

RCM/TREE/MH I-1

General

- a) Please provide Tabs 7 through 13 and Appendices 10-1 through 10-10, 11-1 through 11-3, 13-2, 13-7, 13-8 and 13-9 in PDF-readable (i.e., searchable) form.

ANSWER:

All the material cited has already been made available in PDF-readable form on the Corporation's website at:

http://www.hydro.mb.ca/regulatory_affairs/electric/gra_2010_2012/index.shtml

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Cost of Service Study

Reference: Cost of Service Study; Tab 11

- a) Please identify all instances where Hydro's COS methodology differs from PUB directives (as discussed on page 1).**

ANSWER:

All instances where Manitoba Hydro's cost of service methodology differs from PUB directives are discussed on pages 7-11 of the 2010 Prospective Cost of Service Study filed as Appendix 11.3 of its Application.

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Cost of Service Study

Reference: Cost of Service Study; Tab 11

b) Please specify the demand/customer classification ratio of each distribution sub function.

ANSWER:

Classification of Distribution Sub functions		
Distribution Facilities	Demand Related	Customer Related
Substations	100%	
Line Transformers	100%	
Pole, Wire and Related Facilities	60%	40%
Services		100%
Meters and Metering Transformers		100%

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Cost of Service Study

Reference: Cost of Service Study; Tab 11

- c) Please provide the basis of the demand/customer classification ratio of each distribution sub function, including all analyses, work papers and spreadsheets relied upon.**

ANSWER:

The basis of the demand/customer classification ratio results from a 1990 study prepared by Ernst and Young. The study considered the applicability of several accepted methods of calculating the split of Distribution costs to both demand and customer components. That Study was filed and reviewed by the PUB as part of Manitoba Hydro's 1991 General Rate Application and the results of which have been used as the basis of all cost of service studies prepared since that time. Please see Appendix 27.

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Cost of Service Study

Reference: Cost of Service Study; Tab 11

d) Please provide Hydro's 1990 study of the classification of Distribution costs.

ANSWER:

Please see Appendix 27.

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Cost of Service Study

Reference: Cost of Service Study; Tab 11

- e) Please indicate whether the class non-coincident peak (NCP) reflects:
- i. class diversified peak, non-coincident with the system peak or the peaks of any other class,
 - ii. the sum of customers' individual maximum demands, non-coincident with class peak, or
 - iii. something else. If so, please explain what.

ANSWER:

The class non-coincident peak (NCP) is the single highest estimated (for Load Research classes) or measured (for metered classes) class diversified demand peak. It may or may not be coincident with one of the TOP 50 system peaks or other class NCPs. It is not the "undiversified peak" or sum of individual customer maximum demands.

The class coincident peak (CP) is the average of the hourly estimated (or measured) demands corresponding to the TOP 50 generation peak kW hours.

The 2008/09 class NCP Load Factor (LF) is the (Total Energy)/(NCP*8760 hours).

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Cost of Service Study

Reference: Cost of Service Study; Tab 11

- f) For each Distribution Service sub-function, please explain the basis of the customer weighting factors used in its allocation (referred to on page 3).**

ANSWER:

An explanation of the customer weighting factors used in the allocation of distribution services can be found on pages 73-78 of Appendix 11.1 filed as part of Manitoba Hydro's Application.

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Cost of Service Study

Reference: Cost of Service Study; Tab 11

- g) For each Distribution Service sub-function, please provide the derivation of the customer weighting factors used in its allocation, including all analyses, workpapers and spreadsheets relied upon.**

ANSWER:

The derivation of the weighting factors used in the table 'C10 Weighted Ratio Customer Service - General' can be found in Attachment 1.

The derivation of the weighting factors used in the allocation table 'C11 Weighted Customer Count Table - Billing', 'C12 Weighted Customer Count Table - Collections', 'C14 Weighted Customer Count Table - Electrical Inspections' and 'C15 Weighted Customer Count Table - Meter Reading' can be found in Attachment 2.

Estimate of Class Share for Individual SCC's

	Consumer Consultation & Information	Municipal and Community Relations	Public Accountability	Power Quality	Service Extensions	Customer Policy	Rates & Cost of Service	Load Research	
Res	43%	80%	33%	45%	18%	30%	13%	19%	
GSS	28%	5%	18%	13%	28%	23%	10%	21%	
GSM	10%	10%	14%	12%	44%	23%	7%	19%	
GSL 0 - 30 kV	7%	2%	5%	10%	7%	6%	6%	29%	
GSL 30-100KV	4%	1%	3%	9%	2%	4%	5%	3%	
GSL 30-100KV Curtailable	1%	0%	1%	3%	1%	1%	5%	1%	
GSL >100KV	4%	1%	7%	6%	1%	6%	10%	3%	
GSL >100KV Curtailable	2%	1%	7%	3%	0%	6%	16%	0%	
SEP	0%	0%	5%	0%	0%	0%	19%	3%	
Lighting	0%	0%	6%	0%	0%	0%	10%	1%	
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	

Planned Orders by SCC

	Consumer Consultation & Information	Municipal and Community Relations	Public Accountability	Power Quality	Service Extensions	Customer Policy	Rates & Cost of Service	Load Research	Total
Planned Orders	19,999,730	1,907,040	1,414,316	2,216,407	2,207,217	495,231	968,869	1,390,354	30,599,164
Percent of Total Planned	65.4%	6.2%	4.6%	7.2%	7.2%	1.6%	3.2%	4.5%	100.0%

Class Share Weighted by Planned Orders

	Consumer Consultation & Information	Municipal and Community Relations	Public Accountability	Power Quality	Service Extensions	Customer Policy	Rates & Cost of Service	Load Research	Total
Res	28.4%	5.0%	1.5%	3.3%	1.3%	0.5%	0.4%	0.9%	41.3%
GSS	18.2%	0.3%	0.9%	0.9%	2.0%	0.4%	0.3%	0.9%	23.9%
GSM	6.7%	0.6%	0.7%	0.8%	3.2%	0.4%	0.2%	0.9%	13.5%
GSL 0 - 30 kV	4.9%	0.1%	0.2%	0.7%	0.5%	0.1%	0.2%	1.3%	8.0%
GSL 30-100KV	2.6%	0.0%	0.1%	0.6%	0.1%	0.1%	0.2%	0.2%	3.9%
GSL 30-100KV Curtailable	0.9%	0.0%	0.1%	0.2%	0.0%	0.0%	0.1%	0.1%	1.5%
GSL >100KV	2.6%	0.1%	0.3%	0.4%	0.0%	0.1%	0.3%	0.1%	4.0%
GSL >100KV Curtailable	1.1%	0.1%	0.3%	0.2%	0.0%	0.1%	0.5%	0.0%	2.3%
SEP	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.6%	0.1%	1.0%
Lighting	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.3%	0.1%	0.7%
Total	65.4%	6.2%	4.6%	7.2%	7.2%	1.6%	3.2%	4.5%	100.0%

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Attachment 1

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Allocation Table	Retail Prospective Cost Of Service Study C13 Number Of Customers - Adj. For Water Htg, Str & Sentinel Lighting		
	Curt Class	Class	Total
Residential	Standard & All Electric	440,315	440,315
	Seasonal	21,642	21,642
	Water Heating	480	480
Total Residential	-	462,437	462,437
General Service Small:	Non-Demand	51,453	51,453
	Demand	11,260	11,260
	Seasonal	816	816
	Water Heating	45	45
Total General Service Small	-	63,573	63,573
SEP	GSM	20	20
	GSL	5	5
Total SEP	-	25	25
General Service Medium		1,859	1,859
General Service Large	0-30KV	-	259
	30-100KV	1	29
	>100KV	3	11
Total General Service Large	4	299	303
Area & Roadway Lighting		15,371	15,371
Total General Consumers	4	543,564	543,568
Diesel		-	-
Total System	4	543,564	543,568

Allocation Table	Retail Prospective Cost Of Service Study Class Weighted Share		
	Curt Class	Class	Total
Residential	Standard & All Electric	0%	39%
	Seasonal	0%	2%
	Water Heating	0%	0%
Total Residential	0%	41%	41%
General Service Small:	Non-Demand	0%	19%
	Demand	0%	4%
	Seasonal	0%	0%
	Water Heating	0%	0%
Total General Service Small	0%	24%	24%
SEP	GSM	0%	1%
	GSL	0%	0%
Total SEP	0%	1%	1%
General Service Medium		0%	13%
General Service Large	0-30KV	0%	8%
	30-100KV	1%	4%
	>100KV	2%	4%
Total General Service Large	4%	16%	20%
Area & Roadway Lighting		0%	1%
Total General Consumers	4%	96%	100%
Diesel			0%
Total System	4%	96%	100%

Allocation Table	Retail Prospective Cost Of Service Study C10 Weighted Ratio - Customer Service Total		
	Curt Class	Class	Total
Residential	Standard & All Electric	-	213,508
	Seasonal	-	10,494
	Water Heating	-	233
Total Residential	-	224,235	224,235
General Service Small:	Non-Demand	-	105,062
	Demand	-	22,992
	Seasonal	-	1,666
	Water Heating	-	91
Total General Service Small	-	129,812	129,812
SEP	GSM	-	4,203
	GSL	-	1,051
Total SEP	-	5,254	5,254
General Service Medium		-	73,304
General Service Large	0-30KV	-	43,424
	30-100KV	7,922	21,392
	>100KV	12,674	21,930
Total General Service Large	20,596	86,746	107,342
Area & Roadway Lighting		-	3,622
Total General Consumers	20,596	522,972	543,568
Diesel			-
Total System	20,596	522,972	543,568

*Number of Customers - Weighted
Allocation of Meter Reading Costs*

Rate Class	Meter Reading Frequency						Annual Meter Readings						Weight Factor	Actual Customers (Unadj.)	Actual Customers (Wtd)
	Monthly 12/yr	Bi-Monthly 6/yr	Semi-Annual 2/yr	Annual 1/yr	Self Read 1/3 yr	Total	Monthly 12	Bi-Monthly 6	Semi-Annual 2	Annual 1	Self Read 0.3	Total			
Residential	11,194	347,200			67,852	426,246	134,328	2,083,200	0	0	20,356	2,237,884	5	440,315	2,201,575
Diesel	512					512	6,144	0	0	0	0	6,144	12		0
Res - Seasonal			4,600	15,507		20,107	0	0	9,200	15,507	0	24,707	1	21,642	21,642
GSS ND	4,695	33,656			10,278	48,629	56,340	201,936	0	0	3,083	261,359	5	40,076	200,378
Diesel	163					163	1,956	0	0	0	0	1,956	12		0
GSS Seasonal			248	546		794	0	0	496	546	0	1,042	1	816	816
GSS Demand	8,864	56			5	8,925	106,368	336	0	0	2	106,706	12	3,972	47,664
G.S. Medium	1,777	2				1,779	21,324	12	0	0	0	21,336	12	1,859	22,308
GSL 0 - 30 kV	227	4				231	2,724	24	0	0	0	2,748	12	259	3,108
GSL 30 kV - 100 kV	28					28	336	0	0	0	0	336	12		
Curtable														1	12
Non-Curtable														29	348
GSL > 100 kV	12					12	144	0	0	0	0	144	12		
Curtable														3	36
Non-Curtable														11	132
SEP															
GSM													12	20	240
GSL 0-30													12	5	60
	27,472	380,918	4,848	16,053	78,135	507,426	329,664	2,285,508	9,696	16,053	23,441	2,664,362		509,008	2,498,319

ELECTRICAL INSPECTION ALLOCATION TABLE

Classification	Projected Number of Customers	Share of Res/Comm Customers	Share of Inspection Activity Charges	Percentage of Cost
Residential	440,315	95.3%	58.1%	5,539.2
Seasonal	21,642	4.7%	58.1%	272.3
Total Residential	461,957	100.0%		5,811.5
GSS Demand 1 Phase	3,972	6.0%	42%	253.2
GSS ND 1 Phase	40,076	61.0%	42%	2,554.3
GSS Demand 3 Phase	7,288	11.1%	42%	464.5
GSS ND 3 Phase	11,377	17.3%	42%	725.1
GSS Seasonal	816	1.2%	42%	52.0
Total G.S. Small	63,529	96.7%		4,049.1
SEP				
GSM	20	0.0%	42%	1.3
GSL 0-30	5	0.0%	42%	0.3
Total SEP	25	0.0%		1.6
G.S. Medium	1,859	2.8%	42%	118.5
GSL 0- 30 kV	259	0.4%	42%	16.5
GSL 30-100 kV Curtailable	1	0.0%	42%	0.1
GSL 30-100 kV Non Curtailab	29	0.0%	42%	1.8
GSL >100 kV Curtailable	3	0.0%	42%	0.2
GSL >100 kV Non Curtailab	11	0.0%	42%	0.7
Total G.S. Large	303.0	0.5%		19.3
Total General Service	65,716	100.0%		4,188.5
Total	527,673			10,000.0
Wiring Inspections				
Activity Charges				
Residential	1,198,403	58.1%		
Commercial	863,724	41.9%		
Total	2,062,127.00			

CUSTOMER BILLING - C.S.S. Cost of Service Allocation 1991 with 2010 # of Customers

Source: Obtained from 1991 Cost of Service Cost Allocation - Summary

	A	B	C											D	E	F	G	H			
		Source:	1991 COST												1991	1991	1991 (adj. for 2010 cust.)				
		C Tables	ALLOCATION											OST PER SERVIC COST ALLOCATION				RATIO			
	1991	NUMBER	COSTS																		
	NUMBER	OF	Customer	Adjustments	Self Reads	Collections of	Collection	Collections	Remittance	Revenue	Contract	Admin	Totals	Billings	Collection	Billings	Clctns	E * B	F * B	G / I	H / J
	OF	OF	Billing			Final Accounts	Write-offs		Control	Accounting	Billings							Billings	Clctns	Billings	Clctns
RESIDENTIAL	306,847	440,315	2,714,021	496,018	822,920	490,047	1,050,744	221,268	134,969	337,964	63,367	193,452	6,524,770	4,685,060	1,839,711	15.3	6.0	6,722,901	2,639,922	8,108.5	7,387.3
Seasonal	21,764	21,642	115,500	70,363	-	3,862	8,281	1,744	957	7,191	-	13,721	221,619	200,184	21,435	9.2	1.0	199,062	21,315	240.1	59.6
Water Heating	3,307	4,802	5,850	1,069	-	-	-	-	-	364	-	695	7,978	7,771	207	2.3	0.1	11,284	301	13.6	0.8
GSS NonDemand	39,370	51,453	487,511	89,098	105,748	83,834	412,260	37,853	5,195	8,673	-	66,189	1,296,361	744,038	552,323	18.9	14.0	972,380	721,829	1,172.8	2,019.9
GSS Demand	3,860	11,260	61,486	11,237	-	8,224	40,441	3,713	510	851	-	6,493	132,954	78,599	54,355	20.4	14.1	229,281	158,559	276.5	443.7
Seasonal	1,054	816	5,593	3,408	-	187	920	84	46	116	-	664	11,019	9,467	1,552	9.0	1.5	7,329	1,202	8.8	3.4
Water Heating	520	447	920	168	-	-	-	-	-	57	-	109	1,255	1,222	33	2.3	0.1	1,050	28	1.3	0.1
SEP GSM		20														22.4	14.1	448	282	0.5	0.8
SEP GSL		5														48.8	2.2	244	11	0.3	0.0
GSM	1,049	1,859	18,557	3,391	-	2,234	10,985	1,009	92	231	-	1,764	38,262	23,474	14,787	22.4	14.1	41,601	26,205	50.2	73.3
GSL 0-30	148	259	5,236	718	-	-	-	-	13	33	-	1,555	7,555	7,224	331	48.8	2.2	12,641	579	15.2	1.6
GSL 30-100 kV	13	30	460	63	-	-	-	-	1	10	-	137	671	642	29	49.3	2.2				
GSL 30-100 kV Curt		1																49	2	0.1	0.0
GSL 30-100 kV Non Curt		29																1,431	65	1.7	0.2
GSL > 100 kV	11	14	389	53	-	-	-	-	1	8	-	116	568	543	25	49.3	2.2				
GSL >100 kV Curt		3																148	7	0.2	0.0
GSL >100 kV Non Curt		11																543	25	0.7	0.1
LIGHTING																					
STREET																					
Zone 1	32	96	849	83	-	-	-	-	-	4	-	336	1,272	1,205	66	37.7	2.1	3,619	199	4.4	0.6
Zone 2&3	729	680	19,344	1,885	-	-	-	-	-	80	-	7,660	28,969	27,457	1,512	37.7	2.1	25,626	1,412	30.9	3.9
SENTINEL	19,626	26,170	34,718	6,345	-	-	-	-	-	2,162	-	4,124	47,349	46,119	1,230	2.3	0.1	61,497	1,640	74.2	4.6
	398,330	559,912	3,470,434	683,900	928,668	588,388	1,523,629	265,671	141,785	357,744	63,367	297,015	8,320,601	5,833,005	2,487,596			8,291,135	3,573,583	10,000.0	10,000.0

RCM/TREE/MH I-2

Cost of Service Study

Reference: Cost of Service Study; Tab 11

- h) Please indicate whether the allocation of services plant assumes that there is one service per customer.**
 - i. If not, explain how the service plant allocator is adjusted to take into account shared services. Provide workpapers.**

ANSWER:

Confirmed, the allocation of services plant assumes that there is one service per customer.

RCM/TREE/MH I-2

Cost of Service Study

Reference: Cost of Service Study; Tab 11

- i) **Please provide an estimate of the number of residential customers that live in multifamily dwellings.**

ANSWER:

As of September 2009, there were 18,970 multiplexes, 14,347 rowhouses and 55,927 apartment suites totaling 89,244 multifamily dwellings that are individually metered and are considered to be residential customers.

RCM/TREE/MH I-2

Cost of Service Study

Reference: Cost of Service Study; Tab 11

j) Please provide:

- i. the total number of services and**
- ii. the number of residential services.**

ANSWER:

As of March 2009, the actual number of general consumer customers was 527,471. This excludes flat rate water heating and sentinel services.

As of March 2009, the actual number of residential customers was 460,804. This includes seasonal and diesel customers and excludes flat rate water heating services.

RCM/TREE/MH I-2

Cost of Service Study

Reference: Cost of Service Study; Tab 11

k) Please provide the average number of residential customers per service line.

ANSWER:

In general, a customer is a service. There are some services such as flat rate water heating and sentinel lighting that do not count as a customer.

In general, each customer is serviced by one line. There is one residential customer per service line for single-family dwellings. In the case of a multi-residential building with multiple meters, there is only one line or hydro service to the building; however each tenant may have their own meter and would be deemed a residential customer. In the case of a multi-residential building with a single meter, there is only one line or hydro service to the building and the owner of the building is classed as one commercial customer.

RCM/TREE/MH I-2

Cost of Service Study

Reference: Cost of Service Study; Tab 11

l) Please provide the current number of secondary transformers.

ANSWER:

Manitoba Hydro does not use the term “secondary transformers” and, as such, is not clear on what the term is intended to mean. However, if the question is intended to refer to distribution transformers, then Manitoba Hydro has 139,445 such transformers.

RCM/TREE/MH I-3

Cost of Service Study

Reference: Prospective Cost of Service Study for Fiscal Year Ending March 31, 2010; Appendix 11.1

- a) **Please provide an Excel version of all spreadsheets used in the preparation of the PCOSS, with all formulas intact and with all lookup tables, tables of functionalization, classification and allocation factors, and supporting calculations.**

ANSWER:

Manitoba Hydro's submissions are available electronically in PDF format and are found on the Corporation's website. Manitoba Hydro declines to provide the requested materials in Excel format for several reasons. First, the models used by the Corporation are large and complex. Manitoba Hydro expects that an independent analyst, untrained with Manitoba Hydro's models, would need to invest a significant amount of time and effort to be capable of operating the model correctly. Allowing other parties to work in and modify spreadsheets and pose questions in Information Requests and on cross-examination based on the modified schedules, will also require Manitoba Hydro to invest a significant amount of time analyzing the changes made to the spreadsheets and to understanding their potential impacts. This approach is inefficient, would require additional time to be provided within the regulatory process and would make the regulatory process more cumbersome.

Second, spreadsheets contain metadata, which includes working notes and references made by the staff responsible for the files. In order to remove metadata, the file must be converted to an Adobe Acrobat portable document format (pdf) file. This is an electronic file format that is an open standard which is readable by many different operating systems, does not require specific software to read and allows all parties to access filed information.

Third, Manitoba Hydro notes that some of the Corporation's models may be subject to intellectual property rights reserved by third parties and are not available to be shared in the regulatory process. In addition, some spreadsheets may contain competitive or commercially sensitive information which is not appropriate to be disclosed.

As an alternative to Manitoba Hydro providing access to spreadsheet models, it is preferable for Intervenor to propose, through the interrogatory process, that Manitoba Hydro run specific scenarios using its models, changing the assumptions as requested, and providing updated results for all parties to examine. Manitoba Hydro is of the view that this is the most appropriate and efficient approach to test new scenarios.

RCM/TREE/MH I-3

Cost of Service Study

Reference: Prospective Cost of Service Study for Fiscal Year Ending March 31, 2010; Appendix 11.1

- b) Please provide a table in Excel of the external allocation factors for all classes including the export class (if not provided in response to (a)).**

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-3(a).

RCM/TREE/MH I-3

Cost of Service Study

Reference: Prospective Cost of Service Study for Fiscal Year Ending March 31, 2010; Appendix 11.1

- c) Please provide a table in Excel of the internal allocation factors for all classes including the export class (if not provided in response to (a)).**

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-3(a).

RCM/TREE/MH I-3

Cost of Service Study

Reference: Prospective Cost of Service Study for Fiscal Year Ending March 31, 2010; Appendix 11.1

- d) Please document the derivation of all external allocators and direct assignments including:
- i. All data relied upon and the calculations performed,
 - ii. All workpapers and Excel spreadsheets (with formulas intact),
 - iii. All studies relied upon.

ANSWER:

i-iii:

Please see the response to RCM/TREE/MH I-3(a). In addition, the derivation of the allocators used in the Cost of Service Study can be found in Schedules D1, D2 and D5 of Appendix 11.1 of Manitoba Hydro's Application, and in the Allocation Program Appendix 11.2.

RCM/TREE/MH I-3

Cost of Service Study

Reference: Prospective Cost of Service Study for Fiscal Year Ending March 31, 2010; Appendix 11.1

- e) Regarding the generation allocator, please provide:**
- i. The marginal costs used to derive the generation allocator,**

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-3(e)(iii).

RCM/TREE/MH I-3

Cost of Service Study

Reference: Prospective Cost of Service Study for Fiscal Year Ending March 31, 2010; Appendix 11.1

e) Regarding the generation allocator, please provide:

- ii. The derivation of the marginal costs, including data relied upon, calculations, workpapers and spreadsheets (with formulas intact),**

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-3(e)(i).

RCM/TREE/MH I-3

Cost of Service Study

Reference: Prospective Cost of Service Study for Fiscal Year Ending March 31, 2010; Attachment 11.1

e) Regarding the generation allocator, please provide:

- iii. The use of these marginal costs in deriving the generation allocator, including data relied upon, calculations, workpapers and spreadsheets (with formulas intact)**

ANSWER:

Please see the response to RCM/TREE/MH I-3(a). Please see Appendix 38 for the following PDF attachments:

Attachment 1: The annual class energy use by period.

Attachment 2: The daily SEP price data used to calculate the weightings.

Attachment 3: The derivation of the weighted hourly price for each period.

Attachment 4: The application of the marginal weightings to the class energy consumption for each period, used to determine the Generation allocators.

RCM/TREE/MH I-3

Cost of Service Study

Reference: Prospective Cost of Service Study for Fiscal Year Ending March 31, 2010; Appendix 11.1

f) Please explain how Hydro functionalizes, classifies, and allocates A&G costs.

ANSWER:

Manitoba Hydro employs a full absorption costing methodology. All costs incurred are ultimately charged to a program or project associated with the generation, transmission, distribution, and marketing of gas or electricity. Corporate general and administration costs are allocated either through activity charges or overhead applied as a percentage of activity charges.

Once corporate general and administrative costs have been allocated, they are functionalized as part of the overall costs of the program or project as described on page 26 of Appendix 11.1.

“SAP, via settlement costs centres, provides the initial functionalization of all functional operating and maintenance costs as well as depreciation expense. Final functionalization is done off-line and includes functionalization of items such as communication system costs to all functions except customer service.”

The functionalization and classification of costs is discussed in greater detail on pages 19-43 of the 2010 Prospective Cost of Service Study provided as Appendix 11.1 to Manitoba Hydro’s Application. Pages 61-82 of the document detail the allocation methods used.

RCM/TREE/MH I-4

Cost Allocation to Export Class

Reference: Cost of Service Study; Tab 11

- a) Please provide the projected annual revenue requirements of the Wuskwatim and the Conawapa projects and the assumptions and calculations upon which they are based.

ANSWER:

Manitoba Hydro does not determine annual revenue requirements for specific future projects such as Wuskwatim and Conawapa and these projects are not included in the Cost of Service Study. Please refer to the response to PUB/MH I-197 for an approximate approach for determining the revenue requirement for the first year beyond in-service for the Conawapa project.

RCM/TREE/MH I-4

Cost Allocation to Export Class

Reference: Cost of Service Study; Tab 11

- b) Please provide Hydro's cost-benefit analysis of**
- i. the Wuskwatim project,**
 - ii. the Conawapa project,**
 - iii. the Keeyask project,**
 - iv. advancing the in-service date of the Wuskwatim project,**
 - v. advancing the in-service date of the Conawapa project, and**
 - vi. advancing the in-service date of the Keeyask project.**

ANSWER:

As recorded in the CEC Report on Wuskwatim Generation and Transmission Projects, the Wuskwatim project was proposed as the next generation resource to meet domestic load growth, and was forecast to be required by 2019. The opportunity to advance the in-service date from 2019 to 2009 (now expected in 2011/12) became apparent. The surplus capacity and energy available from this plant, prior to being required for domestic load, could be sold on the export market. The resultant return would more than pay for the advancement of the plant. Overall the early investment would protect Manitoba Hydro's position in the export market, reduce the cost of the Wuskwatim Generating Station that is to be borne by ratepayers and thus support continued low rates within the Province. Please see the CEC report for the analysis of the Wuskwatim project.

Manitoba Hydro has not made a commitment to develop Keeyask or Conawapa but is working to protect potential in-service-dates. Current plans that include Keeyask as the next plant are based on the successful conclusion of the sales with Wisconsin Public Service and Minnesota Power. Any commitment to either Keeyask or Conawapa will depend on the prevailing circumstances at the time. Keeyask and/or Conawapa will be subject to a full examination when the "needs for and alternatives to" process is initiated.

RCM/TREE/MH I-4

Cost Allocation to Export Class

Reference: Cost of Service Study; Tab 11

- c) **Please provide a forecast of the output of each existing generation plant with and without exports for the next ten years.**

ANSWER:

Manitoba Hydro does not determine the output of generating facilities for a hypothetical scenario of a system without exports. The output of the system of hydroelectric generating facilities in any one year can deviate from median water conditions by as much as a 25% reduction in low water conditions to a 25% increase during high water conditions. Manitoba Hydro determines the plant output over each of 94 historic flow conditions and uses the average of these in order to develop a best estimate forecast of output in any one year. This forecast of output for existing generation plant is not expected to vary over the next ten years.

Based on current plant capability, the expected energy production calculated over the full range of streamflow conditions for each existing hydraulic generating station is presented in the following table.

Generating Station	Average Energy (GWh)
Pointe du Bois	580
Slave Falls	520
Seven Sisters	1,015
McArthur Falls	390
Great Falls	915
Pine Falls	640
Grand Rapids	1,555
Jenpeg	925
Kelsey	1,810
Kettle	7,130
Long Spruce	6,080
Limestone	7,630
Laurie River (I & II)	60
TOTAL Hydraulic Generation	29,250

RCM/TREE/MH I-4

Cost Allocation to Export Class

Reference: Cost of Service Study; Tab 11

- d) **Please provide the current costs of operation of each existing generation facility, including**
- i. Fuel**
 - ii. Fixed and variable O&M**
 - iii. Capital additions**
 - iv. Environmental costs.**

ANSWER:

The cost of operation for each generation facility is shown in the following table. Please note that fixed and variable O&M costs cannot be separated. While environmental costs are not separately identified in Manitoba Hydro's financial reporting system there are environmental costs contained in the reported depreciation expense.

**2010 Forecast Cost of Operations for Generation Facilities
(\$ Millions)**

	Fuel	O & M	Depreciation	Total
Great Falls GS		9.5	2.8	12.2
McArthur Falls GS		4.1	0.8	4.9
Seven Sisters GS		7.1	2.1	9.2
Pine Falls GS		5.2	1.1	6.3
Pointe Du Bois GS		11.2	9.2	20.5
Slave Falls GS		4.6	1.9	6.5
Grand Rapids GS		16.9	4.7	21.5
Laurie River GS		1.1	0.4	1.5
Long Spruce GS		31.2	8.5	39.7
Jenpeg GS		12.7	4.2	16.9
Kettle GS		34.6	5.6	40.2
Kelsey GS		12.9	3.7	16.5
Limestone GS		38.6	21.9	60.5
Brandon GS*	18.9	15.4	15.3	49.6
Selkirk GS	0.0	9.6	3.9	13.4
	18.9	214.6	86.1	319.6

* Includes Brandon CT

RCM/TREE/MH I-4

Cost Allocation to Export Class

Reference: Cost of Service Study; Tab 11

- e) Please provide the basis of the statement that “gas-fired generation is almost never used to support exports (p. 3).

ANSWER:

In almost all cases, hydraulic generation or imports are a lower cost alternative to running Manitoba Hydro gas-fired generation. Please see Manitoba Hydro’s response to PUB/MH I-84.

RCM/TREE/MH I-5

Load Research

Reference: Electric Load Forecast and Load Research, Tab 7

a) Please provide in Excel-readable form the Schedules 7.2.1, 7.2.2 and 7.2.3.

ANSWER:

For the reasons outlined in RCM/TREE/MH I-3(a), Manitoba Hydro declines to provide the requested materials in Excel format.

RCM/TREE/MH I-5

Load Research

Reference: Electric Load Forecast and Load Research, Tab 7

- b) For each month of the year ending March 31, 2009, please provide the Hydro domestic peak and its date and time.

ANSWER:

Year/Month/Day/Hour Ending	kW
2008/04/07 8:00	2917590
2008/05/02 9:00	2608283
2008/06/30 18:00	2673852
2008/07/24 18:00	2670545
2008/08/20 18:00	2814343
2008/09/18 21:00	2472009
2008/10/27 9:00	2909238
2008/11/20 18:00	3508062
2008/12/15 18:00	4055506
2009/01/15 9:00	4094590
2009/02/27 8:00	3835822
2009/03/11 9:00	3880597

RCM/TREE/MH I-5

Load Research

Reference: Electric Load Forecast and Load Research, Tab 7

- c) For each month of the year ending March 31, 2009, please provide the Hydro system peak (including exports as well as domestic usage) and its date and time.

ANSWER:

Year/Month/Day/Hour	
Ending	kW
2008/04/23 14:00	4637000
2008/05/30 11:00	4607000
2008/06/24 17:00	4730000
2008/07/10 19:00	4753000
2008/07/10 20:00	4753000
2008/08/18 12:00	4800000
2008/09/12 16:00	4763000
2008/10/27 19:00	4793000
2008/11/17 18:00	4920000
2008/12/16 16:00	4953000
2009/01/12 18:00	4801000
2009/02/02 18:00	4670000
2009/03/10 16:00	4663000

RCM/TREE/MH I-5

Load Research

Reference: Electric Load Forecast and Load Research, Tab 7

- d) For each month of the year ending March 31, 2009, please provide the estimated rate class contributions to the monthly domestic and system monthly peaks.**

ANSWER:

Please refer to tables on the following two pages.

Estimated and measured rate class contribution to the monthly domestic peak:

Revenue Class	GS Large 30-100 kV	GS Large 30- 100 kV Curtable	GS Large > 100 kV	GS Large > 100 kV Curtable	GS Large 750-30 kV	GS Large Sep	GS Medium	GS Medium SEP	GS Small Demand	GS Small Non Demand	Residential
2008-04-07 08:00	80,693	26,216	360,903	313,899	190,165	113	376,250	2,199	238,237	183,562	1,029,040
2008-05-02 09:00	78,853	25,707	325,674	304,008	196,385	172	368,414	2,506	236,139	179,755	772,684
2008-06-30 18:00	82,851	26,212	302,284	309,257	200,138	39	363,027	301	198,227	167,704	813,693
2008-07-24 18:00	81,625	26,353	282,234	269,301	217,310	708	400,905	247	220,094	190,969	832,929
2008-08-20 18:00	83,610	26,255	293,522	279,568	225,363	460	414,978	308	222,590	200,974	919,236
2008-09-18 21:00	80,200	26,611	315,278	307,693	208,460	156	362,976	714	197,755	175,146	703,535
2008-10-27 09:00	99,943	25,836	324,967	302,716	209,233	886	406,567	3,436	271,742	214,516	909,889
2008-11-20 18:00	105,105	25,877	350,843	314,879	221,612	648	437,728	3,927	297,334	260,108	1,384,877
2008-12-15 18:00	92,292	26,057	337,697	198,914	225,418	141	482,636	4,252	335,774	288,358	1,621,219
2009-01-15 09:00	106,821	26,084	325,594	319,332	234,313	144	517,754	5,677	358,388	315,361	1,565,899
2009-02-27 08:00	109,893	19,317	298,200	302,530	206,495	506	472,302	5,509	324,228	289,334	1,591,153
2009-03-11 09:00	85,795	25,855	335,705	299,736	230,167	604	492,635	5,264	338,031	303,456	1,496,482

Estimated and measured rate class contribution to the monthly system peak:

Revenue Class	GS Large 30-100 kV	GS Large 30- 100 kV Curtailable	GS Large > 100 kV	GS Large > 100 kV Curtailable	GS Large 750-30 kV	GS Large Sep	GS Medium	GS Medium SEP	GS Small Demand	GS Small Non Demand	Residential
2008-04-23 14:00	263,809	318,251	80,836	26,175	211,395	50	384,566	2,509	233,189	216,668	623,303
2008-05-30 11:00	290,352	252,948	70,881	25,907	212,773	383	382,913	1,291	227,572	192,100	480,397
2008-06-24 17:00	289,367	240,963	71,470	25,919	222,516	1,017	410,496	369	228,918	205,004	661,894
2008-07-10 19:00	247,934	271,364	73,476	26,304	206,513	163	367,762	244	199,439	166,841	672,192
2008-07-10 20:00	249,206	301,055	80,927	26,317	203,134	163	356,117	253	192,412	158,965	689,198
2008-08-18 12:00	276,912	304,809	79,892	26,178	228,492	1,513	418,918	205	246,120	219,524	625,943
2008-09-12 16:00	329,879	316,421	96,239	26,548	224,994	1,064	410,066	325	233,934	210,894	501,925
2008-10-27 19:00	345,187	287,241	88,984	25,913	199,943	322	363,021	2,892	240,036	177,004	1,009,416
2008-11-17 18:00	352,918	271,165	101,544	25,870	213,578	613	415,962	3,257	275,533	231,601	1,168,465
2008-12-16 16:00	330,156	252,525	83,814	26,086	232,784	642	498,008	3,834	347,764	304,686	1,292,587
2009-01-12 18:00	307,039	300,247	105,223	24,827	218,190	611	471,719	4,955	315,603	273,148	1,612,817
2009-02-02 18:00	335,007	294,325	87,386	12,517	219,879	1,010	455,694	4,931	305,305	272,960	1,424,013
2009-03-10 16:00	333,766	297,792	78,849	25,788	227,018	511	490,215	4,231	327,390	301,545	1,227,837

RCM/TREE/MH I-5

Load Research

Reference: Electric Load Forecast and Load Research, Tab 7

- e) For each month of the year ending March 31, 2009, please provide the estimated rate class NCP and its date and time.

ANSWER:

Please refer to tables on the following two pages.

	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08
GS Large 30-100 kV	91632 2008/04/07 0:00	83303 2008/05/28 0:00	96527 2008/06/14 12:00	95670 2008/07/29 9:00	99552 2008/08/30 15:00	101947 2008/09/29 16:00
GS large 30-100 kV Curtailable	26458 2008/04/02 20:00	26114 2008/05/28 18:00	26280 2008/06/23 13:00	26482 2008/07/23 9:00	26571 2008/08/26 8:00	26873 2008/09/22 01:00
GS Large > 100kV	383827 2008/04/04 22:00	358637 2008/05/01 16:00	338242 2008/06/20 03:00	333540 2008/07/03 16:00	331641 2008/08/28 03:00	343420 2008/09/17 00:00
GS Large > 100 Curtailable	326038 2008/04/28 8:00	322604 2008/05/03 3:00	320681 2008/06/07 10:00	319242 2008/07/13 16:00	316946 2008/08/01 8:00	322288 2008/09/22 01:00
GS Large 750V -30kV	217278 2008/04/01 11:00	225009 2008/05/15 14:00	241299 2008/06/25 15:00	232758 2008/07/22 14:00	243085 2008/08/20 15:00	233781 2008/09/22 15:00
GS Medium	415782 2008/04/01 11:00	398740 2008/05/28 14:00	431060 2008/06/26 15:00	432463 2008/07/24 14:00	451123 2008/08/20 14:00	424449 2008/09/18 15:00
GS Small Demand	267134 2008/04/07 10:00	248212 2008/05/02 10:00	251866 2008/06/25 15:00	256880 2008/07/24 14:00	260191 2008/08/21 14:00	256604 2008/09/18 14:00
GS Small Non Demand	233174 2008/04/01 12:00	218454 2008/05/02 12:00	221212 2008/06/25 13:00	230139 2008/07/04 16:00	245956 2008/08/21 15:00	230653 2008/09/18 16:00
Residential	1058566 2008/04/01 8:00	889812 2008/05/05 8:00	868707 2008/06/30 20:00	891863 2008/07/01 18:00	978050 2008/08/17 20:00	850337 2008/09/01 18:00

	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09
GS Large 30-100 kV	106069 2008/10/20 20:00	107740 2008/11/14 9:00	116623 2008/12/05 10:00	109729 2009/01/13 14:00	114107 2009/02/27 00:00	100541 2009/03/17 2:00
GS large 30-100 kV Curtaillable	26204 2008/10/28 18:00	26102 2008/11/29 17:00	26328 2008/12/17 10:00	26211 2009/01/19 7:00	19410 2009/02/25 17:00	26216 2009/03/17 02:00
GS Large > 100kV	360249 2008/10/29 00:00	363737 2008/11/17 21:00	364770 2008/12/03 00:00	363711 2009/01/20 01:00	353957 2009/02/03 0:00	351439 2009/03/12 3:00
GS Large > 100 Curtaillable	324321 2008/10/24 03:00	316844 2008/11/13 11:00	277867 2008/12/11 16:00	326880 2009/01/23 17:00	324431 2009/02/06 7:00	325059 2009/03/08 11:00
GS Large 750V -30kV	221950 2008/10/28 11:00	232714 2008/11/20 15:00	243843 2008/12/15 11:00	243596 2009/01/13 12:00	239220 2009/02/04 11:00	236559 2009/03/11 12:00
GS Medium	427100 2008/10/27 11:00	475515 2008/11/20 11:00	519053 2008/12/15 11:00	531151 2009/01/14 10:00	513113 2009/02/03 10:00	508831 2009/03/10 11:00
GS Small Demand	281813 2008/10/27 10:00	328390 2008/11/21 11:00	363450 2008/12/15 11:00	365111 2009/01/15 10:00	358142 2009/02/03 10:00	346841 2009/03/11 10:00
GS Small Non Demand	234565 2008/10/28 12:00	279704 2008/11/20 14:00	325434 2008/12/16 12:00	342999 2009/01/14 14:00	326164 2009/02/03 11:00	322268 2009/03/11 11:00
Residential	1050995 2008/10/26 19:00	1384877 2008/11/20 18:00	1703125 2008/12/14 19:00	1690733 2009/01/14 19:00	1591153 2009/02/27 8:00	1496482 2009/03/11 9:00

RCM/TREE/MH I-5

Load Research

Reference: Electric Load Forecast and Load Research, Tab 7

- f) Please provide the derivation of “Relative Accuracy %” and “Variance” in Schedule 7.2.1 for each customer class.

ANSWER:

“**Relative Accuracy %**” is derived as the average of the Percent-Error for each of the hourly class demand estimates corresponding to the TOP 50 generation peak kW hours for winter on-peak (Dec-Feb, 6:00 - 22:00) or summer on-peak (Jun-Aug, 6:00 to 22:00). Percent-Error is the percentage error (or accuracy) of the estimated demand for the class based on a 90% confidence level.

“**Variance**” is derived as the square of the class (Coincident Peak Load kW) * (Relative Accuracy %)/100

$$((\text{CP Load kW}) * (\text{Relative Accuracy \%})/100)^2$$

“CP Load kW” is the average of the hourly class demand estimates corresponding to the TOP 50 generation peak kW hours for winter on-peak (Dec-Feb, 6:00 - 22:00) or summer on-peak (Jun-Aug, 6:00 to 22:00).

For classes metered at census, “Relative Accuracy %” and “Variance” are zero.

RCM/TREE/MH I-6

Load Information

Reference: PCOSS for Fiscal Year ending March 31, 2010, Appendix 11.1, Section D

- a) i. **Please explain why load data for the year 2006/07 is not available for use in the Cost-of-Service Study.**

ANSWER:

Load Research for 2006/07 is now available. At the time of preparation Manitoba Hydro was undergoing a migration to a new Customer Information System (CIS) and historical billing data required for Load Research was not yet available. The data subsequently became available and the 2006/07 Load Research has now been completed.

RCM/TREE/MH I-6

Load Information

Reference: PCOSS for Fiscal Year ending March 31, 2010, Appendix 11.1, Section D

- a) For each of the annual periods 2002/03 through 2005/06 and 2007/08, please provide, in Excel-readable form, the estimated hourly loads for each rate class, for the export class and for the total system.**

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-3(a) for an explanation of why Excel spreadsheets are not provided here.

Hourly data for eleven classes over the six years requested would amount to about 600,000 rows of data. In an attempt to summarize the hourly data into a meaningful presentation, the 12 Period TOU reports are provided. Please refer to the following six tables showing 12 period TOU energy for various rate classes, exports and total system for years 2002/03 to 2007/08.

