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February 13, 2023

THE PUBLIC UTILITIES BOARD OF MANITOBA  
400-330 Portage Avenue  
Winnipeg, Manitoba  
R3C 0C4

ATTENTION: Dr. D. Christle, Board Secretary and Executive Director

Dear Dr. Christle:

**RE: MANITOBA HYDRO'S 2023/24 & 2024/25 GENERAL RATE APPLICATION – REVISED  
ROUND I IR RESPONSE**

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Manitoba Hydro filed responses to Round I Information Requests of the Public Utilities Board ("PUB") on February 3, 2023. In the response to part e) of COALITION/MH I-131, Manitoba Hydro inadvertently inserted a duplicate table located on page 14 and page 15 of the original response. Enclosed please find a revised response to COALITION/MH I-131a-e that includes an updated table located on page 15. Page 16 has been removed due to a minor formatting error. Manitoba Hydro has also updated the response on its external website.

Should you have any questions with respect to the foregoing, please do not hesitate to contact the writer at 204-360-3257.

Yours truly,

**MANITOBA HYDRO LEGAL SERVICES**

Per:

A handwritten signature in blue ink that reads 'B. Czarnecki'.

*for:* Brent Czarnecki  
Senior Counsel

**REFERENCE:**

Tab 8, Section 8.3, pg. 7, Appendix 8.1, Table B1, pg. 22

**PREAMBLE TO IR (IF ANY):**

MH states:

“PCOSS24 has been prepared using the Corporation’s preliminary budget for the 2023/24 fiscal year.”

**QUESTION:**

- a) Please identify and explain what components of MH’s PCOSS24 - 2023/24 revenue requirement (Table B1) are based on a “preliminary budget”.
  - i. Please identify and explain what components of MH’s PCOSS24 - 2024/25 revenue requirement are based on a “preliminary budget”.
- b) Please explain what level of detail was available for each revenue requirement component based on a “preliminary budget” for purposes of the PCOSS, for each of the two test years, 2023/24 & 2024/25.
- c) For each revenue requirement component, for each of the two test years 2023/24 & 2024/25, please compare and contrast the quality and level of input cost data was available for PCOSS24, compared to the quality and level of input cost data available for past cost of service studies. Please provide both a qualitative response, as well as a quantitative response.
- d) Please summarize and provide the PCOSS sensitivities that MH prepared to understand the potential variability in outcomes for PCOSS24 in both the 2023/24 and 2024/25 Test Years as a result of the preliminary MH budget. If no PCOSS sensitivities were prepared, please explain why not.
- e) Please explain whether MH has prepared a sensitivity analysis of past prospective cost of service studies compared to actual to understand the degree in variability of cost-of-service results.
  - i. If the response is no, please provide a sensitivity analysis at a high level for the first test year of PCOSS18 and PCOSS21 that compares forecast to actual results.

As part of the sensitivity analysis, please incorporate actual costs, revenue and load (customer numbers, demand and energy), keeping methodology for the PCOSS unchanged (to isolate the PCOSS results between forecast and actual). Please provide a summary of the results and indicative Table A1 schedules.

- ii. If the response is no, please explain the degree of reliance that can be placed on the results of PCOSS24 for purposes of establishing class rate differentiation and rates.
- iii. Please summarize and provide all supporting schedules associated with the change in PCOSS18 results associated with the PUB's rate direction flowing from Order 59/18.

**RESPONSE:**

Response to parts a) to d):

All components of the revenue requirements for PCOSS24 are based on the 2023/24 Preliminary Budget.

The 2023/24 budget will be considered 'Preliminary' until final approval is received as described in Manitoba Hydro's response to COALITION/MH I-66b. The 'Preliminary' status does not affect the level of details available for use in the PCOSS.

The revenue requirement details available for PCOSS24 are consistent with past studies, with the exception of the modified O&A expenses that were used in PCOSS18. For PCOSS18 a detailed O&A budget that reflected the new corporate structure was not yet complete, so Manitoba Hydro used the best available detailed budget data (2016/17 from IFF15) with adjustments for known target changes. PCOSS24 uses the current detailed O&A budgeting process that was completed in September 2022.

