\$10.54 + 25\% \times \$10.54 \times 11 = \$39.525$

PUB/GAC - 13 Reference: Chernick Evidence Pages 7 to 31 of 101

Preamble: Mr. Chernick provides his best estimates of Manitoba Hydro's marginal cost.

Request: Please provide all work papers, including spreadsheets in working electronic form, for all the calculations performed to support this section of marginal costs.

Response:

Mr. Chernick's workpapers are attached as Attachment PUB/GAC-13.

PUB/GAC - 14 Reference: Chernick Evidence Pages 32 to 45 of 101

Preamble: Mr. Chernick provides recommendations on the rate design that he has derived.

Request: Please provide all work papers, including spreadsheets in working electronic form, for all the calculations performed to support this section of rate design.

Response:

Mr. Chernick's workpapers are attached as Attachment PUB/GAC-14.