Fiscal Year	Revenue Class	Spring 04/01 to 05/31			Summer 06/01 to 09/30			Fall 10/01 to 11/30			Winter 12/01 to 03/31			Total Energy
		On Peak MTWRF 07:01 - 11:00, 16:01 - 20:00	Mid Peak MTWRF 11:01 - 16:00, 20:01 - 23:00 SA, SU, Holidays 07:01 - 23:00	Off Peak Every Day 23:01 - 07:00	On Peak MTWRF 12:01 - 20:00	Mid Peak MTWRF 07:01 - 12:00, 20:01 - 23:00 SA, SU, Holidays 07:01 - 23:00	Off Peak Every Day 23:01 - 07:00	On Peak MTWRF 07:01 - 11:00, 16:01 - 20:00	Mid Peak MTWRF 11:01 - 16:00, 20:01 - 23:00 SA, SU, Holidays 07:01 - 23:00	Off Peak Every Day 23:01 - 07:00	On Peak MTWRF 07:01 - 11:00, 16:01 - 20:00	Mid Peak MTWRF 11:01 - 16:00, 20:01 - 23:00 SA, SU, Holidays 07:01 - 23:00	Off Peak Every Day 23:01 - 07:00	kWh
2002-2003	EXPORTS	494,002,000	678,866,000	187,816,000	1,271,751,000	2,132,551,000	567,676,000	452,093,000	624,326,000	219,405,000	676,972,000	862,331,000	366,435,000	8,534,224,000
2002-2003	GENERATION	1,368,591,000	2,156,795,000	1,001,235,000	2,993,531,000	5,095,000,000	2,164,796,000	1,416,712,000	2,279,867,000	1,127,984,000	2,796,765,000	4,458,785,000	2,381,019,000	29,241,080,000
2002-2003	GSL030	17,543,918	32,479,728	25,820,887	30,314,062	58,213,150	46,588,042	17,874,021	34,123,003	27,568,054	37,493,369	69,796,145	55,437,916	453,252,296
2002-2003	GSL030CURT	5,934,224	11,199,061	8,872,111	10,818,003	21,216,328	15,785,237	6,742,850	12,870,476	9,840,317	14,150,129	27,747,375	21,351,773	166,527,885
2002-2003	GSL100	121,222,556	219,271,821	174,368,097	214,917,927	410,381,084	318,474,099	121,342,336	228,972,224	177,997,090	254,081,153	477,041,862	371,722,128	3,089,792,377
2002-2003	GSL100CURT	55,898,807	104,963,301	80,750,430	109,819,118	217,067,375	165,445,848	56,164,378	107,762,525	82,543,976	115,477,152	220,307,523	167,982,536	1,484,182,967
2002-2003	GSL750	52,548,729	83,872,263	55,976,389	101,722,839	161,570,871	105,069,543	52,116,139	85,023,721	56,683,712	113,203,984	186,046,787	125,657,064	1,179,492,040
2002-2003	GSM	77,133,352	126,945,075	80,507,762	151,757,528	249,499,836	148,466,191	81,501,402	139,616,261	88,663,813	191,622,606	331,742,932	217,709,642	1,885,166,401
2002-2003	GSSD	54,831,444	92,597,539	55,898,893	106,219,739	176,597,016	98,687,203	60,884,985	106,325,972	65,352,243	149,432,682	264,161,980	169,367,324	1,400,357,020
2002-2003	GSSND	48,492,256	82,436,326	48,415,572	101,191,683	151,356,187	82,750,563	54,107,051	94,592,808	59,324,999	136,448,608	242,000,720	160,811,868	1,261,928,643
2002-2003	RESBAS	199,724,522	356,338,087	229,192,100	338,396,199	643,951,665	315,077,350	239,329,900	441,803,269	264,892,385	655,361,488	1,191,683,287	803,876,699	5,679,626,951

Fiscal Year	Revenue Class	Spring 04/01 to 05/31			Summer 06/01 to 09/30			Fall 10/01 to 11/30			Winter 12/01 to 03/31			Total Energy
		On Peak MTWRF 07:01 - 11:00, 16:01 - 20:00	Mid Peak MTWRF 11:01 - 16:00, 20:01 - 23:00 SA, SU, Holidays 07:01 - 23:00	Off Peak Every Day 23:01 - 07:00	On Peak MTWRF 12:01 - 20:00	Mid Peak MTWRF 07:01 - 12:00, 20:01 - 23:00 SA, SU, Holidays 07:01 - 23:00	Off Peak Every Day 23:01 - 07:00	On Peak MTWRF 07:01 - 11:00, 16:01 - 20:00	Mid Peak MTWRF 11:01 - 16:00, 20:01 - 23:00 SA, SU, Holidays 07:01 - 23:00	Off Peak Every Day 23:01 - 07:00	On Peak MTWRF 07:01 - 11:00, 16:01 - 20:00	Mid Peak MTWRF 11:01 - 16:00, 20:01 - 23:00 SA, SU, Holidays 07:01 - 23:00	Off Peak Every Day 23:01 - 07:00	kWh
2003-2004	EXPORTS	344,642,000	486,473,000	140,237,000	513,087,000	524,414,000	201,716,000	38,725,000	86,839,000	70,340,000	125,701,000	170,658,000	159,689,000	2,862,521,000
2003-2004	GENERATION	1,112,892,000	1,840,241,000	791,672,000	1,999,936,000	2,835,176,000	1,230,566,000	712,629,000	1,243,489,000	720,649,000	1,927,326,000	3,064,524,000	1,959,338,000	19,438,438,000
2003-2004	GSL030	16,597,134	33,608,653	25,221,926	36,389,686	68,855,278	54,462,206	20,068,040	40,117,916	30,761,811	44,441,782	82,973,983	63,526,243	517,024,659
2003-2004	GSL030CURT	7,280,387	15,149,952	11,067,278	17,065,864	32,615,840	25,092,665	8,044,515	16,249,704	12,116,103	16,975,703	32,118,120	24,540,845	218,316,976
2003-2004	GSL100	98,016,967	190,735,539	147,697,990	170,444,656	317,044,170	249,192,333	102,124,143	197,151,080	152,344,751	221,914,484	405,354,367	318,204,508	2,570,224,988
2003-2004	GSL100CURT	74,656,981	146,694,840	112,897,871	144,389,287	296,148,929	229,700,732	76,145,694	151,075,417	114,214,112	160,733,110	302,732,655	235,640,191	2,045,029,818
2003-2004	GSL750	61,764,572	104,264,013	67,063,257	132,243,816	211,441,111	137,685,890	63,132,405	107,599,277	70,559,013	136,187,622	220,760,534	150,430,257	1,463,131,766
2003-2004	GSM	113,303,757	197,082,372	117,632,432	254,885,364	407,491,903	240,566,934	123,402,712	215,157,647	132,148,974	277,895,504	469,301,683	307,273,780	2,856,143,059
2003-2004	GSSD	61,775,249	111,187,802	64,928,441	132,122,342	218,705,260	126,322,205	72,145,382	128,693,532	78,692,498	173,439,270	294,329,547	191,102,812	1,653,444,340
2003-2004	GSSND	56,692,280	103,174,740	59,541,044	137,173,948	200,570,206	116,093,677	65,694,092	118,897,422	72,281,932	162,035,966	279,873,966	187,737,696	1,559,766,968
2003-2004	RESBAS	195,923,151	381,822,547	218,799,200	402,976,185	733,235,918	359,039,284	262,252,763	498,223,268	292,910,251	707,196,827	1,252,857,150	865,212,779	6,170,449,322

Fiscal Year	Revenue Class	Spring 04/01 to 05/31			Summer 06/01 to 09/30			Fall 10/01 to 11/30			Winter 12/01 to 03/31			Total Energy
		On Peak MTWRF 07:01 - 11:00, 16:01 - 20:00	Mid Peak MTWRF 11:01 - 16:00, 20:01 - 23:00 SA, SU, Holidays 07:01 - 23:00	Off Peak Every Day 23:01 - 07:00	On Peak MTWRF 12:01 - 20:00	Mid Peak MTWRF 07:01 - 12:00, 20:01 - 23:00 SA, SU, Holidays 07:01 - 23:00	Off Peak Every Day 23:01 - 07:00	On Peak MTWRF 07:01 - 11:00, 16:01 - 20:00	Mid Peak MTWRF 11:01 - 16:00, 20:01 - 23:00 SA, SU, Holidays 07:01 - 23:00	Off Peak Every Day 23:01 - 07:00	On Peak MTWRF 07:01 - 11:00, 16:01 - 20:00	Mid Peak MTWRF 11:01 - 16:00, 20:01 - 23:00 SA, SU, Holidays 07:01 - 23:00	Off Peak Every Day 23:01 - 07:00	kWh
2004-2005	EXPORTS	315,857,000	403,493,000	98,590,000	1,289,122,000	2,188,672,000	620,084,000	532,815,000	1,015,622,000	425,812,000	815,715,000	1,606,436,000	757,395,000	10,069,613,000
2004-2005	GENERATION	1,077,090,000	1,768,921,000	793,787,000	2,988,091,000	5,087,810,000	2,204,615,000	1,479,069,000	2,766,265,000	1,476,149,000	3,008,310,000	5,690,136,000	3,365,294,000	31,705,537,000
2004-2005	GSL030	19,389,891	39,696,809	30,630,514	41,901,506	77,663,805	59,512,648	22,058,709	41,881,783	32,533,477	43,334,429	83,580,502	64,163,317	556,347,390
2004-2005	GSL030CURT	8,383,263	17,176,471	12,757,377	17,372,873	33,106,861	25,478,051	7,960,095	16,217,861	12,244,396	16,882,602	33,220,026	25,281,272	226,081,148
2004-2005	GSL100	98,421,306	198,309,592	151,030,520	191,870,084	346,603,654	272,832,314	101,386,674	196,112,605	150,676,259	213,924,719	408,890,023	314,925,576	2,644,983,326
2004-2005	GSL100CURT	75,163,232	156,932,073	118,294,697	154,294,706	298,394,409	231,694,817	83,342,896	165,822,041	126,032,326	181,025,538	360,568,357	274,253,850	2,225,818,941
2004-2005	GSL750	53,785,205	94,415,683	61,260,510	138,296,711	215,168,129	140,609,272	66,291,705	111,428,758	73,366,181	139,109,789	234,370,706	157,767,670	1,485,870,317
2004-2005	GSM	96,682,104	179,860,503	108,695,391	251,562,341	408,318,794	241,052,128	124,517,746	222,383,742	134,713,504	274,581,866	491,652,993	317,449,110	2,851,470,222
2004-2005	GSSD	56,992,383	102,602,088	62,454,084	136,727,853	214,633,468	125,897,215	86,990,070	150,839,578	93,301,841	200,136,461	354,299,554	240,040,976	1,824,915,571
2004-2005	GSSND	50,414,779	94,313,283	54,793,351	129,056,562	181,173,788	102,093,592	62,913,903	112,070,389	65,637,689	139,687,408	250,403,974	157,439,453	1,399,998,170
2004-2005	RESBAS	194,380,175	390,065,131	244,493,470	374,975,001	704,748,122	373,241,744	257,529,289	484,540,032	310,841,984	708,654,479	1,306,549,329	924,647,106	6,274,665,862

Fiscal Year	Revenue Class	Spring 04/01 to 05/31			Summer 06/01 to 09/30			Fall 10/01 to 11/30			Winter 12/01 to 03/31			Total Energy
		On Peak MTWRF 07:01 - 11:00, 16:01 - 20:00	Mid Peak MTWRF 11:01 - 16:00, 20:01 - 23:00 SA, SU, Holidays 07:01 - 23:00	Off Peak Every Day 23:01 - 07:00	On Peak MTWRF 12:01 - 20:00	Mid Peak MTWRF 07:01 - 12:00, 20:01 - 23:00 SA, SU, Holidays 07:01 - 23:00	Off Peak Every Day 23:01 - 07:00	On Peak MTWRF 07:01 - 11:00, 16:01 - 20:00	Mid Peak MTWRF 11:01 - 16:00, 20:01 - 23:00 SA, SU, Holidays 07:01 - 23:00	Off Peak Every Day 23:01 - 07:00	On Peak MTWRF 07:01 - 11:00, 16:01 - 20:00	Mid Peak MTWRF 11:01 - 16:00, 20:01 - 23:00 SA, SU, Holidays 07:01 - 23:00	Off Peak Every Day 23:01 - 07:00	kWh
2005-2006	EXPORTS	591,624,000	1,138,561,000	823,852,000	1,342,816,000	2,534,283,000	1,706,039,000	530,785,000	1,111,945,000	811,462,000	944,548,000	1,870,675,000	1,237,344,000	14,643,934,000
2005-2006	GENERATION	1,483,915,000	2,761,575,000	1,893,773,000	3,139,672,000	5,666,989,000	3,640,860,000	1,500,977,000	2,890,889,000	1,966,470,000	3,153,799,000	5,811,140,000	3,901,522,000	37,811,581,000
2005-2006	GSL030	19,495,848	36,869,009	30,053,727	38,878,178	71,605,573	57,557,696	20,610,717	38,467,499	30,804,339	49,111,859	90,406,786	71,255,285	555,116,514
2005-2006	GSL030CURT	8,507,999	16,158,628	12,363,902	16,466,745	31,839,305	24,513,214	8,086,229	16,299,510	12,283,552	17,034,339	32,358,422	24,735,896	220,647,742
2005-2006	GSL100	104,387,649	193,883,450	151,584,165	182,146,986	333,609,130	263,373,687	103,391,210	200,795,257	154,831,018	219,526,249	407,752,119	320,514,990	2,635,795,910
2005-2006	GSL100CURT	89,695,852	171,148,529	132,678,837	189,561,396	360,161,537	279,610,801	91,653,908	184,111,169	141,649,550	191,925,080	365,195,323	282,016,351	2,479,408,333
2005-2006	GSL750	66,328,431	109,034,775	70,940,468	143,138,820	223,544,718	146,381,708	67,204,713	112,560,091	74,402,022	138,217,888	224,968,272	153,222,753	1,529,944,656
2005-2006	GSM	114,771,116	199,720,651	120,239,716	249,049,369	407,213,653	240,250,955	123,373,062	218,813,343	132,659,363	272,751,920	470,116,634	304,841,461	2,853,801,244
2005-2006	GSSD	76,463,185	129,015,008	82,245,383	158,147,293	254,539,115	153,162,649	84,146,229	145,826,148	92,028,213	190,985,347	332,804,614	224,855,180	1,924,218,362
2005-2006	GSSND	51,156,962	88,447,505	50,199,907	115,349,580	163,685,220	92,138,890	59,392,205	100,938,308	58,862,738	144,803,389	245,682,108	150,188,706	1,320,845,519
2005-2006	RESBAS	199,785,804	366,420,601	254,122,263	392,812,058	738,331,311	392,150,965	260,888,435	471,512,058	322,280,273	693,440,891	1,253,019,603	825,976,224	6,170,740,484

Fiscal Year	Revenue Class	Spring 04/01 to 05/31			Summer 06/01 to 09/30			Fall 10/01 to 11/30			Winter 12/01 to 03/31			Total Energy
		On Peak MTWRF 07:01 - 11:00, 16:01 - 20:00	Mid Peak MTWRF 11:01 - 16:00, 20:01 - 23:00 SA, SU, Holidays 07:01 - 23:00	Off Peak Every Day 23:01 - 07:00	On Peak MTWRF 12:01 - 20:00	Mid Peak MTWRF 07:01 - 12:00, 20:01 - 23:00 SA, SU, Holidays 07:01 - 23:00	Off Peak Every Day 23:01 - 07:00	On Peak MTWRF 07:01 - 11:00, 16:01 - 20:00	Mid Peak MTWRF 11:01 - 16:00, 20:01 - 23:00 SA, SU, Holidays 07:01 - 23:00	Off Peak Every Day 23:01 - 07:00	On Peak MTWRF 07:01 - 11:00, 16:01 - 20:00	Mid Peak MTWRF 11:01 - 16:00, 20:01 - 23:00 SA, SU, Holidays 07:01 - 23:00	Off Peak Every Day 23:01 - 07:00	kWh
2006-2007	EXPORTS	561,989,000	1,195,229,000	872,618,000	1,174,499,000	2,261,358,000	1,536,885,000	344,329,000	369,918,000	109,460,500	706,030,000	932,615,000	325,611,000	10,390,541,500
2006-2007	GENERATION	1,389,555,000	2,815,477,000	1,898,575,000	3,020,491,000	5,433,427,000	3,459,850,000	1,332,889,000	1,904,863,000	885,069,000	2,908,529,000	4,728,630,000	2,525,340,000	32,302,695,000
2006-2007	GSL030	21,277,283	42,694,276	32,077,139	46,639,945	87,584,193	69,191,726	26,809,441	49,406,405	39,091,798	52,862,857	101,918,976	78,858,280	648,412,319
2006-2007	GSL030CURT	7,413,918	16,111,168	11,821,076	16,802,104	32,667,758	24,785,964	8,778,378	16,227,563	12,527,516	16,405,452	32,154,309	24,254,549	219,949,755
2006-2007	GSL100	95,854,818	195,770,278	149,518,523	188,269,315	353,653,964	277,162,875	105,229,844	191,678,419	150,989,450	216,769,203	410,748,667	320,293,284	2,655,938,640
2006-2007	GSL100CURT	88,720,473	181,737,896	137,243,061	183,504,678	356,527,297	274,561,538	91,426,954	171,531,227	133,722,434	180,747,425	350,556,413	270,624,198	2,420,903,594
2006-2007	GSL750	63,260,604	111,029,027	69,517,301	143,403,368	224,919,007	143,450,573	69,593,029	110,380,076	73,273,721	139,859,935	231,984,856	154,250,704	1,534,922,201
2006-2007	GSM	114,267,627	208,379,524	125,184,362	270,016,866	434,062,565	264,339,491	134,665,882	221,039,059	141,630,430	286,898,619	493,083,512	320,413,641	3,013,981,578
2006-2007	GSSD	77,756,652	146,023,400	85,047,513	177,898,691	287,375,913	167,092,588	95,964,865	160,150,815	100,568,108	212,421,209	373,608,291	242,350,724	2,126,258,769
2006-2007	GSSND	39,170,334	73,605,372	48,734,157	93,489,901	144,682,624	89,596,904	51,845,790	86,996,035	62,995,208	124,065,757	222,065,496	153,899,639	1,191,147,217
2006-2007	RESBAS	193,758,263	382,478,275	257,783,220	422,633,855	758,202,250	391,163,818	281,780,461	486,323,223	348,203,239	726,090,615	1,312,390,465	896,110,392	6,456,918,076

Fiscal Year	Revenue Class	Spring 04/01 to 05/31			Summer 06/01 to 09/30			Fall 10/01 to 11/30			Winter 12/01 to 03/31			Total Energy
		On Peak MTWRF 07:01 - 11:00, 16:01 - 20:00	Mid Peak MTWRF 11:01 - 16:00, 20:01 - 23:00 SA, SU, Holidays 07:01 - 23:00	Off Peak Every Day 23:01 - 07:00	On Peak MTWRF 12:01 - 20:00	Mid Peak MTWRF 07:01 - 12:00, 20:01 - 23:00 SA, SU, Holidays 07:01 - 23:00	Off Peak Every Day 23:01 - 07:00	On Peak MTWRF 07:01 - 11:00, 16:01 - 20:00	Mid Peak MTWRF 11:01 - 16:00, 20:01 - 23:00 SA, SU, Holidays 07:01 - 23:00	Off Peak Every Day 23:01 - 07:00	On Peak MTWRF 07:01 - 11:00, 16:01 - 20:00	Mid Peak MTWRF 11:01 - 16:00, 20:01 - 23:00 SA, SU, Holidays 07:01 - 23:00	Off Peak Every Day 23:01 - 07:00	kWh
2007-2008	EXPORTS	540,278,000	931,576,000	335,018,000	1,266,513,000	2,473,098,000	1,702,859,000	507,672,000	943,508,000	689,341,000	631,610,000	1,339,763,000	577,636,500	11,938,872,500
2007-2008	GENERATION	1,381,154,000	2,511,669,000	1,227,707,000	3,074,749,000	5,638,963,000	3,709,673,000	1,535,060,000	2,684,055,000	1,855,569,000	2,883,608,000	5,670,758,000	3,388,271,000	35,561,236,000
2007-2008	GSL030	23,420,089	46,210,995	35,083,027	48,858,815	94,086,846	70,215,346	28,079,559	50,640,905	40,803,425	54,826,340	111,954,419	85,223,375	689,403,141
2007-2008	GSL030CURT	8,152,135	16,311,136	12,257,247	15,186,732	30,560,664	23,001,434	9,008,679	16,089,303	12,492,401	16,394,390	33,724,391	24,958,201	218,136,713
2007-2008	GSL100	102,858,676	203,018,383	157,226,345	195,574,425	377,589,940	293,109,840	109,768,297	194,810,195	157,986,298	211,167,039	429,393,704	325,299,860	2,757,803,002
2007-2008	GSL100CURT	87,871,804	172,834,536	131,814,889	177,095,151	345,870,520	265,592,905	93,873,112	168,437,752	132,807,480	177,146,145	366,813,005	275,080,718	2,395,238,017
2007-2008	GSL750	65,829,242	112,022,691	72,474,342	139,815,873	225,152,692	145,873,704	70,861,044	109,030,270	74,566,542	135,910,362	239,482,163	158,232,399	1,549,251,324
2007-2008	GSM	120,420,755	215,974,431	133,645,166	260,335,535	433,066,201	263,216,616	137,598,367	219,583,228	140,146,368	282,132,666	518,057,889	335,738,782	3,059,916,004
2007-2008	GSSD	67,854,637	123,654,934	74,686,412	146,901,380	245,859,127	145,203,276	86,029,010	138,510,696	89,473,157	187,259,485	351,537,420	230,426,490	1,887,396,024
2007-2008	GSSND	56,178,039	103,690,064	60,547,754	127,111,865	193,691,111	105,340,160	70,217,607	112,035,351	68,173,487	161,482,282	298,259,893	191,685,693	1,548,413,306
2007-2008	RESBAS	207,230,021	405,604,635	273,046,386	417,776,277	780,555,967	388,801,979	301,225,449	495,980,369	306,777,519	753,460,025	1,450,063,197	970,797,795	6,751,319,619

RCM/TREE/MH I-6

Load Information

Reference: PCOSS for Fiscal Year ending March 31, 2010, Appendix 11.1, Section D

- b) Please provide the derivation of the following factors from the Company's load research data for each rate class:
- i. class contributions to the summer and winter coincident peaks,
 - ii. class contributions to the Highest 50 total peak hours – Winter 2008/2009
 - iii. class contributions to the Highest 50 total peak hours – Summer 2008/2009
 - iv. class summer and winter non-coincident peaks;
 - v. Please include the load research data used, calculations, workpapers and spreadsheets (with formulas intact).

ANSWER:

- i. “**CP Load kW**” is the average of the hourly class estimated, or measured, demands corresponding to the TOP 50 generation peak kW hours
- ii. The TOP 50 generation peak kW hours for winter for the on-peak period (Dec-Feb, 6:00 - 22:00) and are listed on Schedule 7.2.2
- iii. TOP 50 generation peak kW hours for summer for the on-peak period (Jun-Aug, 6:00 to 22:00) and are listed on Schedule 7.2.3
- iv. “**NCP Load**” is the class single highest peak estimated or measured demand during the winter period (Apr 2008 and Nov 2008 to Mar 2009 from 00:00 to 24:00) or summer period (May-Oct 2008 from 00:00 to 24:00).
- v. Manitoba Hydro Load Research uses the Combined Ratio Estimation (CRE) methodology to estimate population hourly class demands derived from sample meter demands and known population energies. Population energies are derived from the billing system on a monthly basis to eliminate seasonality error. Stratified random sampling is used with a design accuracy of +/- 10% at a 90% Confidence Level.

For reasons provided in Manitoba Hydro's response to RCM/TREE/MH I-3(a), Manitoba Hydro declines to provide the requested information.

RCM/TREE/MH I-7

Rebalancing Energy and Demand Charges

Reference: Rebalancing Energy and Demand Charges, Appendix 13.7

- a) Please provide the “5-year transition plan” to rebalance demand and energy charges that Hydro has prepared or submitted in response to PUB Order 116/08, Directive 24 (referred to on page 1).

ANSWER:

Manitoba Hydro has not prepared a “5-year transition plan”. The following tables do however provide the Demand / Energy Rebalancing progress made since 2003 to 2011, assuming the rates proposed in Manitoba Hydro’s Rate Application are approved as filed.

ENERGY:

General Service Demand / Energy Rate Rebalancing: Progress Since 2003					
Rate ¢ per kW.h Energy					
	Small	Medium	Large <30	Large 30-100	Large >100
Rate as of March 2003	2.12¢	2.12¢	2.01¢	1.98¢	1.98¢
Rate Mar 2003 if rebalanced	2.54¢	2.54¢	2.50¢	2.30¢	2.28¢
Class cumulative rate increase to April 1/11	25.11%	24.72%	25.62%	23.23%	23.53%
March 2003 rate adjusted for increases	2.65¢	2.64¢	2.52¢	2.43¢	2.44¢
Rebalanced Mar 2003 rate adj for increases	3.18¢	3.17¢	3.15¢	2.84¢	2.82¢
Proposed rate April 2011	3.20¢	3.20¢	3.01¢	2.81¢	2.73¢
Rebalanced progress	104%	106%	78%	94%	77%

DEMAND:

General Service Demand / Energy Rate Rebalancing: Progress Since 2003					
Rate \$ per kV.A Demand					
	Small	Medium	Large <30	Large 30-100	Large >100
Rate as of March 2003	\$8.41	\$8.32	\$7.09	\$6.36	\$5.75
Rate Mar 2003 if rebalanced	\$6.98	\$6.79	\$5.07	\$4.53	\$3.58
Class cumulative rate increase to April 1/11	25.11%	24.72%	25.62%	23.23%	23.53%
March 2003 rate adjusted for increases	\$10.52	\$10.38	\$8.91	\$7.84	\$7.10
Rebalanced March 2003 rate adj for increases	\$8.73	\$8.47	\$6.37	\$5.58	\$4.42
Proposed rate April 2011	\$8.34	\$8.34	\$7.08	\$6.06	\$5.40
Rebalanced Progress	122%	107%	72%	79%	64%

RCM/TREE/MH I-7

Rebalancing Energy and Demand Charges

Reference: Rebalancing Energy and Demand Charges, Appendix 13.7

b) Please specify Hydro's current demand-energy rebalancing targets by rate.

ANSWER:

If the intent on rebalancing demand and energy is to continue moving these charges toward their embedded costs as depicted in the cost of service study (and as premised in Order 116/08 Directive 24), then the energy rate for the Large >30 kV classes will have to continue to increase at a faster pace than their demand charge, as indicated in the table below.

Assuming the proposed rates filed in the Application are approved, then Manitoba Hydro can begin to apply increases to both demand and energy charges for the Small, Medium and Large <30 kV rate classes.

These results are contingent on Manitoba Hydro's Cost of Service for 2010, but as indicated on page 2 of Tab 11 of the Application, these results may change pending a review of COSS methodologies.

	Prop. Apr/11 Rate (Demand)	PCOSS10 Allocated Cost	Rev / Cost %		Prop. Apr/11 Rate (Energy)	PCOSS10 Allocated Cost	Rev / Cost %
GSS	8.34	7.74	108%		3.20	2.95	108%
GSM	8.34	8.81	95%		3.20	2.95	108%
GSL <30	7.08	8.64	82%		3.01	2.89	104%
GSL 30-100	6.06	4.78	127%		2.81	2.58	109%
GSL >100	5.40	3.31	163%		2.73	2.56	107%

RCM/TREE/MH I-7

Rebalancing Energy and Demand Charges

Reference: Rebalancing Energy and Demand Charges, Appendix 13.7

- c) Please provide Hydro's basis for its current demand-energy rebalancing targets, including studies, workpapers, and spreadsheets (with formulas intact).**

ANSWER:

No other studies have been undertaken by Manitoba Hydro and the reports filed to date fully explain the methods and results. Manitoba Hydro does not provide live versions of its models; please see Manitoba Hydro's response to RCM/TREE/MH I-3(a)

Please see also Manitoba Hydro's responses to RCM/TREE/MH I-7(a) and (b).

RCM/TREE/MH I-7

Rebalancing Energy and Demand Charges

Reference: Rebalancing Energy and Demand Charges, Appendix 13.7

- d) Please explain the rationale that Hydro “accepts in principle” for collecting some demand-related costs “in a peak period energy charge ... where infrastructure for Time-of-Use billing is in place” (discussed on page 5).**

ANSWER:

The statement means that Manitoba Hydro accepts in principle that some demand related costs could be collected in a peak period energy charge but does not have a specific proposal at this time.

RCM/TREE/MH I-7

Rebalancing Energy and Demand Charges

Reference: Rebalancing Energy and Demand Charges, Appendix 13.7

- e) Please provide Hydro's implementation plans for collecting some demand-related costs in a peak period energy charge where infrastructure for Time-of-Use billing is now in place, that is, in the General Service Large >100 kV and General Service 30-100 kV classes (discussed on page 5).**
 - i. If Hydro has no implementation plans for this rate design, explain why.**

ANSWER:

Manitoba Hydro does not have implementation plans for this rate as it has yet to determine and finalize a specific rate design.

The Energy Intensive Rate Application filed with the Public Utilities Board on February 12, 2010 includes a time-of-use component for which on-peak energy use in excess of a customer's on-peak baseline will be billed at an energy rate related to marginal cost.

RCM/TREE/MH I-7

Rebalancing Energy and Demand Charges

Reference: Rebalancing Energy and Demand Charges, Appendix 13.7

f) Please provide Hydro's current estimates of marginal T&D costs.

ANSWER:

Manitoba Hydro has not updated its T&D marginal costs since 2004. These marginal costs are provided in the report "Marginal Transmission and Distribution Cost Estimates. SPD 04/05" Manitoba Hydro, September 23, 2004. This report is provided as Appendix 49.

In order to obtain current 2009 estimates, the marginal T&D costs are escalated from the above 2004 report. The current escalated T&D marginal costs in 2009 dollars are as follows:

- Transmission: 73.87 \$/kW/yr
- Distribution: 44.78 \$/kW/yr

RCM/TREE/MH I-7

Rebalancing Energy and Demand Charges

Reference: Rebalancing Energy and Demand Charges, Appendix 13.7

- g) Please provide the Company's most recent marginal T&D cost study, including all workpapers and spreadsheets (with formulas intact).**

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-7(f) which indicates that the report "Marginal Transmission and Distribution Cost Estimates. SPD 04/05" Manitoba Hydro, September 23, 2004 is the most recent marginal T&D cost study.

RCM/TREE/MH I-7

Rebalancing Energy and Demand Charges

Reference: Rebalancing Energy and Demand Charges, Appendix 13.7

- h) Please provide the source of Hydro's current estimates of marginal T&D costs, including studies, workpapers, and Excel spreadsheets (with formulas intact).**

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-7(f) which indicates that the source of Hydro's current estimate of marginal T&D costs is the report "Marginal Transmission and Distribution Cost Estimates. SPD 04/05" Manitoba Hydro, September 23, 2004.

RCM/TREE/MH I-7

Rebalancing Energy and Demand Charges

Reference: Rebalancing Energy and Demand Charges, Appendix 13.7

- i) Please provide a copy of “Marginal Transmission and Distribution Cost Estimates. SPD 04/05” Manitoba Hydro, September 23, 2004.**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-7(f) which indicates that report SPD 04/05 is provided as Appendix 49.

RCM/TREE/MH I-7

Rebalancing Energy and Demand Charges

Reference: Rebalancing Energy and Demand Charges, Appendix 13.7

j) Please provide the Company's distribution planning guidelines.

ANSWER:

The following standards and guidelines are applicable to Manitoba Hydro Distribution Planning

Safety

Manitoba Hydro is required to observe the requirements of the CSA Standard C22.3 No. 1 - "Overhead Systems", CSA Standard C22.3 No. 7 - "Underground Systems", CSA Standard C22.3 No. 3 - "Electrical Coordination", CSA Standard C22.3 No. 5.1 - "Recommended Practices for Electrical Protection - Electric Contact Between Overhead Supply and Communication Lines", and CSA Standard C22.3 No. 9 - "Interconnection of Distributed Resources and Electricity Supply Systems".

Distribution Voltage Criteria

Manitoba Hydro Voltage levels and criteria are specified in the CSA Standard CAN-3-C235-83 - "Preferred Voltage Levels for AC Systems 0 to 50,000 Volts.

Distribution Transformer Loading Guidelines

Manitoba Hydro's maximum distribution loading limits are based on the IEEE C57.91 - 1995 Guide for Loading Mineral-Oil-Immersed Transformers utilizing a 90% preload and appropriate average ambient temperatures.

Power Transformer Loading Guidelines

Manitoba Hydro's maximum station power transformer loading limits are based on the IEEE C57.91-1995 Guide for Loading Mineral-Oil-Immersed Transformers. Based on these guidelines, two loading levels are defined: normal and emergency. "Normal" loading limits are applied to transformers under normal load conditions. "Emergency" loading limits are applied to transformers under first contingency, the failure of a bank, where the remaining

banks can be loaded to emergency limits. Some loss of life is assumed under emergencies and this is why these levels are higher.

Station Loading & Reliability

Stations are divided into two basic categories: those having FIRM station capacity and those having NON-FIRM station capacity.

FIRM STATION CAPACITY is that load which a station has the ability to supply indefinitely, after the loss of its largest transformer, with no more than a short customer interruption to facilitate switching within the station. Switching outside the station is not included within the definition because of the length of time such switching may take.

Those stations having NON-FIRM capacity will experience an extended outage up to 20 hours in length, in order to transport and connect the mobile transformer, or if a tie feeder is available, they may experience an outage of perhaps 2 hours.

RCM/TREE/MH I-7

Rebalancing Energy and Demand Charges

Reference: Rebalancing Energy and Demand Charges, Appendix 13.7

k) Please provide the load diversity assumptions used by Hydro in designing its distribution additions.

ANSWER:

For commercial and industrial customers, Manitoba Hydro accepts the load provided by the consultant. The load is then adjusted further based on Manitoba Hydro's experience with similar customers.

Residential customers are estimated to have a diversified electrical load of 3.5 kVA for a gas-heated residence and 10 kVA for an electrically heated residence.

RCM/TREE/MH I-7

Rebalancing Energy and Demand Charges

Reference: Rebalancing Energy and Demand Charges, Appendix 13.7

l) Please provide the most recent study of load diversity on Hydro's:

- i. Subtransmission lines**
- ii. Substations**
- iii. Primary distribution lines**
- iv. Secondary lines**
- v. Line transformers**

ANSWER:

Manitoba Hydro does not have a document that has been approved for external release.

RCM/TREE/MH I-7

Rebalancing Energy and Demand Charges

Reference: Rebalancing Energy and Demand Charges, Appendix 13.7

m) Please provide Hydro's current estimates of marginal generation plant and O&M costs.

ANSWER:

Please see Manitoba Hydro's response to CAC/MSOS/MH I-66(c) which provides a marginal cost of the generation component as \$6.47/kW.h in 2009/10 for the residential class of customers.

RCM/TREE/MH I-7

Rebalancing Energy and Demand Charges

Reference: Rebalancing Energy and Demand Charges, Appendix 13.7

- n) Please provide the Company's most recent marginal generation plant and O&M cost study, including all workpapers and spreadsheets (with formulas intact).**

ANSWER:

The current methodology that Manitoba Hydro uses to determine the generation component of marginal cost is based solely on the production costing benefits to the Manitoba Hydro system, with export prices being the primary factor in influencing marginal benefit. The marginal cost study is not being provided since it contains information on forecast prices of specific electricity export products. The determination of marginal cost is a complex exercise and general description of the process is provided below.

The generation-related marginal benefit is derived by an analysis of production costing for a system with or without a small quantity of capacity and energy. A complex computer model (SPLASH) is utilized to simulate operation of the system of reservoir and generating facilities to meet firm load requirements while minimizing operating costs and maximizing export revenues. A range of 94 possible flow conditions is utilized to determine the value of the small increment of energy and capacity. This value is dependent on the mix of thermal and import energy and the quantity of export energy associated with each of the flow conditions. In low flow conditions, the marginal benefit is derived from the displacement of high-cost thermal and import energy, while in median to high flow conditions the benefit is derived primarily from new export sales. Benefits may be very small or even nonexistent in extremely high flows when tie-lines may be saturated and reservoirs filled to capacity.

RCM/TREE/MH I-7

Rebalancing Energy and Demand Charges

Reference: Rebalancing Energy and Demand Charges, Appendix 13.7

- o) Please specify the percentage of feeders that peak in the summer and the percentage that peak in the winter.**

ANSWER:

Area	Total Feeders	Summer Peaking	%	Winter Peaking	%	Equal Summer & Winter	%
Rural - West	442	5	1	437	99		
Winnipeg - Suburban	469	122	26	321	68	26	6
Winnipeg - Central	300	30	10	270	90		
Rural - East & North	427	8	2	419	98		
TOTAL	1,638	165	10	1,447	88	26	2

RCM/TREE/MH I-7

Rebalancing Energy and Demand Charges

Reference: Rebalancing Energy and Demand Charges, Appendix 13.7

p) For each substation owned by MH, please provide in a single table:

- i. the summer and winter peak load (MW or MVA) on each substation;**
- ii. the date and time of the summer and winter peaks on each substation;**
- iii. the summer and winter effective capability of each substation**

ANSWER:

	Winnipeg Central Stations	Season	Loading Limit (kVA)	Last Measured Load (kVA)	Date of Measurement	Time
1	Alfred (12), 4kV	Winter	12,900	9,720	2009-01-15	17:00
	Alfred (12), 4kV	Summer	12,900	5,370	2009-07-04	17:00
2	Amy (6), 4kV	Winter	18,700	10,680	2009-01-14	9:22
	Amy (6), 4kV	Summer	18,700	8,140	2009-07-22	14:18
3	Arlington (4), 4kV	Winter	30,400	19,330	2006-12-06	18:03
	Arlington (4), 4kV	Summer	34,600	12,890	2009-07-06	15:47
4	Boyd (10), 4kV	Winter	14,700	10,280	2009-01-14	18:38
	Boyd (10), 4kV	Summer	17,300	7,870	2009-07-06	12:57
5	Cambridge (15), 4kV	Winter	20,200	10,940	2009-01-04	17:00
	Cambridge (15), 4kV	Summer	20,000	7,080	2009-07-09	17:00
6	Charles (11), 4kV	Winter	14,700	14,020	2009-01-04	17:00
	Charles (11), 4kV	Summer	17,300	8,900	2009-07-09	17:00
7	Church (25), 12kV	Winter	36,000	17,030	2009-01-27	10:59
	Church (25), 12kV	Summer	47,700	16,340	2009-07-14	12:43
8	Edmonton (21), 12kV	Winter	57,500	39,130	2009-01-14	12:13
	Edmonton (21), 12kV	Summer	69,100	41,020	2009-07-22	15:05
9	Edmonton (21), 4kV	Winter	25,300	14,970	2009-01-14	11:46
	Edmonton (21), 4kV	Summer	28,800	12,630	2009-07-16	17:56
10	Empress (20), 4kV	Winter	16,500	8,440	2009-01-14	11:00

	Winnipeg Central Stations	Season	Loading Limit (kVA)	Last Measured Load (kVA)	Date of Measurement	Time
	Empress (20), 4kV	Summer	20,000	7,420	2009-07-09	17:00
11	Fife (24), 4kV	Winter	30,400	16,530	2009-01-14	11:30
	Fife (24), 4kV	Summer	36,600	16,050	2009-07-06	12:50
12	Jessie (22), 12kV	Winter	36,000	17,430	2009-01-14	10:19
	Jessie (22), 12kV	Summer	47,400	14,010	2009-07-23	18:17
13	Jessie (22), 4kV	Winter	37,500	26,960	2009-01-14	18:37
	Jessie (22), 4kV	Summer	37,500	17,090	2009-07-23	17:56
14	Keewatin (18), 4kV	Winter	20,000	9,110	2009-01-15	11:00
	Keewatin (18), 4kV	Summer	20,000	8,990	2009-07-06	13:46
15	King (1), 12kV	Winter	53,300	34,170	2009-01-15	12:17
	King (1), 12kV	Summer	53,300	32,820	2009-07-22	14:38
16	King (1), 4kV	Winter	30,000	19,010	2009-01-15	11:26
	King (1), 4kV	Summer	30,000	13,820	2009-07-22	13:58
17	Lindsay (7), 4kV	Winter	14,700	9,430	2009-01-04	18:10
	Lindsay (7), 4kV	Summer	17,300	6,100	2009-07-26	21:46
18	Logan (23) A, 4kV	Winter	24,800	18,330	2009-01-14	17:54
	Logan (23) A, 4kV	Summer	30,000	13,090	2009-07-06	15:49
19	Logan (23) B, 4kV	Winter	26,500	18,020	2009-01-14	11:18
	Logan (23) B, 4kV	Summer	30,000	14,660	2009-07-02	10:42
20	Martin (17), 4kV	Winter	14,680	12,510	2009-01-15	17:00
	Martin (17), 4kV	Summer	17,300	0	2009-07-01	0:00
21	Rover (3), 4kV	Winter	30,200	15,970	2009-01-05	17:00
	Rover (3), 4kV	Summer	32,400	12,100	2009-07-07	17:00
22	Scotland (5), 4kV	Winter	27,100	17,680	2009-01-15	17:00
	Scotland (5), 4kV	Summer	27,100	12,380	2009-07-09	17:00
23	Sherbrook (14), 12kV	Winter	48,700	24,990	2009-01-15	12:00
	Sherbrook (14), 12kV	Summer	64,400	25,900	2009-07-23	17:27
24	Sherbrook (14), 4kV	Winter	21,600	13,610	2009-01-14	17:47
	Sherbrook (14), 4kV	Summer	21,600	8,990	2009-07-23	18:51
25	St. Matthews (8), 12kV	Winter	44,000	24,000	2009-01-07	18:10
	St. Matthews (8), 12kV	Summer	51,800	23,390	2009-07-07	15:30
26	St. Matthews (8), 4kV	Winter	16,500	8,110	2009-01-14	18:09
	St. Matthews (8), 4kV	Summer	19,500	7,210	2009-07-22	16:23

	Winnipeg Central Stations	Season	Loading Limit (kVA)	Last Measured Load (kVA)	Date of Measurement	Time
27	Strathcona (9), 4kV	Winter	14,700	7,440	2009-01-14	11:05
	Strathcona (9), 4kV	Summer	17,300	7,270	2009-07-22	15:48
28	Taylor (16), 12kV	Winter	36,000	10,360	2009-01-14	18:41
	Taylor (16), 12kV	Summer	47,700	6,690	2009-07-22	14:39
29	Taylor (16), 4kV	Winter	14,700	8,950	2009-01-04	17:43
	Taylor (16), 4kV	Summer	17,300	5,930	2009-07-20	17:50
30	York (2), 12kV	Winter	54,000	27,320	2009-01-14	12:20
	York (2), 12kV	Summer	71,500	29,590	2009-07-22	14:14

	Winnipeg Suburban Stations	Season	Loading Limit (kVA)	Last Measured Load (kVA)	Year of Measurement
31	ATWOOD	Winter	80,400	24,553	2008/2009
	ATWOOD	Summer	60,800	21,929	2009
32	AUGIER	Winter	78,750	20,541	2008/2009
	AUGIER	Summer	61,876	23,774	2009
33	BAYLOR	Winter	26,990	9,532	2008/2009
	BAYLOR	Summer	20,070	6,380	2009
34	BEAVERHILL	Winter	22,340	4,653	2008/ 2009
	BEAVERHILL	Summer	14,280	3,549	2009
35	BERRY	Winter	13,150	7,343	2008/2009
	BERRY	Summer	18,980	5,820	2009
36	CAVALIER	Winter	31,710	15,687	2008/ 2009
	CAVALIER	Summer	28,310	11,358	2009
37	CHESTERFIELD	Winter	22,500	7,456	2008/2009
	CHESTERFIELD	Summer	22,500	4,709	2009
38	CHEVRIER	Winter	69,440	21,824	2008/2009
	CHEVRIER	Summer	52,920	10,124	2009
39	COURT	Winter	171,100	32,008	2008/2009
	COURT	Summer	133,100	29,059	2009
40	CRESTVIEW	Winter	25,760	10,170	2008/2009
	CRESTVIEW	Summer	21,600	3,808	2009
41	DAKOTA	Winter	123,400	53,997	2008/ 2009

	Winnipeg Suburban Stations	Season	Loading Limit (kVA)	Last Measured Load (kVA)	Year of Measurement
	DAKOTA	Summer	78,840	48,186	2009
42	DAWSON RD - 4 KV	Winter	28,820	6,739	2008/ 2009
	DAWSON RD - 4 KV	Summer	28,820	4,924	2009
43	DAWSON RD - 24 KV	Winter	32,400	20,624	2008/2009
44	DAY	Winter	78,700	37,264	2008/2009
	DAY	Summer	61,300	30,320	2009
45	DE BOURMONT	Winter	12,900	4,278	2008/ 2009
	DE BOURMONT	Summer	11,000	3,636	2009
46	DES MEURONS	Winter	36,000	15,994	2008/2009
	DES MEURONS	Summer	36,000	9,572	2009
47	DUGALD	Winter	12,960	12,868	2008/2009
	DUGALD	Summer	11,360	3,938	2009
48	DUNRAVEN	Winter	17,300	9,507	2008/ 2009
	DUNRAVEN	Summer	17,300	6,117	2009
49	EMERSON	Winter	31,190	13,458	2009/2010
	EMERSON	Summer	23,150	10,867	2009
50	FERMOR	Winter	13,340	6,092	2008/ 2009
	FERMOR	Summer	13,340	2,130	2009
51	FERNBANK	Winter	10,000	8,797	2008/2009
	FERNBANK	Summer	10,000	8,444	2009
52	FRENCH	Winter	27,830	7,230	2008/2009
	FRENCH	Summer	26,000	4,929	2009
53	FROBISHER	Winter	44,100	14,752	2008/2009
	FROBISHER	Summer	32,700	30,591	2009
54	GOULET	Winter	34,600	8,794	2008/ 2009
	GOULET	Summer	26,300	7,077	2009
55	GRANDE POINTE	Winter	12,960	9,742	2008/2009
	GRANDE POINTE	Summer	12,160	5,102	2009
56	HARROW	Winter	30,000	23,902	2008/2009
	HARROW	Summer	30,000	24,465	2009
57	HEADINGLEY	Winter	16,000	4,392	2008/2009
	HEADINGLEY	Summer	12,550	2,196	2009
58	INKSTER	Winter	75,600	33,410	2008/2009

	Winnipeg Suburban Stations	Season	Loading Limit (kVA)	Last Measured Load (kVA)	Year of Measurement
	INKSTER	Summer	58,800	31,798	2009
59	KING EDWARD	Winter	22,340	6,007	2008/2009
	KING EDWARD	Summer	14,280	6,341	2009
60	KINGSBURY	Winter	16,400	5,804	2008/2009
	KINGSBURY	Summer	15,640	5,589	2009
61	KIRKFIELD	Winter	40,000	40,994	2008/2009
	KIRKFIELD	Summer	40,000	41,180	2009
62	LAXDAL	Winter	17,710	5,279	2008/2009
	LAXDAL	Summer	14,300	3,503	2009
63	LORETTE	Winter	12,940	7,839	2008/2009
	LORETTE	Summer	11,000	4,128	2009
64	MARKHAM	Winter	22,340	9,257	2008/2009
	MARKHAM	Summer	14,280	5,066	2009
65	MCPHILLIPS	Winter	71,600	39,473	2007/2008
	MCPHILLIPS	Summer	65,700	33,387	2009
66	MIDDLECHURCH	Winter	10,000	5,343	2008/2009
	MIDDLECHURCH	Summer	10,000	2,474	2009
67	MOHAWK	Winter	160,000	94,960	2008/2009
	MOHAWK	Summer	160,000	89,609	2009
68	NESS	Winter	15,840	4,478	2008/2009
	NESS	Summer	13,340	5,672	2009
69	Norcraft	Winter	5,000	1,369	2008/2009
	Norcraft	Summer	5,000	1,972	2009
70	NOTRE DAME	Winter	25,950	10,345	2008/2009
	NOTRE DAME	Summer	21,420	8,863	2009
71	OAK BLUFF	Winter	10,000	9,076	2008/2009
	OAK BLUFF	Summer	10,000	3,770	2009
72	OAKBANK	Winter	24,300	21,253	2008/2009
	OAKBANK	Summer	21,300	10,627	2009
73	OLIVE	Winter	16,940	7,681	2008/2009
	OLIVE	Summer	15,610	5,331	2009
74	PEGUIS	Winter	32,180	15,982	2008/2009
	PEGUIS	Summer	24,300	13,132	2009

	Winnipeg Suburban Stations	Season	Loading Limit (kVA)	Last Measured Load (kVA)	Year of Measurement
75	PEMBINA	Winter	5,760	58	2008/2009
	PEMBINA	Summer	5,280	1,576	2009
76	PERIMETER SOUTH	Winter	23,760	18,899	2008/2009
	PERIMETER SOUTH	Summer	23,600	11,699	2009
77	PLESSIS RD	Winter	275,600	68,194	2008/2009
	PLESSIS RD	Summer	235,200	87,166	2009
78	RANNOCK	Winter	30,500	5,992	2008/2009
	RANNOCK	Summer	23,600	4,125	2009
79	RIDGEWAY	Winter	37,750	25,623	2009/2010
	RIDGEWAY	Summer	25,820	11,946	2009
80	ROSE	Winter	20,180	10,270	2008/ 2009
	ROSE	Summer	14,280	7,786	2009
81	SANFORD	Winter	16,080	7,737	2008/2009
	SANFORD	Summer	12,160	2,855	2009
82	SEMPLE	Winter	22,760	16,262	2008/2009
	SEMPLE	Summer	22,760	9,868	2009
83	SHAFTSBURY	Winter	21,620	5,654	2008/ 2009
	SHAFTSBURY	Summer	14,280	2,477	2009
84	SIMPSON	Winter	26,300	13,815	2009/2010
	SIMPSON	Summer	24,300	13,004	2009
85	SOUTHWOOD	Winter	28,000	14,271	2008/2009
	SOUTHWOOD	Summer	28,000	24,205	2009
86	SPRINGFIELD - 12 KV	Winter	80,440	40,790	2009/2010
	SPRINGFIELD - 12 KV	Summer	60,760	45,395	2009
87	ST JAMES - 4 KV	Winter	18,000	4,493	2008/2009
	ST JAMES - 4 KV	Summer	18,000	8,497	2009
88	ST JAMES - 24 KV	Winter	208,000	54,306	2008/2009
	ST JAMES - 24 KV	Summer	208,000	67,321	2009
89	ST NORBERT	Winter	10,000	3,367	2008/2009
	ST NORBERT	Summer	10,000	2,505	2009
90	ST VITAL TERMINAL	Winter	121,300	38,642	2008/2009
	ST VITAL TERMINAL	Summer	91,600	59,589	2009
91	STORIE	Winter	62,640	10,049	2008/2009

	Winnipeg Suburban Stations	Season	Loading Limit (kVA)	Last Measured Load (kVA)	Year of Measurement
	STORIE	Summer	40,180	13,834	2009
92	STURGEON	Winter	22,340	9,382	2008/2009
	STURGEON	Summer	14,280	7,083	2009
93	TRANSCONA SOUTH	Winter	11,700	7,027	2008/2009
	TRANSCONA SOUTH	Summer	8,330	3,404	2009
94	TRANSCONA-C.P.R.	Winter	5,000	3,008	2008/2009
	TRANSCONA-C.P.R.	Summer	5,000	2,549	2009
95	UNIVERSITY	Winter	21,620	15,537	2008/2009
	UNIVERSITY	Summer	21,620	17,888	2009
96	WATT ST.	Winter	25,950	11,178	2009/2010
	WATT ST.	Summer	25,950	13,623	2009
97	WILKES	Winter	100,000	76,631	2008/2009
	WILKES	Summer	100,000	77,293	2009
98	WINDSOR PARK	Winter	19,000	6,230	2008/2009
	WINDSOR PARK	Summer	13,800	8,860	2009

	Rural - West Stations	Season	Loading Limit (kVA)	Last Measured Load (kVA)	Year of Measurement
99	ALEXANDER	Winter	4,871	2,515	2009/2010
100	AMARANTH	Winter	17,438	15,514	2008/ 2009
101	ANGUSVILLE	Winter	2,340	1,098	2009/2010
102	AUSTIN	Winter	10,060	7,905	2008/ 2009
103	BALDUR	Winter	16,016	6,280	2008/ 2009
104	BENITO	Winter	7,550	5,021	2008/ 2009
105	BEULAH	Winter	7,550	2,511	2008/2009
106	BINSCARTH	Winter	4,680	2,840	2008/ 2009
107	BIRCH RIVER	Winter	8,250	3,603	2008/ 2009
108	BIRTLE QUEEN ST	Winter	15,100	7,554	2008/2009
109	BOISSEVAIN	Winter	23,193	13,012	2008/ 2009
110	BRANDON 65TH STREET EAST	Summer	36,303	19,992	2008
	BRANDON 65TH	Winter	42,279	17,940	2008/ 2009