Since the 2023/24 Preliminary Budget used for PCOSS24 provided the same level of details as the forecasts used for previous studies, no additional sensitives were specifically warranted or prepared for PCOSS24.

Manitoba Hydro has not prepared a version of PCOSS24 based on the 2024/25 test year and therefore cannot provide the requested results for "PCOSS24 - 2024/25 Test Year". Please see Manitoba Hydro's response to COALITION/MH I-130a.

- e) Manitoba Hydro has not prepared an Actual Cost of Service Study (ACOSS) for either 2018 or 2021. Manitoba Hydro does not typically prepare ACOSS and has not used them in an attempt to understand variability in COS results.

Manitoba Hydro's PCOSS has been developed with a deliberate effort to avoid and eliminate variability wherever possible. The second test year is used for the study in part because it includes average export revenues that consider a range of flow data and is also less likely to be impacted by abnormal levels of water in storage compared to the first test year. Other inputs that help minimize variability include the use of weather normalized customer load, and load research that is averaged over eight years to develop normalized estimates of class demand. A PCOSS prepared on this basis is the appropriate benchmark to use to guide gradual adjustments to rates in order to achieve target RCCs over the long term.

- i. The request to prepare a sensitivity of PCOSS18 and PCOSS21 using "actual costs, revenue and load" would entail the preparation of a full ACOSS for those years. Due to time constraints and lack of readily available data in the appropriate format for use in the ACOSS, Manitoba Hydro is not able to provide the requested studies.

However, Manitoba Hydro has prepared versions of PCOSS18 and PCOSS21 incorporating the actual export revenues for those years since these revenues are potentially the most significant source of variability and are readily incorporated into the study. Net Export Revenue has been estimated by assigning variable cost based on the ratio of net to gross export revenue in PCOSS18 and PCOSS21. Net income has been adjusted for the change in Net Export Revenue in all scenarios.

The following schedules provide the results of a version of PCOSS18 that incorporates the \$436.9 million of actual export revenues for 2017/18, a reduction of \$19M compared to the unrevised PCOSS18.

Manitoba Hydro  
Prospective Cost Of Service Study  
March 31, 2018  
Revenue Cost Coverage Analysis  
*Coalition 131 e (i)*  
**SUMMARY**

Customer Class	Total Cost (\$000)	Class Revenue (\$000)	RCC % Prior to NER	Net Export Revenue (\$000)	Total Revenue (\$000)	RCC % Current Rates
Residential	803,638	607,106	75.5%	155,389	762,495	94.9%
General Service - Small Non Demand	150,461	139,479	92.7%	30,056	169,535	112.7%
General Service - Small Demand	183,506	146,983	80.1%	38,491	185,474	101.1%
General Service - Medium	251,132	191,737	76.3%	55,169	246,907	98.3%
General Service - Large 0 - 30kV	119,310	89,652	75.1%	28,429	118,081	99.0%
General Service - Large 30-100kV*	86,211	69,995	81.2%	24,054	94,049	109.1%
General Service - Large >100kV*	228,678	180,458	78.9%	67,246	247,704	108.3%
*Includes Curtailment Customers						
SEP	737	844	114.5%	-	844	114.5%
Area & Roadway Lighting	22,794	21,571	94.6%	1,423	22,994	100.9%
<b>Total General Consumers</b>	<b>1,846,467</b>	<b>1,447,826</b>	<b>78.4%</b>	<b>400,257</b>	<b>1,848,083</b>	<b>100.1%</b>
Diesel	8,984	7,368	82.0%	-	7,368	82.0%
Export	36,628	436,885	1192.7%	(400,257)	36,628	100.0%
<b>Total System</b>	<b>1,892,080</b>	<b>1,892,080</b>	<b>100.0%</b>	<b>-</b>	<b>1,892,080</b>	<b>100.0%</b>

Manitoba Hydro  
Prospective Cost of Service Study - March 31, 2018  
Customer, Demand, Energy Cost Analysis  
*Coalition I31 a (i)*  
**SUMMARY**