	Rural - West Stations	Season	Loading Limit (kVA)	Last Measured Load (kVA)	Year of Measurement
	STREET EAST				
111	BRANDON BLACK ST	Winter	8,600	2,985	2008/ 2009
112	BRANDON CROCUS PLAINS	Winter	43,400	20,991	2008/ 2009
113	BRANDON ELVISS	Winter	3,000	1,360	2008/ 2009
114	BRANDON FORTIER	Summer	34,594	18,659	2008
	BRANDON FORTIER	Winter	43,594	27,816	2008/ 2009
115	BRANDON GENERAL HOSPITAL	Winter	5,786	1,533	2006/ 2007
116	BRANDON HIGHLAND PARK	Summer	17,066	10,511	2008
	BRANDON HIGHLAND PARK	Winter	21,999	20,714	2008/ 2009
117	BRANDON LORNE AVE	Winter	26,300	29,773	2008/ 2009
118	BRANDON LOUISE	Summer	5,850	2,310	2009
	BRANDON LOUISE	Winter	7,740	5,316	2007/ 2008
119	BRANDON MCTAVISH AVE	Winter	8,250	6,300	2008/ 2009
120	BRANDON PATRICIA AVE	Winter	26,500	10,213	2008/ 2009
121	BRANDON SERVICE CENTER	Winter	3,000	721	2004/ 2005
122	BRANDON UNIVERSITY 267684	Winter	2000	1,663	2008/ 2009
123	BRANDON VICTORIA AVE	Winter	6,880	3,396	2008/ 2009
124	BROOMHILL	Winter	3,120	1,508	2008/2009
125	CAMPERVILLE	Winter	15,160	5,645	2008/ 2009
126	CARBERRY NORTH	Winter	41,250	26,775	2008/ 2009
127	CARROLL	Winter	4,300	2,989	2008/2009
128	CARTWRIGHT	Winter	10,000	6,444	2008/ 2009
129	CRANBERRY	Winter	43,400	6,036	2009/2010

	Rural - West Stations	Season	Loading Limit (kVA)	Last Measured Load (kVA)	Year of Measurement
	PORTAGE				
130	CROMER NORTH	Winter	10,000	9,764	2008/ 2009
131	CROSSING BAY	Winter	4,300	235	2009/2010
132	CYPRESS RIVER	Winter	5,160	4,464	2008/ 2009
133	DAUPHIN 2ND ST NW	Winter	10,000	9,552	2008/ 2009
134	DAUPHIN MOUNTAIN AVE	Winter	26,500	11,044	2008/ 2009
135	DAUPHIN VERMILION	Winter	10,000	10,348	2008/ 2009
136	DELORAINIE	Winter	26,500	9,239	2008/2009
137	DOUGLAS	Winter	6,600	4,532	2008/ 2009
138	ELKHORN CUSHING AVE	Winter	8,250	5,826	2008/ 2009
139	ERICKSON	Winter	10,000	6,585	2008/ 2009
140	ETHELBERT	Winter	4,680	3,082	2008/ 2009
141	FLIN FLON ROSS LAKE	Winter	82,500	36,625	2009/2010
142	FORREST	Winter	10,000	5,372	2008/ 2009
143	FOXWARREN	Winter	7,550	2,423	2008/ 2009
144	GILBERT PLAINS	Winter	11,700	5,929	2008/ 2009
145	GLADSTONE	Winter	10,000	7,934	2007/ 2008
146	GLENBORO NORTH	Winter	20,320	6,496	2007/ 2008
147	GLENELLA	Winter	7,550	3,016	2007/ 2008
148	GRAND RAPIDS	Summer	34,440	3,549	2008
	GRAND RAPIDS	Winter	43,400	9,625	2009/2010
149	GRANDVIEW	Winter	11,700	5,914	2008/ 2009
150	GUY HILL	Winter	8,250	3,767	2009/2010
151	HAMIOTA	Winter	16,500	8,476	2008/ 2009
152	HARTNEY	Winter	20,131	7,110	2008/ 2009
153	HOLLAND	Winter	6,600	4,141	2005/2006
154	HOLLAND DSC	Winter	7,350	5,840	2009/2010
155	INGLIS	Winter	7,550	4,567	2008/2009

	Rural - West Stations	Season	Loading Limit (kVA)	Last Measured Load (kVA)	Year of Measurement
156	KILLARNEY	Winter	33,193	19,011	2007/ 2008
157	LANGRUTH	Winter	4,680	2,326	2007/ 2008
158	LENA DSC	Winter	7,350	2,372	2008/2009
159	MACGREGOR	Winter	20,131	8,725	2007/ 2008
160	MAFEKING	Winter	8,600	1,738	2008/ 2009
161	MANSON	Winter	8,600	2,232	2008/ 2009
162	MCCREARY	Winter	15,100	7,261	2008/ 2009
163	MELITA	Winter	26,500	10,177	2008/ 2009
164	MINIOTA	Winter	4,873	3,235	2008/2009
165	MINITONAS	Winter	7,550	4,728	2008/2009
166	MINNEDOSA SOUTH	Winter	21,999	14,624	2007/ 2008
167	MINTO	Winter	4,873	2,979	2008/ 2009
168	MOOSE LAKE	Winter	8,600	3,748	2009/2010
169	NEELIN	Winter	7,020	3,316	2009/2010
170	NEEPAWA	Summer	22,000	10,544	2008
171	NEEPAWA	Winter	26,500	18,906	2008/ 2009
172	NEEPAWA NORTH	Winter	9,890	4,487	2008/ 2009
173	NINETTE	Winter	12,230	3,982	2008/2009
174	OAK LAKE	Winter	10,000	6,364	2008/ 2009
175	OAKBURN	Winter	5,000	3,150	2007/2008
176	OCHRE RIVER	Winter	5,663	4,311	2006/ 2007
177	ONANOLE	Summer	11,000	5,548	2009
	ONANOLE	Winter	15,100	6,302	2008/ 2009
178	PELICAN RAPIDS DSC	Winter	7150	3,011	2006/2007
179	PIERSON	Summer	5,500	2,950	2008
	PIERSON	Winter	8,043	6,317	2009/2010
180	PILOT MOUND	Winter	27,438	13,556	2008/ 2009
181	PINE RIVER	Winter	7,550	2,496	2008/ 2009
182	PIPESTONE	Winter	7,550	3,572	2009/2010
183	PLUMAS	Winter	4,680	3,543	2006/ 2007
184	PROSPECTORS CORNER DSC	Winter	7150	1,654	2009/2010

	Rural - West Stations	Season	Loading Limit (kVA)	Last Measured Load (kVA)	Year of Measurement
185	Pukatawagan	Winter	8,250	5,812	2008/ 2009
186	RAPID CITY	Winter	13,333	5,205	2008/ 2009
187	RESTON	Winter	10,000	6,375	2008/ 2009
188	RIDING MOUNTAIN	Winter	7,550	5,080	2008/ 2009
189	RIVERS	Winter	10,000	7,293	2008/ 2009
190	ROBLIN GREENWAY	Winter	16,500	11,199	2008/ 2009
191	RORKETON	Winter	10,000	5,526	2008/ 2009
192	ROSSBURN	Winter	8,600	6,734	2007/ 2008
193	RUSSELL	Winter	18,250	7,729	2008/ 2009
194	SAN CLARA	Winter	3,510	1,713	2008/2009
195	SANDY LAKE	Winter	7,550	6,017	2008/ 2009
196	SHERGROVE	Winter	10,000	5,930	2008/ 2009
197	SHERRIDON	Winter	6,600	655	2008/ 2009
198	SHILO	Winter	8,400	4,923	2008/ 2009
199	SHILO DSC	Summer	5,400	4,005	2009
200	SHOAL LAKE	Winter	11,760	6,320	2006/ 2007
201	SHORTDALE	Winter	4,680	2,511	2008/ 2009
202	SIFTON	Winter	4,680	2,935	2008/ 2009
203	SIOUX VALLEY	Winter	10,000	7,023	2006/ 2007
204	SNOW LAKE	Winter	11,000	5,243	2009/2010
205	SOURIS	Winter	43,000	11,078	2007/ 2008
206	ST. LAZARE	Winter	4,680	2,225	2008/ 2009
207	STE ROSE	Winter	15,100	7,994	2008/ 2009
208	STE. CLAUDE	Winter	18,250	8,077	2008/ 2009
209	STRATHCLAIR	Winter	5,000	4,113	2008/ 2009
210	SWAN RIVER DITCH ROAD	Winter	10,000	7,582	2008/2009
211	SWAN RIVER VALLEY ROAD	Winter	43,594	25,740	2006/ 2007
212	THE PAS RALLS ISLAND	Winter	82,500	49,112	2008/ 2009
213	THE PAS RALLS ISLAND STEPUP	Winter	14,000	7,737	2008/ 2009

	Rural - West Stations	Season	Loading Limit (kVA)	Last Measured Load (kVA)	Year of Measurement
214	TREHERNE	Winter	17,438	9,302	2008/ 2009
215	VIRDEN SOUTH	Winter	26,500	15,574	2008/ 2009
216	VIRDEN WALLACE	Winter	27,438	8,910	2008/ 2009
217	WASKADA	Winter	10,000	5,722	2008/ 2009
218	WATERHEN	Winter	10,000	3,699	2006/ 2007
219	WAWANESA	Winter	17,438	6,391	2008/ 2009
220	WAYWAYSEECAPPO	Winter	7,550	4,297	2008/ 2009
221	WINNIPEGOSIS NORTH	Winter	12,230	4,220	2008/ 2009
222	WINNIPEGOSIS SOUTH	Winter	3,440	1,369	2005/ 2006

	Rural - East Stations	Season	Loading Limit (kVA)	Last Measured Load (kVA)	Year of Last Measurement
223	A.E.C.L.	Winter	14,850	3,589	2000/ 2001
224	Altona West	Winter	28,958	18,507	2008/ 2009
225	Arborg West	Winter	22,588	16,771	2008/ 2009
226	Ashern	Winter	13,300	12,240	2008/ 2009
227	Beausejour East	Winter	28,150	16,709	2007/ 2008
228	Berens River	Winter	4,644	3,835	2008/ 2009
229	Bird Lake	Summer	2,665	487	2008
	Bird Lake	Winter	3,745	630	2008/ 2009
230	Bisset	Winter	2,580	1,533	2008/ 2009
231	Black River	Winter	2,106	1,405	2007/ 2008
232	Bloodvein	Winter	4,644	1,890	2006/ 2007
233	Brereton Lake	Summer	12,500	2,835	2009
	Brereton Lake	Winter	13,300	3,915	2009/2010
234	Brokenhead	Winter	4,212	3,623	2007/ 2008
235	Cabot	Winter	14,850	11,328	2007/ 2008
236	Carman	Winter	28,958	17,570	2007/ 2008
237	Dallas	Winter	13,300	10,812	2008/ 2009
238	Darlingford	Winter	7,220	4,443	2008/ 2009

	Rural - East Stations	Season	Loading Limit (kVA)	Last Measured Load (kVA)	Year of Last Measurement
239	Dominion City	Winter	6,795	6,024	2008/ 2009
240	East Selkirk	Winter	19,202	15,042	2008/ 2009
241	Elie	Winter	14,850	11,031	2008/ 2009
242	Elm Creek East	Winter	9,060	6,141	2007/ 2008
243	Elma	Winter	4,200	3,938	2007/2008
244	Eriksdale East	Winter	6,795	5,702	2008/ 2009
245	Finns	Winter	6,795	7,019	2008/ 2009
246	Fisher Branch	Winter	13,300	7,425	2008/ 2009
247	Fort Alexander DSC	Winter	7,020	4,282	2008/2009
248	Fraserwood	Winter	4,212	3,975	2008/ 2009
249	Garson	Winter	19,750	13,351	2007/ 2008
250	Gimli	Winter	20,385	17,337	2008/ 2009
251	Grand Beach	Winter	13,300	6,195	2008/ 2009
252	Graysville	Winter	2,808	1,605	2008/ 2009
253	Great Falls	Winter	2,808	2,211	2007/ 2008
254	Gretna Green	Winter	4,644	3,829	2008/ 2009
255	Grunthal	Summer	21,870	8,752	2009
	Grunthal	Winter	28,958	12,547	2009/2010
256	Gull Harbour	Winter	4,212	2,137	2008/ 2009
257	Gull Lake	Winter	13,300	3,770	2005/ 2006
258	Hadashville DSC	Summer	5,000	3,052	2009
	Hadashville DSC	Winter	7,020	4,538	2009/2010
259	Hodgson	Winter	14,850	9,603	2008/ 2009
260	Jordan	Winter	9,588	4,293	2007/ 2008
261	Komarno	Winter	13,590	6,110	2008/ 2009
262	La Broquerie	Summer	10,000	7,275	2009
	La Broquerie	Winter	13,300	12,457	2009/2010
263	Lac Du Bonnet	Winter	27,250	26,653	2007/2008
264	Letellier	Winter	13,300	8,324	2008/ 2009
265	Libau	Winter	13,300	4,395	2007/ 2008
266	Little Grand Rapids	Winter	9,288	4,597	2008/ 2009
267	Lowe Farm	Winter	13,300	4,208	2008/ 2009
268	Lundar	Winter	7,425	6,675	2008/ 2009

	Rural - East Stations	Season	Loading Limit (kVA)	Last Measured Load (kVA)	Year of Last Measurement
269	Manigotagan	Winter	6,795	3,572	2007/ 2008
270	Manitou East	Winter	28,150	9,082	2008/ 2009
271	McTavish	Winter	14,850	6,979	2008/ 2009
272	Medika DSC	Summer	5,000	688	2009
	Medika DSC	Winter	7,020	827	2009/2010
273	Miami	Winter	6,795	5,306	2008/ 2009
274	Mitchell	Summer	0	9,502	2009
	Mitchell	Winter	0	9,524	2009/2010
275	Moosehorn	Winter	4,212	3,887	2008/ 2009
276	Morden Cheval	Winter	13,300	14,873	2008/ 2009
277	Morden Ninth	Winter	28,150	17,324	2008/ 2009
278	Morris	Winter	9,288	7,745	2008/ 2009
279	Netley	Winter	13,300	11,362	2008/ 2009
280	Niverville	Summer	11,520	10,042	2009
	Niverville	Winter	13,590	10,057	2009/2010
281	Notre Dame de Lourdes	Winter	3,096	5,069	2008/ 2009
282	Oakville	Winter	14,850	9,441	2008/ 2009
283	Parkdale	Winter	13,300	13,672	2008/ 2009
284	Pinawa North	Winter	11,880	8,227	2007/ 2008
285	Pine Falls	Winter	36,763	14,905	2005/ 2006
286	Piney DSC	Summer	5,000	2,247	2009
	Piney DSC	Winter	6,615	3,074	2009/2010
287	Plum Coulee	Winter	13,300	9,060	2008/ 2009
288	Poplar Point	Winter	6,795	6,068	2008/ 2009
289	Poplar River	Winter	5,418	2,820	2008/ 2009
290	Poplarfield	Winter	4,212	4,677	2008/ 2009
291	Portage 15th St	Winter	28,510	22,246	2008/ 2009
292	Portage la Reine	Winter	9,060	7,098	2006/ 2007
293	Portage Sask Ave	Winter	26,890	21,154	2008/ 2009
294	Portage Southport	Winter	4,644	5,812	2008/ 2009
295	Portage Westco Dr	Winter	28,150	12,374	2008/ 2009
296	Randolph	Summer	17,280	12,119	2009
	Randolph	Winter	22,275	17,786	2009/2010

	Rural - East Stations	Season	Loading Limit (kVA)	Last Measured Load (kVA)	Year of Last Measurement
297	Richer North	Summer	10,000	6,345	2009
	Richer North	Winter	13,300	9,397	2009/2010
298	Riverton	Winter	14,850	8,425	2008/ 2009
299	Saltel	Summer	5,000	2,232	2008
	Saltel	Winter	6,795	7,649	2009/2010
300	Sarto	Summer	12,500	6,895	2009
	Sarto	Winter	13,300	8,937	2009/2010
301	Selkirk Mercy St.	Winter	37,125	37,270	2008/ 2009
302	Somerset	Winter	28,150	8,361	2008/ 2009
303	Sprague South	Summer	11,520	3,864	2009
	Sprague South	Winter	13,300	6,918	2009/2010
304	St Jean Baptiste	Winter	4,644	2,159	2008/ 2009
305	St. Laurent	Winter	7,207	7,986	2008/ 2009
306	St. Malo	Summer	10,000	6,202	2009
	St. Malo	Winter	13,300	7,335	2009/2010
307	St. Martin	Winter	13,300	9,165	2008/ 2009
308	St. Pierre	Summer	17,280	6,914	2009
	St. Pierre	Winter	20,725	9,819	2009/2010
309	Star Lake	Summer	11,520	7,717	2009
	Star Lake	Winter	14,850	7,680	2009/2010
310	Ste Agathe	Winter	6,795	5,665	2008/2009
311	Ste. Anne	Summer	17,280	11,905	2009
	Ste. Anne	Winter	20,725	17,926	2009/2010
312	Ste. Elizabeth	Summer	5,000	1,932	2008
	Ste. Elizabeth	Winter	6,795	4,392	2009/2010
313	Steepprock	Winter	4,212	1,976	2008/ 2009
314	Steinbach	Summer	42,100	26,773	2009
	Steinbach	Winter	50,425	31,873	2009/2010
315	Steinbach Loewen	Summer	11,520	13,297	2009
	Steinbach Loewen	Winter	27,714	12,914	2009/2010
316	Stonewall	Summer	23,040	15,637	2008
	Stonewall	Winter	29,700	27,643	2008/ 2009
317	Stony Mountain West	Winter	13,300	8,608	2007/ 2008

	Rural - East Stations	Season	Loading Limit (kVA)	Last Measured Load (kVA)	Year of Last Measurement
318	Stuartburn	Summer	10,000	3,330	2009
	Stuartburn	Winter	13,300	5,280	2009/2010
319	Swan Lake	Winter	13,300	7,265	2008/ 2009
320	Teulon	Winter	28,150	13,790	2008/ 2009
321	Victoria Beach	Summer	10,000	4,597	2009
	Victoria Beach	Winter	13,300	7,912	2008/ 2009
322	Vita	Summer	5,000	3,726	2009
	Vita	Winter	6,795	4,831	2009/2010
323	Vivian	Winter	9,900	9,464	2007/ 2008
324	Warren	Winter	19,800	11,521	2007/ 2008
325	Westbourne	Winter	6,795	3,711	2008/ 2009
326	Whitemouth North	Winter	11,880	3,499	2007/ 2008
327	Whiteshell	Winter	17,944	5,572	2007/ 2008
328	Winkler Market St	Winter	28,150	36,318	2008/ 2009
329	Winkler North	Winter	28,150	21,299	2008/ 2009
330	Winnipeg Beach	Winter	14,850	13,171	2008/2009
331	Woodlands	Winter	9,747	6,778	2008/ 2009
332	Woodridge	Summer	5,000	2,503	2009
	Woodridge	Winter	6,795	3,594	2009/2010
333	Zhoda DSC	Summer	5,000	1,662	2009
	Zhoda DSC	Winter	6,795	2,137	2009/2010

	Rural - North Stations	Season	Loading Limit (kVA)	Last Measured Load (kVA)	Year of Last Measurement
334	Churchill South	Winter	39,060	7,702	2008/ 2009
335	Cross Lake	Winter	31,388	13,192	2009/2010
336	Dunlop	Winter	2,106	198	2007/ 2008
337	Garden Hill	Winter	39,060	7,541	2009/2010
338	Gillam	Winter	22,275	9,501	2008/ 2009
339	Gods Lake Narrows	Winter	37,125	8,146	2008/ 2009
340	Ilford	Summer	5,850	950	2009
341	Ilford	Winter	7,740	1,915	2007/ 2008

	Rural - North Stations	Season	Loading Limit (kVA)	Last Measured Load (kVA)	Year of Last Measurement
342	Kettle	Winter	9,900	261	2008/ 2009
343	Leaf Rapids	Winter	37,125	3,427	2008/ 2009
344	Limestone	Winter	11,138	1,845	2008/ 2009
345	Lynn Lake Copper St	Winter	9,288	4,319	2004/ 2005
346	Nelson House	Winter	11,093	8,542	2008/ 2009
347	Norway House	Winter	14,850	16,979	2009/2010
348	Notigi	Winter	1,548	922	1995/ 1996
349	Oxford House	Winter	39,060	5,571	2008/ 2009
350	South Indian Lake	Winter	14,850	2,857	2004/ 2005
351	Split Lake	Winter	19,751	7,072	2009/2010
352	Thompson Burntwood	Winter	29,700	27,653	2009/2010
353	Thompson Mystery Lake	Winter	34,875	39,782	2008/ 2009
354	Thompson Oak St	Winter	3,483	3,113	2009/2010
355	Thompson Station Rd	Winter	3,483	4,215	2009/2010
356	Wabowden	Winter	7,740	4,531	2009/2010
357	Wasagamack	Winter	40,176	5,642	2007/2008

RCM/TREE/MH I-7

Rebalancing Energy and Demand Charges

Reference: Rebalancing Energy and Demand Charges, Appendix 13.7

- q) Please estimate the percentage of transmission, subtransmission and distribution plant that is driven by the customer's individual maximum demand (that is, the billing units for demand charges).**

ANSWER:

Allocation of costs of transmission, subtransmission and distribution is not driven by customer billing demand, but rather by diversified demand either coincident peak or non-coincident peak.

RCM/TREE/MH I-8

Proposed Rate Structure

Reference: Bill Comparisons, Appendices 10.5 and 10.6

- a) Please provide Excel versions (with formulas intact) of the spreadsheets used to derive the bill comparisons in Appendices 10.5 and 10.6.**

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-3(a).

RCM/TREE/MH I-8

Proposed Rate Structure

Reference: Bill Comparisons, Appendices 10.5 and 10.6

- b) For each domestic rate class, please provide a comparison table of per-unit demand, energy, customer and other charges under the existing and proposed rates.**

ANSWER:

Please see Manitoba Hydro's response to MIPUG/MH I-20(a) which provides the billing determinants for each of the customer rate classes for 2010/11 and 2011/12. Included in that response are the current and proposed rates for demand, energy and customer charges.

RCM/TREE/MH I-8

Proposed Rate Structure

Reference: Bill Comparisons, Appendices 10.5 and 10.6

- c) For each non-demand-metered class or subclass, please provide bill comparison tables that show:
- i. the % of total kW.h included in the block;
 - ii. the % of total bills included in the block;
 - iii. the \$ and % change in bill.
 - iv. Include an electronic copy of this bill comparison table.

ANSWER:

- (i) and (ii) Please see Manitoba Hydro's response to MIPUG/MH I-20(a).
- (iii) The only non-demand metered classes or subclasses are Residential (Basic, Seasonal and Diesel) and General Service Small Non-Demand (Basic, Seasonal and Diesel), for which the \$ and % change in bill are all shown in Appendices 10.5 and 10.6.
- (iv) Please see Manitoba Hydro's response to RCM/TREE/MH I-3(a).

RCM/TREE/MH I-8

Proposed Rate Structure

Reference: Bill Comparisons, Appendices 10.5 and 10.6

- d) For demand-metered rates, please provide bill comparisons by kW.h for a given kW rather than by load factor.

ANSWER:

The bill comparisons shown in Appendix 10.5 for demand-metered rates are provided below, but the Load Factor has been replaced with the equivalent kW.h amount associated with the kV.A shown above each table. The same kW.h and kV.A values would be used for the tables shown in Appendix 10.6.

GS Small: 51 kV.A

kW.h	April 1, 2009 \$ / Month	April 1, 2010 \$ / Month	Difference in \$ / Month	Percent Change
9,308	\$651.99	\$669.66	\$17.67	2.71%
18,615	\$1,105.83	\$1,142.53	\$36.70	3.32%
27,923	\$1,386.38	\$1,440.94	\$54.56	3.94%
37,230	\$1,652.56	\$1,724.81	\$72.25	4.37%

GS Small: 100 kV.A

kW.h	April 1, 2009 \$ / Month	April 1, 2010 \$ / Month	Difference in \$ / Month	Percent Change
18,250	\$1,498.14	\$1,534.08	\$35.94	2.40%
36,500	\$2,040.34	\$2,111.20	\$70.86	3.47%
54,750	\$2,562.29	\$2,667.83	\$105.54	4.12%
73,000	\$3,084.24	\$3,224.45	\$140.21	4.55%

GS Medium: 500 kV.A

kW.h	April 1, 2009 \$ / Month	April 1, 2010 \$ / Month	Difference in \$ / Month	Percent Change
91,250	\$6,920	\$7,120	\$200	2.89%
182,500	\$9,529	\$9,903	\$374	3.92%
273,750	\$12,139	\$12,686	\$547	4.51%
365,000	\$14,749	\$15,469	\$720	4.88%

GS Medium: 1,000 kV.A

kW.h	April 1, 2009 \$ / Month	April 1, 2010 \$ / Month	Difference in \$ / Month	Percent Change
182,500	\$13,699	\$14,073	\$374	2.73%
365,000	\$18,919	\$19,639	\$720	3.81%
547,500	\$24,138	\$25,206	\$1,068	4.42%
730,000	\$29,358	\$30,772	\$1,414	4.82%

GS Large 750 V - 30 kV: 5,000 kV.A

kW.h	April 1, 2009 \$ / Month	April 1, 2010 \$ / Month	Difference in \$ / Month	Percent Change
912,500	\$60,311	\$61,680	\$1,369	2.27%
1,825,000	\$85,223	\$87,960	\$2,737	3.21%
2,737,500	\$110,134	\$114,240	\$4,106	3.73%
3,650,000	\$135,045	\$140,520	\$5,475	4.05%

GS Large 30 -100 kV: 10,000 kV.A

kW.h	April 1, 2009 \$ / Month	April 1, 2010 \$ / Month	Difference in \$ / Month	Percent Change
1,825,000	\$107,685	\$109,693	\$2,008	1.86%
3,650,000	\$154,770	\$158,785	\$4,015	2.59%
5,475,000	\$201,855	\$207,878	\$6,023	2.98%
7,300,000	\$248,940	\$256,970	\$8,030	3.23%

GS Large >100 kV: 50,000 kV.A

kW.h	April 1, 2009 \$ / Month	April 1, 2010 \$ / Month	Difference in \$ / Month	Percent Change
9,125,000	\$499,950	\$509,075	\$9,125	1.83%
18,250,000	\$729,900	\$748,150	\$18,250	2.50%
27,375,000	\$959,850	\$987,225	\$27,375	2.85%
36,500,000	\$1,189,800	\$1,226,300	\$36,500	3.07%

LUBD Small: 100 kV.A

kW.h	April 1, 2009 \$ / Month	April 1, 2010 \$ / Month	Difference in \$ / Month	Percent Change
3,650	\$408.20	\$416.04	\$7.84	1.92%
7,300	\$688.15	\$702.93	\$14.78	2.15%
10,950	\$968.11	\$989.82	\$21.71	2.24%
14,600	\$1,248.06	\$1,276.71	\$28.65	2.30%

LUBD Medium: 500 kV.A

kW.h	April 1, 2009 \$ / Month	April 1, 2010 \$ / Month	Difference in \$ / Month	Percent Change
18,250	\$2,472.38	\$2,402.55	(\$69.83)	(2.82%)
36,500	\$3,872.15	\$3,837.00	(\$35.15)	(0.91%)
54,750	\$5,271.93	\$5,271.45	(\$0.48)	(0.01%)
73,000	\$6,671.70	\$6,705.90	\$34.20	0.51%

LUBD Large 750 V - 30 kV: 5,000 kV.A

kW.h	April 1, 2009 \$ / Month	April 1, 2010 \$ / Month	Difference in \$ / Month	Percent Change
182,500	\$21,278	\$21,552	\$274	1.29%
365,000	\$33,707	\$34,254	\$547	1.62%
547,500	\$46,135	\$46,956	\$821	1.78%
730,000	\$58,563	\$59,658	\$1,095	1.87%

LUBD GS Large 30 -100 kV: 10,000 kV.A

kW.h	April 1, 2009 \$ / Month	April 1, 2010 \$ / Month	Difference in \$ / Month	Percent Change
365,000	\$37,646	\$38,048	\$402	1.07%
730,000	\$59,692	\$60,495	\$803	1.35%
1,095,000	\$81,738	\$82,943	\$1,205	1.47%
1,460,000	\$103,784	\$105,390	\$1,606	1.55%

LUBD GS Large >100 kV: 50,000 kV.A

kW.h	April 1, 2009 \$ / Month	April 1, 2010 \$ / Month	Difference in \$ / Month	Percent Change
1,825,000	\$172,518	\$174,343	\$1,825	1.06%
3,650,000	\$274,535	\$278,185	\$3,650	1.33%
5,475,000	\$376,553	\$382,028	\$5,475	1.45%
7,300,000	\$478,570	\$485,870	\$7,300	1.53%

RCM/TREE/MH I-8

Proposed Rate Structure

Reference: Bill Comparisons, Appendices 10.5 and 10.6

- e) Please provide the bill frequency data from which the bill comparison tables were derived.

ANSWER:

Bill frequency data is only used for all rate classes which have a blocked rate structure. Below are the bill frequency tables for the main sub-classes: Residential Basic, General Service Small Non-Demand, Small Demand and Medium.

BILL FREQUENCY DATA FOR BASIC RESIDENTIAL

BLOCK END	BLOCK KW.H	BLOCK BILLS	CUMULATIVE KW.H	CUMULATIVE BILLS	CONSOL. FACTOR	% CONSOL FACTOR	USE / AVG. USE
0	-63,521	54.2	(63,521)	54	(63,521)	(0.000009221)	0.000000000
50	2,263,127	92,016	2,199,606	92,070	257,685,811	0.037408132	0.037757107
60	962,279	16,931.8	3,161,885	109,002	308,729,423	0.044818110	0.045308528
70	1,183,298	17,685.7	4,345,183	126,688	359,602,645	0.052203352	0.052859950
80	1,465,400	19,058.5	5,810,583	145,746	410,294,431	0.059562256	0.060411371
100	3,884,889	42,202	9,695,472	187,949	511,080,062	0.074193260	0.075514214
120	5,111,163	45,601	14,806,635	233,549	610,996,059	0.088698020	0.090617057
140	6,516,130	49,352	21,322,765	282,901	709,967,869	0.103065712	0.105719899
150	3,842,397	26,125.9	25,165,162	309,027	759,080,317	0.110195344	0.113271321
165	5,628,163	35,436	30,793,325	344,463	832,253,056	0.120817797	0.124598453
175	4,618,854	27,064	35,412,179	371,527	880,709,079	0.127852136	0.132149874
185	5,061,250	28,020	40,473,429	399,547	928,889,291	0.134846435	0.139701296
200	9,293,835	47,866	49,767,264	447,413	1,000,643,584	0.145262973	0.151028428
500	360,322,238	1,006,947	410,089,502	1,454,360	2,283,806,702	0.331539179	0.377571069
750	539,305,673	861,882	949,395,175	2,316,242	3,113,559,475	0.451994011	0.566356604
900	363,334,529	439,661	1,312,729,704	2,755,903	3,514,032,324	0.510130472	0.679627925
1200	687,521,791	659,049	2,000,251,495	3,414,952	4,144,462,735	0.601649768	0.906170567
1400	392,006,695	301,812	2,392,258,190	3,716,764	4,471,301,030	0.649096734	1.057198994
1600	340,380,226	227,065	2,732,638,416	3,943,829	4,745,383,856	0.688885213	1.208227422
1800	297,789,654	175,162	3,030,428,070	4,118,991	4,979,475,090	0.722868131	1.359255850
2000	263,870,997	138,806	3,294,299,067	4,257,797	5,182,294,867	0.752311386	1.510284278
2500	554,713,511	248,106.6	3,849,012,578	4,505,903	5,588,740,828	0.811314961	1.887855347
3000	467,263,047	170,479.4	4,316,275,625	4,676,383	5,892,511,325	0.855413186	2.265426417
3500	409,996,253	126,387.3	4,726,271,878	4,802,770	6,122,857,978	0.888852505	2.642997486
4000	367,413,422	98,110.7	5,093,685,300	4,900,881	6,297,340,900	0.914182111	3.020568555
5000	587,554,319	131,758.5	5,681,239,619	5,032,639	6,527,016,619	0.947524030	3.775710694
50000	1,207,257,569	169,155	6,888,497,188	5,201,795	6,888,497,188	1.000000000	

BILL FREQUENCY DATA FOR SMALL NON-DEMAND

	BLOCK END	BLOCK KW.H	BLOCK BILLS	CUMULATIVE KW.H	CUMULATIVE BILLS	CONSOL. FACTOR	% CONSOL FACTOR	USE / AVG. USE
1	0	-226,007	877.9	(226,007)	878	(226,007)	(0.000141489)	0.000000000
2	100	2,818,940	64,933.2	2,592,933	65,811	57,018,923	0.035696119	0.038192876
3	200	6,039,914	40,237.0	8,632,847	106,048	109,437,427	0.068512192	0.076385753
4	300	8,290,784	32,341.2	16,923,631	138,389	158,428,141	0.099182331	0.114578629
5	400	9,805,823	27,628.2	26,729,454	166,018	204,350,854	0.127931780	0.152771505
6	500	9,834,651	21,736.6	36,564,105	187,754	247,722,555	0.155084194	0.190964382
7	600	17,943,565	32,035.1	54,507,670	219,789	288,676,750	0.180723152	0.229157258
8	700	11,383,085	17,451.1	65,890,755	237,240	326,872,245	0.204635055	0.267350135
9	800	12,414,008	16,505.2	78,304,763	253,746	363,365,163	0.227481076	0.305543011
10	900	12,764,595	14,959.2	91,069,358	268,705	398,299,028	0.249351068	0.343735887
11	1000	14,181,449	14,922.8	105,250,807	283,628	431,694,307	0.270257844	0.381928764
12	2000	148,975,512	102,994.1	254,226,319	386,622	701,125,119	0.438932272	0.763857527
13	3000	147,530,391	59,737.1	401,756,710	446,359	892,893,610	0.558986991	1.145786291
14	4000	136,025,767	39,145.1	537,782,477	485,504	1,036,051,277	0.648609397	1.527715055
15	5000	123,193,946	27,499.3	660,976,423	513,003	1,146,315,923	0.717639460	1.909643818
16	6000	112,239,407	20,477.2	773,215,830	533,480	1,232,760,030	0.771756917	2.291572582
17	7000	100,418,201	15,480.4	873,634,031	548,961	1,301,406,131	0.814732113	2.673501346
18	8000	90,880,401	12,141.2	964,514,432	561,102	1,356,267,232	0.849077349	3.055430110
19	9000	80,466,699	9,474.6	1,044,981,131	570,577	1,400,431,631	0.876726023	3.437358873
20	10000	73,375,287	7,728.3	1,118,356,418	578,305	1,436,018,418	0.899004770	3.819287637
21	11000	64,750,083	6,178.8	1,183,106,501	584,484	1,464,567,901	0.916877884	4.201216401
22	12000	57,508,287	5,001.7	1,240,614,788	589,485	1,487,643,188	0.931323934	4.583145164
23	13000	47,416,394	3,798.0	1,288,031,182	593,283	1,506,271,282	0.942985863	4.965073928
24	14000	43,898,423	3,255.6	1,331,929,605	596,539	1,521,379,005	0.952443900	5.347002692
25	15000	37,605,371	2,594.2	1,369,534,976	599,133	1,533,603,476	0.960096906	5.728931455

26	16000	32,073,074	2,070.1	1,401,608,050	601,203	1,543,492,850	0.966288048	6.110860219
27	17000	27,982,385	1,696.8	1,429,590,435	602,900	1,551,497,435	0.971299238	6.492788983
28	18000	24,081,335	1,378.0	1,453,671,770	604,278	1,557,945,770	0.975336152	6.874717746
29	19000	19,407,930	1,049.3	1,473,079,700	605,327	1,563,210,000	0.978631770	7.256646510
30	20000	16,544,718	848.5	1,489,624,418	606,176	1,567,528,418	0.981335272	7.638575274
31	21000	13,448,193	655.9	1,503,072,611	606,832	1,571,097,911	0.983569917	8.020504037
32	22000	11,131,529	517.9	1,514,204,140	607,350	1,574,074,940	0.985433656	8.402432801
33	23000	10,541,499	468.6	1,524,745,639	607,818	1,576,560,039	0.986989427	8.784361565
34	24000	7,832,127	333.4	1,532,577,766	608,152	1,578,643,366	0.988293673	9.166290329
35	25000	7,685,443	314.1	1,540,263,209	608,466	1,580,395,709	0.989390709	9.548219092
36	26000	5,969,917	234.2	1,546,233,126	608,700	1,581,881,726	0.990321015	9.930147856
37	27000	5,323,656	200.6	1,551,556,782	608,901	1,583,160,282	0.991121442	10.312076620
38	28000	4,546,170	165.1	1,556,102,952	609,066	1,584,254,152	0.991806248	10.694005383
39	1000000	41,239,427	1,005	1,597,342,379	610,071	1,597,342,379	1.000000000	

BILL FREQUENCY DATA FOR SMALL DEMAND

				CUMULATIVE	CUMULATIVE	CONSOL.	% CONSOL	USE /
	BLOCK END	BLOCK KW.H	BLOCK BILLS	KW.H	BILLS	FACTOR	FACTOR	AVG. USE
1	0	-58,706	3.0	(58,706)	3	(58,706)	(0.000030886)	0.000000000
2	100	11,434	192.5	(47,272)	196	7,936,778	0.004175657	0.004210813
3	200	34,359	227.0	(12,913)	423	15,909,787	0.008370375	0.008421626
4	300	49,940	194.0	37,027	617	23,862,877	0.012554614	0.012632438
5	400	58,510	163.6	95,537	780	31,797,897	0.016729346	0.016843251
6	500	77,630	166.5	173,167	947	39,717,867	0.020896159	0.021054064
7	600	94,060	164.3	267,227	1,111	47,622,287	0.025054792	0.025264877
8	700	44,350	68.0	311,577	1,179	55,511,547	0.029205449	0.029475689
9	800	158,380	212.0	469,957	1,391	63,386,037	0.033348335	0.033686502
10	900	121,040	139.5	590,997	1,530	71,246,037	0.037483598	0.037897315
11	1000	139,610	145.0	730,607	1,675	79,091,207	0.041611058	0.042108128
12	2000	2,453,987	1,608.7	3,184,594	3,284	156,688,394	0.082436090	0.084216255
13	3000	4,079,838	1,631.0	7,264,432	4,915	232,627,132	0.122388587	0.126324383
14	4000	5,475,505	1,549.4	12,739,937	6,465	307,025,937	0.161530903	0.168432511
15	5000	6,946,594	1,544.5	19,686,531	8,009	379,821,531	0.199829746	0.210540638
16	6000	9,706,589	1,757.1	29,393,120	9,766	451,012,520	0.237284382	0.252648766
17	7000	11,497,329	1,762.9	40,890,449	11,529	520,439,449	0.273810920	0.294756894
18	8000	13,910,972	1,851.0	54,801,421	13,380	588,049,421	0.309381530	0.336865021
19	9000	16,997,757	1,993.8	71,799,178	15,374	653,758,978	0.343952303	0.378973149
20	10000	19,275,081	2,024.4	91,074,259	17,398	717,452,259	0.377462284	0.421081277
21	11000	22,116,928	2,102.8	113,191,187	19,501	779,076,187	0.409883547	0.463189404
22	12000	26,326,729	2,283.0	139,517,916	21,784	838,541,916	0.441169350	0.505297532
23	13000	27,731,511	2,213.5	167,249,427	23,998	895,749,927	0.471267333	0.547405660
24	14000	30,081,149	2,224.9	197,330,576	26,222	950,720,976	0.500188418	0.589513788
25	15000	33,531,560	2,308.8	230,862,136	28,531	1,003,434,136	0.527921594	0.631621915
26	16000	36,326,840	2,341.8	267,188,976	30,873	1,053,796,976	0.554418232	0.673730043

27	17000	36,994,913	2,240.9	304,183,889	33,114	1,101,859,589	0.579704686	0.715838171
28	18000	42,174,620	2,407.7	346,358,509	35,522	1,147,617,709	0.603778712	0.757946298
29	19000	39,289,440	2,121.7	385,647,949	37,643	1,191,109,249	0.626660257	0.800054426
30	20000	44,055,224	2,257.4	429,703,173	39,901	1,232,409,173	0.648388760	0.842162554
31	21000	43,872,264	2,137.7	473,575,437	42,038	1,271,525,037	0.668968197	0.884270681
32	22000	43,265,926	2,010.6	516,841,363	44,049	1,308,555,363	0.688450401	0.926378809
33	23000	43,923,646	1,952.5	560,765,009	46,002	1,343,558,509	0.706866076	0.968486937
34	24000	45,588,859	1,938.2	606,353,868	47,940	1,376,665,068	0.724283928	1.010595064
35	25000	42,065,355	1,714.2	648,419,223	49,654	1,407,971,723	0.740754824	1.052703192
36	26000	43,615,484	1,709.9	692,034,707	51,364	1,437,511,907	0.756296353	1.094811320
37	27000	44,864,021	1,691.1	736,898,728	53,055	1,465,388,428	0.770962605	1.136919447
38	28000	42,980,860	1,561.7	779,879,588	54,617	1,491,622,788	0.784764891	1.179027575
39	29000	42,451,002	1,488.8	822,330,590	56,105	1,516,317,990	0.797757403	1.221135703
40	30000	44,497,341	1,506.8	866,827,931	57,612	1,539,541,931	0.809975863	1.263243830
41	35000	186,588,572	5,758.4	1,053,416,503	63,371	1,636,705,503	0.861095061	1.473784469
42	40000	161,885,758	4,329.8	1,215,302,261	67,700	1,708,726,261	0.898986251	1.684325107
43	45000	137,335,203	3,237.2	1,352,637,464	70,938	1,762,065,464	0.927048797	1.894865746
44	50000	115,175,041	2,429.9	1,467,812,505	73,368	1,801,237,505	0.947657790	2.105406384
45	60000	173,389,767	3,174.2	1,641,202,272	76,542	1,850,860,272	0.973765064	2.526487661
46	70000	112,935,079	1,749.0	1,754,137,351	78,291	1,876,308,351	0.987153676	2.947568938
47	80000	65,240,199	875.0	1,819,377,550	79,166	1,889,001,550	0.993831756	3.368650215
48	90000	38,877,708	460.3	1,858,255,258	79,626	1,895,155,258	0.997069314	3.789731491
49	100000	19,947,360	211.0	1,878,202,618	79,837	1,898,102,618	0.998619963	4.210812768
50	120000	17,129,871	159.6	1,895,332,489	79,997	1,900,060,489	0.999650028	5.052975322
51	140000	3,291,260	26.0	1,898,623,749	80,023	1,900,499,749	0.999881130	5.895137875
52	160000	1,661,840	11.2	1,900,285,589	80,034	1,900,637,589	0.999953649	6.737300429
53	180000	167,580	1.0	1,900,453,169	80,035	1,900,669,169	0.999970264	7.579462983
54	200000	0	.0	1,900,453,169	80,035	1,900,693,169	0.999982891	8.421625536
55	1000000	272,520	1.2	1,900,725,689	80,036	1,900,725,689	1.000000000	

BILL FREQUENCY DATA FOR MEDIUM DEMAND

	BLOCK END	BLOCK KW.H	BLOCK BILLS	CUMULATIVE KW.H	CUMULATIVE BILLS	CONSOL. FACTOR	% CONSOL FACTOR	USE / AVG. USE
1	0	-342,600	62.2	(342,600)	62	(342,600)	(0.000113641)	0.000000000
2	100	11	5.0	(342,589)	67	2,101,011	0.000696908	0.000812774
3	200	360	2.0	(342,229)	69	4,544,571	0.001507440	0.001625548
4	300	720	3.0	(341,509)	72	6,987,791	0.002317859	0.002438322
5	400	2,880	8.0	(338,629)	80	9,430,571	0.003128132	0.003251097
6	500	960	2.0	(337,669)	82	11,872,831	0.003938233	0.004063871
7	600	540	1.0	(337,129)	83	14,314,871	0.004748260	0.004876645
8	700	0	.0	(337,129)	83	16,756,871	0.005558275	0.005689419
9	800	1,440	2.0	(335,689)	85	19,198,711	0.006368236	0.006502193
10	900	1,800	2.0	(333,889)	87	21,640,511	0.007178184	0.007314967
11	1000	960	1.0	(332,929)	88	24,082,071	0.007988052	0.008127741
12	2000	45,582	30.4	(287,347)	119	48,481,853	0.016081490	0.016255483
13	3000	129,008	49.2	(158,339)	168	72,847,861	0.024163725	0.024383224
14	4000	114,620	32.1	(43,719)	200	97,169,481	0.032231236	0.032510966
15	5000	181,741	40.0	138,022	240	121,454,522	0.040286613	0.040638707
16	6000	227,385	42.0	365,407	282	145,693,207	0.048326615	0.048766448
17	7000	498,793	76.6	864,200	359	169,877,100	0.056348442	0.056894190
18	8000	500,457	67.7	1,364,657	426	193,980,657	0.064343621	0.065021931
19	9000	297,183	35.0	1,661,840	461	218,039,840	0.072324081	0.073149672
20	10000	1,321,759	138.0	2,983,599	599	242,023,599	0.080279524	0.081277414
21	11000	877,776	83.6	3,861,375	683	265,885,775	0.088194637	0.089405155
22	12000	681,170	59.0	4,542,545	742	289,679,345	0.096086993	0.097532897
23	13000	1,051,863	84.0	5,594,408	826	313,400,608	0.103955365	0.105660638
24	14000	922,457	67.9	6,516,865	894	337,049,865	0.111799852	0.113788379
25	15000	1,612,922	111.4	8,129,787	1,005	360,601,287	0.119611888	0.121916121
26	16000	1,291,430	83.0	9,421,217	1,088	384,062,817	0.127394106	0.130043862

27	17000	984,426	59.7	10,405,643	1,148	407,447,443	0.135150815	0.138171604
28	18000	1,864,030	106.4	12,269,673	1,254	430,751,673	0.142880856	0.146299345
29	19000	1,626,818	88.0	13,896,491	1,342	453,955,491	0.150577591	0.154427086
30	20000	1,559,182	80.1	15,455,673	1,422	477,073,673	0.158245920	0.162554828
31	21000	1,748,758	85.0	17,204,431	1,507	500,118,331	0.165889862	0.170682569
32	22000	2,520,512	117.3	19,724,943	1,625	523,054,143	0.173497699	0.178810311
33	23000	2,738,241	121.5	22,463,184	1,746	545,876,484	0.181067897	0.186938052
34	24000	2,092,412	88.9	24,555,596	1,835	568,592,396	0.188602793	0.195065793
35	25000	2,353,525	95.8	26,909,121	1,931	591,219,121	0.196108105	0.203193535
36	26000	2,767,255	108.4	29,676,376	2,039	613,740,376	0.203578433	0.211321276
37	27000	2,020,111	76.0	31,696,487	2,115	636,172,487	0.211019191	0.219449017
38	28000	2,283,982	83.0	33,980,469	2,198	658,520,469	0.218432044	0.227576759
39	29000	2,420,306	84.7	36,400,775	2,283	680,789,475	0.225818701	0.235704500
40	30000	3,189,087	108.0	39,589,862	2,391	702,958,862	0.233172314	0.243832242
41	35000	20,876,006	639.1	60,465,868	3,030	812,027,868	0.269350636	0.284470949
42	40000	27,924,197	743.5	88,390,065	3,774	917,578,065	0.304361766	0.325109656
43	45000	32,694,978	765.7	121,085,043	4,539	1,019,465,043	0.338157801	0.365748362
44	50000	39,625,681	834.6	160,710,724	5,374	1,117,180,724	0.370570212	0.406387069
45	60000	95,663,358	1,741.9	256,374,082	7,116	1,299,624,082	0.431086896	0.487664483
46	70000	109,225,253	1,678.6	365,599,335	8,794	1,465,222,335	0.486016039	0.568941897
47	80000	125,518,741	1,676.2	491,118,076	10,471	1,613,734,076	0.535277565	0.650219311
48	90000	143,147,971	1,684.9	634,266,047	12,155	1,745,568,047	0.579007055	0.731496725
49	100000	129,178,301	1,361.5	763,444,348	13,517	1,862,074,348	0.617652337	0.812774139
50	120000	257,076,813	2,345.0	1,020,521,161	15,862	2,057,477,161	0.682467689	0.975328967
51	140000	209,672,959	1,616.5	1,230,194,120	17,478	2,213,666,120	0.734275758	1.137883794
52	160000	204,558,296	1,366.0	1,434,752,416	18,844	2,340,160,416	0.776234070	1.300438622
53	180000	172,238,816	1,017.1	1,606,991,232	19,862	2,442,497,232	0.810179317	1.462993450
54	200000	171,186,116	900.0	1,778,177,348	20,762	2,526,517,348	0.838048892	1.625548278
55	1000000	1,236,583,928	3,741.7	3,014,761,276	24,503	3,014,761,276	1.000000000	

RCM/TREE/MH I-8

Proposed Rate Structure

Reference: Bill Comparisons, Appendices 10.5 and 10.6

f) Please indicate whether MH has considered proposing seasonally-differentiated rates for Residential and General Service non-demand rates

i. If not, explain why not.