Class	CUSTOMER			DEMAND				ENERGY		
	Cost (\$000)	Number of Customers	Unit Cost \$/Month	Cost (\$000)	% Recovery	Billable Demand MVA	Unit Cost \$/KVA	Cost (\$000)	Metered Energy mWh	Unit Cost ¢/kWh
Residential	77,669	508,242	12.73	386,164	0%	n/a	n/a	184,416	7,586,096	7.52 **
GS Small - Non Demand	13,941	42,707	27.20	67,281	0%	n/a	n/a	39,182	1,622,627	6.56 **
GS Small - Demand	12,274	4,197	243.70	81,228	37%	2,623	11.40	51,514	2,146,454	4.79
General Service - Medium	9,490	2,125	372.14	109,814	92%	7,722	13.08	76,659	3,204,436	2.67
General Service - Large <30kV	3,522	321	n/a	45,963	100%	4,302	11.50 *	41,396	1,745,362	2.37
General Service - Large 30-100kV	2,457	40	n/a	23,232	100%	3,388	7.65 *	36,468	1,578,519	2.31
General Service - Large >100kV	5,816	16	n/a	53,078	100%	7,815	7.54 *	102,538	4,504,939	2.28
SEP	67	31	180.55	90	0%	n/a	n/a	580	25,500	2.63 **
Area & Roadway Lighting	16,102	157,982	8.49	3,266	0%	n/a	n/a	2,003	82,415	6.39 **
<b>Total General Consumers</b>	<b>141,338</b>	<b>715,661</b>		<b>770,115</b>		<b>25,818</b>		<b>534,758</b>	<b>22,496,347</b>	
Diesel	395	785	41.89	-	0%	n/a	n/a	8,589	14,546	59.05 **
Export	n/a	n/a	n/a	-	0%	n/a	n/a	36,628	8,557,000	0.43 ***
<b>Total System</b>	<b>141,732</b>	<b>716,446</b>		<b>770,115</b>		<b>25,818</b>		<b>579,976</b>	<b>31,067,893</b>	

\* - includes recovery of customer costs

\*\* - includes recovery of demand costs

\*\*\* - includes recovery of customer and demand costs

Manitoba Hydro  
Prospective Cost Of Service Study - March 31, 2018  
Functional Breakdown  
*Coalition I31 a(e)*  
SUMMARY

Class	Total Cost (\$000)	Generation Cost (\$000)	%	Transmission Cost (\$000)	%	Subtransmission Cost (\$000)	%	Distribution Cost Service Cost (\$000)	%	Distribution Plant Cost (\$000)	%
Residential	648,249	292,649	45.1%	66,944	10.3%	36,835	5.7%	73,542	11.3%	178,279	27.5%
General Service - Small Non Demand	120,405	57,859	48.1%	11,695	9.7%	6,386	5.3%	12,637	10.5%	31,827	26.4%
General Service - Small Demand	145,015	74,573	51.4%	14,500	10.0%	7,898	5.4%	7,790	5.4%	40,254	27.8%
General Service - Medium	195,963	107,895	55.1%	19,776	10.1%	10,726	5.5%	8,286	4.2%	49,280	25.1%
General Service - Large <30kV	90,881	56,274	61.9%	9,514	10.5%	5,129	5.6%	2,911	3.2%	17,051	18.8%
General Service - Large 30-100kV	62,157	48,128	77.4%	7,535	12.1%	4,036	6.5%	2,178	3.5%	279	0.4%
General Service - Large >100kV	161,433	134,671	83.4%	20,946	13.0%	0	0.0%	5,577	3.5%	239	0.1%
SEP	737	580	78.7%	90	12.2%	0	0.0%	44	6.0%	23	3.1%
Area & Roadway Lighting	21,371	2,792	13.1%	501	2.3%	271	1.3%	911	4.3%	16,896	79.1%
<b>Total General Consumers</b>	<b>1,446,211</b>	<b>775,422</b>	<b>53.6%</b>	<b>151,501</b>	<b>10.5%</b>	<b>71,282</b>	<b>4.9%</b>	<b>113,878</b>	<b>7.9%</b>	<b>334,128</b>	<b>23.1%</b>
Diesel	8,984	8,589	95.6%	0	0.0%	0	0.0%	0	0.0%	395	4.4%
Export	36,628	36,628	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
<b>Total System</b>	<b>1,491,823</b>	<b>820,640</b>	<b>55.0%</b>	<b>151,501</b>	<b>10.2%</b>	<b>71,282</b>	<b>4.8%</b>	<b>113,878</b>	<b>7.6%</b>	<b>334,523</b>	<b>22.4%</b>



The following schedules provide the results of a version of PCOSS21 that incorporates the \$610.9 million of actual export revenues for 2020/21, a reduction of \$27.1 million compared to the unrevised PCOSS21.

Manitoba Hydro  
Prospective Cost Of Service Study  
March 31, 2021  
Revenue Cost Coverage Analysis  
*Coalition 131 e (f)*  
SUMMARY

Customer Class	Total Cost (\$ million)	Class Revenue (\$ million)	RCC % Prior to NER	Net Export Revenue (\$ million)	Net Cost (\$ million)	RCC % Current Rates
Residential	1,023.1	770.5	75.3%	223.3	799.8	96.3%
General Service - Small Non Demand	195.0	171.9	88.2%	44.0	151.0	113.9%
General Service - Small Demand	239.1	191.1	79.9%	55.4	183.7	104.0%
General Service - Medium	306.1	231.3	75.6%	73.2	232.9	99.3%
General Service - Large 0 - 30kV	170.9	121.4	71.1%	43.7	127.2	95.5%
General Service - Large 30-100kV	139.7	102.4	73.3%	40.7	99.0	103.4%
General Service - Large >100kV	280.2	197.5	70.5%	84.3	195.9	100.8%
SEP	1.9	2.1	111.6%	-	1.9	111.6%
Area & Roadway Lighting	22.5	26.5	117.6%	1.2	21.3	124.1%
<b>Total General Consumers</b>	<b>2,378.4</b>	<b>1,814.7</b>	<b>76.3%</b>	<b>565.7</b>	<b>1,812.7</b>	<b>100.1%</b>
Diesel	11.1	9.0	81.7%	-	11.1	81.7%
Export	45.2	610.9	1350.9%	(565.7)	610.9	100.0%
<b>Total System</b>	<b>2,434.7</b>	<b>2,434.7</b>	<b>100.0%</b>	<b>-</b>	<b>2,434.7</b>	<b>100.0%</b>

Manitoba Hydro  
Prospective Cost Of Service Study - March 31, 2021  
Customer, Demand, Energy Cost Analysis  
Coalition 131 a (i)  
SUMMARY

Class	C U S T O M E R			D E M A N D				E N E R G Y		
	Cost (\$ million)	Number of Customers	Unit Cost \$/Month	Cost (\$ million)	% Recovery	Billable Demand MVA	Unit Cost \$/MVA	Cost (\$ million)	Metered Energy mWh	Unit Cost c/kWh
Residential	68.9	527,258	10.88	466.0	0%	n/a	n/a	264.9	7,694,424	9.50 **
General Service - Small Non Demand	11.6	55,586	17.45	81.8	0%	n/a	n/a	57.6	1,683,573	8.28 **
General Service - Small Demand	12.0	13,895	72.30	97.4	37%	2,809	13.93	74.4	2,187,796	6.19
General Service - Medium	9.7	2,001	408.26	121.4	86%	6,991	15.00	101.8	3,005,213	3.94
General Service - large <30kV	3.2	351	n/a	61.0	100%	4,525	14.19 *	63.0	1,874,088	3.36
General Service - large 30-100kV	1.9	44	n/a	35.7	100%	3,747	10.03 *	61.4	1,881,290	3.25
General Service - large >100kV	3.4	18	n/a	64.0	100%	6,831	9.86 *	128.5	3,996,967	3.22
SEP	0.1	32	290.54	0.2	0%	n/a	n/a	1.5	48,000	3.68 **
Area & Roadway Lighting	17.4	160,340	9.05	2.3	0%	n/a	n/a	1.7	48,641	8.09 **
<b>Total General Consumers</b>	<b>128.1</b>	<b>790,235</b>		<b>929.8</b>		<b>24,703</b>		<b>754.8</b>	<b>22,419,941</b>	
Diesel	0.8	784	81.19	-	0%	n/a	n/a	10.3	15,440	66.64 **
Export	n/a	n/a	n/a	-	0%	n/a	n/a	45.2	10,442,000	0.43 ***
<b>Total System</b>	<b>128.9</b>	<b>760,019</b>		<b>929.8</b>		<b>24,703</b>		<b>810.3</b>	<b>32,877,382</b>	