ANSWER:

Manitoba Hydro has done some preliminary review of seasonally-differentiated rates for the Residential rate class. One method looked at increasing the size of the first block rate in the winter months and reducing the first block size in the summer months. This method would have the advantage of mitigating impacts on winter bills for those customers who have no choice but to use electricity to heat their homes.

In terms of customer impacts of a seasonally differentiated rate, the winter bill advantage would be offset, at least in part, by higher summer bills. Further, because the larger winter block shelters a larger portion of residential energy from the second block price, the second block price may have to be higher in order to capture the same revenue as a rate design which is not seasonally differentiated.

From a billing administration perspective, implementing a seasonally-differentiated rate is more complex than the current rate structure. However compared to other potential TOU rate structures it is relatively easy to implement and for customers to understand. All residential services would be affected with two rate changes a year. Billing issues could be problematic for customers in the two rate change months as customers may notice the billing difference and would be more apt to contact the Contact Centre and/or their district office with enquiries. The major complaint would be unfairness of estimated bills and proration of bills.

RCM/TREE/MH I-8

Proposed Rate Structure

Reference: Bill Comparisons, Appendices 10.5 and 10.6

- g) Please provide all available analyses of the costs and benefits of implementation of seasonal pricing.**

ANSWER:

Manitoba Hydro has not completed a detailed cost / benefit analysis of implementing seasonal pricing.

RCM/TREE/MH I-8

Proposed Rate Structure

Reference: Bill Comparisons, Appendices 10.5 and 10.6

- h) Please provide a table comparing the proposed Residential and General Service tail blocks with the Company's estimates of marginal cost.**

ANSWER:

Please see Manitoba Hydro's response to CAC/MSOS/MH I-66(c).

RCM/TREE/MH I-9

Proposed Rate Structure

Reference: Proof of Revenue, Appendices 10.1 and 10.2

- a) Please provide the workpapers and electronic copies of the spreadsheets (with formulas intact) used to derive the Proof of Revenue**

ANSWER:

For the reasons outlined in RCM/TREE/MH I-3(a), Manitoba Hydro declines to provide the requested materials in Excel format.

RCM/TREE/MH I-9

Proposed Rate Structure

Reference: Proof of Revenue, Appendices 10.1 and 10.2

- b) For each rate category and subcategory shown in the Proof of Revenue, please provide:
- i. The number of billing units assumed,
 - ii. The per unit charges under the current and proposed rates, and
 - iii. Total revenues from each unit charge, separately, under the current and proposed rates

ANSWER:

Please see Manitoba Hydro's response to MIPUG/MH I-20(a).

RCM/TREE/MH I-9

Proposed Rate Structure

Reference: Proof of Revenue, Appendices 10.1 and 10.2

c) Please provide the basis for the current and proposed DSM reduction.

ANSWER:

The DSM revenue reductions are determined based on the rates applied to the load reductions associated with each DSM program as provided by Power Smart Planning and Market Research. Please see response to MIPUG/MH I-20(c) for a detailed breakdown by customer class.

RCM/TREE/MH I-9

Proposed Rate Structure

Reference: Proof of Revenue, Appendices 10.1 and 10.2

d) Please provide the basis for the current and proposed “Misc. Rev & Adjs.”

ANSWER:

Miscellaneous Revenues and Adjustments are revenues associated with non-energy related fees collected by Manitoba Hydro such as late payment charges, special read fees and reconnect fees. Also included are accrual accounting adjustments to reflect a monthly distribution of seasonal revenues which are otherwise collected twice a year (April and October).

Forecast revenues for all components of “Misc. Rev and Adjs” are based on historical trends and proposed rate increases. Revenues derived from Late Payment Charges make up approximately 75% of the total “Misc. Rev & Adjs.”

RCM/TREE/MH I-10

Demand-Side Management

Reference: 2009 Power Smart Plan, Appendix 9.1; and 2007-2008 Power Smart Annual Review, Appendix 9.2

a) Please explain how MH screens DSM projects.

ANSWER:

Please refer to the 2009 Power Smart Plan provided in Appendix 9.1 of this Application. Section 4.3 “Economic Effective Ratios” of the Power Smart Plan on page 21 outlines how energy efficient opportunities are assessed.

RCM/TREE/MH I-10

Demand-Side Management

Reference: 2009 Power Smart Plan, Appendix 9.1; and 2007-2008 Power Smart Annual Review, Appendix 9.2

b) Please identify all potential DSM programs screened for the Power Smart Plan.

ANSWER:

All programs screened for the 2009 Power Smart Plan are included within the Power Smart Plan which is provided in Appendix 9.1 of this Application.

RCM/TREE/MH I-10

Demand-Side Management

Reference: 2009 Power Smart Plan, Appendix 9.1; and 2007-2008 Power Smart Annual Review, Appendix 9.2

- c) Please provide MH's evaluation of the cost-effectiveness of its current DSM programs.**

ANSWER:

Please refer to the 2007/08 Power Smart Annual Review which can be found in Appendix 9.2 of this Application. The cost-effectiveness results of Manitoba Hydro's current DSM programs can be found in the report on page 50 (Total Resource Cost), page 52 (Rate Impact Measure) and page 55 (Levelized Utility Cost.)

RCM/TREE/MH I-10

Demand-Side Management

Reference: 2009 Power Smart Plan, Appendix 9.1; and 2007-2008 Power Smart Annual Review, Appendix 9.2

- d) Please specify the avoided cost estimates MH is using to screen DSM projects.**
- i. Document the derivation of the avoided costs, including all workpapers and spreadsheets.**

ANSWER:

The marginal value used for the analysis in the 2009 Power Smart Plan was 8.26 cents per kW.h (at meter). The marginal cost contains the expected value of electricity exports which is commercially sensitive. Therefore, detailed information on the derivation of the avoided cost can not be provided.

RCM/TREE/MH I-10

Demand-Side Management

Reference: 2009 Power Smart Plan, Appendix 9.1; and 2007-2008 Power Smart Annual Review, Appendix 9.2

- e) Please provide the penetration rate estimated for each program and provide the basis of that estimate.

ANSWER:

Residential Programs:

New Home Program – Market penetration is expected to be 8% by the year 2012, the scheduled end date for the program. This estimate is based on historical and projected program participation rates.

Home Insulation Program – Market penetration is expected to be 56% by the year 2017, the scheduled end date for the program. This estimate is based on historical and projected program participation rates.

Water & Energy Saver Package – Market penetration is expected to be 25% by the end of the five-year proposed program. This estimate is based on predicted market acceptance of water saving technologies as well participation results from other utilities offering similar programs.

Compact Fluorescent Lighting Program – Market penetration is expected to be 31% by the scheduled program end date in 2012. This estimate is based on historical and projected customer participation rates.

Power Smart Appliance Program – The incentive program for Energy Star appliances ended on March 31 2009. Market penetration was estimated to be 62% by the end of the program, based on program participation rates and feedback received from participating retailers.

Lower Income Energy Efficiency Program (LIEEP) – Market penetration is expected to be approximately 7% by the end of March 2011. The total participation is estimated to be 5,650 by March 2011, and the potential market size is estimated to be approximately 76,000 lower income (LICO x 125%) dwellings based on the residential study of 2003.

Seasonal LED Program – The trade and save incentive program ended in December of 2008. Results indicate a Program market penetration of 20% however, informal shelf space surveys of retailers indicate that approximately 80% of the product available is now LED. Building on the premise of the Power Smart Program, a number of participating retailers have continued to offer LED sales promotions with at least one retailer offering incandescent light string turn-in events. This indicates that the market is continuing to move toward the more efficient technology.

Energy Efficient Light Fixtures Program – Market penetration is expected to be 10% by 2011. The penetration rate estimate is based on the availability of qualifying Energy Star fixtures as determined by a physical shelf space inventory of retailers across Manitoba and historical and projected customer participation.

HE Furnace & Boiler Program (ECM motors) – Market penetration for furnaces that incorporate ECM motors was estimated to be 35% as of the program end date of December 31, 2009.

Refrigerator Recycling – Market penetration is expected to be 20% by the end of the three year proposed program. This estimate is based on participation rates for similar programs offered by other utilities.

Commercial Programs:

Commercial Lighting Program – Market penetration is expected to be 60% by the year 2024. This estimate is based on historical and projected customer participation.

Commercial Custom Measures Program – This program is used to support any and all energy saving upgrades not addressed by the existing suite of programs. It serves as a catch-all for sometimes unique and unknown upgrades. As such, it is very difficult to define the overall market and market penetration.

Commercial Windows Program – Market penetration is expected to be 27% by the year 2024. This estimate is based on historical and projected customer participation.

Commercial HVAC Program (Chiller) – Market penetration is expected to be 53% by the scheduled program end date in 2017. This estimate is based on historical and projected customer participation.

Commercial Parking Lot Controller Program – Market penetration is expected to be 60% at the scheduled program end date on March 31, 2010. This estimate is based on historical and projected customer participation.

Commercial Rinse & Save Program – Market penetration is expected to be 58% at the scheduled program end date on March 31, 2010. This estimate is based on historical and projected customer participation.

Commercial Refrigeration Program – Market penetration is expected to be 51% by the year 2024. This estimate is based on historical and projected customer participation.

Commercial Insulation Program – Market penetration is expected to be 37% by the year 2024. This estimate is based on historical and projected customer participation.

Commercial Earth Power Program – Market penetration for electric base case commercial customers is estimated at 14% by the scheduled program end date in 2016/17. This estimate is based on historical and projected customer participation.

Commercial New Construction Program – Market penetration is expected to be 21% by the scheduled program end date in 2018. This estimate is based on market size, and also on the predicted availability of skilled design professionals to accommodate demand, as well as market acceptance for the emerging practices required in high performance building design.

Commercial Building Optimization Program – Market penetration is expected to be 31% by the year 2024. This estimate is based on historical and projected customer participation.

Agricultural Heat Pad Program – Market penetration is expected to be 37% at the scheduled program end date on March 31, 2010. This estimate is based on historical and projected customer participation.

Power Smart Energy Manager Program – Market penetration is expected to be 46% by the year 2017. This estimate is based on discussions with school divisions that had expressed interest in participating after Manitoba Hydro's pilot program with Pembina Trails School Division.

Commercial Kitchen Appliance Program – Market penetration is expected to be 46% by the scheduled program end date in 2017. This estimate is based on historical and projected customer participation.

Commercial Clothes Washers Program – Market penetration is expected to be 44% by the scheduled program end date in 2018. This estimate is based on historical and projected customer participation.

Network Energy Management Program – Market penetration is expected to be 41% by the scheduled program end date in 2013. This estimate is based on historical and projected customer participation.

Power Smart Shops – Market penetration is expected to be 57% by the scheduled program end date in 2018. This estimate is based on historical and projected customer participation,

CO2 Sensors – Market penetration is expected to be 71% by the scheduled program end date in 2018. As a newly launched program, this estimate is based on predicted availability and market acceptance of this technology.

Industrial Programs:

Performance Optimization Program – Market penetration is expected to be 18% by the program end date of 2018 and was based on the economic opportunities related to mechanical processes in industrial and large commercial customers.

Emergency Preparedness Program – The Emergency Preparedness Program plan is targeting a penetration rate of 70% for its program period. This is based on a target consisting of the top 250 electric customers in greater Winnipeg.

RCM/TREE/MH I-10

Demand-Side Management

Reference: 2009 Power Smart Plan, Appendix 9.1; and 2007-2008 Power Smart Annual Review, Appendix 9.2

f) Please estimate the utility costs for each of MH's DSM programs.

ANSWER:

Please refer to the 2009 Power Smart Plan which can be found in Appendix 9.1 of this Application. The Annual Program Electric Budgets (Utility Costs) for all DSM programs can be found in Appendix A.5 (page 142) of the Power Smart Plan.

RCM/TREE/MH I-10

Demand-Side Management

Reference: 2009 Power Smart Plan, Appendix 9.1; and 2007-2008 Power Smart Annual Review, Appendix 9.2

g) Please provide the basis of MH's forecast of energy and peak savings from each of its DSM programs.

ANSWER:

Manitoba Hydro determines the energy savings that will be achieved through its Power Smart programs using manufacturer's data, engineering analysis, prototype testing, pilot projects, pre and post measurements or ongoing program monitoring and verification. The total energy savings are determined by estimating the number of customers or projects that will participate in a project and multiplying the estimated energy savings per participant or project by the total number of participants or projects. The results are further adjusted for persistence, interactive effects, free rider and free driver factors.

RCM/TREE/MH I-10

Demand-Side Management

Reference: 2009 Power Smart Plan, Appendix 9.1; and 2007-2008 Power Smart Annual Review, Appendix 9.2

h) Please provide MH's total budget for DSM projects.

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-10(f).

RCM/TREE/MH I-10

Demand-Side Management

Reference: 2009 Power Smart Plan, Appendix 9.1; and 2007-2008 Power Smart Annual Review, Appendix 9.2

- i) Please explain how MH determined how much to spend on Energy Efficiency and what amount of savings to strive for.**

ANSWER:

Manitoba Hydro undertakes a bottom up approach in determining the energy savings targets and the associated budget required to pursue these targets. Economic energy efficient opportunities are identified and subsequently, programs are designed to pursue those opportunities. The individual programs and their associated budgets are combined into an overall Power Smart Plan.

RCM/TREE/MH I-10

Demand-Side Management

Reference: 2009 Power Smart Plan, Appendix 9.1; and 2007-2008 Power Smart Annual Review, Appendix 9.2

- j) Please identify all Energy Efficiency programs in which MH has been forced to shut off applications or wait-list customers, due to budget constraints.**

ANSWER:

There are no programs that fall into this category.

RCM/TREE/MH I-10

Demand-Side Management

Reference: 2009 Power Smart Plan, Appendix 9.1; and 2007-2008 Power Smart Annual Review, Appendix 9.2

- k) Please identify all Energy Efficiency programs in which MH could reach additional customers or fund additional cost-effective measures, if the program budget were increased.**

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-10(j).

RCM/TREE/MH I-10

Demand-Side Management

Reference: 2009 Power Smart Plan, Appendix 9.1; and 2007-2008 Power Smart Annual Review, Appendix 9.2

- l) Please indicate whether the Energy Efficiency investment per customer is limited in any program.**
 - i. If so, describe those limits and explain why MH is not willing to make all cost-effective investments in Energy Efficiency.**

ANSWER:

Manitoba Hydro does not place a limit on the investment per customer in its Power Smart programs based on budget constraints.

RCM/TREE/MH I-11

Reference: ICF Risk Report, page 4

- a) Please provide a copy of the Manitoba Hydro 2008/09 Power Resource Plan, cited in footnote 2.**

ANSWER:

Please see Manitoba Hydro's response to MIPUG/MH I-12(a).

RCM/TREE/MH I-11

Reference: ICF Risk Report, page 4

- b) Please provide a copy of “MHEB Group TSR System Impact Study Out-Year Analysis”, cited in footnote 3.**

ANSWER:

MISO studies for this project can be found here:

<http://oasis.midwestiso.org/documents/miso/Transmission%20Service%20Planning%20-%20SIS%20Reports.htm> (search for A000)

and here:

<https://oasis.midwestiso.org/documents/miso/Transmission%20Service%20Planning%20-%20FaS%20Reports.htm> (search for F088)

This figure excludes station & equipment costs, reactive compensation, environmental, routing etc.

RCM/TREE/MH I-12

Reference: ICF Risk Report, page 6

- a) Please provide non-redacted copies of the proposed contracts and binding term sheets with Northern States Power, Wisconsin Public Service, and Minnesota Power.**

ANSWER:

Manitoba Hydro respectfully declines to file the requested term sheets. It should be recognized that the term sheets form the basis for further negotiations which are currently underway and contain commercially sensitive information.

RCM/TREE/MH I-13

Reference: ICF Risk Report, page 18

- a) Please define the term “high priority domestic load.” Please explain which domestic load customers are considered to be “high priority”.**

ANSWER:

All domestic load customers are high priority except for those customers that choose to participate in the Surplus Energy Program. In addition, Manitoba Hydro's Border Accommodation Sales and any export loads covered by a Separated Load Agreement are served on an equivalent basis as domestic load.

RCM/TREE/MH I-13

Reference: ICF Risk Report, page 18

- b) Please provide the percentage of total domestic load that is considered to be “high priority”.**

ANSWER:

99.9% of domestic load is firm load.

RCM/TREE/MH I-14

Reference: ICF Risk Report, Exhibit 2-3, page 32

a) What types of capacity resources are included in the “Other Supply” column?

ANSWER:

The capacity resources referred to in the “Other Supply” column are forecasted Demand Side Management savings that are incremental to those included in the load forecast. The DSM savings that are included in the load forecast are related to the DSM services and activity that are expected to occur in the future without additional Manitoba Hydro investment.

RCM/TREE/MH I-14

Reference: ICF Risk Report, Exhibit 2-3, page 32

- b) Does the calculation of the winter reserve margin account for the impact of net exports? If so, please describe how net exports are reflected in this exhibit and provide the amount of net exports assumed for each year.**

ANSWER:

The table in the ICF report was derived by ICF and does not include the impact of exports.

The following table has been compiled by Manitoba Hydro and it provides an alternative derivation of surplus winter capacity reserve margin when firm export is included.

2008/09 Power Resource Plan
Surplus System Firm Capacity (Winter Peak) Demand and Resources (MW)
At Generation

	A Hydro Electric Supply	B Thermal Supply	C Demand Side Mgmt	D Imports	E Total Resources	F Winter Peak	G Export Sales	H Total Demand	I Surplus	J Surplus Reserve Margin*
2009/10	4900	535	46	616	6097	4515	693	5208	889	23%
2010/11	4911	535	68	616	6130	4636	638	5274	856	22%
2011/12	4934	535	90	616	6175	4745	638	5383	792	20%
2012/13	5175	535	109	616	6435	4838	605	5443	992	24%
2013/14	5175	535	125	550	6385	4883	605	5488	897	21%
2014/15	5175	535	139	550	6399	4927	605	5532	867	20%
2015/16	5175	535	153	385	6248	4972	413	5385	983	19%
2016/17	5218	535	167	385	6305	5009	413	5422	883	20%
2017/18	5307	535	181	385	6408	5062	413	5475	933	21%
2018/19	5400	535	189	385	6509	5122	578	5700	809	18%
2020/21	5760	430	195	385	6770	5182	743	5925	845	18%
2020/21	5945	430	202	385	6962	5242	963	6205	757	16%
2021/22	5945	430	209	385	6969	5302	963	6265	704	15%
2022/23	6463	430	216	385	7494	5362	1375	6737	757	16%
2023/24	6911	430	219	385	7945	5421	1375	6798	1149	24%
2024/25	7170	430	222	385	8207	5481	1375	6856	1351	28%

*Surplus Reserve Margin is calculated as $I/(F-C-D)$

RCM/TREE/MH I-14

Reference: ICF Risk Report, Exhibit 2-3, page 32

- c) **Has Manitoba Hydro adopted a minimum winter reserve margin for capacity-expansion purposes? If so, what is that minimum reserve margin?**

ANSWER:

Manitoba Hydro's minimum winter capacity planning reserve margin is 12% and is consistent with the Manitoba Hydro calculation provided in RCM/TREE/MH I-14(b).

RCM/TREE/MH I-15

Reference: General

- a) Please file Phillippe Dunsky's review of Manitoba Hydro's Power Smart Program.

ANSWER:

Please see Manitoba Hydro's response to CAC/MSOS/MH I-73(a).

RCM/TREE/MH I-15 (REVISED)

Reference: General

- b) Please file Manitoba Hydro's response to Mr. Dunsky's analysis and to each of his recommendations, including an explanation for each point of divergence.**

ANSWER:

Manitoba Hydro has developed an action plan which addresses the recommendations put forth by Mr. Dunsky. This action plan is provided as Appendix 71.

RCM/TREE/MH I-15 (REVISED)

Reference: General

- b) Please file Manitoba Hydro's response to Mr. Dunsky's analysis and to each of his recommendations, including an explanation for each point of divergence.**

ANSWER:

Manitoba Hydro has developed an action plan which addresses the recommendations put forth by Mr. Dunsky. This action plan is provided as Appendix 71.

RCM/TREE/MH I-16

Reference: ICF Risk Report, Exhibit 2-4, page 33

- a) Please provide a non-redacted copy of the “Manitoba Hydro Integrated Financial Forecast”, November, 2008.**

ANSWER:

Please see Appendix 21 - Manitoba Hydro Integrated Financial Forecast (IFF08-1), November 2008.

RCM/TREE/MH I-17

Reference: ICF Risk Report, page 33

- a) With regard to the statement that “demand growth would ultimately lead to the need for more capacity,” what would be the first year of need for new capacity in the absence of the three proposed contracts with Northern States Power, Wisconsin Public Service, and Minnesota Power?**

ANSWER:

Under the assumptions in the 2009/10 power resource plan, new resources to meet Manitoba load would be required by 2022/23. The above consideration is from the dependable energy perspective which is currently the critical factor for new resource requirements as opposed to winter peak capacity.

RCM/TREE/MH I-18

Reference: ICF Risk Report, page 41, Exhibit 2-14, page 41

- a) Please provide the current forecast by Manitoba Hydro of annual revenues from domestic load and from exports for years beyond 2008/2009.**

ANSWER:

Please see Appendix 5.2, IFF09-1, page 34 for forecasted Domestic and Extra-provincial Revenues from electric operations, respectively.

RCM/TREE/MH I-19

Reference: ICF Risk Report, page 44

With regard to the statement: “Under contract, Manitoba Hydro is only obligated to purchase energy.”

- a) What contract is being referred to in this statement? Please provide a copy of the referenced contract.**

ANSWER:

On page 44, the “contract” that the ICF Risk Report is Manitoba Hydro’s Market Participation Agreement where MH as a MISO market participant has agreed to the rules associated with transactions in the MISO market. When Manitoba Hydro purchases from the MISO market, it is an energy-only transaction. MH capacity purchases are via bilateral contracts with various counterparties.

RCM/TREE/MH I-19

Reference: ICF Risk Report, page 44

With regard to the statement: “Under contract, Manitoba Hydro is only obligated to purchase energy.”

b) Does this statement mean that Manitoba Hydro does not need to purchase capacity for the purposes of serving domestic load?

ANSWER:

As Manitoba Hydro’s load and generation resources are outside the MISO market, MH does not need to meet MISO’s planning capacity requirement. Instead, Manitoba Hydro has its own capacity planning criteria which requires MH to maintain 12% reserves. Therefore, Manitoba Hydro always has sufficient capacity to meet its obligations but may choose to purchase energy from the MISO market for economic or energy supply reasons.

RCM/TREE/MH I-19

Reference: ICF Risk Report, page 44

With regard to the statement: “Under contract, Manitoba Hydro is only obligated to purchase energy.”

- c) Does this statement mean that Manitoba Hydro does not need to purchase capacity for the purposes of replacing firm export obligations that cannot be met with domestic supply due to drought conditions?**

ANSWER:

During droughts Manitoba Hydro does not become capacity deficient. It may however, choose to purchase energy from the MISO market to serve its load obligations including firm exports for economic or energy security reasons.

RCM/TREE/MH I-20

Reference: ICF Risk Report, page 49

- a) Please provide non-redacted copies of the eight existing long-term export trade agreements.**

ANSWER:

Manitoba Hydro respectfully declines to file this information. The requested contracts contain commercially sensitive information.

RCM/TREE/MH I-21

Reference: ICF Risk Report, page 52

Please provide non-redacted copies of:

- a) All documents provided to the Manitoba Hydro Electric Board (MHEB) or the Export Power Risk Management Committee (EPRMC) by management regarding the three proposed contracts with Northern States Power, Wisconsin Public Service, and Minnesota Power.**

ANSWER:

Information contained in the requested documents relates to on-going negotiations between Manitoba Hydro and the referenced parties. The proposed contracts referenced have not been finalized, and the referenced materials contain commercially sensitive information, the disclosure of which could be harmful to Manitoba Hydro's business interests. Manitoba Hydro therefore respectfully declines to provide the requested information.

RCM/TREE/MH I-21

Reference: ICF Risk Report, page 52

Please provide non-redacted copies of:

- b) Minutes of MHEB or EPRMC meetings regarding consideration by these two supervisory bodies of the three proposed contracts.**

ANSWER:

Please see the response to part (a) of this Information Request.

RCM/TREE/MH I-21

Reference: ICF Risk Report, page 52

Please provide non-redacted copies of:

- c) All documents provided to management by either the MHEB or EPRMC regarding consideration by these two supervisory bodies of the three proposed contracts.**

ANSWER:

Please see the response to part (a) of this Information Request..

RCM/TREE/MH I-22

Reference: ICF Risk Report, page 52

- a) Please provide a copy of the Master or Interchange Agreement for bilateral transactions.**

ANSWER:

The Master Agreements that Manitoba Hydro executes for bilateral transactions include: the Mid-Continent Energy Marketers Association Tariff (MEMA), the Edison Electric Institute (EEI) Master Power Purchase & Sale Agreement, and the WSPP Agreement. These contracts are standard industry purchase and sale agreements and have similar comprehensive provisions. The type of master agreement between Manitoba Hydro and its counterparties is generally determined by mutual agreement.

Please refer to Appendix 29 for a copy of the MEMA Tariff.

Please refer to Appendix 30 for a generic version of the standard MH Interchange Agreement.

RCM/TREE/MH I-23

Reference: ICF Risk Report, page 54

With regard to the planned additions cited in footnote 37:

- a) Please provide all economic or financial analyses by Manitoba Hydro or its consultants of the lifetime cost-effectiveness of these investments.**

ANSWER:

New resources are not proposed based on lifetime cost-effectiveness, but rather are proposed as least cost alternatives to meet growing domestic load requirements.

As recorded in the CEC Report on Wuskwatim Generation and Transmission Projects, the Wuskwatim project was proposed as the next generation resource to meet domestic load growth, and was forecast to be required by 2019. The opportunity to advance the in-service date from 2019 to 2009 (now expected in 2011/12) became apparent. The surplus capacity and energy available from this plant, prior to being required for domestic load, could be sold on the export market. The resultant return would more than pay for the advancement of the plant. Overall the early investment would protect Manitoba Hydro's position in the export market, reduce the cost of the Wuskwatim Generating Station that is to be borne by ratepayers and thus support continued low rates within the Province. Please see the CEC report for the analysis of the Wuskwatim project.

Manitoba Hydro has not made a commitment to develop Keeyask or Conawapa but is working to protect potential in-service-dates. Current plans that include Keeyask as the next plant are based on the successful conclusion of the sales with Wisconsin Public Service and Minnesota Power. Any commitment to either Keeyask or Conawapa will depend on the prevailing circumstances at the time. Keeyask and/or Conawapa will be subject to a full examination when the "needs for and alternatives to" process is initiated.

RCM/TREE/MH I-23

Reference: ICF Risk Report, page 54

With regard to the planned additions cited in footnote 37:

- b) Please provide all economic or financial analyses by Manitoba Hydro or its consultants of the effect of the risk factors identified in Chapter Four on expected lifetime cost-effectiveness of these investments.**

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-4(b). With respect to Wuskwatim, the CEC proceedings comprehensively covered relevant risk factors.

RCM/TREE/MH I-24

Reference: ICF Risk Report, page 55

- a) Please provide a copy of the Manitoba Hydro Corporate Risk Management Report, cited in footnote 40.**

ANSWER:

The Corporate Risk Management Report dated October 2008 was filed with the Application under Appendix 12.1 (without Appendixes A and C). The full Corporate Risk Management Report (with sensitive information redacted) was distributed to all Parties on March 8, 2010.

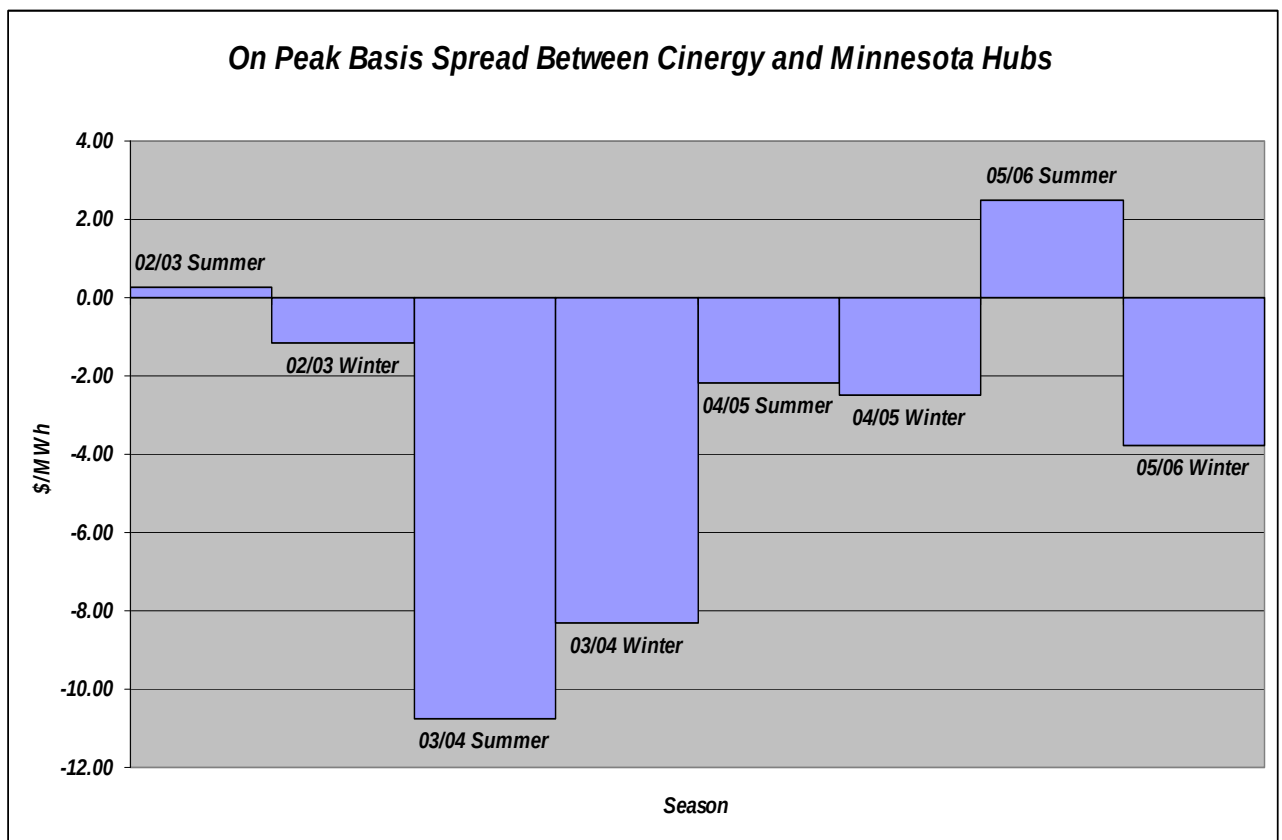
Reference: ICF Risk Report, page 59

- a) Please provide the basis for the assertion that Manitoba Hydro experienced shortage pricing in its spot purchases during the 2003-04 drought.**

ANSWER:

See attached chart which shows the price spread between Cinergy and Minnesota Hubs by season from May 2002 to April 2006. A negative spread indicates that power prices in Minnesota were higher than at Cinergy.

Note that the large negative spreads indicate represent when Manitoba Hydro was purchasing large volumes from the market during the drought of 2003/04.



RCM/TREE/MH I-26

Reference: ICF Risk Report, page 71

- a) Please provide copies of the MISO transmission studies that estimate \$2 billion of additional transmission construction in the U.S. to support the proposed contracts.**

ANSWER:

MISO studies for this project can be found here:

<http://oasis.midwestiso.org/documents/miso/Transmission%20Service%20Planning%20-%20SIS%20Reports.htm> (search for A000)

and here:

<https://oasis.midwestiso.org/documents/miso/Transmission%20Service%20Planning%20-%20FaS%20Reports.htm> (search for F088)

This estimate excludes terminal station & equipment costs, reactive compensation, environmental, permitting, and regulation costs.

Reference: ICF Risk Report, page 71

- b) Please describe the “cost allocation” that is planned as part of the proposed contracts. Will Manitoba Hydro be responsible for any part of the \$2 billion construction cost or any ongoing O&M costs for the new transmission required to support the proposed contracts?**

ANSWER:

Cost allocation for the US portion of the interconnection has not yet been determined.

For the facilities in Canada, Manitoba Hydro will be responsible for all capital and O&M costs. In addition, Manitoba Hydro may be responsible for a portion of the costs in the US associated with the provision of additional import capability into Canada.

RCM/TREE/MH I-26

Reference: ICF Risk Report, page 71

- c) Please provide any studies by Manitoba Hydro or its consultants of the need for and costs associated with transmission upgrades on Manitoba Hydro's system to support the proposed contracts.**

ANSWER:

Manitoba Hydro has not completed any separate studies associated with transmission upgrades on Manitoba Hydro's system associated with the proposed contracts. A Facility Study on Manitoba upgrades is currently being conducted by Manitoba Hydro.

RCM/TREE/MH I-27

Reference: ICF Risk Report, Exhibit 6-1, page 79

a) Please provide a copy of the document “Summary of LT contract.doc”.

ANSWER:

Please refer to Attachment 1 for a copy of the “Summary of LT Contract.doc” document.

MANITOBA HYDRO

SUMMARY OF LONG TERM CONTRACTS

Minnesota Power (MP) 50 MW System Participation Power Sale

An extension of the 50 MW sale to MP was entered into June 22, 2006. The commitment is for a six-year period with transactions beginning May 1, 2009 through to April 30, 2015. The price for capacity is set in the contract for the 2009/10 year at the greater of US [REDACTED]/MW-month or [REDACTED]/MW-month escalated by [REDACTED] from the 2004 base year. The energy price is set in the contract for 2009/10 at the greater of [REDACTED]/MWh or [REDACTED]/MWh escalated by [REDACTED] from 2004 base year. MP is obliged to purchase 208 GWh throughout each contract year of the contract, which equates to a capacity factor of 47.6%.

Northern States Power (NSP) 500 MW Extension System Participation Sale

A 500 MW sale to NSP was entered into on August 1, 2002. The commitment is for a ten-year period from May 1, 2005 to April 30, 2015. The price for capacity and energy is based on 2000/01 values of [REDACTED]/MW-month and [REDACTED]/MWh and escalated each year by [REDACTED]. Northern States Power is obliged to purchase 2086 GWh in each twelve month period during the duration of the contract. This equates to a capacity factor of 47.6%.

Northern States Power (NSP) 150 MW Diversity Exchange Agreement

A 150 MW diversity exchange arrangement with NSP was signed on March 5, 1991. The commitment is for a twenty-year period beginning May 1, 1995 and ending April 30, 2015. The obligation involves Manitoba Hydro making available 150 MW of capacity to NSP during the summer months (May through to October) in return for NSP making available 150 MW of capacity to Manitoba Hydro during the winter months (November through to April). The supplying party has the right to limit energy deliveries to a 20 percent capacity factor.

Effective July 15, 2002, Amendment No.1 was authorized by both parties to modify the Summer Season energy price for the period May 2003 through October 2016. As per the amendment, NSP has the right to purchase energy at the nominated rate when exercised by March 1st and the rate for all other energy in excess of the nominated amount will be [REDACTED]. The nominated energy rate will be [REDACTED]/MWh for the 2003 Summer Season and escalated annually thereafter to the year of delivery by the [REDACTED] prior to the contract year.

Effective March 17, 2008, Amendment No. 2 was authorized by both parties to provide Manitoba Hydro the right to submit an energy bid to purchase winter season energy from the MISO Day Ahead market and to modify the pricing for winter season energy from market price as defined by NSP to [REDACTED].

Northern States Power (NSP) 200 MW Diversity Exchange Agreement

A 200 MW diversity exchange arrangement with NSP was signed on November 16, 1987. The sale commitment is for twenty years starting November 1, 1996 and ending October 31, 2016. The obligation involves Manitoba Hydro making available 200 MW of capacity to NSP during the summer months (May through October) in return for NSP making available 200 MW of capacity to Manitoba Hydro during the winter months (November through April). The supplying party has the right to limit energy deliveries in each season to a 20 percent capacity factor. [REDACTED] capacity.

Effective July 15, 2002, Amendment No.1 was authorized by both parties to modify the Summer Season energy price for the period May 2003 through October 2016. As per the amendment, NSP has the right to purchase energy at the nominated rate when exercised by March 1st and the rate for all other energy in excess of the nominated amount will be [REDACTED]. The nominated energy rate is [REDACTED]/MWh for the 2003 Summer Season and escalated annually thereafter to the year of delivery by [REDACTED] prior to the contract year.

Effective March 17, 2008, Amendment No. 2 was authorized by both parties to provide Manitoba Hydro the right to submit an energy bid to purchase winter season energy from the MISO Day Ahead market and to modify the pricing for winter season energy from market price as defined by NSP to [REDACTED] per MWh.

Northern States Power - 213 MW Participation Sale

Sale extends from November 7, 2007 to October 31, 2007. Capacity Quantity is 213 MW. Up to a 20% capacity factor over any consecutive 31 day period unless otherwise mutually agreed to by the Parties. NSP shall have no obligation to schedule energy hereunder.

MH is responsible for providing firm transmission service to the Point of Delivery for this Agreement (under the Manitoba Hydro Open Access Transmission Tariff node in the MISO OASIS). NSP is responsible for providing firm network transmission service in the United States to deliver to NSP's load under the MISO TEMT.

NSP has the right to purchase an amount of energy associated with the System Participation Power subject to the limits set out in Energy Quantity. Additional energy quantities of System Participation Power may be purchased by NSP, subject to mutual agreement of the Parties. NSP shall retain all FTR revenues and be responsible for all FTR obligations associated with this Transmission Path as a hedge against the costs of congestion and losses incurred through the delivery of energy from the Point of Delivery throughout the Contract Term.

Otter Tail Power (OTP) 50 MW System Participation Sale

A system participation sale to OTP was signed on July 7, 1999. The commitment is for a 10-year period starting May 1, 2000 and ending April 30, 2010. Manitoba Hydro has the right to limit energy deliveries to a 47.6% capacity factor and Manitoba Hydro may request energy from OTP so that the net energy transfer in any month may be zero. The price for capacity will be

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_____/MW-month in 2000/01 and escalate each year to become _____/MW-month in 2009/10. The energy rate will be based on a 1999 rate of _____/MWh escalated to the year of delivery by the rate of change in the _____, for the calendar year prior to the year in which delivery takes place.

Supplementary Agreement #1 reduces the fixed monthly capacity charges to _____/MW-month in 2000/01 escalated to _____/MW-month in 2009/10 and adds a fixed energy rate component of _____/MWh in 2000/01 escalated to _____ in 2009/10 to the previous energy rate throughout the contract term.

Great River Energy 150 MW Diversity Exchange Agreement

A 150 MW diversity exchange arrangement with UPA (subsequently merged with Cooperative Power Association to become Great River Energy "GRE") was signed on March 5, 1991. The commitment is for a twenty-year period starting May 1, 1995 and ending April 30, 2015. The obligation involves Manitoba Hydro making available 150 MW of capacity to GRE during the summer months (May through to October) in return for GRE making available 150 MW of capacity to Manitoba Hydro during the winter months (November through to April). Each supplying party has the right to limit the amount of energy delivered to a 20 percent capacity factor. _____. The energy rates for future years is based on _____.

Effective May 1, 2008, Amendment # 19 was authorized by both parties for the May 1, 2008 to April 30, 2009 term. During the summer season (April 1st to October 31st) Manitoba Hydro will offer energy as and when available to GRE on a day ahead basis. GRE has the right to accept any offers of energy from Manitoba Hydro. Any energy offered and accepted on a day ahead basis _____. During the winter season (November 1st to March 31st) Manitoba Hydro may specify a schedule of hourly energy purchases from GRE on a day ahead basis from the GRE Dickenson or the MHEB MISO node as specified by GRE. The intent of the amending agreement is to increase actual energy deliveries under the diversity exchange agreement and to enter a longer amending agreement should the terms prove to be acceptable to both parties.

Minnesota Municipal Power Agency (MMPA) 60/30 MW System Participation Power Sale

A system participation sale to MMPA was signed on January 5, 2000. The commitment is for a 12-year period starting May 1, 2000 and ending April 30, 2012. The amount of capacity is 60 MW for the first nine years and 30 MW for the remaining three years. The price for capacity and energy in the first contract year is _____/MW-month and _____/MWh. These rates for capacity and energy will be escalated annually to the year of delivery by the _____ prior to the contract year. MMPA is obliged to purchase 252 GWh for each contract year during the first 9 years of the contract and 125 GWh in each of

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the last 3 contract years.

Southern Minnesota Municipal Power Agency (SMMPA) 30 MW System Participation Sale

A 30 MW System Participation Power Sale was signed with SMMPA on April 18, 2007. The contract is for five years starting April 1, 2008 continuing through March 31, 2013. Manitoba Hydro's obligation is to deliver 30 MW of capacity and 480 MWh's per day over 16 continuous hours between H.E. 7:00 through H.E. 22:00 CPT for Monday to Friday. The price for capacity will be the greater of [REDACTED]/MW-month or [REDACTED]/MW-month for year 2006 escalated to the year of delivery by the [REDACTED]. The price for energy will be the greater of [REDACTED] / MWh or [REDACTED] for the year 2006 escalated to the year of delivery by the [REDACTED].

Wisconsin Public Service - 100 MW System Participation Agreement

This contract was entered into as a call/put option for the term June 1, 2007 to May 31, 2009. WPS has a call option for up to 100 MW of capacity and MH has a put option for up to 100 MWh per hour between HE 7:00 to HE 22:00 Monday through Friday (including NERC holidays.). Energy price [REDACTED]. The strike price for capacity is subject to mutual agreement of the parties. The premium for the capacity option [REDACTED]. Supplemental energy price shall be [REDACTED]. Environmental attributes arising from MH sale to WPS under this agreement to be owned by WPS.

Lake St. Joseph - Manitoba-Ontario Root River Diversion Agreement

This agreement was signed on September 24, 1958 with Ontario Power Generation Inc. but can be terminated by either party with four years notice. Manitoba Hydro returns to OPG one-half of all incremental energy generated in the Province of Manitoba on the Winnipeg River due to the diversion of Lake St. Joseph water. OPG pays to Manitoba Hydro [REDACTED]/MWh for the associated energy.

Island Falls Power and Energy Transfer Agreement

A wheeling agreement was signed on January 15, 1985 with SaskPower. The commitment is for an indefinite period but with a termination option with five years notice by either party. The obligation involves Manitoba Hydro providing transmission service to SaskPower. Island Falls is a hydraulic generating plant located near the Manitoba/Saskatchewan border which SaskPower assumed ownership of from Hudson Bay Mining and Smelting. It is more economic to continue transmitting the power to Manitoba Hydro from Island Falls and Manitoba Hydro supplying an equal amount of power to SaskPower over southern ties than to construct a new transmission line in Saskatchewan. The wheeling charge established is [REDACTED]/MWh.

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NEW LONG TERM CONTRACTS UNDER NEGOTIATION TERM SHEET COMMITMENTS

Manitoba Hydro has signed term sheets with Northern States Power, Minnesota Power and Wisconsin Public Service Corporation that are in various stages of negotiations for definitive power sale agreements.

Northern States Power (NSP) 375 & 125MW System Participation Power Sale

A 375MW and 125MW System Participation Power Sale term sheet with NSP was signed on October 31, 2006 for the ten-year period starting May 1, 2015 and ending April 30, 2025. The sale requires Manitoba Hydro to provide 375MW of capacity to NSP for the contract years May 1, 2015 to April 30, 2025 and 125MW of capacity to NSP for the contract years May 1, 2021 to April 30, 2025 conditional upon the addition of new major hydraulic generation. Manitoba Hydro's corresponding energy obligation is to deliver 6,000 MWh's over 16 continuous hours between HE 7:00 through HE 22:00 CPT each day Monday to Friday for May 1, 2015 to April 30, 2025 and 2,000 MWh's over 16 continuous hours between HE 7:00 through HE 22:00 CPT each day Monday to Friday for May 1, 2021 to April 30, 2025.

The capacity and energy prices specified in the Term Sheet are [REDACTED] per MW-month and [REDACTED] per MWh (2006 \$'s) escalating [REDACTED]. Manitoba Hydro has the right to reduce energy deliveries during the winter season (November through April) in increments of 50MW's by paying NSP [REDACTED].

Northern States Power (NSP) 350MW System Participation Power Diversity Sale

A 350MW System Participation Power Diversity Sale term sheet with NSP was signed on October 31, 2006 for the ten-year period starting May 1, 2015 and ending April 30, 2025. The sale requires the existing 150MW and 200MW Diversity Sale agreements with NSP to be amended so that they terminate on April 30, 2015. The Diversity Sale involves Manitoba Hydro making available 350MW of capacity plus 35MW of planning reserves to NSP during the summer months (May through October) in return for NSP making available 350MW of capacity plus 52.5MW of planning reserves to Manitoba Hydro during the winter months (November through April). Each supplying party has the right to limit the amount of energy delivered to a 20 percent capacity factor. [REDACTED]. Energy purchases by either party under the Diversity Sale will be based on [REDACTED]. Manitoba Hydro has the right to increase energy purchases during the winter season (November through April) up to a 100% capacity factor at [REDACTED].

Minnesota Power (MP) 250MW System Participation Power Sale

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A 250MW System Participation Sale term sheet was signed with MP on December 12, 2007. The sale requires Manitoba Hydro to (i) offer 3.3 million MWh's of surplus energy to MP during the May 1, 2008 to April 30, 2022 period [REDACTED], (ii) provide 250MW of system participation capacity to MP during the period May 1, 2022 to April 30, 2035, (iii) purchase on-peak and off-peak capacity and energy from MP [REDACTED].

Manitoba Hydro's energy obligation during the May 1, 2022 to April 30, 2025 period is to deliver 4,000 MWh's over 16 continuous hours between HE 7:00 through HE 22:00 CPT for each day Monday to Sunday. Manitoba Hydro has the right to curtail delivery of weekend energy (Saturday, Sunday and NERC holidays) during periods of adverse water conditions.

The capacity price is [REDACTED] per MW-month (2007 \$'s) escalating annually [REDACTED] from May 1, 2007 to April 30, 2022. The capacity price [REDACTED]. The price for on-peak energy (Monday to Friday) is [REDACTED] from May 1, 2007. The price for weekend energy (Saturday, Sunday and NERC holidays) is [REDACTED].

The environmental benefits and attributes associated with the energy sold to MP will be assigned or transferred from Manitoba Hydro to MP and consideration for such benefits and attributes is [REDACTED].

The term sheet requires MP to construct new transmission facilities to provide 250MW of incremental import/export capability.

Wisconsin Public Service Corporation (WPS) 500MW System Participation Power Sale

A 500MW System Participation Sale term sheet was signed with Wisconsin Public Service Corporation on March 31, 2008. The sale covers a fourteen year period (June 1, 2018 to May 31, 2032) and requires Manitoba Hydro to provide WPS with the following capacity quantities:

150MW June 1, 2018 to May 31, 2019
300MW June 1, 2019 to May 31, 2020
500MW June 1, 2020 to May 31, 2030
250MW June 1, 2030 to May 31, 2032

Manitoba Hydro's energy obligation during the June 1, 2018 to May 31, 2032 period is equal to the applicable capacity quantity multiplied by 16 hours scheduled equally over 16 consecutive hours from HE 7:00 to HE 22:00 CPT for each day Monday to Sunday. Manitoba Hydro has the right to curtail delivery of weekend energy (Saturday, Sunday and NERC holidays) during periods of adverse water conditions.

The capacity price is [REDACTED] per MW-month (2007 \$'s) escalating annually based [REDACTED]

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[REDACTED]. The price for on-peak energy (Monday to Friday) is [REDACTED] (2007 \$'s) escalating annually based [REDACTED]. In the event that transmission losses from the delivery point exceed 6% of the on-peak energy price, then the on-peak energy price [REDACTED]

[REDACTED] The price for weekend energy (Saturday, Sunday and NERC holidays)

The environmental benefits and attributes associated with the energy sold to WPS will be assigned or transferred from Manitoba Hydro to WPS and consideration for such benefits and attributes [REDACTED].

The term sheet requires WPS to construct new transmission facilities to provide not less than 650MW of incremental export capability and up to 750MW incremental import capability.

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Reference: ICF Risk Report, Exhibit 6-1, page 79

- b) Please provide all workpapers, including all electronic spreadsheets, relied on to derive the values shown for “Negotiated On-Peak Firm Price”.**

ANSWER:

These workpapers contain commercially sensitive information. Manitoba Hydro respectfully declines to disclose same.

RCM/TREE/MH I-28

Reference: ICF Risk Report, page 92

- a) With regard to the statement that new facilities will be brought on-line earlier than required for domestic load, when would Manitoba Hydro bring Conawapa and Keeyask on-line in the absence of the three proposed export contracts? Please provide all workpapers, memoranda, reports, or other documentation relied on to derive these on-line dates.**

ANSWER:

As stated in CAC/MSOS/MH I-40(a) under the assumptions in the 2009/10 power resource plan and in the absence of the three proposed export contracts, new resources to meet Manitoba load would be required by 2022/23, regardless of the specific supply option. The supply/demand table on the next page provides the supporting information that is used to determine the 2022/23 requirement for new resources.

Meeting Manitoba's System Firm Energy Demand and Dependable Resources (GW.h)

Fiscal Year	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
Power Resources																		
Manitoba Hydro Plants																		
Existing	21110	21090	21080	21060	21040	21030	20690	20660	20640	20630	20610	20600	20590	20580	20580	20570	20560	20560
Wuskwatim			550	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250
Conawapa (net addition)																		
Keeyask (net addition)																		
Bipole III HVDC LINE									243	243	243	243	243	243	243	243	243	243
Manitoba Thermal Plants																		
Brandon Unit 5 (Drought Operation)	811	811	811	811	811	811	811	811	811	811								
Selkirk	953	953	953	953	953	953	953	953	953	953	953	953	953	953	953	953	953	953
Brandon Units 6-7 SCCT	2354	2354	2354	2354	2354	2354	2354	2354	2354	2354	2354	2354	2354	2354	2354	2354	2354	2354
New Thermal																		
CCGT																		
SCGT																		
Wind Power: 400 MW	320	818	1254	1254	1254	1254	1254	1254	1254	1254	1254	1254	1254	1254	1254	1254	1254	1254
Demand Side Management	244	440	606	719	819	842	798	825	890	949	993	1037	1082	1115	1151	1158	1133	1100
Major Rerunning (incremental to existing)																		
Kelsey Rerunning								60	150	150	150	150	150	150	150	150	150	150
Pointe du Bois Redeveloped																		
Imports																		
Total	2796	2796	2796	2796	2705	2705	2784	2293	1769	1575	1575	1575	1575	1575	1575	1575	1575	1575
TOTAL POWER RESOURCES	28588	29262	30404	31197	31186	31199	30895	30461	30313	30168	29382	29415	29450	29473	29510	29507	29472	29439
Demand																		
2009 Base Load Forecast	24239	24759	25323	25763	26177	26783	27137	27495	27808	28088	28452	28818	29185	29555	29927	30300	30681	31063
Non-Committed Construction Power			10	20	30	30	35	30	10									
Exports																		
Total	3626	3404	3385	3259	3156	3156	547	339	145	145	145	145	145	145	145	145	145	145
Total Demand	27865	28163	28718	29042	29363	29969	27719	27864	27963	28233	28597	28963	29330	29700	30072	30445	30826	31208
SURPLUS (w/ B#5)	723	1099	1686	2155	1823	1231	3175	2596	2350	1935	785	452	120	-227	-562	-938	-1354	-1769
EXPORTABLE SURPLUS		288	875	1344	1012	420	2364	1785	1539	1124	785	452	120	-227	-562	-938	-1354	-1769

Conawapa

Reference: ICF Risk Report, page 98

- a) For each year from 2015 through 2035, please provide the annual amount of firm on-peak export sales in total for the three proposed contracts, expressed (i) in TWh; (ii) as a percent of forecasted dependable energy during the on-peak hours; and (iii) as a percent of forecasted dependable energy less domestic energy requirements during the on-peak hours.

ANSWER:

The requested information for only the on-peak hours is not available since Manitoba Hydro does not break down dependable energy into on-peak and off-peak periods. The Manitoba Hydro system has the capability to generate varying proportions of its dependable energy during on-peak periods depending on requirements. Instead of information for only on-peak periods, information is being provided on an annual basis which includes the off-peak period.

The table on the next page is a summary of the total annual energy requirement associated with the proposed long-term export contracts (NSP, WPS and MP). This contractual energy is compared to the following:

- (a) Total firm energy demand (Manitoba domestic demand and dependable firm export sales) which is representative of forecasted dependable energy as requested in (ii).
- (b) The total of all surplus dependable energy including firm export contracts which is representative of forecasted dependable energy less domestic energy requirements as requested in (iii).

Fiscal Year	Firm Export Sales (NSP, WPS and MP Contracts)		
	Energy (GWh/yr)	Percent of Total Dependable Energy	Percent of Surplus Dependable Energy
2015/16	1415	4%	52%
2016/17	1207	4%	50%
2017/18	1207	4%	49%
2018/19	1781	5%	44%
2019/20	2469	6%	43%
2020/21	3349	8%	56%
2021/22	3503	9%	75%
2022/23	4847	11%	59%
2023/24	4941	10%	48%
2024/25	4941	10%	50%
2025/26	3444	7%	40%
2026/27	3444	8%	43%
2027/28	3444	8%	45%
2028/29	3444	8%	48%
2029/30	3444	8%	51%
2030/31	2488	6%	43%
2031/32	2296	5%	44%
2032/33	1340	3%	32%
2033/34	1148	3%	32%
2034/35	1148	3%	36%
2035/36	94	0%	3%

RCM/TREE/MH I-30

Reference: ICF Risk Report, page 103

a) Please provide a copy of the Management Control Plan.

ANSWER:

Please refer to Attachment 1 for a copy of the Management Control Plan.

Manitoba Hydro Management Control Plan For Power Related Transactions

The scope of this Management Control Plan (MCP) covers all power related transactions in both the United States and Canada, including energy and financial products, for both system and merchant use, as well as associated transactions for related products including transmission, fuel, ancillary services and environmental attributes such as emission credits or allowances, and renewable energy credits.

Manitoba Hydro’s MCP consists of a portfolio of risk management mechanisms used to protect the Corporation from unnecessary risk or harm as a result of improper business practices. These mechanisms include application of both Corporate wide and divisional policies and procedures, control mechanisms through signing authority requirements and segregation of duties, sophisticated computerized systems, use of budgets and reporting and review.

This MCP for the Power Related Transactions incorporates controls in the following areas:

- Long Term Generation Adequacy (Resource Availability)
- Short Term Resource Management
- System Transactions
 - Energy Products
 - Financial Products
- Merchant Transactions (Related or Pure Merchant)
 - Energy Products
 - Financial Products
- Customer Credit

Oversight Approval

The MCP has incorporated the existing policies and processes of the Corporation into its framework. Where these policies and processes are invoked during the import and export of power, the oversight required by the Manitoba Hydro-Electric Board and the Export Power Risk Management Committee (EPRMC) would also be invoked. As described herein exceptions to the MCP must be reported to the EPRMC.

I) Manitoba Hydro-Electric Board (MHEB)

MHEB oversight specific to the import and export of power would be related to the following areas:

- Approval of sales requiring new generation, in concert with approving new generation,
- Approval of long term sales exceeding 5 years and 100 MW,
- Existing oversight activities through current processes and through Executive Management reporting to the MHEB.

II) Export Power Risk Management Committee (EPRMC)

The scope of the EPRMC is to provide oversight of the management of the energy supply and financial risks resulting from Manitoba Hydro's participation in the export power market. The primary responsibilities of the EPRMC are:

- Review and approve criteria for managing risks associated with energy planning and operations;
- Review and approve criteria for managing risks associated with short term marketing transactions;
- Review and approve general drought management strategies;
- Review and approve export market policies;
- Receive and review audits and quarterly reports of market activities and transactions;
- Review and approve exceptions to the MCP.

Long Term Generation Adequacy

Management Control Objective:

- To ensure Manitoba Hydro does not enter into any export commitments that would require the construction of new generation without appropriate approvals.

MCP:

Corporate authorizing mechanisms and reports that are used to ensure long term generation adequacy have as their foundation the Corporate Policy Statement on Generation Planning (No. G195), attached as Appendix A.

The Corporate Policy Statement outlines Manitoba Hydro's planning criteria with respect to capacity and energy. Under this policy, Manitoba Hydro is required to carry planning reserves as protection against plant breakdown or increase in peak demand above forecast. Manitoba Hydro's requirement for a reserve margin continues to be more stringent than the reserve margin for other predominately hydro entities that exist within the mid-west regions of North America.

The energy resource planning criteria as outlined in the Corporate Policy Statement requires that Manitoba Hydro have sufficient dependable energy available to meet the Manitoba load and export commitments in the event that the lowest recorded coincident river flows are repeated (i.e. the worst drought on the record of 90 years is repeated).

Practices and procedures related to the export of dependable energy, the import of power or the purchase of fuel are based on the availability of surplus energy in a system that

carries the appropriate reserves. Long term export contracts are negotiated and entered into with compliance to the Approval Authority Table as approved by the EPRMC. If Manitoba Hydro has determined that sufficient capacity and surplus dependable energy are available from the existing system, long term sales may be entered into accordance with Manitoba Hydro's Export Marketing Strategy and the appropriate signing authority.

Should Manitoba Hydro determine that new generation is required for a long term sale, a long term contract would not be entered into without following internal assessment processes and obtaining the appropriate approvals including MHEB approval. The MCP relies on Manitoba Hydro's existing policies and processes for determining and approving plans related to long term generation adequacy. These processes include the use of sophisticated simulation programs and extensive reviews prior to the preparation of Manitoba Hydro's Power Resource Plan. The Power Resource Plan does not itself create authorization to construct new facilities, but provides input into the Integrated Financial Forecast, which is presented to the MHEB for approval. Manitoba Hydro is also required to obtain MHEB and Order in Council approval prior to entering into any export commitments that would require the construction of new generation. In this way, the MCP complements Manitoba Hydro's existing policies and processes for the approval of new generation.

Short Term Resource Management

Management Control Objective:

- To ensure the optimum use of Manitoba Hydro's generation resources in accordance with existing regulations, agreements and operating constraints while ensuring the maximization of export revenue subject to meeting the Manitoba load and export requirements and system reliability criteria.

MCP:

The MCP relies on Manitoba Hydro's already existing policies and processes for Short Term Resource Management.

Manitoba Hydro's Hydraulic Operations Department utilizes an award winning decision computer system called HERMES (Hydro-Electric Reservoir Management Evaluation System) as its main risk analysis and management tool. Internal reviews of the information and internal and external reporting requirements as described below are part of the resource management process.

The main output of HERMES can best be described as a short term generation operating plan. The operating plan is updated on a weekly basis and decisions are jointly reviewed at the weekly Resource Management Planning Meeting. In developing the generation operating plan, HERMES is utilized to analyze Manitoba Hydro's ability to meet its domestic load and export obligations under a wide range of conditions. For example, current water flows and pessimistic precipitation forecasts are analyzed in combination with high Manitoba load, current export obligations and a range of equipment outages to

determine how the commitments can best be met while maintaining appropriate energy reserve margins.

HERMES is also utilized to identify how much energy in reservoir storage and accredited capacity is surplus to domestic and currently committed export needs. The Hydraulic Operations Department which is functionally separate from the Power Trading and Export Power Market departments, identifies these energy and capacity surpluses, and provides a basis for the power trading function to determine surplus quantities to take to the short term forward market.

HERMES also has the capability to identify when power purchases or thermal generation are economic resources to meet Manitoba Hydro's obligations, and to estimate the quantities of fuel required.

The forecasting capabilities of HERMES are utilized to generate the annual Forecast of Generation Cost and Interchange Revenues. This forecast is reviewed and approved by the Executive Committee and incorporated into the Integrated Financial Forecast (IFF). The current state of Manitoba Hydro's resources is summarized on a monthly basis in the Energy Resources Review and Outlook report, which is distributed to all levels of management including the EPRMC.

System Transactions

System Transactions involve system resources either those owned by Manitoba Hydro or those procured to meet its load obligations. When economic, System Transactions also include power purchase transactions to serve Manitoba Hydro's export obligations, intended to be supplied by Manitoba Hydro's system resources. System Transactions include both energy and financial products.

System Energy Products provide a physical supply while System Financial Products must be associated with an underlying physical position. System Financial Products are used to financially settle price for power related transactions or to manage risk on physical supply.

Management Control Objective:

- To ensure Manitoba Hydro is not put at unnecessary risk or harm as a result of individuals engaging in unauthorized business transactions;
- To ensure Manitoba Hydro is not put at unnecessary risk or harm in the event of non-delivery of the specified products;
- To ensure the approved financial instruments are utilized in a manner that minimize Manitoba Hydro's business risks in the power markets, reduce transaction costs, and/or manage congestion costs;
- To ensure transactions are billed and recorded in a timely and accurate manner.

MCP:

There is a portfolio of operational systems and controls in Manitoba Hydro to protect the Corporation from unauthorized business transactions. Transactions are authorized and controlled through policies, practices and procedures, through approval authority tables, segregation of duties and thorough review and reporting. The approval authorities for all Transactions are outlined in the Approval Authority Table as approved by the EPRMC.

i) System Energy & Related Products

System Energy Products include Physical Bilateral Contracts, Day Ahead Market and Real Time Market power transactions and Related Products. The underlying intent for these transactions is the physical delivery of power to or from Manitoba Hydro's system. Related Products include physical transmission service as required for the expected transaction, natural gas supply, storage and transportation, coal or fuel oil, emission credits or allowances, and renewable energy credits.

Forward sales and purchase contracts, two weeks and longer in duration, are formalized in writing in accordance with the applicable Master Agreement. The power trader or marketer negotiates these forward sales using industry pricing indicators as a guide. As a minimum Manitoba Hydro will require recovery of 110% of its incremental costs in making any short term forward sale commitment. The power trader or marketer uses this information along with industry pricing indicators to negotiate forward contracts.

Written contracts are reviewed, approved and signed in accordance with the approval authority requirements. The forward sales contracts are immediately entered into the HERMES computer system, so that the supply / demand balance for the forward planning period reflects the current state.

All System Energy Transactions are entered into and managed through the transaction capture system (TCS). The Supply and Demand Planner function in the TCS shows currently available generation capacity, Manitoba's forecasted load, reliability margins and net available resources on an hourly basis independently supplied from the System Control Center (SCC) for the next seven day period. The traders, in consultation with the SCC, monitor and determine, on an hourly basis, if there is any surplus generation available above that necessary to serve the forecasted Manitoba load and existing export commitments. Any imbalances (surpluses or shortfalls) are resolved via Bilateral transactions or through the use of the Day Ahead and Real Time market mechanisms. All transactions are entered into the TCS system on a real time basis to ensure the current status is accurately reflected on the TCS system for all traders.

As per industry practice, physical bilateral transactions up to two weeks in duration are negotiated over the telephone due to the large volume of transactions and short lead time available, as per industry practice. The submission of Day Ahead and Real Time Market bids and offers into standard markets such as MISO, is done via a secured network computer interface. Bid and offer prices are generated based on market price forecasts and are subject to minimum sell and maximum buy prices determined using short term water conditions and forecasted energy supply requirements.

Every physical transaction requires a valid NERC (North American Electric Reliability Corporation) tag before the energy is permitted to flow to the counterparty. Each power trader must be individually licensed to prepare tags or submit energy bids and offers into a standard market and is identified on the computer system by a unique digital certificate.

Individual transactions for all System Energy Products are entered into and managed through the transaction capture system (TCS). The power traders enter each transaction's negotiated price, quantity and NERC tag reference I.D. for each physical transaction into the TCS. Transactions into standard markets are entered into the TCS via a computer interface between the TCS and market operator's computer systems. All transactions are independently verified on a daily or weekly basis by Manitoba Hydro billing staff with the customers' billing staff, or via the settlement system for standard markets. The month end accounting process provides a final opportunity to review and independently verify the transactions.

ii) System Financial Products

Permitted System Financial Products include Put and Call Options, Swaps, and Bilateral Contracts for Differences. System Financial Products also include financial tools provided by the market to manage congestion and price uncertainty. These include Financial Transmission Rights, Auction Revenue Rights, Virtual Bids and Offers and Bilateral Contracts registered as Financial Schedules.

System Financial Products may only be used under the following terms or conditions:

- a) Put and call options, swaps and bilateral contracts for differences for power or natural gas for the purpose of managing the uncertainty in available generation or load forecast, or fuel supplies for Manitoba Hydro's power supply assets. In addition, these products may be used to enter into favorable forward sales or to minimize exposure to price volatility on power and gas purchases.
- b) Financial Transmission Rights (FTRs) purchased, converted from Auction Revenue Rights (ARRs) or resold for the purpose of managing expected congestion costs on expected sales/purchases of power from or to Manitoba Hydro's system with the exception that Manitoba Hydro may nominate FTRs provided there is a positive expected value.
- c) Virtual bids and offers used for the purpose of managing the uncertainty in available generation or load forecast, to minimize generation start-up charges for Manitoba Hydro's system or to manage price risk on an underlying physical position;
- d) Volumes associated with Financial Products cannot exceed the projected underlying physical position

The underlying framework for FTRs or ARRs, Virtual bids and offers and Financial Schedules is the Market Participant Agreement with the market operator that defines the market rules for these products and binds both parties to those rules. The underlying framework for put and call options, swaps and bilateral contracts for differences is a Master Agreement, which defines the standard terms and conditions for these products. Options, swaps and contracts for difference transactions would be done in writing under the Master Agreement. The submittal of bids and offers for Financial Transmission

Rights, Auction Revenue Rights and virtual bids and offers into standard markets such as the MISO Day 2 Market are done via computer interface on a secured network.

Oversight for System Financial Products is provided by the Power Sales and Operations Market Committee (PSOMC). The PSOMC consists of the Power Trading Department Manager, Export Power Marketing Manager and the Division Manager of Power Sales and Operations.

The PSOMC would approve strategies used to purchase, nominate or sell FTRs or ARRs, make virtual supply or demand bids, and for the use of call and put options, contracts for differences and swaps. The PSOMC would also approve transactions for monthly, seasonal and yearly Financial Transmission Rights or Auction Revenue Rights, based on analysis from staff in Export Power Marketing and Power Trading departments. A complete list of approval authorities for System Financial Products is outlined in the Approval Authority Table.

Merchant Transactions

Merchant Transactions include transactions of Energy and Financial Products that do not involve power directly from or to Manitoba Hydro's system and fit into one of following categories:

1. Related Merchant Transactions involve the resale of power purchased from third parties, and which either flows over transmission owned or reserved by/for Manitoba Hydro, or was purchased for Manitoba Hydro system requirements and has subsequently been deemed surplus.
2. Pure Merchant Transactions involve the purchase of power by Manitoba Hydro from one or more parties for resale to one or more parties.

Management Control Objective:

- To ensure Manitoba Hydro is not put at unnecessary risk or harm as a result of individuals engaging in unauthorized business transactions.
- To ensure any Merchant Transactions Manitoba Hydro enters into have a strong expectation of profit.
- To ensure transactions are billed and recorded in a timely and accurate manner.

MCP:

The portfolio of controls in Manitoba Hydro developed to protect the Corporation from unauthorized business System Transactions would apply to all Merchant Transactions.

The Energy and Financial Products used for System and Merchant Transactions are the same. The difference between System and Merchant Transactions is that System Transactions involve power either sourced from Manitoba Hydro resources or procured to meet domestic or existing system export obligations and Merchant Transactions do

not. The approval authority for all Merchant Transactions is outlined in the Approval Authority Table.

The initial intent for Merchant Transactions is to have smaller scale merchant activity that would allow Manitoba Hydro's power trading staff to attain knowledge of and experience with evolving energy markets which is transferable to the management and optimization of Manitoba Hydro's core export sales activity. The MCP for Merchant Transactions limits the scale of merchant activity to minimize risk exposure for Manitoba Hydro.

Transaction limits for Related Merchant Transactions are:

- A maximum net power position of 1000 GWh.
- Fixed price to fixed price transactions may be entered into only if there is a positive profit margin.
- All other transactions may be entered into only if there is a positive expected value and with a term no more than three days in duration.

Transaction limits for Pure Merchant Transactions are:

- A Stop Loss Limit of US\$500,000. In other words, all Pure Merchant Transactions would stop if the net losses for the year reached \$500,000 US. A report would be immediately sent to the EPRMC.
- At any point in time, the Value at Risk (VaR) in the portfolio must be less than the Stop Loss Limit. This VaR would be calculated on a daily basis.
- Fixed price to fixed price transactions may be entered into only if there is a positive profit margin.
- All other transactions may be entered into only if there is a positive expected value and with a term no more than three days in duration.

All Merchant Transactions shall have a maximum duration of six months.

General Transaction Controls

The underlying framework for bilateral transactions is the Master or Interchange Agreement, which defines the standard terms and conditions for power transactions entered into with each customer. Transactions are only to be made with customers who have been deemed creditworthy and for which there is a Master Agreement in place. All transactions are subject to Manitoba Hydro's Contract Documentation and Review Procedures which establishes a review process to minimize contract documentation risk. For transactions into a standard electricity market such as MISO or IESO, there is a similar Market Participant Agreement with the market operator that defines the market products and the rules binding both parties.

Secured computer networks and digital certificates are used to submit transactions into standard markets. Telephone lines of staff responsible for System and Merchant Transactions are recorded to ensure proper power trading conduct and to aid in dispute resolution as required.

Transactions may also be conducted through Broker or Clearing Firms, which facilitate the completion of transactions between counterparties. Manitoba Hydro has entered into Broker and Clearing Firm Agreements which outline the rules for these transactions.

All completed transactions are independently verified on a daily or weekly basis by Manitoba Hydro billing staff with the customers' billing staff, or via the settlement system for standard markets. The month end billing process provides a final opportunity to review and independently verify the transactions

Separate power trader, billing, accounting, credit, treasury and administrative authorizations are used in the TCS to segregate access of specific functions. User access and roles are periodically reviewed by the PSOMC. Payment and receipt for all transactions are independently handled through the Treasury and Accounts Payable Departments.

Power and fuel purchases are controlled through Manitoba Hydro's existing processes and procedures for purchases of goods and services, with delegated signing authorities duly identified.

Energy (System or Merchant) export transactions must identify the delivery point at the international border and are considered a sale within Canada to ensure there is no US tax exposure and to comply with US law.

Reporting of power related sales, purchases and expenses is done on actual activity as well as in comparison to forecasted amounts. Reports are made available to all levels of management through preliminary reporting and standard Management Reports with additional reporting to the EPRMC. Reporting requirements to external agencies such as Statistics Canada, National Energy Board and Department of Finance are also met. See Appendix B for more detail on management reporting.

As physical protection for the operation, a secured off-site backup power trading office with redundant computers and computer system is maintained in the event that the main power trading office (located at Head office) is damaged or otherwise rendered unusable. In addition, fire proof cabinets are used to protect original documents.

Customer Credit

Management Control Objective:

- To protect against losses due to customer payment default.

MCP:

To protect against losses due to customer payment default, Manitoba Hydro has in place Creditworthiness Requirements designed for all wholesale customers. The

Creditworthiness requirements are approved by the EPRMC and developed and administered by staff that are functionally separate from the power marketers.

Credit for power transactions up to specified exposure limits is only granted to customers who meet Manitoba Hydro's Creditworthiness Requirements for export power sales. Exceptions to the Creditworthiness Requirements must be reported to the EPRMC.

As previously noted, a Master or Market Participant Agreement is entered into with each customer. These governing agreements define standard terms and conditions for transactions. Credit must be established under the Creditworthiness Requirements and a Master or Market Participant Agreement is required prior to conducting business with an entity.

Management receives the monthly Credit Exposure Review report on Manitoba Hydro's credit position with its wholesale export customers and provides exception reporting to the EPRMC as required.

Any bad debt write offs (there have been none to date) would be noted in the Management Report.

Appendix A

Corporate Policy Statement on Generation Planning (No. G195)

Capacity Criteria

Manitoba Hydro will plan to carry a minimum reserve against breakdown of plant and increase in demand above forecast of 12% of the Manitoba forecast peak demand each year plus the reserve required by any export contract in effect at the time. (E.M.C. 373.03)

Energy Resource Planning

The corporation will plan to have adequate energy resources to supply the firm (dependable) energy demand in the event that the lowest recorded coincident river flow conditions are repeated. Planning studies, to meet the firm energy demand, may include up to a maximum of 10% of the energy demand in Manitoba to be supplied from the energy reserves on interconnected utilities, provided an energy purchase contract is or will be in effect during the time being studied. (E.M.C. 177.05)

Appendix B

Partial Listing of Corporate Reporting on Power Related Transactions

Integrated Financial Forecast

The annual Integrated Financial Forecast is reviewed and approved by the MHEB and includes a snapshot of all forecast capital expenditures and interchange revenues, and expenses for the next 11 years. While the Capital component identifies future generation requirements, approval of the Integrated Financial Forecast by the MHEB is not considered approval to construct new facilities according to the schedule shown. Decisions to build new plant are made by the MHEB on a case by case basis, usually in response to a specific management recommendation. Moreover, further authorization is required from the provincial government by way of an order-in-council before a final commitment is made and if the agreement requires the construction of a new, international or interprovincial transmission line, then further approval is required from the National Energy Board.

Power Resource Plan

The annual Power Resource Plan, which details planned system additions to meet future loads is approved by Executive Committee and reported to the MHEB. It identifies a base case to meet previously contracted exports and forecast domestic loads as well as opportunities to advance plant to meet new export contracts. The Power Resource Plan does not in itself create authorization to construct new facilities, but provides input into the Integrated Financial Forecast.

Forecast of Generation Costs and Interchange Revenues

These are annual reports that are reviewed and approved by Executive Committee for incorporation in the Integrated Financial Forecast. They identify all revenues, power purchases and expenses expected from interchange activities for the next 21 years, for all contracts where such contracts are in place. They also identify anticipated revenue from energy and capacity that has not yet been sold.

Energy Resources Review and Outlook

This is a monthly report summarizing water conditions, recent operating and market experience and provides an outlook for the immediate future. Copies are provided to Executive members. This report is prepared in Power Supply and is given wide distribution.

Preliminary and Final Variance Analysis

This monthly report is sent to management including the Executive, usually within 10 days of month end and compares actual export revenue and variable generation costs verses the IFF estimate for the past month. A finalized Revenue and Cost Variance for each month is also prepared and distributed.

Management Report

This is the monthly report which includes summary information on all Manitoba Hydro operating and capital spending activities. This report is prepared by Management Accounting and is widely distributed to Executive and Management personnel. Included in the Management Report are the following individual reports specifically related to Power Transactions:

- Power Sales, Purchase & Expense Summary
- Comparative Analysis of Fuel
- Generation Statistics

Power Sales, Purchases & Expenses Summary

This monthly report includes system and merchant transactions. System transactions are aggregated as bilateral or market and Merchant transactions are aggregated as either related merchant or pure merchant. Both system and merchant transactions are further segregated into physical deliveries and financial categories. These amounts provide a summary of volume and value for the current month and year to date. Distribution would be to relevant senior management including the Executive

Power Transactions Exception Report

This report would note what violations, if any, on the parameters establish in this document for the transactions

Credit Exposure Review

This is a monthly report summarizing credit exposure by customer and by bond rating. Customers who have been placed on creditwatch by a bond rating agency are also highlighted.

RCM/TREE/MH I-31

Reference: ICF Risk Report, Exhibit 9-1, page 110

- a) Please provide a copy of the Manitoba Hydro-Electric Board Annual Report, dated March 31, 2008.**

ANSWER:

Please see Appendix 42.

RCM/TREE/MH I-32

Reference: ICF Risk Report, page 111

- a) Please provide a copy of the 2002-2004 Drought Risk Management Review cited in footnote 64.**

ANSWER:

The requested report “2002-2004 Drought Risk Management Review” was previously filed for the 2008/09 General Rate Application, as “Appendix 43 - Report on the 2002-2004 Drought”. These materials were also referenced in Manitoba Hydro’s letter of November 6, 2009 and circulated by email February 26, 2010. A hard copy was forwarded to all parties on March 4, 2010.

RCM/TREE/MH I-33

Reference: ICF Risk Report, Exhibit 9-2, page 112

a) Please provide a copy of the Response to PUB Order 117/06.

ANSWER:

See attached link.

[http://www.hydro.mb.ca/regulatory_affairs/electric/gra_08_09/Appendix%2012.5-Directive%204\(i\)%20from%20117-06-Drought%20Cost%20Documentation%20for%20PUB.pdf](http://www.hydro.mb.ca/regulatory_affairs/electric/gra_08_09/Appendix%2012.5-Directive%204(i)%20from%20117-06-Drought%20Cost%20Documentation%20for%20PUB.pdf)

RCM/TREE/MH I-33

Reference: ICF Risk Report, Exhibit 9-2, page 112

- b) Please provide all workpapers, including electronic spreadsheets, relied on to derive the annual data shown in Exhibit 9-2.**

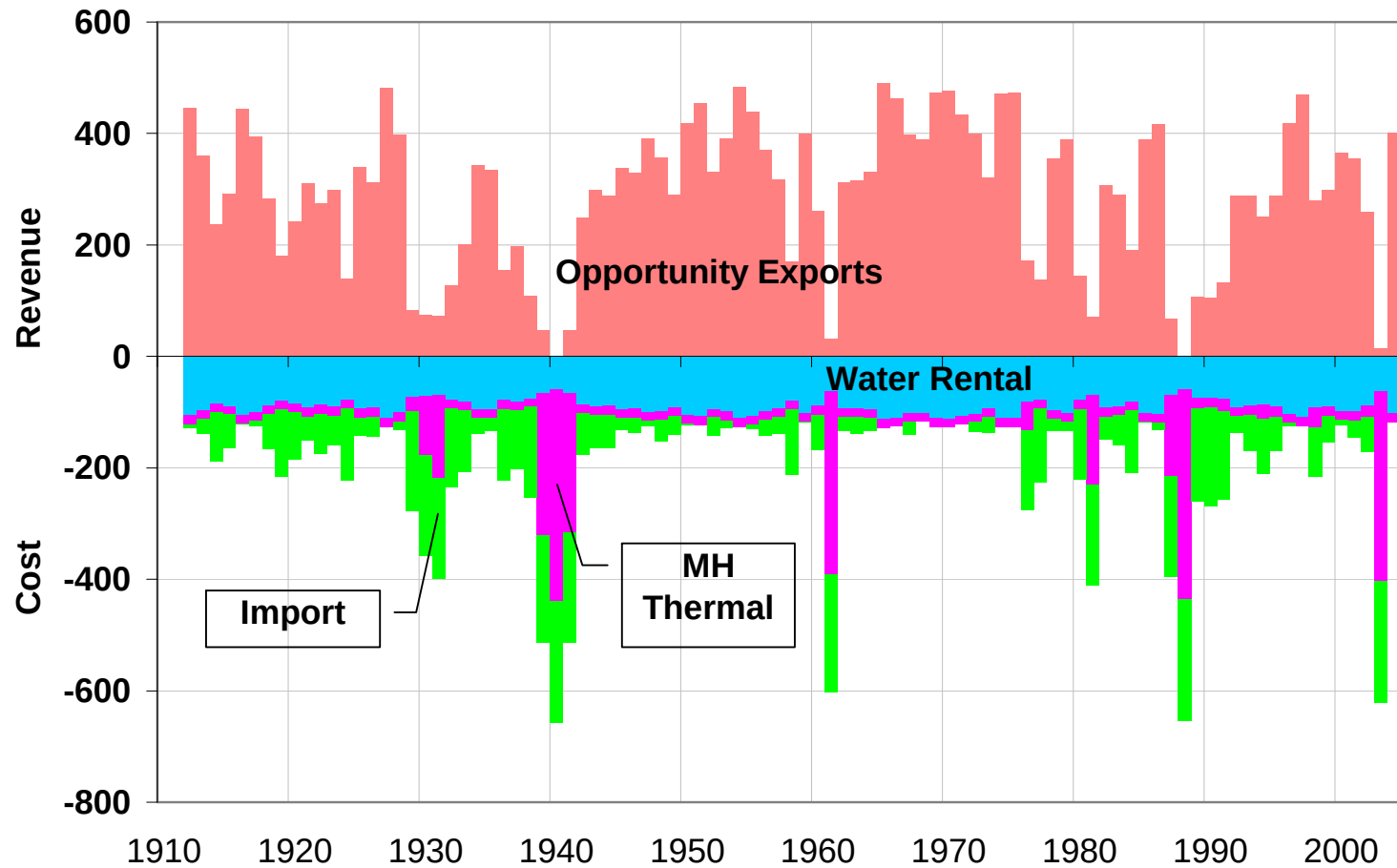
ANSWER:

The annual net revenue data that is shown in Exhibit 9-2 is based on 2006/07 assumptions consistent with the 2006/07 power resource plan. These net revenues are derived from the output of a complex computer model (SPLASH) which simulates the monthly operation of the entire Manitoba Hydro system of generating facilities and reservoirs to produce costs of system operation under a series of 94 possible water flow conditions. Please refer to the response to RCM/TREE/MH I-33(a) for a further description of how these net revenues are derived.

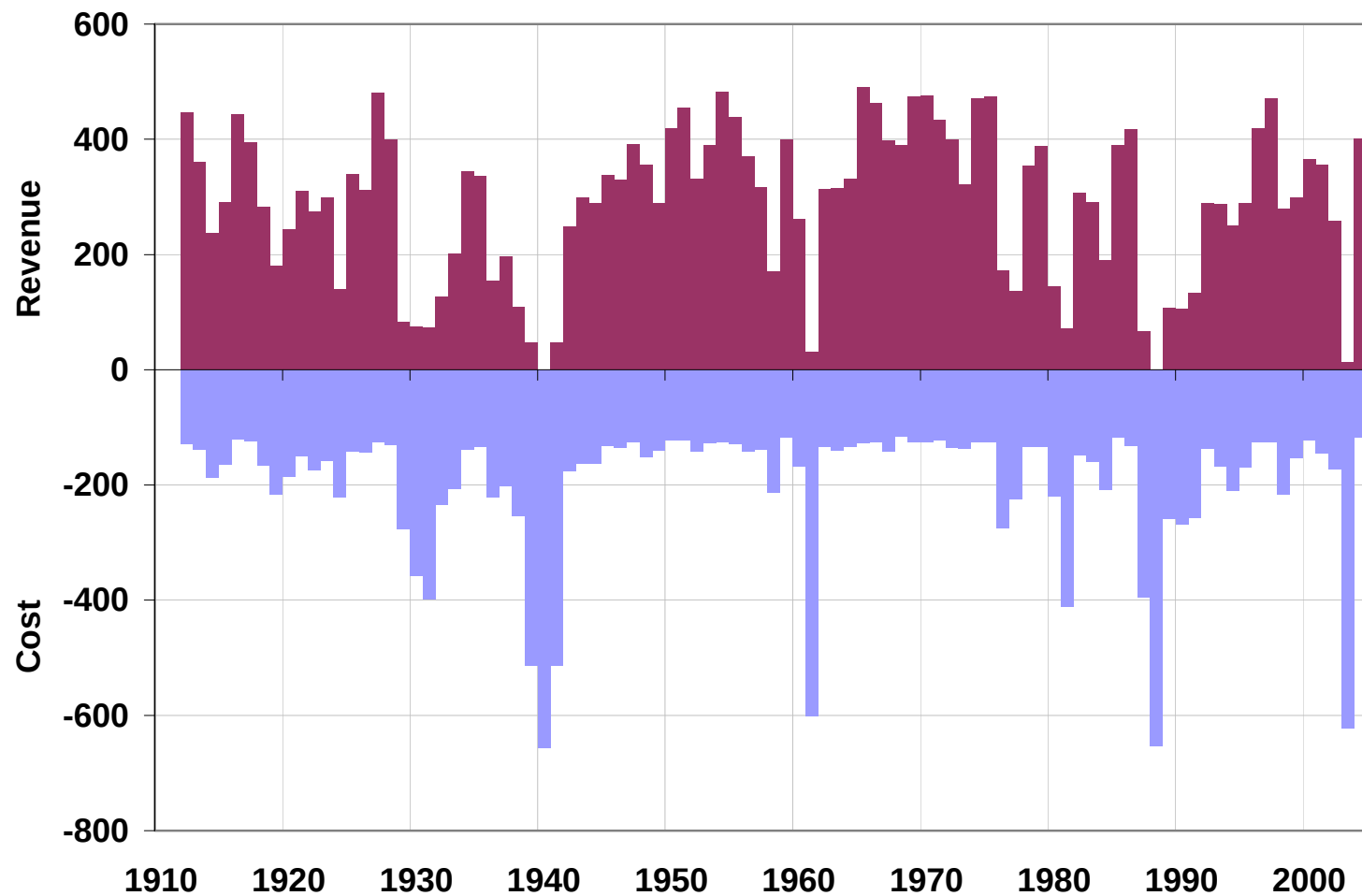
The figures on the following pages provide information on the components that influence net revenues - opportunity export revenues, thermal generation cost, import cost and water rental cost. The information being provided in this response is based on assumptions consistent with the 2009/10 power resource plan and corresponds to load year 2011/12. The relative difference from average corresponding to this 2009 analysis is very similar to the 2006 analysis as observed in comparing Figure (c) below to the Exhibit 9-2 in the ICF Risk Report.

Figure (a) shows the various cost and revenue components for each flow case (1912/13 to 2005/06) in the historical record. It is noted that costs are shown as a negative. These components are amalgamated into costs and revenues and summarized in Figure (b). The net revenues for each flow case are shown in Figure (c) after costs have been netted against revenues.

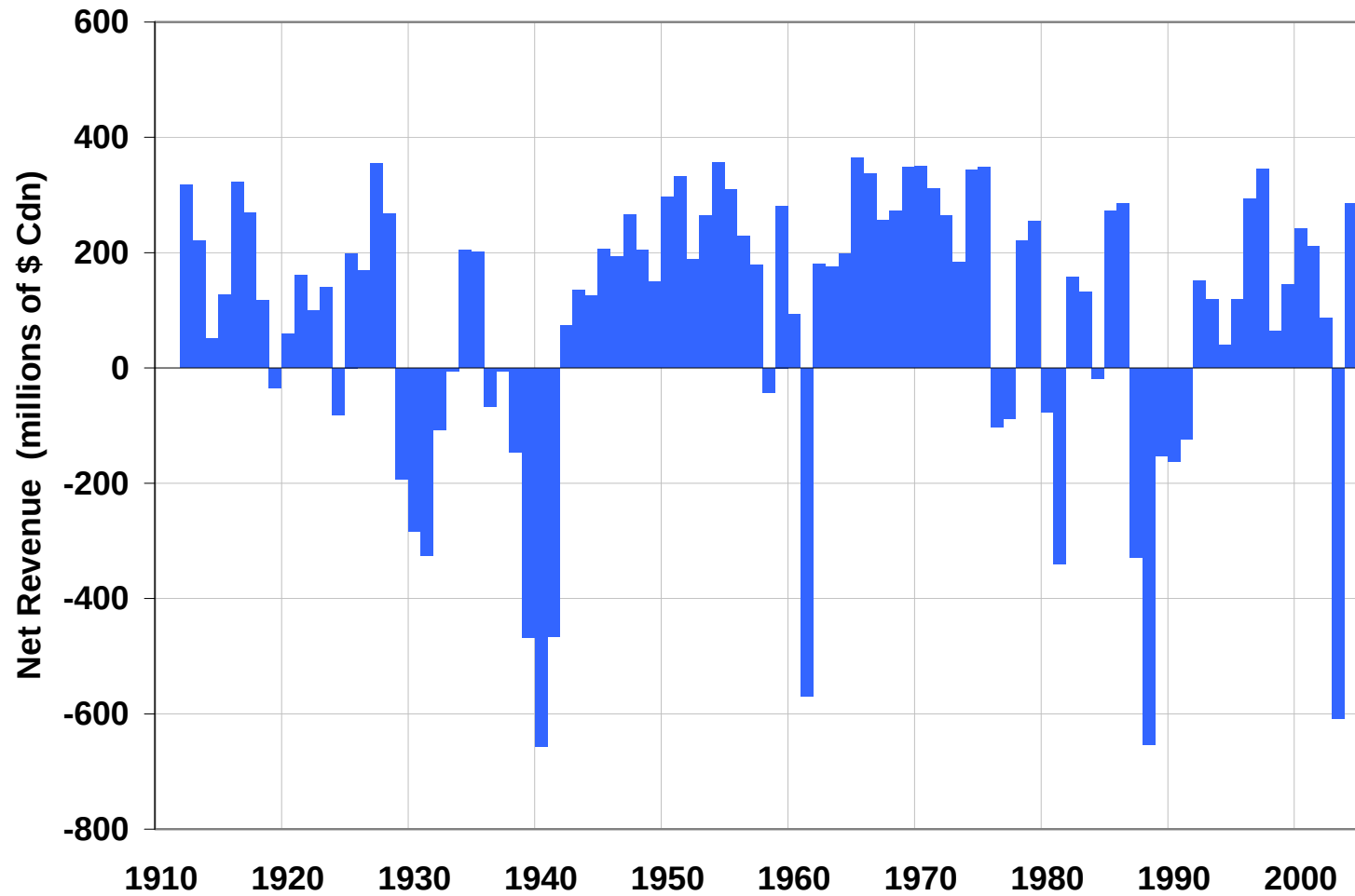
(a) FLOW-RELATED REVENUE & COST COMPONENTS
(millions of \$ Cdn)



(b) FLOW-RELATED REVENUES & COSTS
(millions of \$ Cdn)



(c) FLOW-RELATED NET REVENUE



RCM/TREE/MH I-34

Reference: ICF Risk Report, page 113

- a) Please provide all documents reviewed by ICF International that define and describe the “Base Case” for Manitoba Hydro’s modeling of an extended drought.**

ANSWER:

ICF International reviewed the report “Analysis of Financial loss Due to Extended Periods of Drought” which is referenced in the response to RCM/TREE/MH I-33(a). This report was provided to the PUB in 2007 in response to PUB Order 117/06.

RCM/TREE/MH I-35

Reference: ICF Risk Report, Exhibit 9-3, page 114

- a) Please provide all documents reviewed by ICF International that define and describe the sensitivity cases for Manitoba Hydro's modeling of an extended drought.**

ANSWER:

The sensitivity cases that ICF International reviewed were contained in the report "Analysis of Financial loss Due to Extended Periods of Drought" which is referenced in the response to RCM/TREE/MH I-33(a). This report was provided to the PUB in 2007 in response to PUB Order 117/06.

Reference: ICF Risk Report, page 114

- a) Has Manitoba Hydro investigated the potential impact of global warming on the likelihood and duration of droughts over the next thirty years? If so, please provide all documentation of this investigation.**

ANSWER:

Manitoba Hydro has been monitoring the issue of potential climate change for many years but at this point has reached no conclusions as to what the impact may be on the likelihood or duration of droughts. The Corporation has recently undertaken a multi-year initiative to investigate the potential impact on future water supply. Given the great uncertainty and complexity associated with the issue, it will likely be a number of years before conclusions can be reached as to the impact on Manitoba Hydro's water supply. Furthermore, the impact on the likelihood and duration of droughts is even more uncertain and complex than the impact on water supply.

RCM/TREE/MH I-37

Reference: ICF Risk Report, page 119

With regard to the simulation of “financial performance of the company under a range of scenarios including droughts spanning one, five, and seven years”:

- a) Please provide all documentation of the results of the IFF simulation process for various drought scenarios.**

ANSWER:

The ICF Risk Report references analysis that has been conducted over the last several years as follows:

- The one year drought referenced was included in IFF07-1 (p. 25-29). This scenario showed the impacts of a one year drought equal to half of the lowest flow on record in 2010/11 and an additional \$100 million per year in non-discretionary capital expenditures.
- The five year drought referenced was included in IFF08-1 (p. 18-20) showing the impacts of a recurrence of the worst five year drought on record beginning in 2010/11 and extending to 2014/15. The five year drought has been updated for IFF09-1, please see Appendix 14.
- The seven year drought referenced was preliminary analysis prepared in conjunction with IFF08-1 and was similar in nature to the five year drought above.

Reference: ICF Risk Report, page 119

With regard to the simulation of “financial performance of the company under a range of scenarios including droughts spanning one, five, and seven years”:

- b) Have the results of the drought-simulation analysis been compared with actual financial performance during historical drought conditions? If so, please provide all documentation of any such comparisons.**

ANSWER:

The drought-simulation analysis was prepared to demonstrate the financial impacts on the Integrated Financial Forecast of droughts differing in magnitude and duration and not intended to reproduce the historical event. The drought-simulation analysis is prepared using the actual flow conditions and applying forecast assumptions to appropriately represent the future financial impact.

Reference: ICF Risk Report, page 119

With regard to the simulation of “financial performance of the company under a range of scenarios including droughts spanning one, five, and seven years”:

- c) Has Manitoba Hydro ever attempted to benchmark the results of its financial simulations against actual financial performance under historical drought conditions, for example by simulating financial performance using historical hydrological conditions? If so, please provide all documentation of such benchmarking analyses.**

ANSWER:

Please see Manitoba Hydro’s response to part b.

RCM/TREE/MH I-38

Reference: ICF Risk Report, page 119

a) Please provide a copy of “Risk Analysis Using Prism”, cited in footnote 73.

ANSWER:

A redacted copy of the presentation “Risk Analysis Using PRISM” can be found in Appendix 31.

RCM/TREE/MH I-39

Reference: ICF Risk Report, page 129

With regard to the discussion of execution risk:

- a) Have Northern States Power, Wisconsin Public Service, or Minnesota Power received state regulatory approval for their proposed contracts with Manitoba Hydro? If so, please provide a copy of the decision by the relevant state commission approving the proposed contract. If not, please indicate whether any of these three utilities have filed for contract approval, and identify the docket number for the proceedings under which these utilities have filed for approval.**

ANSWER:

None of the referenced term sheets have resulted in signed contracts. As a result, no reference has yet been made to any regulatory body for approval.

RCM/TREE/MH I-39

Reference: ICF Risk Report, page 129

With regard to the discussion of execution risk:

- b) Will Manitoba Hydro commence construction of the Wuskwatim, Keeyask, or Conawapa hydro facilities prior to Northern States Power, Wisconsin Public Service, or Minnesota Power receiving state regulatory approval for their proposed contracts with Manitoba Hydro?**

ANSWER:

The construction of the Wuskwatim G.S. is underway and is not dependent on the proposed export contracts.

Manitoba Hydro has not made a commitment to develop either the Keeyask G.S. or the Conawapa G.S. but is working to protect potential in-service-dates.

Current plans that include Keeyask as the next plant are based on the successful conclusion of the sales with Wisconsin Public Service and Minnesota Power including all regulatory approvals. Any commitment to Keeyask or Conawapa will depend on the prevailing circumstances at the time.

Reference: ICF Risk Report, page 129

With regard to the discussion of execution risk:

- c) What are Manitoba Hydro's contingency plans with regard to construction of the Wuskwatim, Keeyask, and Conawapa hydro facilities in the event that one or more of the three proposed contracts fail to receive state regulatory approval?**

ANSWER:

The construction of the Wuskwatim G.S. is underway with in-service expected in 2011 which is at least four years prior to any new firm sales commitments.

The proposed NSP sale is made up of two parts; an initial sale that is not dependant on new facilities in Manitoba including Wuskwatim, and a second conditional sale of 125 MW commencing in 2021, which is subject to the construction of major new hydraulic generation greater than 1000 MW in Manitoba. Manitoba Hydro expects to receive U.S. regulatory approval for these sales well before it makes the decision to commit to Conawapa.

The sale agreements to Minnesota Power or Wisconsin Public Service are conditional on all parties receiving regulatory approvals for the sales, and new generation and transmission construction. Should either of the agreements not receive regulatory approval in the U.S., and if the issue that was impeding approval could not be resolved, and if no replacement customer could be found in a timely manner, Manitoba Hydro would not proceed with its preferred plan for Keeyask followed by Conawapa.

RCM/TREE/MH I-40

Please provide by month for October 2005 to present, the aging of residential arrears.

a) Provide the aging of arrears by dollar amounts in each aging bucket.