\*includes recovery of Customer costs

\*\*includes recovery of Demand costs

\*\*\*includes recovery of Customer and Demand costs

Manitoba Hydro  
Prospective Cost Of Service Study - March 31, 2021  
Functional Breakdown  
Coalition 131 a (i)  
SUMMARY

Class	Total Cost (\$ million)	Generation Cost (\$ million)	%	Transmission Cost (\$ million)	%	Subtransmission Cost (\$ million)	%	Distribution Cost Service (\$ million)	%	Distribution Plant Cost (\$ million)	%
Residential	799.8	427.5	53.5%	81.5	10.2%	36.7	4.6%	65.0	8.1%	189.1	23.6%
General Service - Small Non Demand	151.0	85.4	56.6%	14.7	9.7%	6.4	4.2%	10.6	7.0%	33.9	22.4%
General Service - Small Demand	183.7	108.1	58.8%	18.0	9.8%	7.8	4.2%	8.2	4.5%	41.7	22.7%
General Service - Medium	232.9	143.7	61.7%	22.9	9.8%	9.7	4.2%	8.8	3.8%	47.9	20.5%
General Service - Large <30kV	127.2	86.3	67.9%	13.1	10.3%	5.5	4.3%	2.7	2.1%	19.6	15.4%
General Service - Large 30-100kV	99.0	81.0	81.8%	11.5	11.6%	4.7	4.7%	1.6	1.7%	0.2	0.2%
General Service - Large >100kV	195.9	168.2	85.9%	24.3	12.4%	-	0.0%	3.2	1.6%	0.2	0.1%
SEP	1.9	1.5	81.5%	0.2	13.2%	-	0.0%	0.1	4.3%	0.0	1.0%
Area & Roadway Lighting	21.3	2.3	11.0%	0.4	1.7%	0.2	0.7%	1.0	4.7%	17.5	81.9%
<b>Total General Consumers</b>	<b>1,812.7</b>	<b>1,104.1</b>	<b>60.9%</b>	<b>186.5</b>	<b>10.3%</b>	<b>70.9</b>	<b>3.9%</b>	<b>101.2</b>	<b>5.6%</b>	<b>350.0</b>	<b>19.3%</b>
Diesel	11.1	10.3	93.1%	-	0.0%	-	0.0%	-	0.0%	0.8	6.9%
Export	45.2	45.2	100.0%	-	0.0%	-	0.0%	-	0.0%	-	0.0%
<b>Total System</b>	<b>1,869.0</b>	<b>1,159.6</b>	<b>62.0%</b>	<b>186.5</b>	<b>10.0%</b>	<b>70.9</b>	<b>3.8%</b>	<b>101.2</b>	<b>5.4%</b>	<b>350.8</b>	<b>18.8%</b>

- ii. As noted in the response to part (a) the use of a 'Preliminary' budget does not reduce the quality of the input data and therefore PCOSS24 does not warrant any additional sensitivities or comparisons to actual results to verify its results. With consideration given to the long-standing and PUB endorsed Zone of Reasonableness of 95-105% which recognizes the many judgements required to functionalize, classify and allocate costs, there is no reason to not consider the results of PCOSS24 in determination of rates.

Please see Manitoba Hydro's response to COALITION/MH I-143 b) for further discussion of the use of ZOR when differentiating class rate increases.

- iii. Manitoba Hydro assumes that "rate direction flowing from Order 59/18" refers to cost allocation related Directives 24 to 27 from that Order. Manitoba Hydro did not prepare a compliance filing of PCOSS18 that reflected the PUB directives from Order 59/18, however has prepared the following version of PCOSS18 which includes the methodology changes that could have been implemented immediately upon receipt of that Order without the need for further study.