ANSWER:

The following table presents the aging of arrears by dollar amounts in each aging bucket by month beginning in February 2009. Manitoba Hydro did not archive this data prior to February 2009.

2009	Aging of Arrears (\$000)		
	30 Days	60 Days	>90 Days
February	13,673	5,354	23,326
March	12,053	6,759	24,070
April	11,661	6,080	24,603
May	11,809	6,060	25,061
June	9,241	6,299	25,067
July	7,469	4,263	25,342
August	7,063	3,995	24,151
September	5,107	3,280	23,387
October	6,579	2,046	22,112
November	7,637	2,735	20,372
December	7,906	4,018	20,005

RCM/TREE/MH I-40

Please provide by month for October 2005 to present, the aging of residential arrears.

b) Provide the aging of arrears by number of accounts in each aging bucket.

ANSWER:

The following table presents the number of accounts in each aging bucket by month beginning in February 2009. Manitoba Hydro did not archive this data prior to February 2009.

2009	Aging of Arrears (Number of Accounts)		
	30 Days	60 Days	>90 Days
February	38,374	19,886	22,677
March	35,348	20,426	22,546
April	34,035	18,341	23,833
May	37,532	18,919	24,572
June	34,677	20,605	24,964
July	32,861	16,735	24,123
August	34,573	17,108	24,717
September	30,622	15,980	24,609
October	31,457	15,237	23,664
November	36,028	15,073	22,890
December	33,302	16,956	21,821

RCM/TREE/MH I-41

Assume for purposes of this Data Request that a residential bill is rendered on Day 1. Assume further the bill remains unpaid. Provide the timeline of each collection step until the bill is final-billed for nonpayment. Identify the Day on which each step of the collection process can be expected to occur.

ANSWER:

Please see Manitoba Hydro's response to CAC/MSOS/MH I-100(d).

RCM/TREE/MH I-42

Assume for purposes of this Data Request, that 100 residential bills are rendered on Day 1. Please provide:

- a) What percent of those bills are paid on or before the due date of the bill. Please identify what Day the due date falls on.**
- b) What percent of those bills are paid by the time the next month's bill is rendered.**
- c) What percent of those bills are paid by the time the second subsequent bill is rendered.**
- d) What percent of those bills are paid by the time the third subsequent bill is rendered.**

ANSWER:

For the average month in 2009, approximately 79.8% of residential bills distributed include no arrears messaging and as such are considered to have been paid on or by the due date. The bill is due on Day 15 after it is issued.

For the average month in 2009, approximately 14.1% of residential bills include a message on the bill stating that the account is 30 days in arrears and approximately 3.4% of residential bills include a message stating that they are 60 days in arrears.

For the average month in 2009, approximately 2.7% of residential bills include a message stating that they are 90 days in arrears. Note, however, that all-electric customers do not receive the 90 day arrears notice (Urgent Notice of Disconnection) during the voluntary weather moratorium period.

If a customer makes partial payments on the account and if arrears still remain on the account, the account may be classified as in 30, 60, or 90 day arrears and therefore receive the arrears messages for more than one consecutive month. Also, if a customer has entered into payment arrangements, they will not receive arrears messages on their bill.

RCM/TREE/MH I-43

Please provide the dollars of residential late fee revenue collected by month for each month October 2005 to present.

ANSWER:

The following table presents the late payment charges billed to residential accounts by month for the period of April 2006 to December 2009. This information is not readily available for residential customers prior to April 2006.

Residential Late Payment Charges Billed (\$)

	2009	2008	2007	2006
December	257 025	241 035	247 193	305 660
November	250 682	218 156	220 485	278 181
October	247 485	233 535	226 861	197 373
September	271 083	264 722	243 009	208 054
August	288 178	277 360	246 282	231 620
July	309 452	280 536	356 876	245 620
June	338 222	307 891	381 828	265 006
May	357 305	236 938	410 549	302 059
April	386 359	365 892	422 466	300 676
March	401 053	366 744	419 343	
February	373 137	332 177	379 632	
January	296 081	278 090	339 569	

RCM/TREE/MH I-44

Please provide the number of residential accounts paying a late charge by month for each month October 2005 to present.

ANSWER:

The following table presents the number of residential accounts billed late payment charges by month for the period of April 2006 to December 2009. This information is not readily available for residential customers prior to April 2006.

Number of Residential Accounts Billed Late Payment Charges

	2009	2008	2007	2006
December	81 978	77 955	83 008	86 048
November	81 515	74 398	76 772	81 978
October	78 575	74 279	78 417	78 106
September	79 395	79 397	79 420	78 173
August	80 834	78 837	78 322	84 148
July	82 536	78 897	81 308	84 600
June	84 709	81 877	84 195	86 295
May	88 963	86 365	87 666	93 706
April	85 373	86 051	86 787	87 568
March	90 488	88 923	89 669	
February	90 772	88 141	89 638	
January	84 012	85 112	88 858	

RCM/TREE/MH I-45

Please provide the most recent cost justification filed with the Manitoba Public Utilities Board of the current residential late payment fee imposed by Manitoba Hydro. Please indicate the date of the filing. For this filing, please provide a copy of all:

- a) Pre-filed direct and rebuttal testimony filed in support of the filing; and**

ANSWER:

No cost justification has previously been filed by Manitoba Hydro with respect to the late payment fee for electric services.

RCM/TREE/MH I-45

Please provide the most recent cost justification filed with the Manitoba Public Utilities Board of the current residential late payment fee imposed by Manitoba Hydro. Please indicate the date of the filing. For this filing, please provide a copy of all:

b) the final regulatory disposition of the request for the proposed rate.

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-45(a).

RCM/TREE/MH I-46

Please provide a list of all Manitoba Hydro residential electric service charges not covered by an energy charge.

- a) For all such service charges, please provide by month for the months October 2005 to present the revenue generated by that service charge;**

ANSWER:

The following are residential service charges not covered by an energy charge:

- Late payment charge,
- Residential reconnection charge,
- Residential special reading fee,
- Residential returned cheque charge, and
- Residential Federal Meter Dispute charge.

Information is not readily available for residential customers prior to April 2006.

Please see Manitoba Hydro's response to RCM/TREE/MH I-43 for late payment charges billed to residential accounts by month for the period of April 2006 to December 2009.

The following table presents the reconnection charges billed to residential accounts by month for the period of April 2006 to December 2009.

Residential Reconnect Charges (\$)

	2009	2008	2007	2006
December	\$ 9 175	\$ 6 315	\$ 4 500	\$ 6 060
November	19 520	15 565	26 150	20 310
October	21 820	27 850	41 125	42 455
September	37 440	40 045	40 950	44 485
August	44 400	52 415	50 285	49 912
July	65 580	77 950	53 135	52 125
June	67 150	87 400	61 170	46 295
May	35 860	64 955	80 055	38 165
April	22 880	16 645	42 805	9 743
March	14 470	9 990	8 415	
February	11 050	10 890	7 530	
January	7 315	10 175	9 635	

The following table presents the special reading fees billed to residential accounts by month for the period of April 2006 to December 2009.

Residential Special Reading Fees (\$)

	2009	2008	2007	2006
December	\$ 96 165	\$ 82 265	\$ 58 485	\$ 49 185
November	89 045	77 245	66 480	87 865
October	50 360	67 640	58 380	37 075
September	68 760	64 360	59 605	37 860
August	61 920	53 920	54 185	42 748
July	69 320	60 325	48 300	45 180
June	66 375	54 885	50 120	70 020
May	65 030	48 840	56 000	24 180
April	61 610	57 240	64 720	13 551
March	83 120	53 050	45 410	
February	63 820	62 575	51 690	
January	72 335	59 215	52 855	

The following table presents the returned cheque charges billed to residential accounts by month for the period of April 2006 to December 2009.

Residential Returned Cheque Charges (\$)

	2009	2008	2007	2006
December	\$ 4 090	\$ 4 840	\$ 4 080	\$ 5 240
November	4 720	4 560	5 060	7 000
October	4 740	5 320	5 140	6 560
September	4 800	5 880	5 540	6 900
August	5 840	5 540	6 980	8 640
July	7 000	7 340	8 100	8 920
June	8 100	8 260	8 820	11 260
May	6 520	7 360	9 000	11 300
April	6 060	7 240	7 440	9 320
March	7 200	6 380	6 900	
February	6 020	5 660	6 020	
January	5 780	6 640	7 580	

The following table presents the Federal Dispute Meter charges billed to residential accounts by month for the period of April 2006 to December 2009.

Residential Federal Dispute Meter Charges (\$)

	2009	2008	2007	2006
December	\$ 35	\$ 70	\$ -	\$ 35
November	35	35	-	-
October	(35)	-	-	35
September	35	35	105	35
August	35	-	-	35
July	-	105	70	70
June	70	70	-	35
May	35	35	35	70
April	-	70	70	70
March	35	70	-	
February	-	35	35	
January	70	35	-	

RCM/TREE/MH I-46

Please provide a list of all Manitoba Hydro residential electric service charges not covered by an energy charge.

b) of monthly revenue is not available, please provide the revenue from each fee for the time periods available (e.g., quarterly, annually, etc.).

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-46(a).

RCM/TREE/MH I-47

For each service charge identified immediately above, provide the most recent cost-justification for the fee as submitted to the Manitoba Public Utilities Board.

ANSWER:

The charges identified in the response to RCM/TREE/MH I-46(a), the late payment charge, residential reconnection charge, residential special reading fee, residential returned cheque charge, and residential Federal meter dispute charge are not charges which are approved by the PUB, and as such, no cost justifications have been submitted.

RCM/TREE/MH I-48

Please provide by month for each month October 2005 to present:

a) The average bill for all residential accounts;

ANSWER:

The following table presents the average bill for residential accounts by month for the period of October 2005 to December 2009.

Average Residential Bill					
Month	2009	2008	2007	2006	2005
December	\$ 101	\$ 105	\$ 100	\$ 90	\$ 88
November	\$ 78	\$ 78	\$ 75	\$ 76	\$ 73
October	\$ 76	\$ 66	\$ 63	\$ 66	\$ 63
September	\$ 59	\$ 58	\$ 56	\$ 55	
August	\$ 57	\$ 59	\$ 61	\$ 57	
July	\$ 60	\$ 56	\$ 56	\$ 57	
June	\$ 65	\$ 53	\$ 55	\$ 54	
May	\$ 71	\$ 65	\$ 59	\$ 57	
April	\$ 103	\$ 88	\$ 89	\$ 79	
March	\$ 108	\$ 105	\$ 94	\$ 91	
February	\$ 116	\$ 117	\$ 113	\$ 95	
January	\$ 140	\$ 115	\$ 104	\$ 96	

RCM/TREE/MH I-48

Please provide by month for each month October 2005:

b) The average arrears of accounts in arrears;

ANSWER:

The following table presents the average arrears for all accounts in arrears by month beginning February 2009. Prior to February 2009, Manitoba Hydro did not archive this data.

Average Arrears for Accounts in Arrears by Month - Year 2009	
Month	Average
February	\$523.28
March	\$547.52
April	\$555.63
May	\$529.85
June	\$506.03
July	\$502.91
August	\$460.86
September	\$446.20
October	\$436.87
November	\$415.51
December	\$442.97

RCM/TREE/MH I-48

Please provide by month for each month October 2005:

c) The average bill of accounts in arrears;

ANSWER:

The following table presents the average bill for all accounts in arrears by month beginning February 2009. Prior to February 2009, Manitoba Hydro did not archive this data.

2009	Average Bills of Accounts in Arrears
February	\$683.95
March	\$728.45
April	\$716.93
May	\$660.23
June	\$620.65
July	\$583.93
August	\$574.90
September	\$557.53
October	\$564.12
November	\$573.24
December	\$584.58

RCM/TREE/MH I-48

Please provide by month for each month October 2005:

d) The total dollars of residential arrears

ANSWER:

Manitoba Hydro does not separate arrears dollars by residential and non-residential.

RCM/TREE/MH I-48

Please provide by month for each month October 2005:

e) The percentage of residential dollars constituting arrears;

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-48(d).

RCM/TREE/MH I-48

Please provide by month for each month October 2005:

f) The percentage of billed accounts having arrears; and

ANSWER:

The following table presents the percentage of all billed accounts having arrears, including arrears of one or more days, by month beginning February 2009. Prior to February 2009, Manitoba Hydro did not archive this data.

Customers in Arrears by Month - Year 2009	
Month	%
February	15.35
March	14.85
April	14.45
May	15.34
June	15.18
July	13.94
August	14.44
September	13.44
October	13.27
November	13.94
December	13.56

RCM/TREE/MH I-48

Please provide by month for each month October 2005:

- g) The average arrears of all residential accounts disconnected for nonpayment in that month.**

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-48(d).

RCM/TREE/MH I-49

Please provide by month for each month October 2005 to present, a distribution of the number of accounts in arrears by the size of arrears by the following bands: (1) \$0 - \$100; (2) \$101 - \$200; (3) \$201 - \$300; (4) \$301 - \$500; (5) \$501 - \$750; (6) \$751 - \$1,000; (7) \$1,001 - \$2,000; and (8) \$2,001 and above. If these bands are not available, please provide the numbers of accounts by which bands are available.

ANSWER:

The following table presents the number of accounts in arrears by dollar range by month beginning February 2009. Prior to February 2009, Manitoba Hydro did not archive this data.

<u>Accounts in Arrears by Month - 2009</u>											
Range	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
\$0-100	36,273	34,659	34,661	38,190	40,832	39,730	42,880	40,307	40,846	40,920	38,805
\$101-200	14,451	13,524	12,929	14,235	14,291	13,129	13,688	12,832	13,074	14,866	13,882
\$201-300	7,525	7,673	6,947	7,447	6,537	5,661	5,630	5,205	5,028	6,116	6,190
\$301-500	8,094	7,720	7,337	7,170	6,354	5,218	4,879	4,534	4,195	4,782	5,471
\$501-750	5,233	5,043	4,624	4,504	3,786	3,142	2,815	2,581	2,222	2,337	2,756
\$751-1000	2,994	2,988	2,787	2,553	2,141	1,750	1,639	1,370	1,219	1,235	1,324
\$1001-2000	4,200	4,390	4,454	4,333	3,606	2,882	2,694	2,380	1,997	1,969	1,915
\$2001 +	2,162	2,322	2,470	2,587	2,425	2,207	2,166	1,997	1,777	1,764	1,734
Totals	80,932	78,319	76,209	81,019	79,972	73,719	76,391	71,206	70,358	73,989	72,077

RCM/TREE/MH I-50

Please provide the number of residential accounts by month for each month October 2005 to present.

ANSWER:

The following table presents the number of residential accounts by month for the period of October 2005 to December 2009.

Month	2009	2008	2007	2006	2005
December	464 305	459 972	454 308	449 142	445 578
November	463 860	459 455	453 817	448 660	445 103
October	463 392	458 835	453 215	448 063	444 514
September	462 776	458 104	452 687	447 506	
August	462 310	457 582	452 278	447 122	
July	461 969	457 108	451 907	446 701	
June	461 599	456 706	451 570	446 475	
May	461 315	456 157	451 253	446 306	
April	461 075	455 798	451 042	446 268	
March	460 804	455 430	450 823	446 370	
February	460 615	455 073	449 700	446 129	
January	460 269	454 777	449 485	445 917	

RCM/TREE/MH I-51

Please identify all Manitoba Hydro accounts that include expenses for the following residential collection activities:

- a) Late payment notices;**
- b) Notices of disconnection for nonpayment.**
- c) Disconnections for nonpayment.**
- d) Field collections not involving disconnection for nonpayment.**

Separate these expenses by sub-accounts if available.

ANSWER:

Residential collection activities listed above are part of the services provided by several Divisions at Manitoba Hydro including Business Support Services, Consumer Marketing & Sales, Customer Service Operations (South), and Customer Service Operations (Winnipeg & North).

RCM/TREE/MH I-52

For Fiscal Year 2005 to date, please provide period-end totals of collection expenses booked to each account and sub-account identified in the Data Request immediately above.

ANSWER:

Residential collection activities are part of the services provided by the Divisions noted in RCM/TREE/MH I-51 and are not budgeted for separately.

RCM/TREE/MH I-53

For Fiscal Years 2005 to date, please provide a copy of all Manitoba Hydro budget documents specifically identifying collection activities as a separately stated line-item.

- a) Provide those budget documents indicating the budgeted expenditures year-to-date;**
- b) Provide those budget documents, if different, of actual expenditures year-to-date.**

ANSWER:

Residential collection activities are part of the services provided by the Divisions noted in RCM/TREE/MH I-51 and are not budgeted for separately.

Please see Manitoba Hydro's response to PUB/MH I-32(b).

RCM/TREE/MH I-54

Please provide a single copy of all studies within the custody or control of Manitoba Hydro documenting the effectiveness of a late payment charge as an incentive to pay for residential utility customers.

- a) Provide all such studies performed using Manitoba Hydro data;**
- b) Provide all such studies performed using data for utilities other than Manitoba Hydro.**

ANSWER:

Manitoba Hydro has not conducted a formal study nor is it aware of any external studies specifically documenting the effectiveness of late payment charge as an incentive for residential customers to pay.

Manitoba Hydro regularly confirms the use and value of late payment charges through discussions with utility organizations, such as Canadian Electric Association, industry conferences, etc., to ensure the measures continue to be relevant and comparable.

Please see Manitoba Hydro's response to RCM/TREE/MH I-66(a) to (f).

RCM/TREE/MH I-55

Please provide a single copy of all studies within the custody or control of Manitoba Hydro documenting the effectiveness of a late payment charge as an incentive to pay for low-income residential utility customers.

- a) Provide all such studies performed using Manitoba Hydro data;**
- b) Provide all such studies performed using data for utilities other than Manitoba Hydro.**

ANSWER:

Manitoba Hydro has not conducted a study documenting the effectiveness of late payment charge as an incentive for low-income residential customers to pay their utility bill. Manitoba Hydro does not collect customer income data specific to customers' accounts within its customer billing system.

Please see Manitoba Hydro's response to RCM/TREE/MH I-66(a) to (f).

RCM/TREE/MH I-56

Please provide a list of all policies establishing whether or not residential customers may or may not enter into a levelized monthly Budget Billing plan (e.g., customer must have been a customer for at least 12-months; customer may not be in arrears; etc.).

ANSWER:

Attached is Manitoba Hydro's policy for the Equal Payment Plan (EPP).

4. Equal Payment Plan

4.1 - General

The Equal Payment Plan provides a convenient method of payment for electricity for customers in all service classifications except Seasonal services.

The monthly equal payment applies for 11 consecutive billings commencing with meters read on and after September 1 through to July 31. The amount includes:

- a) the estimated annual electricity billing including monthly Basic Charge divided into 12 equal installments; and
- b) monthly contract payments, flat-rate (unmetered) services and rental charges.

4.2 - Settlement Payment

The settlement payment is due with the billing for meters read from August 1 to August 31 or upon customer request for termination. The settlement payment includes:

- a) total of any unpaid electricity bills;
- b) deferred balance (the difference between the installments and the actual charges billed);
- c) monthly contract payments, flat-rate (unmetered) services and rental charges.

Full payment of the settlement billing is a condition of continuing with the Equal Payment Plan. When the net bill for the settlement period is a credit, it will be applied to offset the next equal payment or may be refunded at the customer's request.

4.3 - Equal Payment Plan Arrears

Where a customer fails to pay the installments and has arrears exceeding 1.5 times but NOT exceeding three times the equal payment amount, the customer will be cautioned that participation is contingent on payment. When the arrears exceed three payments, the customer will be removed from the Equal Payment Plan.

4.4 - Equal Payment Plan Review

Installment amounts will be reviewed and, if applicable, changed as follows:

- a) annual review - prior to the start of each equal payment billing season, estimated annual electricity billing will be revised, recognizing the past year's use, weather conditions and any rate adjustments;
- b) monthly review - the deferred balance will be monitored and where it appears that the balance for the settlement period will be excessive, the monthly equal payment amount will be adjusted accordingly.

RCM/TREE/MH I-57

Please provide the number of residential accounts using levelized monthly Budget Billing by month for each month October 2005 to present. For each month:

a) Provide the total number of customers on Budget Billing;

ANSWER:

The following table presents the number of residential customers on Manitoba Hydro's Equal Payment Plan (EPP). Data is not readily available prior to April 2006.

Equal Payment Plan Customers – Residential

Month	2009	2008	2007	2006
December	101 064	88 407	76 729	65 888
November	99 729	87 464	75 765	65 072
October	97 904	85 741	74 365	63 909
September	83 625	72 560	62 085	54 953
August	4 619	8 117	3 442	2 796
July	90 189	78 230	66 219	56 760
June	90 421	78 221	66 386	57 267
May	90 505	78 183	66 525	60 642
April	90 557	78 161	66 636	60 170
March	90 422	78 121	66 728	
February	90 043	77 868	66 681	
January	89 057	77 322	66 320	

Note: For program administration purposes, customers are removed from the EPP in the balancing month (August) and re-enrolled the following billing month.

RCM/TREE/MH I-57

Please provide the number of residential accounts using levelized monthly Budget Billing by month for each month October 2005 to present. For each month:

- b) Provide the total number of customers newly entering into a levelized Budget Billing plan that month;**

ANSWER:

The following table presents the number of residential customers newly entering the Manitoba Hydro Equal Payment Plan (EPP) by month for the period of April 2006 to December 2009. Data is not readily available prior to April 2006.

New Equal Payment Plan Customers - Residential				
Month	2009	2008	2007	2006
December	1 148	979	858	591
November	1 697	1 210	1 216	985
October	2 247	1 960	1 662	1 326
September	18 388	16 658	16 129	14 287
August	83 861	72 724	62 230	55 112
July	21	181	59	18
June	57	262	43	30
May	114	235	64	78
April	155	195	95	671
March	392	222	229	
February	671	439	375	
January	1 278	789	571	

Note: For program administration purposes, customers are removed from the EPP in the balancing month (August) and re-enrolled the following billing month.

RCM/TREE/MH I-57

Please provide the number of residential accounts using levelized monthly Budget Billing by month for each month October 2005 to present. For each month:

- c) Provide the total number of customers removed from Budget Billing for collection-related reasons (i.e., having incurred an arrears);**

ANSWER:

The following table presents the number of residential customers removed from the Manitoba Hydro Equal Payment Plan (EPP) by month for the period of April 2006 to December 2009. Reasons for removal are not identified; the figures presented below include all possible reasons for removal from EPP such as year end balancing, account arrears, and customer requests. Data is not readily available prior to April 2006.

Removed Equal Payment Plan Customers - Residential

Month	2009	2008	2007	2006
December	359	269	251	164
November	421	236	263	164
October	451	288	226	243
September	5 125	8 699	3 856	3 395
August	88 978	73 069	66 189	58 626
July	293	253	211	541
June	198	198	204	3 455
May	206	172	206	200
April	257	182	321	181
March	292	184	328	
February	291	241	210	
January	328	266	159	

Note: For program administration purposes, customers are removed from the EPP in the balancing month (August) and re-enrolled the following billing month.

RCM/TREE/MH I-57

Please provide the number of residential accounts using levelized monthly Budget Billing by month for each month October 2005 to present. For each month:

d) Provide the total number of customers with credit balances in that month;

ANSWER:

The following table presents the number of residential Equal Payment Plan (EPP) customers with credit balances month by month for the period of April 2006 to December 2009. A credit (-) balance exists when the EPP installments billed for the EPP year to date exceed the actual charges incurred to date. Data is not readily available prior to April 2006.

Equal Payment Plan - Number of Residential Customers with Credit Balances

Month	2009	2008	2007	2006
December	49 929	38 962	23 639	28 384
November	86 994	64 224	45 228	42 609
October	75 682	77 543	61 966	53 453
September	66 747	64 194	53 433	46 473
August	43 934	36 722	26 324	14 173
July	69 759	63 349	47 430	39 500
June	72 769	68 366	54 955	47 706
May	80 610	70 287	55 780	56 746
April	40 419	49 858	36 360	37 699
March	35 633	21 286	28 450	
February	27 538	16 695	17 008	
January	14 553	14 344	19 982	

Note: For program administration purposes, customers are removed from the EPP in the balancing month (August) and re-enrolled the following billing month.

RCM/TREE/MH I-57

Please provide the number of residential accounts using levelized monthly Budget Billing by month for each month October 2005 to present. For each month:

e) Provide the total number of customers with positive balances in that month.

ANSWER:

The following table presents the number of residential Equal Payment Plan (EPP) customers with debit balances month by month for the period of April 2006 to December 2009. A debit (+) balance exists when the actual charges incurred to date exceed the EPP installments billed for the EPP year to date. Data is not readily available prior to April 2006.

Equal Payment Plan - Number of Customers with Debit Balances

Month	2009	2008	2007	2006
December	46 166	49 123	48 839	33 719
November	17 836	18 448	30 256	22 316
October	22 481	8 190	12 273	10 588
September	23 685	22 781	18 311	15 473
August	45 891	37 312	39 631	42 416
July	23 435	17 993	17 999	16 941
June	11 858	4 649	10 102	11 907
May	13 013	6 511	9 520	5 880
April	44 197	27 049	28 610	21 047
March	58 159	55 611	40 317	
February	57 587	60 353	45 245	
January	78 297	66 536	49 148	

Note: For program administration purposes, customers are removed from the EPP in the balancing month (August) and re-enrolled the following billing month.

RCM/TREE/MH I-58

For each month October 2005 to present, please provide:

a) the interest rate paid on residential cash security deposits by month;

ANSWER:

The following table presents the interest rate paid on residential security deposits by month for the period of October 2005 to December 2009.

Interest Rate - Residential Deposits

	2009	2008	2007	2006	2005
December	1.40%	3.46%	5.66%	4.20%	4.20%
November	1.40%	4.01%	5.82%	4.20%	3.90%
October	1.40%	4.22%	5.95%	4.20%	3.90%
September	1.40%	4.12%	4.95%	4.20%	
August	1.40%	4.15%	4.95%	4.20%	
July	1.40%	4.12%	4.95%	4.20%	
June	1.40%	4.17%	4.95%	4.20%	
May	1.56%	4.48%	4.95%	4.20%	
April	1.66%	4.63%	4.95%	4.20%	
March	2.00%	4.98%	4.20%	4.20%	
February	2.28%	5.27%	4.20%	4.20%	
January	2.77%	5.60%	4.20%	4.20%	

RCM/TREE/MH I-58

For each month October 2005 to present, please provide:

b) the number of residential accounts for whom cash security deposits were held;

ANSWER:

The following table presents the number of residential accounts for whom security deposits were held by month for the period of October 2005 to December 2009.

Number of Residential Deposits

	2009	2008	2007	2006	2005
December	1 000	1 345	1 593	1 746	3 226
November	1 012	1 379	1 628	1 731	3 308
October	1 035	1 428	1 681	1 742	3 426
September	1 070	1 488	1 764	1 768	
August	1 110	1 590	1 844	1 782	
July	1 119	1 607	1 859	1 756	
June	1 166	1 613	1 859	1 749	
May	1 198	1 585	1 844	1 757	
April	1 232	1 504	1 857	1 763	
March	1 270	1 544	1 825	1 827	
February	1 293	1 566	1 810	1 868	
January	1 316	1 579	1 754	1 916	

RCM/TREE/MH I-58

For each month October 2005 to present, please provide:

- c) the dollar amounts of cash security deposits held for residential customers; and

ANSWER:

The following table presents the dollar amount of security deposits held for residential customers by month for the period of October 2005 to December 2009.

Residential Security Deposits					
	2009	2008	2007	2006	2005
December	\$ 75 406	\$ 98 607	\$ 108 979	\$ 105 185	\$ 134 608
November	75 906	100 207	109 404	101 327	135 583
October	78 681	103 032	112 379	99 427	141 233
September	81 441	107 435	117 889	100 237	
August	84 316	114 740	122 135	98 984	
July	83 212	116 090	122 385	98 471	
June	86 012	115 890	121 885	91 860	
May	87 487	111 115	120 135	89 095	
April	89 987	102 629	120 110	86 220	
March	92 807	105 254	115 285	90 000	
February	95 207	107 454	113 610	91 493	
January	96 757	108 404	107 810	93 093	

RCM/TREE/MH I-58

For each month October 2005 to present, please provide:

- d) the dollars of interest paid on residential cash security deposits by month for each month October 2005 to present.**

ANSWER:

The following table presents the dollars of interest paid on residential security deposits by month for the period of April 2006 to December 2009. This information is not available for residential customers prior to April 2006.

Interest Paid on Residential Deposits

	2009	2008	2007	2006
December	\$ 1 085	\$ 3 316	\$ 3 688	\$ 7 730
November	50	137	140	277
October	58	152	205	389
September	48	145	166	362
August	34	82	134	521
July	39	121	90	199
June	27	79	61	213
May	22	79	58	642
April	19	59	33	300
March	(32)	29	25	
February	10	24	13	
January	2	10	4	

RCM/TREE/MH I-59

Please provide a copy of all written documents that explain, assess or otherwise discuss the criteria Manitoba Hydro uses to assess on an ongoing basis the effectiveness of its current credit and collection activities.

ANSWER:

Manitoba Hydro does not have a document explaining or assessing the criteria used to assess the effectiveness of our credit and collection activities. Manitoba Hydro follows generally accepted industry practices and utilizes commonly accepted methods of monitoring and assessing the operational effectiveness of credit and collection activities. These measures include, but are not limited to:

- Yearly Write Off statistics
- Aging of Receivables statistics
- Monthly Bad Debt Assignment statistics
- Inbound and Outbound call volumes
- Payment arrangement statistics
- Daily work assignment volumes
- Disconnection/Reconnection statistics

These measures are regularly confirmed through discussions with utility organizations, such as Canadian Electric Association and industry conferences, to ensure the measures continue to be relevant and to compare overall performance.

RCM/TREE/MH I-60

Please provide any written assessment, evaluation, report or other written document of any nature prepared since January 1, 2005 which discusses the effectiveness of Manitoba Hydro's current credit and collection activities.

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-70(a-n).

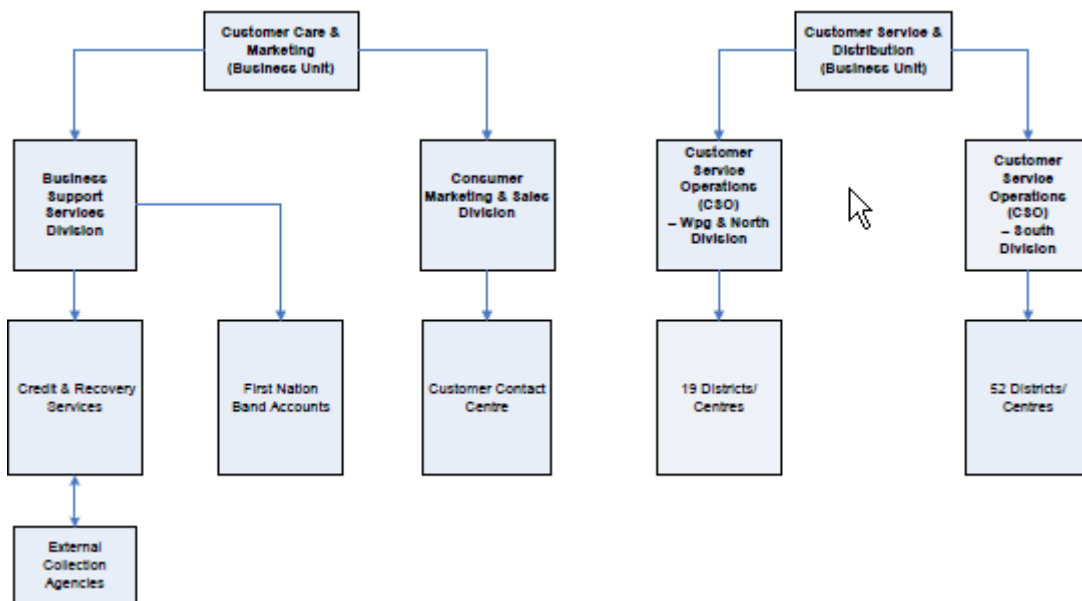
RCM/TREE/MH I-61

Identify the current organizational structure which provide all credit and collection services, including in-house and outside individuals, departments, and organizations with current staffing and funding levels.

ANSWER:

Collection services/activities are part of the services provided by several Divisions at Manitoba Hydro including Business Support Services, Consumer Marketing & Sales, Customer Service Operations (South), and Customer Service Operations (Winnipeg & North).

The following chart presents the areas involved in collection activities:



First Nation Band Accounts and Credit & Recovery Services areas have 4 and 64 equivalent full-time (EFT) staff, respectively. Collection activities represent a portion of staff activities in the Customer Service Operations (South), Customer Service Operations (Winnipeg & North), and Consumer Marketing & Sales Divisions.

For funding levels, please see Manitoba Hydro's response to PUB/MH I-32(b).

RCM/TREE/MH I-62

State the total budgeted collection costs for each fiscal year 2005 to current inclusive, separated by residential and non-residential accounts, associated with handling delinquent accounts, excluding administrative and overhead expenses.

ANSWER:

Collection costs include expenses for uncollectible accounts and external collections costs. These costs are not separated between residential and non-residential accounts.

	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Collections Costs (\$000s)	5,035	5,129	5,254	5,359	5,463	4,430	4,542	4,646

Collection activities are part of the services provided by the Divisions noted in RCM/TREE/MH I-51 and are not budgeted for separately for residential and non-residential accounts.

RCM/TREE/MH I-63

State the total actual collection costs for each fiscal year 2005 to current inclusive, separated by residential and non-residential accounts, associated with handling delinquent accounts, excluding administrative and overhead expenses.

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-62.

Fiscal Year	2004/05	2005/06	2006/07	2007/08	2008/09
Collections Costs (\$000s)	5,161	6,790	7,218	5,256	5,019

RCM/TREE/MH I-64

For each month since October 2005, please provide the number of each of the following for residential accounts:

a) Disconnection of service for nonpayment;

ANSWER:

The following table presents the number of residential accounts disconnected for non-payment each month. Data is not available prior to May 2006.

		Jan-07	69	Jan-08	109	Jan-09	53	Jan-10	97
		Feb-07	61	Feb-08	102	Febr-09	159		
		Mar-07	111	Mar-08	94	Mar-09	225		
		Apr-07	1006	Apr-08	313	Apr-09	408		
May-06	961	May-07	1940	May-08	1715	May-09	978		
June-06	1089	June-07	1268	June-08	1862	June-09	1617		
July-06	1178	July-07	1289	July-08	1893	July-09	1602		
Aug-06	1165	Aug-07	1036	Aug-08	1104	Aug-09	1124		
Sept-06	808	Sept-07	851	Sept-08	793	Sept-09	1037		
Oct-06	801	Oct-07	839	Oct-08	425	Oct-09	372		
Nov-06	510	Nov-07	444	Nov-08	200	Nov-09	268		
Dec-06	40	Dec-07	23	Dec-08	93	Dec-09	73		

RCM/TREE/MH I-64

For each month since October 2005, please provide the number of each of the following for residential accounts:

b) Written disconnect notice (mailed);

ANSWER:

Manitoba Hydro does not mail disconnection notices separate from the customer's monthly bill; without an active payment arrangement at 90 days, the "Urgent Notice of Disconnection" message is printed on the customer's bill.

RCM/TREE/MH I-64

For each month since October 2005, please provide the number of each of the following for residential accounts:

c) Written disconnect notice (posted) (e.g., door hanger);

ANSWER:

The following table presents the number of residential accounts receiving a written disconnection notice each month. Data is not available prior to May 2006.

		Jan-07	894	Jan-08	1159	Jan-09	1122	Jan-10	1379
		Feb-07	751	Feb-08	838	Febr-09	898		
		Mar-07	999	Mar-08	740	Mar-09	1314		
		Apr-07	857	Apr-08	914	Apr-09	1307		
May-06	473	May-07	900	May-08	1330	May-09	1455		
June-06	536	June-07	961	June-08	1189	June-09	1764		
July-06	483	July-07	753	July-08	120	July-09	1970		
Aug-06	681	Aug-07	769	Aug-08	990	Aug-09	1564		
Sept-06	591	Sept-07	609	Sept-08	648	Sept-09	1531		
Oct-06	577	Oct-07	803	Oct-08	982	Oct-09	1198		
Nov-06	441	Nov-07	819	Nov-08	862	Nov-09	1374		
Dec-06	229	Dec-07	268	Dec-08	457	Dec-09	726		

RCM/TREE/MH I-64

For each month since October 2005, please provide the number of each of the following for residential accounts:

d) The reconnection of service;

ANSWER:

The following table presents the number of residential accounts reconnected each month. Data is not available prior to May 2006.

		Jan-07	111	Jan-08	115	Jan-09	79	Jan-10	123
		Feb-07	93	Feb-08	138	Febr-09	151		
		Mar-07	107	Mar-08	105	Mar-09	214		
		Apr-07	736	Apr-08	393	Apr-09	334		
May-06	762	May-07	1746	May-08	1344	May-09	673		
June-06	974	June-07	1208	June-08	1764	June-09	1320		
July-06	1103	July-07	1231	July-08	1837	July-09	1487		
Aug-06	1086	Aug-07	1090	Aug-08	1177	Aug-09	1030		
Sept-06	940	Sept-07	918	Sept-08	1027	Sept-09	1107		
Oct-06	928	Oct-07	965	Oct-08	602	Oct-09	607		
Nov-06	493	Nov-07	646	Nov-08	304	Nov-09	393		
Dec-06	98	Dec-07	64	Dec-08	145	Dec-09	169		

RCM/TREE/MH I-65

For each month October 2005 to present, please provide:

- a) the total number of residential customers, by month, broken down by tariff class; and

ANSWER:

Manitoba Hydro offers three tariff classes for residential customers; Monthly, Seasonal, and Diesel. The following three tables detail the number of customers by month within each of these tariff classes:

Residential Customers - Monthly (Current tariff no. 2009-01)

Month	2009	2008	2007	2006	2005
December	446 411	438 777	433 331	428 301	424 912
November	445 966	438 261	432 846	427 820	424 436
October	445 496	437 653	432 244	427 222	423 837
September	444 878	436 922	431 731	426 669	
August	444 412	436 399	431 322	426 288	
July	444 074	435 925	430 945	425 867	
June	443 700	435 523	430 604	425 644	
May	443 415	434 972	430 287	425 474	
April	443 175	434 612	430 076	425 436	
March	439 612	434 454	429 982	425 704	
February	439 422	434 096	428 858	425 463	
January	439 075	433 800	428 645	425 250	

Residential Customers - Seasonal* (Current tariff no. 2009-02)

Month	2009	2008	2007	2006	2005
December	17 357	20 648	20 437	20 312	20 145
November	17 357	20 648	20 437	20 312	20 145
October	17 357	20 648	20 437	20 312	20 145
September	17 357	20 648	20 437	20 312	
August	17 357	20 648	20 437	20 312	
July	17 357	20 648	20 437	20 312	
June	17 357	20 648	20 437	20 312	
May	17 357	20 648	20 437	20 312	
April	17 357	20 648	20 437	20 312	
March	20 648	20 437	20 312	20 145	
February	20 648	20 437	20 312	20 145	
January	20 648	20 437	20 312	20 145	

* Seasonal customers are billed twice annually (once in April and again in October). The October bill includes summer consumption and may include unbilled usage from the previous winter. The April bill includes the Annual Basic Charge and may also include winter consumption.

Residential Customers - Diesel (Current tariff no. 2009-03)

	2009	2008	2007	2006	2005
December	537	547	540	529	521
November	537	546	534	528	522
October	539	534	534	529	532
September	541	534	519	525	
August	541	535	519	522	
July	538	535	525	522	
June	542	535	529	519	
May	543	537	529	520	
April	543	538	529	520	
March	544	539	529	521	
February	545	540	530	521	
January	546	540	528	522	

RCM/TREE/MH I-65

For each month October 2005 to present, please provide:

- b) the average bill for a customer taking service broken down by tariff class.

ANSWER:

Average Bill - Monthly Residential

Month	2009	2008	2007	2006	2005
December	\$104	\$109	\$105	\$93	\$90
November	80	81	78	79	74
October	78	68	65	69	64
September	58	59	57	56	
August	57	60	62	58	
July	60	56	57	58	
June	65	54	56	55	
May	73	68	61	58	
April	106	91	92	82	
March	111	109	98	95	
February	121	122	118	98	
January	146	120	109	99	

Average Bill - Seasonal* Residential

Month	2009	2008	2007	2006	2005
December	\$18	\$9	\$9	\$9	\$43
November	18	9	9	9	43
October	18	9	9	9	43
September	66	40	35	37	
August	66	40	35	39	
July	66	40	35	39	
June	66	40	35	39	
May	33	20	17	19	
April	33	20	27	19	
March	46	38	7	14	
February	9	9	9	43	
January	9	9	9	43	

* Seasonal customers are billed twice annually (once in April and again in October). Revenue is allocated to the billing months based on forecast and is adjusted to actual in March of each year.

Average Bill - Diesel Residential

	2009	2008	2007	2006	2005
December	\$241	\$84	\$103	\$109	\$94
November	113	103	109	70	74
October	55	81	65	64	66
September	74	60	67	64	
August	48	74	56	55	
July	104	59	66	59	
June	84	70	73	63	
May	96	88	72	67	
April	95	89	78	86	
March	109	100	93	79	
February	88	107	85	86	
January	141	75	95	87	

RCM/TREE/MH I-66

Please provide all written studies currently within the custody or control of Manitoba Hydro, whether or not prepared by or for Manitoba Hydro, that explicitly assess the extent to which the following activities reduce residential bad debt:

- a) Cash security deposits;**
- b) Deferred payment agreements;**
- c) Disconnections for nonpayment;**
- d) Field collections;**
- e) Call center collection calls;**
- f) Late payment charges.**

ANSWER:

Manitoba Hydro does not have documents explicitly assessing the extent to which the above mentioned activities reduce residential bad debt.

Manitoba Hydro follows generally accepted industry practices for managing arrears and bad debt. These measures are regularly confirmed through discussions with utility organizations, such as the Canadian Electrical Association (CEA), industry conferences, etc., to compare practices to ensure account management methods continue to be relevant.

Please refer also to Manitoba Hydro's response to RCM/TREE/MH I-54.

RCM/TREE/MH I-67

Please provide all written studies currently within the custody or control of Manitoba Hydro, whether or not prepared by or for Manitoba Hydro, that explicitly assess the extent to which the following activities reduce residential arrears:

- a) Cash security deposits;**
- b) Deferred payment agreements;**
- c) Disconnections for nonpayment;**
- d) Field collections;**
- e) Call center collection calls;**
- f) Late payment charges.**

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-66.

RCM/TREE/MH I-68

Please provide any and all price elasticity studies in the possession or control of Manitoba Hydro, whether or not done specifically for Manitoba Hydro, regarding long-and/or short-term price elasticities for the following:

- a) Residential customers as a whole;**

ANSWER:

Manitoba Hydro does not have any price elasticity studies done specifically for Manitoba Hydro Residential customers.

Manitoba Hydro's load forecasting methodology for residential customers implicitly incorporates customer fuel choice in its equations, by incorporating a term that relates customer selection of electricity as a heating fuel to the relative prices of electricity and natural gas. Please see page 16 of Appendix 7.1 to the Application. The year-over-year percentage change in all electric customers to the year-over-year percentage change in the ratio of electricity price to natural gas price for this equation is -.016.

Manitoba Hydro has provided documents to the PUB in past proceedings which have discussed price elasticity of Residential customers. These include:

- 1) The response to MIPUG/MH II-9(d) from the 2004/05 General Rate Application proceeding, a copy of which is hereto attached.
- 2) "Review of Time of Use and Inverted Electric Rate Structures for Application in Manitoba", a report prepared for Manitoba Hydro by NERA Economic Consulting in 2005 and subsequently filed with the Public Utilities Board and intervenors. An extract from that study, pages 43 through 46, is hereto attached.

MIPUG/MH II-9

Reference: PUB/MH I -43

- d) Please provide any studies or analysis done by Manitoba Hydro to quantify the elasticity of industrial loads with respect to electricity costs.**

ANSWER:

Manitoba Hydro has not undertaken its own research into the elasticity of industrial electricity demand with respect to prices. Generally speaking, it would be expected that the greater the percentage electricity costs make up of the overall budget of any customer, residential, commercial or industrial, the more sensitive that customer's demand will be to the price of electricity. Thus one would expect households using or contemplating electricity for home heating would be more sensitive to the price of electricity than households which do not. Similarly, electricity-intensive industry would be expected to be more influenced in location or expansion decisions by the price of electricity than other industry for which electricity constitutes only a small portion of the cost of production. This appears to be borne out in the experience in Manitoba with respect to load expansion of various industries and residential and commercial loads discussed in the response to MIPUG/MH II-9(e).

A Danish study, a copy of which is attached as Appendix 41, appears to bear out this conclusion. The study followed a panel of 2,949 Danish companies from 1983 to 1996. It investigated, among other issues, how various company characteristics such size, type of industrial sub-sector, and electricity intensity in production influence price and production elasticities. It appears that companies with a high electricity intensity also have a high own-price elasticity. Average industrial elasticity determined in this study was -0.479.

There exists a very significant body of literature on the subject of price elasticity of demand for electricity and results vary considerably depending on the location, the time periods of analysis, the methodology of estimation used and other factors. A review by Bonneville Power Authority (go to www.bpa.gov/Power/LP/sn03/files/Parties_Data_Responses/CR-WA-004A.doc) documents historic and current estimates of price elasticities for residential, commercial and industrial customer classes. Historic estimates of short run price elasticity show a range of -0.13 to -0.45 for Residential; -0.17 to -0.42 for Commercial and -0.30 to -0.59 for Industrial. Short run elasticities based on more current studies show a range of -0.20 to -0.44 for Residential; -0.12 to -0.38 for Commercial and -0.39 to -0.69 for Industrial.

Long run elasticities based on more current studies range from -0.35 to -2.23 for Residential; -0.29 to -1.65 for Commercial and -0.76 to -2.87 for Industrial.

Scenario 4: Rates for Large GS Customers

Large Demand <30 kV

	Demand Charges (\$/kVA)	Energy Charges		
		Peak (cents/kWh)	Shoulder (cents/kWh)	Off-Peak (cents/kWh)
Spring	\$ 2.65	3.88	2.86	0.95
Summer	\$ 4.00	4.98	3.10	0.41
Fall	\$ 2.65	3.42	2.29	0.76
Winter	\$ 5.30	5.96	3.00	2.10

Large Demand 30-100 kV

	Demand Charges (\$/kVA)	Energy Charges		
		Peak (cents/kWh)	Shoulder (cents/kWh)	Off-Peak (cents/kWh)
Spring	\$ 2.25	3.75	2.77	0.75
Summer	\$ 3.40	4.84	3.01	0.23
Fall	\$ 2.25	3.29	2.20	0.55
Winter	\$ 4.50	5.71	2.87	2.01

Large Demand >100 kV

	Demand Charges (\$/kVA)	Energy Charges		
		Peak (cents/kWh)	Shoulder (cents/kWh)	Off-Peak (cents/kWh)
Spring	\$ 2.00	3.57	2.60	0.64
Summer	\$ 3.00	4.65	2.85	0.13
Fall	\$ 2.00	3.11	2.03	0.45
Winter	\$ 4.00	5.47	2.68	1.84

VII. ANALYSIS OF ILLUSTRATIVE RATES

A. Changes in Consumption Based on Elasticity Estimates and Feedback to Illustrative Rates

A key factor in the evaluation of TOU and inverted rates is the likely response of customers to the new rate structures. This responsiveness, or “price elasticity,” is quantified as the percent change in quantity demanded divided by the percent change in price. Own-price elasticity measures the responsiveness of quantity demanded to changes in the price of that product. It is normally a negative number, as price and quantity are inversely related. Own-price elasticity can vary by TOU period (time-of-day, season) and by rate component (per-kWh charge, per-kW charge). Some elasticity studies derive cross-price elasticity estimates, such as the responsiveness of demand in one period to changes in the price of another period within the day.

NERA identified illustrative short-run own-price elasticities of demand for each customer class and rate structure to be tested, based upon results from controlled experiments on

inverted block and TOU rates in other jurisdictions. In the US, much of the elasticity work was done in the late seventies and early eighties. Because the electricity prices, rate designs, market and utility structures have changed significantly since then, the results of those studies must be interpreted cautiously.⁴³ The price elasticities used in our rate exercise are shown below. The elasticity estimates are not used to *predict* changes in demand, but rather to evaluate the *relative* shifts that might occur with implementation of the various tariff structures.