These methodology changes include:

- The RCC calculation was changed to treat Net Export Revenue (NER) as a cost reduction, rather than an addition to class revenue (Directive 27).
- A non-tariffable transmission subfunction was added that is allocated the same as other transmission but does not receive a share of NER (Directive 24).
- A new subfunction was added to allocate building moves & safety watches, contact centre outages, line locates and marketing R&D to all classes other than GSL 30-100 and GSL >100 (Directive 25).

The following table illustrates the impact of incorporating each of these directives on class RCCs from PCOSS18.

	PCOSS18	Directive 27 NER in RCC	Directive 24 Non Tariffable Transmission	Directive 25 GSL Customer	59/18 Compliant
Residential	94.8%	-1.3%	0.0%	-0.1%	93.4%
GSS ND	112.5%	3.2%	0.0%	-0.2%	115.5%
GSS D	101.0%	0.3%	0.0%	-0.2%	101.1%
GSM	98.3%	-0.5%	0.0%	-0.1%	97.7%
GSL 0-30	99.1%	-0.4%	0.1%	-0.2%	98.6%
GSL 30-100	109.3%	3.7%	0.1%	1.1%	114.2%
GSL >100	108.6%	3.7%	0.1%	1.0%	113.4%
A&RL	100.3%	0.0%	0.0%	-0.2%	100.1%

The following schedules reflect PCOSS18 incorporating the Directive 24, 25 and 27 methodology changes.

Manitoba Hydro  
Prospective Cost Of Service Study  
March 31, 2018  
Revenue Cost Coverage Analysis  
*Coalition I-131 e (iii)*  
SUMMARY

Customer Class	Total Cost (\$000)	Class Revenue (\$000)	RCC% Prior to NER	Net Export Revenue (\$000)	Net Cost (\$000)	RCC % Current Rates
Residential	811,993	607,106	74.8%	161,754	650,239	93.4%
General Service - Small Non Demand	152,061	139,479	91.7%	31,311	120,751	115.5%
General Service - Small Demand	185,461	146,983	79.3%	40,107	145,354	101.1%
General Service - Medium	253,806	191,737	75.5%	57,505	196,301	97.7%
General Service - Large 0 - 30kV	120,563	89,652	74.4%	29,645	90,918	98.6%
General Service - Large 30-100kV*	86,381	69,995	81.0%	25,092	61,289	114.2%
General Service - Large >100kV*	229,156	180,458	78.7%	70,090	159,066	113.4%
*Includes Curtailment Customers						
SEP	739	844	114.2%	-	739	114.2%
Area & Roadway Lighting	23,025	21,571	93.7%	1,483	21,542	100.1%
<b>Total General Consumers</b>	<b>1,863,186</b>	<b>1,447,826</b>	<b>77.7%</b>	<b>416,987</b>	<b>1,446,199</b>	<b>100.1%</b>
Diesel	8,996	7,368	81.9%	-	8,996	81.9%
Export	38,159	455,146	1192.7%	(416,987)	455,146	100.0%
<b>Total System</b>	<b>1,910,341</b>	<b>1,910,341</b>	<b>100.0%</b>	<b>-</b>	<b>1,910,341</b>	<b>100.0%</b>

Manitoba Hydro  
Prospective Cost Of Service Study - March 31, 2018  
Customer, Demand, Energy Cost Analysis  
*Coalition I-131 e (iii)*

**SUMMARY**

Class	CUSTOMER			DEMAND				ENERGY		
	Cost (\$000)	Number of Customers	Unit Cost \$/Month	Cost (\$000)	% Recovery	Billable Demand MVA	Unit Cost \$/KVA	Cost (\$000)	Metered Energy mWh	Unit Cost e/kWh
Residential	78,892	508,242	12.94	388,675	0%	n/a	n/a	182,673	7,586,096	7.53 **
GS Small - Non Demand	14,218	54,988	21.55 †	67,720	0%	n/a	n/a	38,812	1,622,627	6.57 **
GS Small - Demand	12,578	12,867	81.46 †	81,749	37%	2,623	11.47	51,027	2,146,454	4.78
General Service - Medium	9,851	2,125	386.31	110,516	92%	7,722	13.17	75,934	3,204,436	2.65
General Service - Large <30kV	3,690	321	n/a	46,224	100%	4,302	11.60 *	41,005	1,745,362	2.35
General Service - Large 30-100kV	1,868	40	n/a	23,297	100%	3,358	7.50 *	36,123	1,578,519	2.29
General Service - Large >100kV	4,295	16	n/a	53,203	100%	7,815	7.36 *	101,569	4,504,939	2.25
SEP	69	31	185.18	90	0%	n/a	n/a	580	25,500	2.63 **
Area & Roadway Lighting	16,268	157,982	8.98	3,289	0%	n/a	n/a	1,985	82,415	6.40 **
<b>Total General Consumers</b>	<b>141,729</b>	<b>736,612</b>		<b>774,763</b>		<b>25,818</b>		<b>529,708</b>	<b>22,496,347</b>	
Diesel	396	785	42.06	-	0%	n/a	n/a	8,599	14,546	59.12 **
Export	n/a	n/a	n/a	-	0%	n/a	n/a	38,159	9,166,000	0.42 ***
<b>Total System</b>	<b>142,125</b>	<b>737,397</b>		<b>774,763</b>		<b>25,818</b>		<b>576,466</b>	<b>31,676,893</b>	

\* - includes recovery of customer costs

\*\* - includes recovery of demand costs

\*\*\* - includes recovery of customer and demand costs

Manitoba Hydro  
Prospective Cost Of Service Study - March 31, 2018  
Functional Breakdown  
*Coalition I-131 e (iii)*  
**S U M M A R Y**

Class	Total Cost (\$000)	Generation Cost (\$000)	%	Transmission Cost (\$000)	%	Subtransmission Cost (\$000)	%	Distribution Cust Service Cost (\$000)	%	Distribution Plant Cost (\$000)	%
Residential	650,239	290,182	44.6%	67,864	10.4%	37,236	5.7%	74,729	11.5%	180,228	27.7%
General Service - Small Non Demand	120,751	57,364	47.5%	11,853	9.8%	6,456	5.3%	12,904	10.7%	32,173	26.6%
General Service - Small Demand	145,354	73,933	50.9%	14,696	10.1%	7,984	5.5%	8,063	5.5%	40,679	28.0%
General Service - Medium	196,301	106,963	54.5%	20,040	10.2%	10,843	5.5%	8,638	4.4%	49,817	25.4%
General Service - Large <30kV	90,918	55,785	61.4%	9,640	10.6%	5,185	5.7%	3,075	3.4%	17,234	19.0%
General Service - Large 30-100kV	61,289	47,707	77.8%	7,633	12.5%	4,080	6.7%	1,588	2.6%	281	0.5%
General Service - Large >100kV	159,066	133,490	83.9%	21,282	13.4%	0	0.0%	4,054	2.5%	241	0.2%
SEP	739	580	78.5%	90	12.2%	0	0.0%	46	6.2%	23	3.1%
Area & Roadway Lighting	21,542	2,768	12.9%	507	2.4%	274	1.3%	951	4.4%	17,041	79.1%
<b>Total General Consumers</b>	<b>1,446,199</b>	<b>768,772</b>	<b>53.2%</b>	<b>153,606</b>	<b>10.6%</b>	<b>72,057</b>	<b>5.0%</b>	<b>114,047</b>	<b>7.9%</b>	<b>337,717</b>	<b>23.4%</b>
Diesel	8,996	8,599	95.6%	0	0.0%	0	0.0%	0	0.0%	396	4.4%
Export	38,159	38,159	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
<b>Total System</b>	<b>1,493,354</b>	<b>815,531</b>	<b>54.6%</b>	<b>153,606</b>	<b>10.3%</b>	<b>72,057</b>	<b>4.8%</b>	<b>114,047</b>	<b>7.6%</b>	<b>338,114</b>	<b>22.6%</b>