OWN-PRICE ELASTICITIES BY TOD PERIOD AND SEASON						
	Winter, Spring & Fall			Summer		
	Peak	Shoulder	Off-Peak	Peak	Shoulder	Off-Peak
Residential and Farm (<200 Amp)	-0.056	-0.056	-0.056	-0.028	-0.028	-0.028
General Service - Small						
Non-Demand	-0.060	-0.060	-0.060	-0.060	-0.060	-0.060
Demand	-0.080	-0.065	-0.050	-0.080	-0.065	-0.050
General Service - Medium	-0.080	-0.065	-0.050	-0.080	-0.065	-0.050
General Service - Large						
0.750 < KV <30	-0.080	-0.065	-0.050	-0.080	-0.065	-0.050
30 < KV <100	-0.150	-0.125	-0.100	-0.150	-0.125	-0.100
KV > 100	-0.150	-0.125	-0.100	-0.150	-0.125	-0.100

In order to calculate the likely impact of new TOU or inverted rates on customer loads, it is necessary to identify the relevant price differentials to which we will apply the elasticity estimates. This requires carefully defining the per-kWh “effective prices” by class and periods. The preliminary effective prices by class were calculated for each of the time-of-day periods (for those customers with TOD rates), and on a seasonal basis for customers under inverted (non-TOD) block rates.

The effective price for a customer under a TOU rate will equal the sum of the per-kWh charge for a specific daily period within a season, plus the per-kVA revenues converted into a per-kVA charge as corresponds for each period. In the TOU rates proposed for Manitoba Hydro, the demand charges apply to the maximum demand in the combined peak and shoulder periods. Therefore, the effective price took into account the kWh charge plus the kW revenues divided by the kWh consumed by the customer in the combined peak and shoulder period.

⁴³ We also reviewed the latest residential TOU experiments in California (summer of 2003), as an additional input to estimate a set of elasticity estimates for residential customers.

In the case of seasonal-only (non-TOD) block rates, the effective price will be the kWh charge of the last block in which the user's consumption falls, plus the demand revenues in the season divided by the sum of kWh in the combined peak and shoulder periods. One complication to estimate the effective price under the new tariffs in the case of inverted block rates has to do with assuming where the marginal consumption would take place:

- For customers whose marginal consumption currently falls in the second block, an increase in the price on the second block will tend to reduce their consumption, possibly enough to move them back to the first block. However, once there, the lower price on the new rates' first block will provide an incentive to increase usage.
- Similarly, for customers with consumption initially ending in the first block, the reduction in the first block price will tend to increase their consumption, possibly enough to move them back to the second block where the higher price on the new rates will provide incentives to reduce usage.⁴⁴

As a simplifying measure, our analysis assumed that if the calculated load response for a customer drove the usage back into the first block, the resulting marginal use would end up at the beginning of the run off block (just above the breakpoint in the block structure). This approach would understate the response in those cases where the new effective per-kWh price is greater than the current effective charge. In practice, however, the effect of our simplifying assumption proved to be quite small, so that we retained the simple correction.

The elasticity estimates were applied to typical customers (with average usage and average load pattern) within each class. This was later grossed up to represent population impacts by multiplying by total customers in the class.⁴⁵ In the case of residential, four typical customer sub-groups were defined:

- Customers with "standard" electric use (non-space heating), whose consumption falls into the current first block only;
- Customers with "standard" electric use (non-space heating), whose consumption falls into the current second block;
- Customers with electric space-heating ("All electric"), whose consumption falls into the current first block only;

⁴⁴ There is also an income effect of the reduction in the first block price for customers whose consumption is on the second block. The income effect shifts the demand curve to the right. Given the limited data available for the analysis, we did not address this effect.

⁴⁵ Future refinements of this analysis would require using a distribution of usage and elasticities within the population, calculate the distribution of load and welfare impacts within the class, and aggregate the results. This refinement would take into account the diversity of load factors and usage patterns within the class, as well as other factors such as the lower elasticity of demand of customers without access to gas as compared to those customers with access.

- Customers with electric space-heating (“All electric”), whose consumption falls into the current second block.

In the case of SGS-ND, six sub-groups were defined for purposes of the load response analysis, differentiating between those whose marginal consumption falls into the first, second or third blocks of the current rates, and whether they use electric space heating or not.

Based upon the results of this analysis, new billing determinants (both energy and demand) were developed for each class. New class revenue requirements were also computed for each class by adding/subtracting the marginal cost of any increase/decrease in consumption. This approach to the class revenue requirement is not consistent with the current use of embedded costs to set class revenue requirements; however, with so many rate structure alternatives being evaluated, this simplifying assumption kept the analyses manageable. The preliminary illustrative rates were then adjusted to produce the new revenue requirement when applied to the adjusted billing determinants. Ideally the elasticity effects should be re-estimated based on the revised prices and the process repeated one or more times. However, for the purpose of evaluating several generic rate designs, no further iterations were performed.

B. Effect of TOD and Inverted Rates on Manitoba Hydro’s Revenue Requirement

One measure of the effectiveness of TOD and inverted rate structures is the effect on the utility’s revenue requirement (based on the 2005/06 Revenue Requirement using rates effective August 1, 2004). The table below shows the effect on class revenue requirements of each of the rate structures evaluated.

Residential

	Revenue Requirement	Change in Revenue Requirement After Load Response	
	(000 \$)	(000 \$)	(%)
Current	\$377,421		
Scenario 1 (Two rates, two-blocks, seasonal)	\$369,977	-\$7,444	-2.0%
Scenario 2 (One rate, two blocks, seasonal)	\$370,001	-\$7,420	-2.0%

RCM/TREE/MH I-68

Please provide any and all price elasticity studies in the possession or control of Manitoba Hydro, whether or not done specifically for Manitoba Hydro, regarding long- and/or short-term price elasticities for the following:

b) Low-income residential customers;

ANSWER:

Manitoba Hydro does not have any studies which specifically address price elasticity of low income residential customers.

Please also see Manitoba Hydro's response to RCM/TREE/MH I-68(a).

RCM/TREE/MH I-68

Please provide any and all price elasticity studies in the possession or control of Manitoba Hydro, whether or not done specifically for Manitoba Hydro, regarding long- and/or short-term price elasticities for the following:

- c) Low-use residential customers, irrespective of income.**

ANSWER:

Manitoba Hydro does not have any studies which specifically address price elasticity of low use residential customers.

Please also see Manitoba Hydro's response to RCM/TREE/MH I-68(a).

RCM/TREE/MH I-69

Please provide the following information: By month since October 2006, a single copy of all reports, compilations, memos or other written document of any nature, including any electronic compilation not committed to paper, routinely (e.g., daily, weekly, monthly, quarterly, annually) generated and filed with the Manitoba Public Utilities Board regarding residential:

- a) Customers or dollars in arrears;**
- b) Disconnections for nonpayment;**
- c) Reconnections;**
- d) Deferred payment arrangements;**
- e) Collection activities;**
- f) Call Centre activities;**
- g) Uncollectibles;**
- h) Billings;**
- i) Receipts;**
- j) Deposits held;**
- k) Deposits applied against accounts;**
- l) Final bills;**
- m) Levelized budget billing;**
- n) Any other indicator of residential billings, residential collections, residential customer payment or nonpayment.**

ANSWER:

Please see Appendix 28 for the attached reports.

Manitoba Hydro is unaware of any other reports regarding the above mentioned items that are regularly generated and filed with the Manitoba Public Utilities Board.

RCM/TREE/MH I-70

Please provide the following information: A single copy of the most recent copy of all reports, compilations, memos or other written document of any nature, including any electronic compilation not committed to paper, routinely (e.g., daily, weekly, monthly, quarterly, annually) generated internally but not filed with the Manitoba Public Utilities Board regarding:

- a) Customers or dollars in arrears;**
- b) Disconnections for nonpayment;**
- c) Reconnections;**
- d) Deferred payment arrangements;**
- e) Collection activities;**
- f) Call Centre activities;**
- g) Uncollectibles;**
- h) Billings;**
- i) Receipts;**
- j) Deposits held;**
- k) Deposits applied against accounts;**
- l) Final bills;**
- m) Levelized budget billing;**
- n) Any other indicator of residential billings, residential collections, residential customer payment or nonpayment.**

ANSWER:

Manitoba Hydro regularly compiles data for the purposes of monitoring operations and activity for the above mentioned items. These compilations vary in format from very detailed, customer specific reporting to broader summaries of activities. Many of these outputs are presented without context and without explanation, and therefore, would not be meaningful outside of the direct operational areas. To attempt to broadly compile all of these documents would require more time than is available in the current process and be costly, and is unlikely to provide the reader with meaningful information relevant to their specific interest.

In an attempt to provide insight into the above listed items, the following information has been provided:

	(a) Arrears (\$000)	(a) Number of Customers in Arrears	(e) Outbound Collection Calls ²	(e) Inbound Collection Calls ²	(d) Payment Arrangements	(e) Collection Notices Delivered	(b) Disconnect for Non- payment	(c) Reconnect
Jan-09	36,932	N/A ¹	10,182	10,473	6,268	1,125	92	89
Feb-09	42,353	22,677	9,639	11,398	5,992	915	277	163
Mar-09	42,882	22,546	12,606	14,236	9,029	1,335	340	235
Apr-09	42,344	23,833	15,022	17,115	11,421	1,320	523	368
May-09	42,930	24,572	19,396	13,662	11,976	1,467	1,202	719
Jun-09	40,607	24,964	15,173	17,319	9,609	1,763	1,947	1,367
Jul-09	37,074	24,123	16,471	16,738	9,808	1,970	1,874	1,534
Aug-09	35,209	24,717	13,007	14,171	7,947	1,561	1,361	1,060
Sep-09	31,774	24,609	13,455	12,700	7,077	1,541	1,215	1,142
Oct-09	30,737	23,664	13,251	11,928	6,810	1,200	456	642
Nov-09	30,744	22,890	13,464	11,449	6,946	1,381	332	427
Dec-09	31,929	21,821	12,042	9,479	5,561	732	126	194

¹Note: Number of customers in arrears by month was not archived prior to February, 2009.

²Note: Outbound and inbound collection call volumes are not available for Manitoba Hydro offices outside of Winnipeg.

	(f) Customer Contact Centre -Incoming Calls				(f) Customer Contact Centre - Emails Received
	<i>Billing</i>	<i>Service</i>	<i>Power Smart</i>	<i>Total</i>	
Jan-09	28,259	18,998	5,173	52,430	4626
Feb-09	23,788	15,555	4,410	43,753	4427
Mar-09	24,754	20,975	4,452	50,181	4303
Apr-09	24,834	16,506	4,291	45,631	4350
May-09	24,770	22,827	4,239	51,836	4666
Jun-09	27,852	25,836	4,416	58,104	5074
Jul-09	28,987	23,007	4,547	56,541	4747
Aug-09	31,746	20,843	5,044	57,633	4864
Sep-09	30,826	20,600	5,763	57,189	3830
Oct-09	31,731	23,211	6,786	61,728	3339
Nov-09	25,914	15,438	5,420	46,772	3712
Dec-09	23,298	16,822	4,187	44,307	3299
Total	326,759	240,618	58,728	626,105	51,237

	(g) Uncollectables (\$1000s)			(g) % Write-Off compared to Previous Year Revenue
Year	Gross Write-Off, net of taxes	Recovery of Prev. Yrs' Write-Off	Net Write-Off	
2004/05	2 431	489	1,942	0.211%
2005/06	2 778	399	2,379	0.253%
2006/07	3 169	640	2,529	0.257%
2007/08	3 319	749	2,570	0.251%
2008/09	3 382	787	2,595	0.242%

	(h) Billings (\$1000s) (Residential and General Service)	(i) Receipts (\$1000s) (Payments Applied to Electric Energy, Taxes, and Other Related Charges)	(j) Deposits Held (\$)	(l) Final Bills	(m) Equal Payment Plan Customers (Residential and General Service)
Jan-09	131,406	117,778	96,757	6,391	92,392
Feb-09	112,964	120,483	95,207	6,089	93,403
Mar-09	114,856	122,451	92,807	6,645	93,809
Apr-09	103,145	114,335	89,987	7,139	93,938
May-09	88,012	107,843	87,487	9,365	93,882
Jun-09	85,387	100,738	86,012	9,791	93,795
Jul-09	82,441	103,386	83,212	10,566	93,567
Aug-09	79,928	88,720	84,316	11,494	4 ,859*
Sep-09	80,401	91,600	81,441	10,023	86,623
Oct-09	87,165	91,446	78,681	10,153	101,494
Nov-09	89,949	106,173	75,906	8,094	103,342

* Note: For program administration purposes, customers are removed from the Equal Payment Plan in the balancing month (traditionally August) and re-enrolled the following billing month.

RCM/TREE/MH I-71

For each document provided in response to the data request immediately above, in addition to providing the date of the document provided, please indicate the frequency at which the document is generated.

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-70.

RCM/TREE/MH I-72

Please identify any documents, analyses or reports prepared, modified or used since October 2005, that addresses, concerns or refers to:

- a) Changes in collection procedures during the months of peak service disconnections;**

ANSWER:

PUB Order 14/08 identifies changes in collection procedures impacting combined natural gas/electric accounts. Please see Manitoba Hydro's response to CAC/MSOS/MH I-100(e).

RCM/TREE/MH I-72

Please identify any documents, analyses or reports prepared, modified or used since October 2005, that addresses, concerns or refers to:

- b) Changes in the decision rule on whether and/or when to perform certain collection activities during the months of peak service disconnections;**

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-72(a).

RCM/TREE/MH I-72

Please identify any documents, analyses or reports prepared, modified or used since October 2005, that addresses, concerns or refers to:

- c) Changes in collection practices or procedures of any sort that are adopted during the months of peak service disconnection.**

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-72(a).

RCM/TREE/MH I-72

Please identify any documents, analyses or reports prepared, modified or used since October 2005, that addresses, concerns or refers to:

- d) Changes in staffing levels or staffing scheduling during the months of peak service**

ANSWER:

Manitoba Hydro attempts to work with customers continuously throughout the year, providing information regarding the customer's bill, payments, and encouraging mutually acceptable arrangements to address any outstanding arrears, not just during the months of peak service disconnection. Manitoba Hydro does not change overall staffing levels specifically for the peak service disconnection months, work allocations may change but overall staffing levels do not change.

RCM/TREE/MH I-72

Please identify any documents, analyses or reports prepared, modified or used since October 2005, that addresses, concerns or refers to:

e) disconnections.

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-72(a).

RCM/TREE/MH I-73

Please provide any documents, analyses or reports prepared by or for Manitoba Hydro that indicates, evaluates or otherwise discusses the amount which residential arrears must reach in order for Manitoba Hydro to cost-effectively disconnect service due to the arrearage.

ANSWER:

Manitoba Hydro is unaware of any documents, analyses or reports to determine the amount residential arrears must reach in order to cost-effectively disconnect service. Under Manitoba Hydro's current policy, a residential bill must be past the due date of the 60 day bill and greater than \$100 prior to disconnection of service (please see Manitoba Hydro's response to CAC/MSOS/MH I-100(d)).

RCM/TREE/MH I-74

Please provide any documents, analyses or reports, not already provided in response to the request immediately above, which are in the custody or control of Manitoba Hydro, regardless of whether the documents or information contained therein was prepared by or for Manitoba Hydro, that indicates, evaluates, discusses, concerns or addresses in any way the amount which residential arrears must reach in order for Manitoba Hydro to cost-effectively disconnect service due to the arrearage.

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-73.

RCM/TREE/MH I-75

Please provide for each month October 2005 to present:

- a) The detailed monthly budgets for each department, office, workgroup or other functioning unit of Manitoba Hydro, by whatever name, preparing a detailed budget, involved with residential collections; and**
- b) The detailed monthly financial reports submitted to Manitoba Hydro fiscal personnel, by (or prepared for) each department, office, workgroup or other functioning units of Manitoba Hydro, by whatever name, involved with residential collections.**

If monthly budgets and/or financial reports are not available, provide what is available (e.g., annual, quarterly) using the most commonly-generated report (e.g., monthly over quarterly, quarterly over annual, etc.).

ANSWER:

As noted in Manitoba Hydro's responses to RCM/TREE/MH I-51 and RCM/TREE/MH I-52, residential collection activities are a part of the services provided by several Divisions at Manitoba Hydro including Business Support Services, Consumer Marketing and Sales, Customer Service Operations (South), Customer Service Operations (Winnipeg & North) and, as such, are not budgeted for separately.

Please see Manitoba Hydro's response to PUB/MH I-32(b) for divisional budget information.

RCM/TREE/MH I-76

Please provide complete residential tariff sheets, if any, for each and every one of the following:

- a) Late fees;**
- b) Deposits;**
- c) Bad check fees;**
- d) Disconnect/reconnect fees (for nonpayment);**
- e) New service connection fees;**
- f) Field collection fees;**
- g) Any and all other charges for residential customers.**

ANSWER:

There are no tariff sheets for residential fees other than energy rates.

Current fees/charges are:

a) Late Fees	1.25% monthly on balance outstanding
b) Deposits (where credit worthiness has not been established)	Rental Home \$300 Apartment (tenant pays heat) \$100 Apartment (landlord pays heat) \$50
c) Returned Cheque Fees	\$20 per item
d) Reconnect Fees	During working hours \$50 After hours \$65
e) New Service Connection Fees	No flat fee New service quotations prepared upon customer request
f) Field Collection Fees	none
g) Special Read Fees Federal Meter Dispute Fees	\$50 per reading \$35

RCM/TREE/MH I-77

For each fee for which a tariff page was provided, please provide:

a) The total residential revenue by year for 2005 to present generated by that fee;

ANSWER:

The following table outlines the revenue arising from the fees identified in RCM/TREE/MH I-76.

a) Late Fees	Please see Manitoba Hydro's response to RCM/TREE/MH I-43.
b) Deposits	There are no revenues generated. If the customer maintains their account in good standing for a period of twelve months, Manitoba Hydro applies a credit representing the deposit amount along with accrued interest to the customer's account. The credit may offset unpaid or future energy charges and other amounts owing. Refunds are available upon customer request.
c) Returned Cheque Fees	Please see Manitoba Hydro's response to RCM/TREE/MH I-46(a).
d) Reconnect Fees	Please see Manitoba Hydro's response to RCM/TREE/MH I-46(a).
e) New Service Connection Fees	There are no revenues generated. Costs associated with the connection of new residential services are billed on a cost-recovery basis.
f) Field Collection Fees	Not applicable - Please see Manitoba Hydro's response to RCM/TREE/MH I-76(f).
g) Special Read Fees	Please see Manitoba Hydro's response to RCM/TREE/MH I-46(a).
Federal Meter Dispute Fees	Please see Manitoba Hydro's response to RCM/TREE/MH I-46(a).

RCM/TREE/MH I-77

For each fee for which a tariff page was provided, please provide:

b) The ratemaking treatment of that revenue; and

ANSWER:

Manitoba Hydro fees for these services are not regulated and do not require PUB approval.

The revenues forecast from these miscellaneous fees are taken into consideration when making a determination of the necessity for and magnitude of rate increases.

RCM/TREE/MH I-77

For each fee for which a tariff page was provided, please provide:

- c) **The proposed ratemaking treatment of that revenue in this proceeding.**

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-77(b).

RCM/TREE/MH I-78

Please provide a comprehensive list of the options that a residential customer of Manitoba Hydro has to pay his or her utility bill. The list of payment options should include, if available, payment through a third party authorized community pay station (or payment center).

ANSWER:

Customers have the following options available for payment of utility bills:

- In person at Manitoba Hydro office locations,
- Mail,
- In person at one of our authorized collection agents,
- In person at a financial institution,
- Electronic (On-line through Internet or through telephone banking), and
- Pre-Authorized Payment Plan.

RCM/TREE/MH I-79

For each option identified in the data request immediately above:

- a) **for each month January 1, 2005 to present, please provide the number of payments received through each option;**

ANSWER:

The following table presents the number of payments received per month for each of the available payment options.

Month	Offices	Mail	Agents	Banks (OTC)	Electronic	Pre-Auth
January 2005	96,379	96,434	8,756	50,635	231,398	101,575
February	100,495	98,547	9,142	54,767	237,243	119,529
March	107,117	107,963	10,038	61,106	264,401	137,412
April	103,699	98,684	8,086	52,039	235,729	107,730
May	110,632	103,603	8,818	56,842	261,110	127,055
June	106,215	96,218	8,403	54,371	236,231	115,247
July	98,895	92,152	8,068	54,523	241,277	118,365
August	101,943	96,571	8,767	56,835	251,623	122,862
September	97,187	91,195	8,590	52,686	233,854	114,381
October	96,187	96,612	8,714	55,178	259,680	121,720
November	95,018	100,294	8,538	57,298	255,791	126,960
December	92,500	96,194	8,367	57,102	259,066	133,788
January 2006	87,003	88,635	7,445	46,505	224,518	95,736
February	83,932	81,088	6,487	36,676	187,132	94,106
March	89,398	85,592	6,761	28,455	202,321	102,197
April	77,798	62,471	4,639	18,414	169,809	68,066
May	101,324	89,811	6,864	23,468	226,879	105,362
June	87,600	70,197	4,996	16,406	185,947	81,183
July	82,069	68,307	5,160	14,921	192,535	81,164
August	79,975	72,811	5,544	14,308	189,081	82,950
September	73,510	63,342	4,477	11,101	169,564	70,953
October	77,815	73,529	5,143	12,252	208,261	82,162

Month	Offices	Mail	Agents	Banks (OTC)	Electronic	Pre-Auth
November	79,549	79,792	5,732	13,034	208,859	92,809
December	70,328	68,718	4,706	11,764	192,873	93,008
January 2007	81,728	76,919	5,388	12,622	222,451	93,432
February	72,942	68,540	4,695	11,360	198,887	93,506
March	84,087	75,083	5,055	12,297	218,654	93,575
April	81,877	67,604	4,265	11,419	211,700	83,633
May	91,511	77,722	5,271	13,044	228,329	98,576
June	72,370	64,405	4,141	11,196	199,671	82,633
July	78,986	65,485	4,216	11,272	210,562	87,206
August	75,730	65,608	4,064	11,383	197,408	82,632
September	68,298	59,072	3,243	10,377	186,771	74,073
October	78,030	70,496	3,616	12,281	225,866	92,350
November	71,896	66,461	3,456	11,521	210,107	81,089
December	65,198	63,442	3,168	11,170	210,764	92,030
January 2008	75,443	68,661	3,312	11,631	222,741	84,679
February	74,088	63,159	3,078	10,900	212,366	88,664
March	74,039	64,390	3,058	11,068	228,529	89,743
April	84,269	65,999	2,740	11,859	234,876	89,194
May	83,975	70,267	3,023	11,594	225,867	96,301
June	75,173	56,402	2,579	10,094	210,998	84,720
July	78,602	62,591	2,902	11,099	223,291	88,580
August	70,090	55,462	2,295	9,696	198,045	81,505
September	73,428	59,958	2,768	10,554	225,866	88,651
October	67,731	61,546	2,694	10,047	221,360	82,592
November	62,508	56,449	2,350	8,495	206,831	82,530
December	65,397	63,133	2,594	8,462	237,924	96,959
January 2009	65,457	58,618	2,382	7,669	223,306	85,411
February	61,838	53,693	2,102	7,451	220,660	85,123
March	71,327	64,590	2,394	8,167	262,909	98,486
April	66,911	55,937	2,098	7,381	223,406	85,608
May	69,790	57,360	2,163	7,366	230,812	92,895
June	66,110	56,159	1,993	7,252	226,292	81,182
July	66,231	58,844	2,088	7,292	243,256	93,938
August	58,904	51,881	1,850	6,241	215,624	82,354

Month	Offices	Mail	Agents	Banks (OTC)	Electronic	Pre-Auth
September	57,628	56,168	1,984	6,545	224,171	85,982
October	49,169	54,373	1,973	6,645	223,623	79,053
November	56,034	61,245	2,073	6,869	240,647	98,003
December	52,361	56,816	1,876	6,932	244,001	98,916
January 2010	52,798	54,471	1,792	6,164	227,753	83,097

RCM/TREE/MH I-79

For each option identified in the data request immediately above:

b) indicate the fee, if any, which is imposed to utilize that option;

ANSWER:

Manitoba Hydro does not assess any fee to the customer to collect utility payments, therefore there is no revenue generated to the benefit of the corporation.

At the discretion of the individual agent, authorized collection agents may assess a convenience fee (established with no direction from Manitoba Hydro) for accepting and processing a customer's utility payment.

As well, a customer's financial institution may assess a fee for electronic, telephone banking, or in person payments depending on the type of account the customer has established with their financial institution.

RCM/TREE/MH I-79

For each option identified in the data request immediately above:

- c) **for each year 2005 to present, please provide the dollars generated by such fee.**

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-79(b).

RCM/TREE/MH I-80

Please provide a list of each incorporated community served by Manitoba Hydro, along with the number of residential customers served in that community.

ANSWER:

Manitoba Hydro does not retain incorporated community identification within customer records. Accounts are grouped geographically into communities which may or may not be incorporated. Rural customers are assigned to these communities depending on proximity and Manitoba Hydro distribution facilities.

December 2009 Residential Customer Count

City	Count
Aghaming	6
Albert Beach	322
Alexander	136
Allegra	30
Alonsa	166
Altamont	73
Altona	1,855
Amaranth	174
Angusville	149
Anola	482
Arbakka	29
Arborg	1,191
Arden	133
Argyle	222
Arnaud	53
Arnes	1,082
Arnolds Co-Op	6
Arrow River	26
Ashern	684
Ashville	79
Aubigny	69

City	Count
Austin	339
Bacon Ridge	60
Badger	30
Bagot	108
Bakers Narrows	445
Baldur	270
Balmoral	338
Barren Lake	27
Barrier Bay	53
Barrows	65
Basswood	89
Beaconia	299
Beausejour	2,951
Beaver	19
Beaver Creek	52
Belair	936
Belleview	22
Bellsite	18
Belmont	185
Benito	399
Benyks Point	12
Berens River	291
Beresford	27
Bethany	45
Betula Lake	173
Beulah	184
Bield	5
Big Whiteshell	181
Big Woody	31
Binscarth	325
Birch River	300
Bird	50
Bird Lake	121
Birds Hill	2
Birnie	88

City	Count
Birtle	424
Bissett	121
Black River	172
Bloodvein	174
Blue Lake	6
Blumenfeld	59
Blumenort	608
Blumenort South	26
Boggy Creek	112
Boissevain	993
Booster Lake	70
Bowsman	351
Bracken Dam	30
Bradwardine	6
Brandon	19,409
Brereton Lake	351
Broad Valley	82
Brochet	119
Brokenhead	75
Brookdale	35
Brunkild	111
Bruxelles	37
Buffalo Point	297
Butler	13
Caddy Lake	167
Caliento	47
Camp Morton	257
Camper	32
Camperville	401
Carberry	1,200
Cardale	11
Cardinal	22
Carey	2
Carlowrie	32
Carman	1,584

City	Count
Carrick	15
Carroll	91
Cartier	228
Cartwright	281
Cayer	31
Cfb Southport	117
Chater	40
Chatfield	60
Chimo Resort	54
Chortitz	63
Churchill	561
Clandeboye	114
Clanwilliam	76
Clear Lake	834
Clearwater	98
Clearwater Lake	369
Cloverleaf	176
Cooks Creek	462
Cormorant	133
Coulter	46
Cowan	76
Cracknell	8
Cranberry Portage	335
Crandall	33
Crane River	205
Crescent Cove	36
Cromer	74
Cross Lake	973
Crossing Bay	19
Crystal City	288
Culross	32
Cypress River	207
Dacotah	12
Dakota Tipi	1
Dallas	24

City	Count
Darlingford	267
Dauphin	4,381
Dauphin Beach	117
Dauphin River	54
Dauphin River Fnc	1
Davidson Lake	48
Dawson Bay	20
Decker	30
Deepdale	17
Deleau	53
Deloraine	691
Delta	189
Desalaberry	1
Ditch Lake	25
Domain	61
Dominion City	206
Dorothy Lake	79
Douglas	213
Dropmore	85
Duck Bay	137
Dufresne	167
Dufrost	35
Dugald	471
Dunrea	85
Durban	122
East Braintree	68
East Selkirk	432
East St Paul	2,547
Easterville	316
Ebb And Flow	384
Ebor	20
Eddystone	110
Eden	137
Edrans	57
Edwin	4

City	Count
Eleanor Lake	53
Elgin	104
Elie	329
Elkhorn	351
Elm Creek	351
Elma	213
Elphinstone	236
Elva	35
Emerson	344
Endcliffe	12
Erickson	941
Eriksdale	468
Ethelbert	311
Ewart	13
Fairfax	44
Fairford	292
Falcon Lake	896
Fannystelle	76
Faulkner	43
Finns	50
Firdale	31
Fisher Bay	15
Fisher Branch	561
Fisher River	418
Flanders Lake	44
Flin Flon	2,613
Fork River	125
Forrest	9
Forrest Station	8
Fort Alexander	630
Foxwarren	199
Franklin	42
Fraserwood	200
Friedensfeld	12
Friedensruh	29

City	Count
Garden Hill	513
Gardenton	126
Garland	75
Garson	393
Gilbert Plains	618
Gillam	476
Gimli	2,340
Giroux	305
Gladstone	638
Glenboro	536
Glenella	169
Glenlea	68
Glenmoor	22
Glenora	67
Gnadenfeld	26
Gnadenthal	49
Gods Lake Narrows	333
Gods River	99
Goodlands	75
Grahamdale	40
Grand Beach	531
Grand Clairiere	4
Grand Marais	1,204
Grand Rapids	360
Grande Pointe	145
Grandview	791
Granville Lake	13
Graysville	79
Great Falls	312
Green Lake	3
Green Oak	19
Green Ridge	26
Gretna	278
Grindstone	273
Griswold	424

City	Count
Grosse Isle	171
Grunthal	867
Gull Lake	342
Gunton	195
Gypsumville	79
Hadashville	151
Halbstadt	55
Hallboro	4
Hamiota	562
Harding	30
Hargrave	37
Harrowby	8
Hartney	333
Haskett	40
Haywood	137
Hazelridge	290
Headingley	951
Hecla Island	141
Herb Lake Landing	14
High Bluff	52
Highland Glen	94
Hilbre	70
Hillside Beach	648
Hilton	20
Hnausa	170
Hochfeld	111
Hodgson	93
Hole River	187
Holland	322
Holmfield	49
Homewood	83
Horndean	70
Horod	3
Horton	1
Howden	60

City	Count
Husavik	63
Ile Des Chenes	804
Ilford	42
Inglis	365
Inwood	266
Isabella	36
Jackhead	71
Jessica Lake	103
Justice	12
Kaleida	5
Kane	28
Katrime	13
Kelwood	130
Kemnay	34
Kenton	175
Kenville	164
Killarney	1,354
Kinosota	56
Kirkella	19
Kirkness	55
Kleefeld	477
Kola	54
Komarno	251
Koostatak	16
La Barriere	17
La Broquerie	1,082
La Riviere	133
La Salle	771
Lac Brochet	137
Lac Du Bonnet	3,866
Ladywood	86
Laguna Beach	18
Lake Francis	97
Lake St Martin	175
Lakeland	23

City	Count
Landmark	739
Langruth	204
Lauder	34
Laurier	147
Lavenham	71
Leaf Rapids	259
Ledwyn	25
Leisure Falls	2
Lena	36
Lenore	45
Lenswood	36
Letellier	167
Libau	285
Linden	23
Little Bullhead	2
Little Grand Rapids	235
Little Saskatchewan	109
Liz Lake	89
Lk-Mb-First-Nation	230
Lockport	134
Long Plain Fn	27
Loni Beach	1
Loon Straits	25
Lorette	1,435
Lowe Farm	195
Lowland	18
Lundar	693
Lyleton	76
Lynn Lake	288
Macdonald	32
Macgregor	603
Mafeking	134
Makaroff	5
Makinak	52
Mallard	41

City	Count
Malonton	38
Manigotagan	194
Manitou	560
Manson	26
Marchand	223
Margaret	55
Mariapolis	65
Marius	2
Marquette	115
Mather	92
Matheson Island	74
Matlock	670
Mcauley	169
Mcconnell	10
Mccreary	491
Mcmunn	23
Mctavish	24
Meadow Portage	243
Meadows	56
Medika	49
Medora	61
Meleb	104
Melita	647
Melrose	187
Menisino	37
Menzie	4
Metigoshe Lake	236
Miami	311
Middlebro	64
Millwood	12
Miniota	191
Minitonas	459
Mink Creek	34
Minnedosa	1,611
Minto	118

City	Count
Mitchell	706
Molson	28
Moore Park	8
Moose Lake	203
Moose Lake S	87
Moosehorn	239
Morden	3,569
Morris	865
Morweena	4
Mountain Road	29
Mulvihill	17
Myrtle	44
Napinka	79
Narcisse	38
Neelin	41
Neepawa	1,929
Nelson House	495
Nesbitt	142
Neubergthal	33
Neuenberg	33
Neuhorst	15
New Bothwell	270
Newdale	152
Newton	18
Ninette	496
Ninga	51
Niverville	1,525
Norway House	1,335
Notre Dame	328
Notre-Dame-Lourdes	7
Nutimik Lake	240
Oak Bluff	344
Oak Brae	8
Oak Lake	670
Oak Point	76

City	Count
Oak River	103
Oakbank	1,232
Oakburn	450
Oakner	24
Oako Beach	24
Oakview	128
Oakville	198
Oberon	2
Ochre Beach	80
Ochre River	229
Olha	1
Onanole	1,093
Opaskwayak	28
Osborne	19
Ostenfeld	6
Osterwick	44
Otter Falls	84
Otterburne	189
Overstoneville	11
Oxford House	413
Paint Lake	126
Pansy	69
Patricia Beach	73
Pauingassi	105
Peguis	781
Peguis Reserve	5
Pelican Lake	189
Pelican Rapids	39
Petersfield	507
Pierson	196
Pikwitonei	42
Pilot Mound	525
Pinawa	643
Pine Creek	31
Pine Dock	120

City	Count
Pine Falls	244
Pine River	295
Piney	117
Pipestone	269
Pleasant Valley	87
Plum Coulee	358
Plumas	259
Pointe Du Bois	134
Polonia	20
Ponemah	281
Pope	12
Poplar Point	81
Poplar River	206
Poplarfield	125
Portage La Prairie	7,317
Powerview	492
Pratt	29
Prawda	92
Princess Harbour	5
Pukatawagan	383
Purves	14
Randolph	60
Rapid City	372
Rathwell	151
Red Deer Lake	11
Red Rock Lake	121
Red Sucker Lake	173
Reinfeld	378
Reinland	80
Rennie	59
Renwer	35
Reston	355
Richer	480
Ridgeville	86
Riding Mountain	143

City	Count
River Hills	76
Rivers	747
Riverton	598
Rm Of Brokenhead	8
Rm Of Cornwallis	169
Rm Of Dauphin	4
Rm Of Dufferin	7
Rm Of East St Paul	560
Rm Of Elton	23
Rm Of Gilbert Plains	4
Rm Of Gimli	82
Rm Of Glenwood	4
Rm Of Grandview	1
Rm Of Grey	3
Rm Of La Broquerie	50
Rm Of Langford	6
Rm Of Macdonald	23
Rm Of Morris	5
Rm Of Morton	3
Rm Of North Cypress	2
Rm Of North Norfolk	13
Rm Of Portage	1
Rm Of Rhineland	2
Rm Of Ritchot	72
Rm Of Rockwood	14
Rm Of Roland	1
Rm Of Rosser	1
Rm Of Russell	7
Rm Of Shell River	27
Rm Of Shellmouth	5
Rm Of Springfield	10
Rm Of St Andrews	1,022
Rm Of St Clements	181
Rm Of Stanley	1
Rm Of Ste Anne	11

City	Count
Rm Of Tache	14
Rm Of Turtle Mountai	2
Rm Of Wallace	5
Rm Of West St Paul	421
Rm Of Westbourne	37
Rm Of Woodlands	3
Rm Portage La Prairi	2
Roblin	1,495
Rock Lake	31
Rock Lake North	49
Rock Lake South	61
Rock Ridge	19
Rockwood	29
Roland	281
Rorketon	332
Rosa	79
Roseau River	137
Roseau River Ir	169
Rosebank	77
Roseisle	134
Rosenfeld	112
Rosengart	24
Rosenort	316
Rosetown	25
Ross	140
Rossburn	691
Rossendale	83
Rosser	263
Rossman Lake	57
Rounthwaite	4
Russell	973
San Clara	97
Sandilands	78
Sandridge	14
Sandy Bay	539

City	Count
Sandy Hook	773
Sandy Lake	630
Sanford	437
Sapotaweyak	243
Sarto	131
Scanterbury	166
Scarth	18
Schanzenfeld	217
Schoenwiese	27
Sclater	22
Seddons Corner	75
Selkirk	3,408
Setting Lake	170
Seven Sisters Falls	281
Sewell	9
Seymourville	37
Shamattawa	172
Shell Valley	20
Shellmouth	42
Sherridon	44
Shevlin	22
Shilo	570
Shoal Lake	590
Shoal River	1
Shortdale	52
Sidney	138
Sifton	196
Silver	54
Silver Ridge	61
Silverton	37
Sinclair	67
Singush Lake	39
Skownan	111
Smith Hill	12
Snow Lake	525

City	Count
Snowflake	50
Solsgirth	45
Somerfeld	22
Somerset	278
Souris	992
South Indian Lake	196
South Junction	74
Southport	75
Spence Lake	4
Sperling	126
Split Lake	374
Sprague	186
Springfield	765
Springstein	55
Spruce Siding	11
Sprucewoods	126
St Adolphe	585
St Alphonse	19
St Ambroise	86
St Andrews	2,603
St Claude	474
St Clement	18
St Clements	2,238
St Eustache	170
St Francois Xavier	405
St Georges	194
St Germain	36
St Germain South	5
St Jean Baptiste	237
St Joseph	55
St Labre	55
St Laurent	1,312
St Lazare	196
St Leon	64
St Malo	818

City	Count
St Martin	128
St Norbert	85
St Pierre	4
St Pierre Jolys	544
St Theresa Point	533
Star Lake	126
Starbuck	298
Ste Agathe	242
Ste Anne	1,432
Ste Elizabeth	28
Ste Genevieve	389
Ste Rita	74
Ste Rose Du Lac	731
Stead	86
Steep Rock	170
Steinbach	5,600
Stephenfield	86
Stevenson Island	43
Stockton	39
Stonewall	2,253
Stony Mountain	757
Strathclair	325
Strathcona Park	60
Stuartburn	82
Sundown	164
Swan Lake	379
Swan River	2,259
Tadoule Lake	109
Teulon	907
Thalberg	55
The Pas	2,506
The Pas Reserve	520
Thicket Portage	51
Thompson	4,292
Thornhill	26

City	Count
Tilston	95
Tolstoi	115
Tourond	33
Toutes Aides	27
Traders Lake	45
Traverse Bay	431
Treesbank	10
Treherne	435
Tuokko N	37
Tuokko S	22
Tyndall	518
Ukraina	15
Umpherville	48
Valley River	56
Valley River Reserve	92
Vassar	99
Venlaw	17
Vermette	14
Victoria Beach	1,407
Village Of Dunnotar	73
Virden	1,873
Vista	1
Vita	292
Vivian	434
Vogar	54
Volga	16
Wabowden	193
Waldersee	44
Wampum	10
Wanless	194
Warren	504
Wasagamack	226
Waskada	179
Waterhen	48
Wawanesa	317

City	Count
Waywayseecappo	138
Wellwood	25
West Hawk Lake	552
West St Paul	1,239
Westbourne	37
Westgate	6
Wheatland	19
White Lake	83
Whitefish Lake	22
Whitemouth	288
Whiteshell	26
Whtewold	253
Winkler	3,836
Winnipeg	239,413
Winnipeg Beach	1,811
Winnipegosis	482
Woodlands	400
Woodmore	56
Woodnorth	33
Woodridge	249
Woodside	16
Worby	37
Wuskwi Sipihk	48
York Landing	117
Youngs Point	34
Zhoda	126
TOTAL	464,305

RCM/TREE/MH I-81

Please provide the most recent study showing the month-by-month load curve:

- a) For residential customers as a whole for a complete 12-month period;**

ANSWER:

Please see Appendix 20.

RCM/TREE/MH I-81

Please provide the most recent study showing the month-by-month load curve:

b) For each residential tariff class for a complete 12-month period;

ANSWER:

The monthly 2008/09 load curves for Standard residential customers are provided in RCM/TREE/MH I-81(a). There is no other separate Load Research data for Seasonal or Diesel residential tariff classes.

RCM/TREE/MH I-81

Please provide the most recent study showing the month-by-month load curve:

c) For low-income residential recipients for a complete 12-month period;

ANSWER:

Manitoba Hydro has no separate Load Research data for low-income residential customers.

RCM/TREE/MH I-81

Please provide the most recent study showing the month-by-month load curve:

d) For low-use residential customers, who are also low-income; and

ANSWER:

Manitoba Hydro has no separate Load Research data for low-income residential customers.

RCM/TREE/MH I-81

Please provide the most recent study showing the month-by-month load curve:

- e) For low-use residential customers, whether or not such customers are low-income; using whatever definition of “low-use” has been utilized by Manitoba Hydro.**

ANSWER:

Please refer to Appendix 43 for the twelve graphs. Low-use is defined as being less than 6,000 kWh/year or 500 kWh/month for the purposes of this response.

RCM/TREE/MH I-82

Please provide a copy of any study, memo, evaluation or analysis of any nature that discusses, assesses or otherwise considers the differences in the load curve for residential customers depending on the:

- a) The monthly kWh consumption of the customer;**

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-82(b).

RCM/TREE/MH I-82

Please provide a copy of any study, memo, evaluation or analysis of any nature that discusses, assesses or otherwise considers the differences in the load curve for residential customers depending on the:

b) The annual kWh consumption of the customer;

ANSWER:

Please see the following attachments which are two responses from the 2004/2005 GRA.

TREE/RCM/MH I-22

In the 2002 proceeding, Manitoba Hydro provided estimates of the residential load factor at usage levels of 0 – 250 kW.h, 250 – 1000 kW.h, 1,000 – 2,000 kW.h, and greater than 2,000 kW.h. Provide the underlying analysis for this data, and any updates to this data prepared since that time.

ANSWER:

The results from the 2002 proceeding were produced from the Manitoba Hydro Load Research Sample for the fiscal year 2000-2001. The results were prepared to test the hypothesis presented by TREE/RCM that low consumption customers have higher class coincident load factors than higher consumption customers.

No further analysis has been performed since these results were produced. However the residential load research sample was reconfigured in December 2003. The new sample design was configured to provide more data points in low consumption customers. The new sample will provide better data to test the hypothesis presented at the 2002 status update hearing. The data from the new sample will not be available until the end of the 2004/2005 fiscal year.

The analysis was performed using the average monthly kWh plotted against the load at 1) Manitoba Hydro system coincident peak, 2) the Residential Class coincident peak and 3) the average of the top 4 system peaks. The results are presented below.

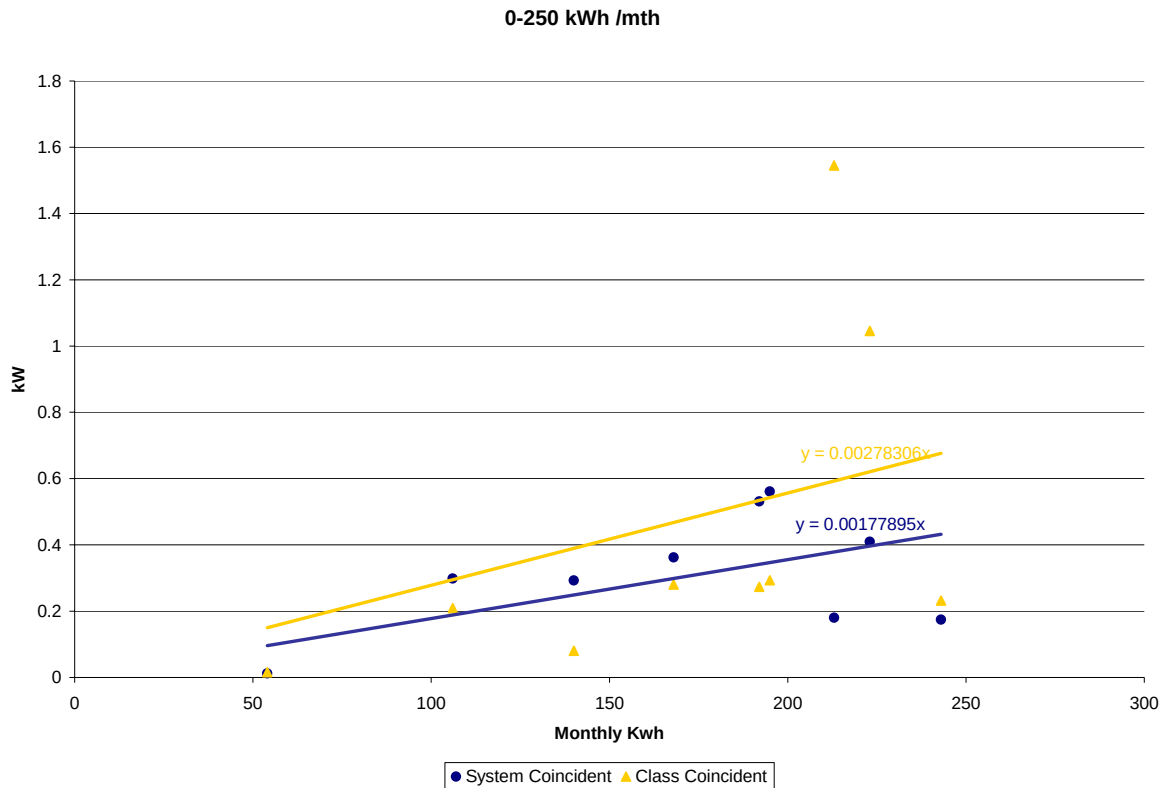


Figure 1

Figure 1 plots the relationship between the residential customers with monthly kWh below 250 against the contribution to peak at both the System and the Class coincident peak. The slope of the regression line represents an inverse relationship to average Load Factor.

$$LoadFactor = kWh / kw(8760)$$

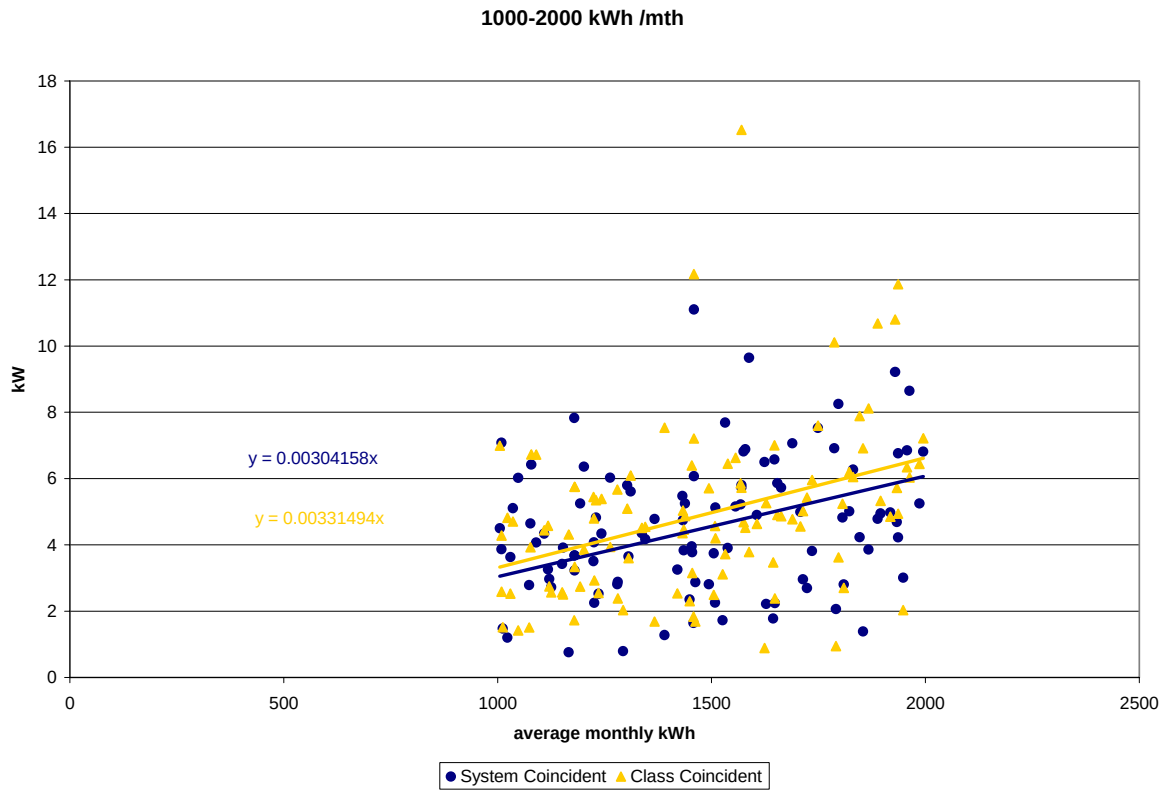
$$Slope = kw / (kWh / 12)$$

$$LoadFactor = 1 / (730 * slope)$$

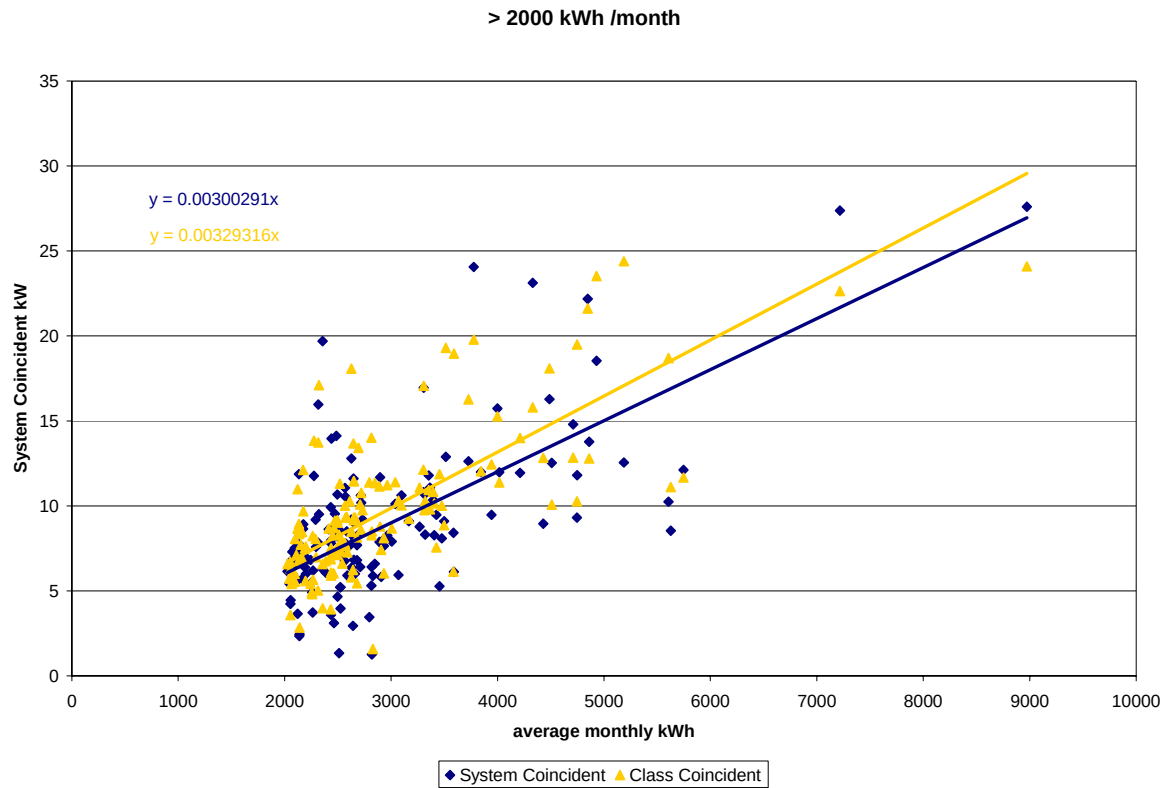
Resulting in the average Load Factor for residential customers below 250 kWh /month is 49.22% for Class Coincident Peak and 77.00% for the System coincident peak.



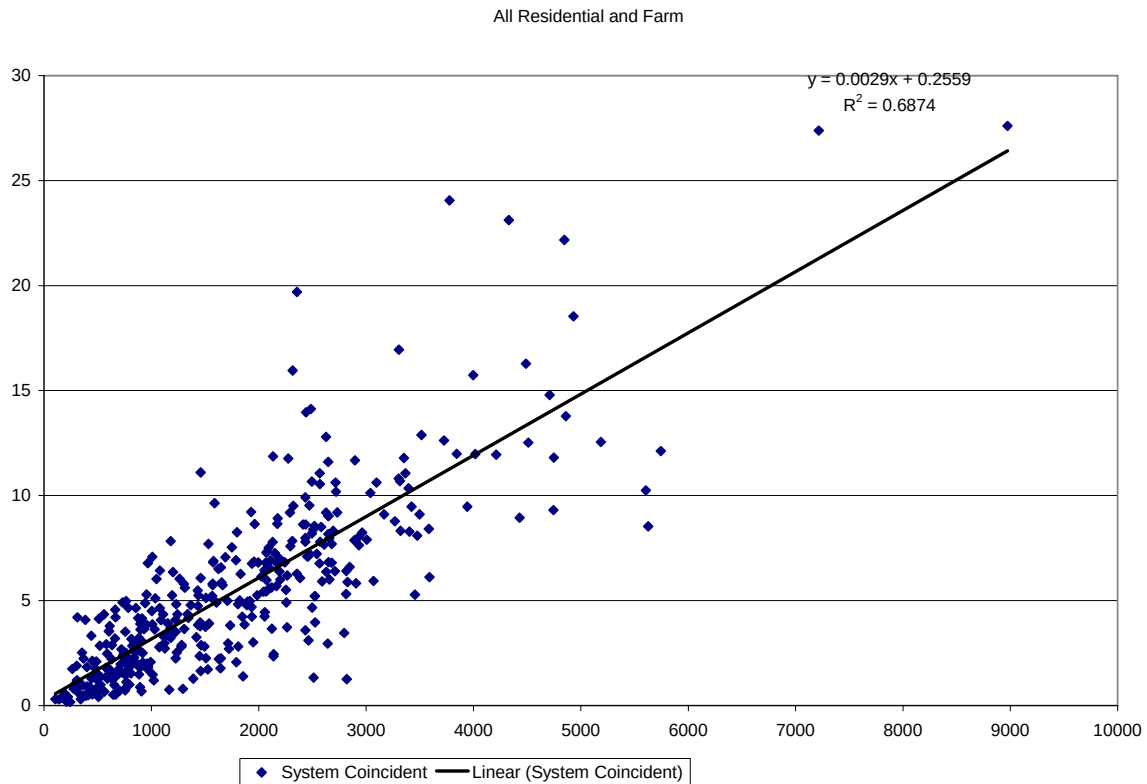
For customers between 250-1000 kWh/month the result is 43.40% for the Class Coincident and 46.76% for System Coincident load Factors



For customers between 1000-2000 kWh/month the result is 41.32% for the Class Coincident and 44.98% for System Coincident load Factors



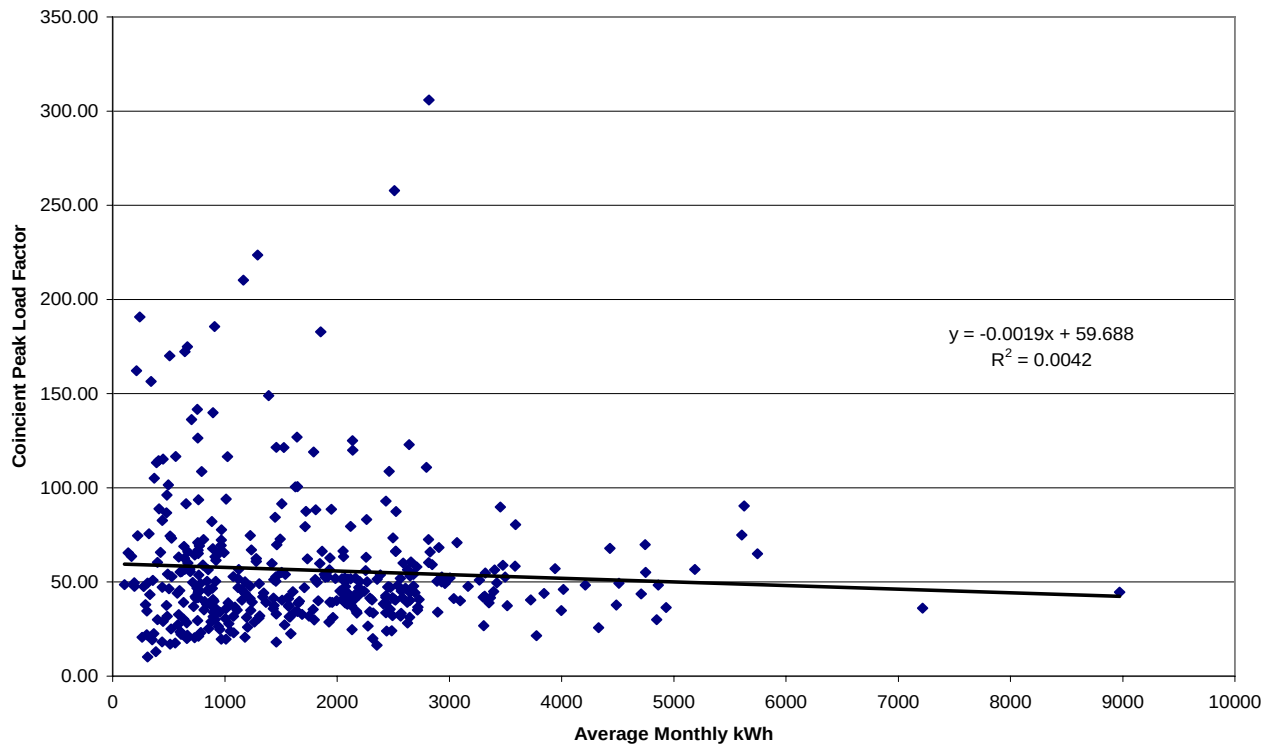
For customers greater than 2000 kWh/month the result is 41.59% for the Class Coincident and 45.62% for System Coincident load Factors



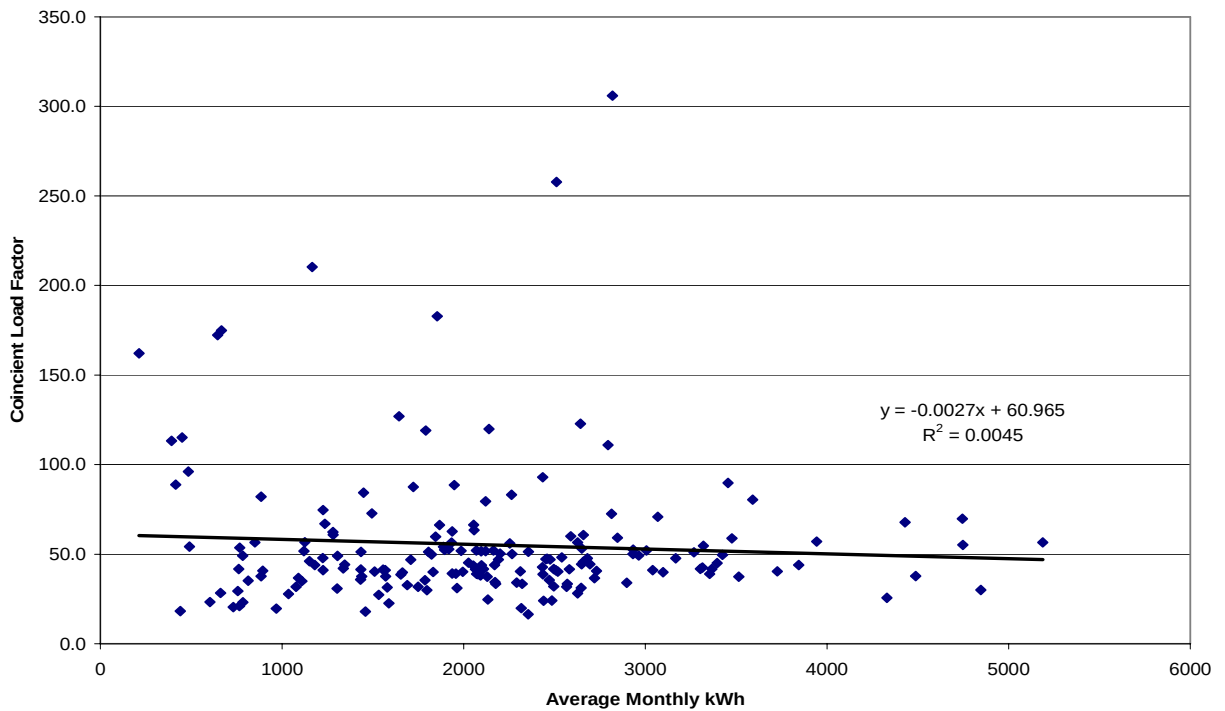
For all customers the result is 47.20% for the System Coincident load Factor

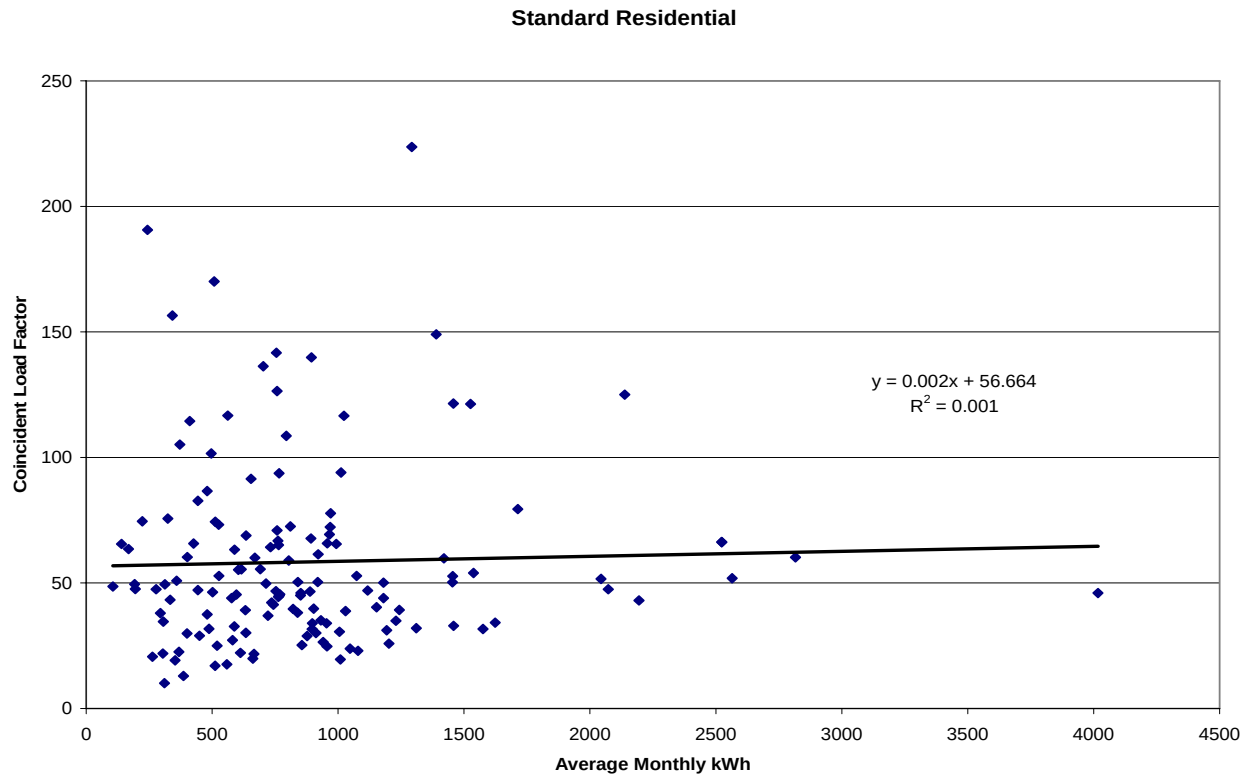
Load Factors were then plotted with respect to average monthly kWh for various subclasses of residential customers. A regression line was plotted to determine any relationship between average monthly kWh and the system coincident peak. The slope of the regression line or the value multiplied by x is the change in load factor per kWh

All Residential and Farm

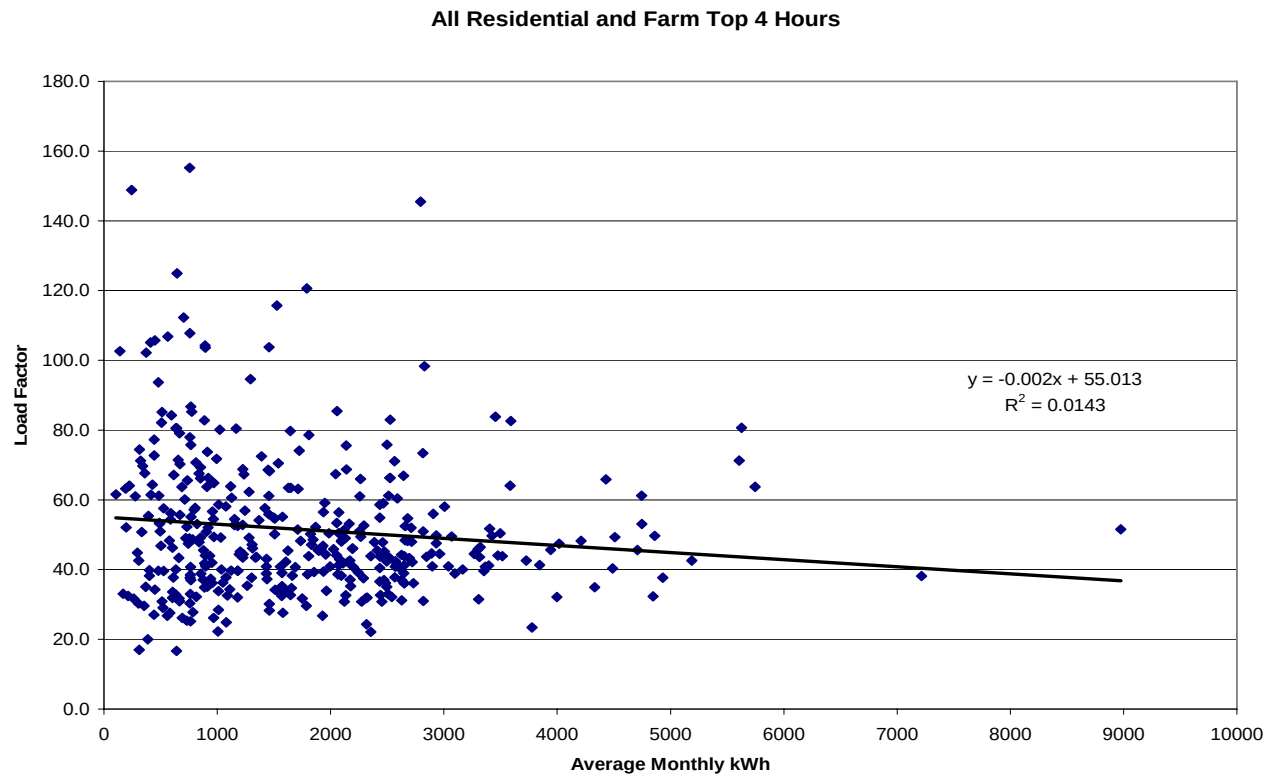


All Electric Residential

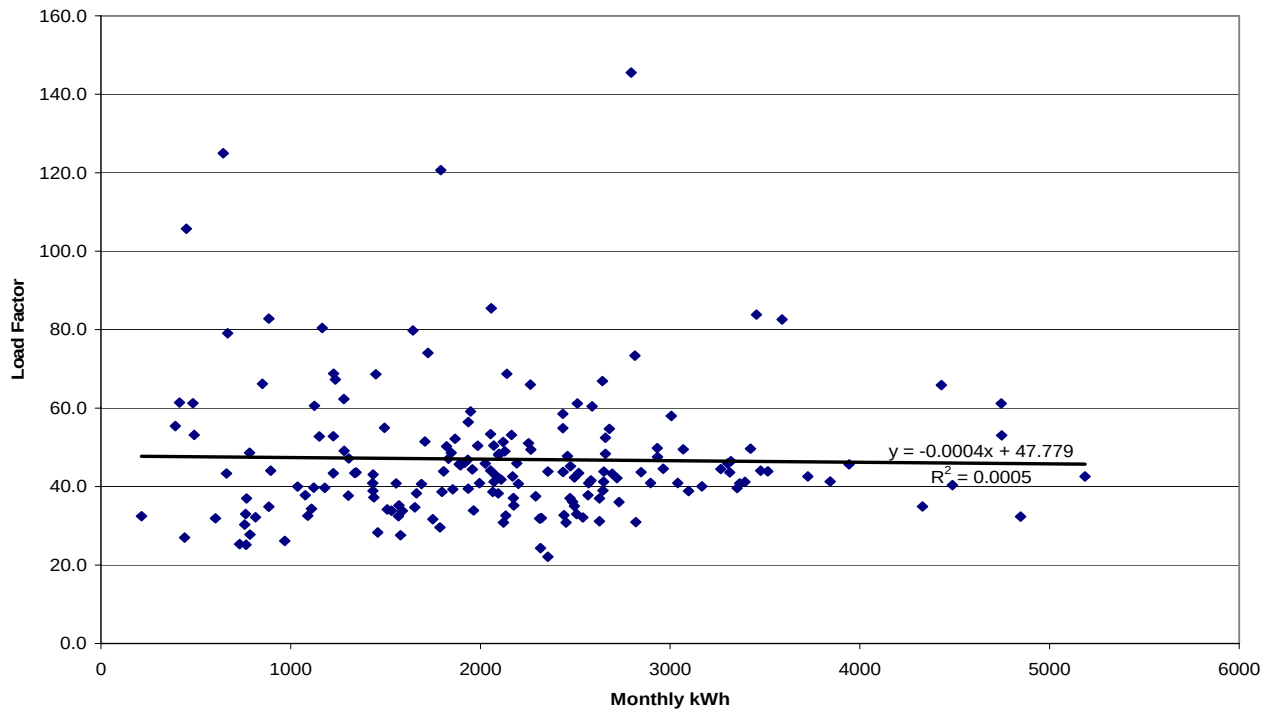




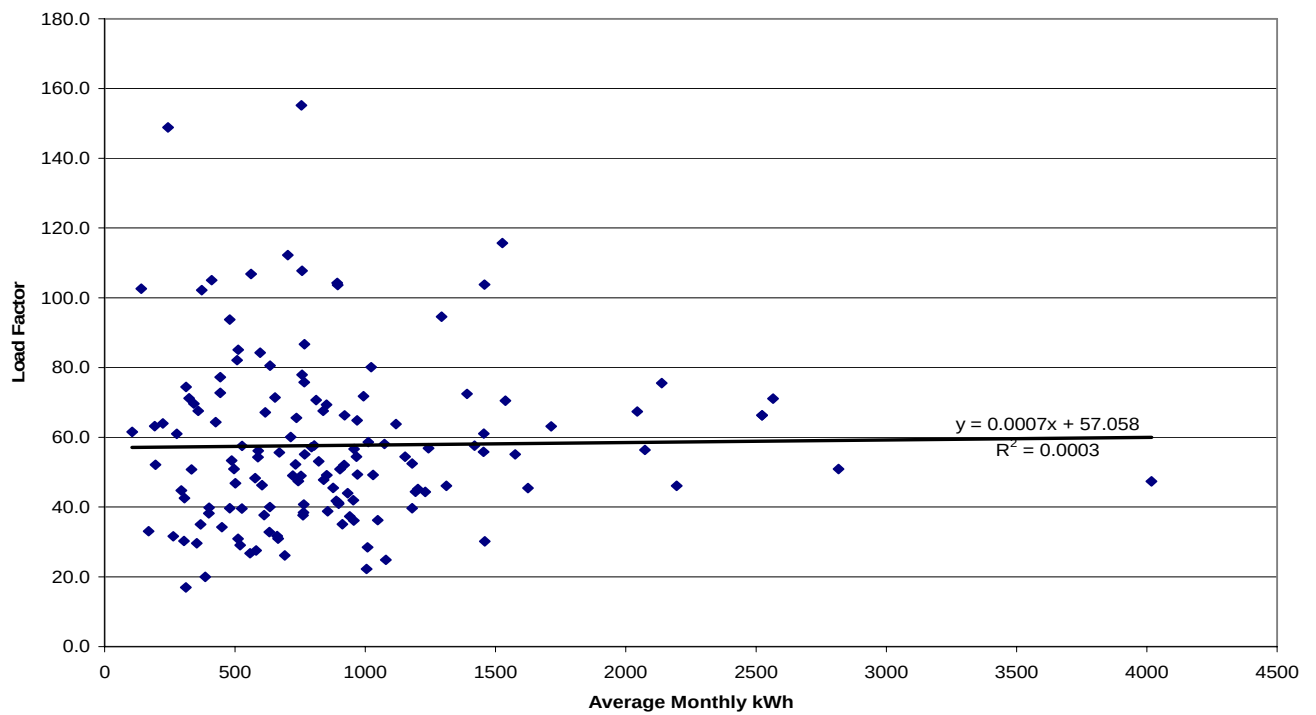
The following plots used the top 4 system hours to test sensitivity



All Electric Residential Top 4 Hours



Residential Standard Top 4 Hours



TREE/RCM/MH II-1

Referring to the response to TREE/RCM/MH I-22, please clarify exactly what is being measured. Page 3 of the response is “for customers between 250 kWh/month and 1,000 kWh/month. Does this mean that this is the estimated load factor for the TOTAL LOAD of customers whose monthly usage falls in this range, or is it the estimated load factor associated with their usage in excess of 250 kWh?

ANSWER:

The data provided is the actual measured integrated hourly kW at the time of the class and system coincident peaks for customers who have an average total monthly consumption (annual kWh/12) between 250 and 1000 kWh per month. As such, it is their load factor based on their total load. The customers were in the Load Research residential sample and had interval metering that provides hourly measurement of their total premise load.

Load factor is the ratio or relationship of average consumption (kWh) to peak consumption; as such the slope of the regression line is the average load factor for the group. The plots graphically represent the relationship of peak consumption to average consumption for all the customers grouped by their average monthly consumption. The graphical representation indicates a significant degree of correlation between coincident peak and average monthly kWh. If the hypothesis that load factor decreased as consumption increased the relationship would not be linear, but would have a higher slope at low kWh and decreasing slope at higher kWh. The second set of plots use the same data as the first plots but plot individual load factors against average monthly kWh to show the change in load factor with respect to consumption. Although the second set of plots indicates there is some decrease in load factor as kWh consumption increases the decrease is not significant.

RCM/TREE/MH I-82

Please provide a copy of any study, memo, evaluation or analysis of any nature that discusses, assesses or otherwise considers the differences in the load curve for residential customers depending on the:

c) The income of the customer.

ANSWER:

Manitoba Hydro has no separate Load Research data for residential customers depending on income.

RCM/TREE/MH I-83

Regarding the electricity usage of residential customers:

- a) For each of the last 12 months, please separately provide the numbers of low-income residential customers with monthly usage levels as follows:
- i. At or below 200 kWh,
 - ii. Between 200 and 250 kWh;
 - iii. Between 250 and 300 kWh;
 - iv. Between 300 and 350 kWh;
 - v. Between 350 and 400 kWh;
 - vi. Between 400 and 450 kWh;
 - vii. Between 450 and 500 kWh;
 - viii. Between 500 and 550 kWh;
 - ix. Between 500 and 600 kWh;
 - x. Between 600 and 650 kWh;
 - xi. Between 650 and 700 kWh;
 - xii. Between 700 and 750 kWh;
 - xiii. Between 750 and 800 kWh;
 - xiv. Between 800 and 850 kWh;
 - xv. Between 850 and 900 kWh;
 - xvi. Between 900 and 950 kWh;
 - xvii. Between 950 and 1000 kWh;
 - xviii. Between 1000 and 1100 kWh;
 - xix. Between 1100 and 1200 kWh;
 - xx. Between 1200 and 1400 kWh;
 - xxi. Between 1400 and 1600 kWh;
 - xxii. Between 1600 and 1800 kWh;
 - xxiii. Between 1800 and 2000 kWh; and
 - xxiv. Above 2000 kWh.

ANSWER:

Please see the following tables.

Number of Low-Income (LICO 125) Residential Basic Customers Across Month For 2009

<u>Monthly kW.h Ranges</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
200 or below	11,066	10,276	14,531	11,135	19,232	14,740	17,927	17,066	18,038	14,380	14,874	10,832
201 to 250	2,044	5,197	4,181	3,651	4,492	5,966	4,757	5,462	3,538	3,333	4,152	2,575
251 to 300	2,394	3,721	4,675	4,261	5,846	5,856	6,316	6,315	6,609	4,277	6,473	5,650
301 to 350	2,481	3,325	4,429	3,817	5,169	6,431	6,049	6,483	6,371	5,726	3,743	3,459
351 to 400	3,602	2,189	3,719	5,068	6,462	4,967	5,666	6,190	5,960	5,986	5,535	5,663
401 to 450	2,829	4,886	3,860	5,721	5,389	5,442	4,936	5,942	5,271	5,203	5,584	5,529
451 to 500	3,224	3,667	4,032	3,946	5,522	6,819	5,782	5,773	5,735	5,745	5,961	4,751
501 to 550	2,964	4,298	4,379	5,796	4,102	4,017	5,349	4,476	6,177	5,134	4,425	4,278
551 to 600	2,840	3,580	4,067	3,730	2,766	4,834	4,925	5,141	3,385	5,013	4,307	4,327
601 to 650	3,751	3,447	2,707	3,149	3,000	3,888	3,206	4,019	4,199	3,610	2,507	4,254
651 to 700	4,037	3,596	3,121	2,492	3,656	3,437	3,847	4,556	5,174	3,401	2,813	3,705
701 to 750	3,010	3,128	2,685	3,089	2,782	2,819	2,487	4,114	4,325	4,165	2,359	2,968
751 to 800	2,785	3,441	2,678	2,364	2,818	2,641	3,870	2,871	3,403	2,877	2,026	2,403
801 to 850	2,649	2,503	2,563	1,942	1,670	2,912	2,748	3,025	2,733	2,062	2,712	2,108
851 to 900	2,268	2,446	2,103	3,171	1,619	3,074	3,256	2,720	1,701	2,242	2,960	3,087
901 to 950	2,745	2,145	2,123	1,746	1,615	2,064	2,124	2,348	2,107	2,514	2,302	1,563
951 to 1,000	2,135	1,195	2,291	1,868	1,630	1,498	2,780	1,604	2,063	1,900	2,286	2,271
1,001 to 1,100	3,950	3,217	2,059	3,259	2,943	3,704	4,270	2,652	4,547	3,930	2,712	2,032
1,101 to 1,200	4,119	2,700	2,384	2,975	2,700	3,412	2,625	3,513	2,128	3,830	2,250	1,821
1,201 to 1,400	4,650	2,999	3,856	3,783	3,695	4,526	4,126	4,227	4,374	6,069	3,907	4,259
1,401 to 1,600	3,141	2,283	2,588	3,122	4,535	2,532	3,314	3,258	2,631	3,648	3,460	3,435
1,600 to 1,800	3,402	3,018	1,914	2,879	3,669	2,457	1,533	970	1,617	3,406	3,380	1,813
1,801 to 2,000	1,844	2,295	2,185	2,723	2,079	2,044	1,258	1,170	1,502	2,675	2,620	2,060
Above 2,000	27,854	26,232	22,654	20,097	8,393	5,704	2,633	1,889	2,196	4,658	12,436	20,941
<u>TOTAL</u>	<u>105784</u>	<u>105784</u>	<u>105784</u>	<u>105784</u>	<u>105784</u>	<u>105784</u>	<u>105784</u>	<u>105784</u>	<u>105784</u>	<u>105784</u>	<u>105784</u>	<u>105784</u>

Number of Low-Income (LICO STD) Residential Basic Customers Across Month For 2009

<u>Monthly kW.h Ranges</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
200 or below	8,338	8,208	11,095	8,774	14,755	11,673	14,649	13,498	14,671	11,700	11,930	8,991
201 to 250	1,840	4,276	2,810	2,876	3,021	5,035	4,116	4,674	2,528	2,926	3,052	2,096
251 to 300	1,831	3,126	3,862	3,549	4,546	4,628	4,107	5,182	4,466	2,856	4,770	3,839
301 to 350	1,694	2,803	3,484	2,379	3,726	4,405	4,468	4,920	5,313	4,313	3,000	2,627
351 to 400	3,348	1,541	2,479	3,749	5,191	4,094	4,333	4,948	4,616	4,062	4,422	4,000
401 to 450	2,274	3,483	3,006	4,109	3,590	4,680	3,771	4,357	3,681	3,835	3,744	4,740
451 to 500	2,035	2,205	2,859	3,286	3,685	4,520	3,561	3,895	3,515	4,238	4,614	3,477
501 to 550	2,173	2,783	2,731	3,999	2,524	2,879	4,177	2,969	4,388	3,696	3,041	3,293
551 to 600	2,081	2,661	2,691	1,972	1,848	2,935	3,210	3,913	2,787	3,766	2,439	3,035
601 to 650	2,237	2,268	2,227	2,168	2,050	2,370	2,600	3,152	3,214	2,367	1,501	2,806
651 to 700	2,779	2,394	2,264	1,914	2,445	2,261	3,024	3,360	3,747	2,599	2,151	2,574
701 to 750	2,510	2,354	1,573	1,912	1,817	1,876	1,771	2,079	2,615	2,654	1,583	2,297
751 to 800	1,961	1,751	1,545	1,863	1,968	2,021	2,537	1,917	2,576	1,963	1,147	1,648
801 to 850	1,492	1,466	1,885	1,090	1,097	2,126	1,922	1,769	1,884	1,550	1,853	902
851 to 900	1,559	1,748	1,440	2,435	1,212	2,146	2,151	1,229	1,207	1,543	2,112	2,096
901 to 950	1,755	1,639	1,143	988	1,087	1,481	1,476	1,535	1,673	1,810	1,167	691
951 to 1,000	1,588	1,044	1,912	1,142	1,405	1,126	1,811	1,225	1,116	1,291	1,285	1,009
1,001 to 1,100	2,584	2,042	1,235	2,116	2,340	2,275	2,878	1,555	3,154	2,825	2,104	1,315
1,101 to 1,200	2,780	2,065	1,793	2,111	2,005	2,449	1,540	2,440	1,235	2,110	1,566	1,170
1,201 to 1,400	3,359	1,711	2,897	2,766	2,236	2,580	2,353	2,023	2,331	3,778	2,452	2,763
1,401 to 1,600	2,151	1,164	1,417	2,378	3,121	1,674	1,552	1,611	1,452	2,168	2,858	2,417
1,600 to 1,800	2,119	2,443	1,161	2,170	2,592	1,248	756	555	603	2,291	2,187	1,501
1,801 to 2,000	1,463	1,802	1,571	1,917	1,231	1,543	481	816	790	1,800	1,927	1,642
Above 2,000	18,988	17,961	15,859	13,276	5,447	2,914	1,695	1,317	1,378	2,801	8,033	14,011
<u>TOTAL</u>	<u>74,938</u>	<u>74,938</u>	<u>74,938</u>	<u>74,938</u>	<u>74,938</u>	<u>74,938</u>	<u>74,938</u>	<u>74,938</u>	<u>74,938</u>	<u>74,938</u>	<u>74,938</u>	<u>74,938</u>

RCM/TREE/MH I-83

Regarding the electricity usage of residential customers:

- b) Provide the same data as requested immediately above, except for residential customers as a whole**

ANSWER:

Please see the following table.

Number of Total Residential Basic Customers Across Month For 2009

<u>Monthly kW.h Ranges</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
200 or below	28,326	31,283	34,991	32,860	46,285	40,157	43,923	48,905	39,458	34,714	33,484	29,872
201 to 250	4,708	10,296	9,323	8,531	12,312	11,844	12,385	11,656	10,963	7,888	9,413	5,535
251 to 300	5,249	8,315	10,995	10,291	15,942	13,468	15,424	14,273	16,631	11,538	13,242	12,252
301 to 350	6,316	8,475	11,013	10,944	14,932	15,052	18,468	15,280	16,423	12,837	13,827	9,441
351 to 400	7,024	8,679	11,357	13,311	19,227	17,058	15,959	17,709	17,386	15,393	16,280	12,135
401 to 450	7,528	10,923	12,634	15,499	17,066	16,027	16,607	17,193	18,022	14,225	16,052	13,823
451 to 500	7,215	9,892	13,151	12,882	17,091	19,443	18,242	19,578	20,240	18,327	18,619	14,061
501 to 550	10,016	11,478	13,454	15,137	16,575	16,161	18,599	18,605	19,819	17,770	15,744	13,825
551 to 600	9,216	13,340	13,436	13,812	16,749	17,758	19,282	20,830	19,016	17,092	18,789	13,486
601 to 650	10,363	11,648	12,863	14,766	14,443	15,677	16,591	19,212	17,151	16,781	16,655	16,214
651 to 700	11,542	14,113	13,197	13,234	14,209	14,626	16,660	16,732	19,363	15,562	13,348	15,389
701 to 750	10,858	13,282	12,831	12,005	12,052	15,792	14,936	14,625	15,550	14,928	11,813	12,826
751 to 800	9,688	12,032	11,350	10,831	12,075	15,697	17,089	15,987	17,297	14,961	12,521	12,283
801 to 850	10,958	11,635	12,137	10,140	11,535	13,455	14,944	15,939	14,975	13,591	12,012	11,925
851 to 900	11,457	11,987	10,167	12,796	10,672	14,585	13,165	16,274	13,060	12,910	13,401	11,681
901 to 950	11,263	10,905	9,353	9,660	9,990	11,916	12,603	13,563	12,669	13,351	10,643	11,715
951 to 1,000	9,008	7,929	10,369	8,158	9,874	10,558	13,145	12,164	11,083	11,350	10,295	11,484
1,001 to 1,100	17,556	17,404	15,307	18,000	15,709	24,001	21,997	21,209	24,208	21,734	15,696	16,103
1,101 to 1,200	17,777	13,330	14,060	14,548	15,518	18,013	19,046	19,077	19,447	19,531	15,585	11,449
1,201 to 1,400	26,257	22,377	18,336	22,666	23,049	30,484	30,472	27,785	30,557	29,944	23,104	25,493
1,401 to 1,600	18,985	16,685	17,529	17,201	21,562	21,084	23,554	19,357	20,198	24,802	20,433	18,537
1,600 to 1,800	18,660	13,407	12,417	16,681	19,710	17,647	12,718	11,975	12,680	17,787	16,855	12,484
1,801 to 2,000	12,142	10,754	12,435	12,946	15,034	14,353	9,268	9,482	9,732	14,483	15,193	12,136
Above 2,000	156,984	138,927	126,391	112,197	57,485	34,240	24,019	21,686	23,168	47,597	76,092	114,947
<u>TOTAL</u>	<u>439,096</u>	<u>439,096</u>	<u>439,096</u>	<u>439,096</u>	<u>439,096</u>	<u>439,096</u>	<u>439,096</u>	<u>439,096</u>	<u>439,096</u>	<u>439,096</u>	<u>439,096</u>	<u>439,096</u>

RCM/TREE/MH I-84

For each usage band identified in the immediately preceding data request, provide a sample monthly billing calculation:

a) At existing standard residential rates; and

ANSWER:

The following table shows the bill calculations at the various consumption levels identified in RCM/TREE/MH I-83, using the existing Residential rate of:

Basic Charge: \$6.85
First 900 kW.h @ 6.25¢
Balance of kW.h @ 6.30¢

kW.h	\$/Month
0	\$6.85
200	\$19.35
250	\$22.48
300	\$25.60
350	\$28.73
400	\$31.85
450	\$34.98
500	\$38.10
550	\$41.23
600	\$44.35
650	\$47.48
700	\$50.60
750	\$53.73
800	\$56.85
850	\$59.98
900	\$63.10
950	\$66.25
1000	\$69.40
1100	\$75.70
1200	\$82.00
1400	\$94.60
1600	\$107.20
1800	\$119.80
2000	\$132.40

RCM/TREE/MH I-84

For each usage band identified in the immediately preceding data request, provide a sample monthly billing calculation:

- b) At the standard residential rates as proposed by Manitoba Hydro in this proceeding.**

ANSWER:

The following table shows the bill calculations at the various consumption levels identified in RCM/TREE/MH I-83, using the proposed Residential rate filed in the Application of:

	Basic Charge: \$5.85
	First 900 kW.h @ 6.37¢
	Balance of kW.h @ 6.75¢
kW.h	\$/Month
0	\$5.85
200	\$18.59
250	\$21.78
300	\$24.96
350	\$28.15
400	\$31.33
450	\$34.52
500	\$37.70
550	\$40.89
600	\$44.07
650	\$47.26
700	\$50.44
750	\$53.63
800	\$56.81
850	\$60.00
900	\$63.18
950	\$66.56
1000	\$69.93
1100	\$76.68
1200	\$83.43
1400	\$96.93
1600	\$110.43
1800	\$123.93
2000	\$137.43

RCM/TREE/MH I-85

By month since October 2005 to present, please provide the sales (kWh) from each customer class disaggregated by:

a) firm gross sales; and

ANSWER:

The following table provides General Consumers Sales (GW.h):

Revenue Month	Residential GW.h	General Service & Other GW.h	Total General Consumer Sales GW.h
2005 10	447.2	1,085.3	1,532.5
2005 11	522.1	1,160.4	1,682.5
2005 12	647.0	1,218.2	1,865.3
2006 01	712.3	1,271.7	1,983.9
2006 02	707.3	1,207.8	1,915.1
2006 03	676.0	1,261.0	1,937.0
2006 04	551.6	1,126.4	1,678.0
2006 05	400.8	1,058.7	1,459.5
2006 06	381.3	1,074.8	1,456.1
2006 07	402.1	1,143.4	1,545.5
2006 08	405.2	1,114.1	1,519.3
2006 09	389.6	1,086.2	1,475.8
2006 10	474.8	1,106.7	1,581.5
2006 11	551.5	1,152.4	1,703.9
2006 12	662.1	1,233.6	1,895.7
2007 01	778.6	1,328.6	2,107.2
2007 02	848.5	1,287.2	2,135.8
2007 03	692.7	1,258.6	1,951.3
2007 04	616.5	1,165.4	1,781.9
2007 05	411.5	1,090.2	1,501.7
2007 06	380.2	1,078.5	1,458.6
2007 07	391.9	1,107.0	1,498.8

Revenue Month	Residential GW.h	General Service & Other GW.h	Total General Consumer Sales GW.h
2007 08	427.5	1,155.0	1,582.5
2007 09	387.5	1,062.6	1,450.2
2007 10	440.9	1,109.0	1,550.0
2007 11	538.8	1,171.4	1,710.2
2007 12	738.3	1,252.4	1,990.7
2008 01	855.9	1,387.0	2,242.8
2008 02	870.9	1,319.5	2,190.4
2008 03	778.2	1,325.4	2,103.6
2008 04	619.1	1,183.5	1,802.6
2008 05	466.5	1,119.9	1,586.4
2008 06	371.9	1,089.6	1,461.5
2008 07	378.4	1,119.9	1,498.3
2008 08	398.6	1,136.8	1,535.4
2008 09	391.6	1,105.1	1,496.7
2008 10	445.8	1,133.7	1,579.5
2008 11	540.9	1,199.2	1,740.2
2008 12	743.4	1,222.3	1,965.7
2009 01	1,004.5	1,437.8	2,442.2
2009 02	829.0	1,223.9	2,052.9
2009 03	764.7	1,284.1	2,048.8
2009 04	695.0	1,195.9	1,890.9
2009 05	476.3	1,062.9	1,539.2
2009 06	430.8	1,081.5	1,512.3
2009 07	392.8	1,076.7	1,469.5
2009 08	374.0	1,031.2	1,405.2
2009 09	385.3	1,034.2	1,419.5
2009 10	515.1	1,096.1	1,611.1
2009 11	528.3	1,079.4	1,607.7
2009 12	696.6	1,198.3	1,894.9
2010 01	929.9	1,348.4	2,278.4
2010 02	794.6	1,193.0	1,987.6

RCM/TREE/MH I-85

By month since October 2005 to present, please provide the sales (kWh) from each customer class disaggregated by:

b) transportation sales.

ANSWER:

Manitoba Hydro does not provide unbundled transportation service to electric retail customers. Please see Manitoba Hydro's response to RCM/TREE/MH I-85(a) for total sales (kWh) to each customer class.

RCM/TREE/MH I-86

By month since October 2005 to present, please provide the revenue from each customer class disaggregated by:

a) firm gross sales; and

ANSWER:

The following table provides General Consumers Sales (Revenue):

Revenue Month	Residential Revenue M\$	General Service & Other Revenue M\$	Total General Consumer Sales Revenue M\$
2005 10	28.0	46.1	74.1
2005 11	32.3	50.7	83.0
2005 12	39.3	53.3	92.6
2006 01	43.0	55.0	98.1
2006 02	42.5	53.5	96.1
2006 03	40.7	50.9	91.6
2006 04	35.2	48.8	84.0
2006 05	25.3	46.3	71.6
2006 06	24.2	48.6	72.8
2006 07	25.4	51.3	76.7
2006 08	25.6	50.0	75.5
2006 09	24.8	48.2	73.0
2006 10	29.6	46.5	76.1
2006 11	33.9	52.0	85.9
2006 12	40.2	53.8	94.0
2007 01	46.8	57.2	104.0
2007 02	50.8	57.3	108.1
2007 03	42.5	59.5	101.9
2007 04	40.0	50.8	90.7
2007 05	26.6	50.0	76.6
2007 06	24.8	50.4	75.2
2007 07	25.5	51.4	76.9

Revenue Month	Residential Revenue M\$	General Service & Other Revenue M\$	Total General Consumer Sales Revenue M\$
2007 08	27.5	52.9	80.5
2007 09	25.2	49.5	74.8
2007 10	28.3	48.6	76.9
2007 11	34.0	52.1	86.1
2007 12	45.6	56.3	101.8
2008 01	52.4	61.1	113.5
2008 02	53.2	59.6	112.8
2008 03	48.0	60.7	108.7
2008 04	40.2	50.7	90.9
2008 05	29.8	51.2	81.0
2008 06	24.4	50.1	74.4
2008 07	25.4	53.3	78.6
2008 08	27.2	54.5	81.7
2008 09	26.8	53.7	80.4
2008 10	30.1	52.2	82.4
2008 11	35.9	55.7	91.6
2008 12	48.3	58.2	106.5
2009 01	64.3	67.1	131.4
2009 02	53.5	59.4	113.0
2009 03	49.6	65.3	114.9
2009 04	47.7	55.5	103.1
2009 05	32.9	55.1	88.0
2009 06	30.0	55.4	85.4
2009 07	27.7	54.8	82.4
2009 08	26.4	53.5	79.9
2009 09	27.2	53.2	80.4
2009 10	35.3	51.9	87.2
2009 11	36.2	53.8	89.9
2009 12	46.8	58.5	105.4
2010 01	61.4	65.6	127.0
2010 02	52.9	59.4	112.4

RCM/TREE/MH I-86

By month since October 2005 to present, please provide the revenue from each customer class disaggregated by:

b) transportation sales.

ANSWER:

Manitoba Hydro does not provide unbundled transportation service to electric retail customers. Please see Manitoba Hydro's response to RCM/TREE/MH I-86(a) for total revenue by customer class.

RCM/TREE/MH I-87

Please define the term “sustainable bill relief” as used on page 3 of the proposed Manitoba Hydro Affordable Energy Program report (November 10, 2009) (hereafter, all references in this set of questions to the “Report” are to be construed as referencing this November 10, 2009 Report).

ANSWER:

Sustainable bill relief is obtained from all those measures from which a customer can benefit through Manitoba Hydro’s Affordable Energy Program which are of a longer term nature and which will assist a customer better manage their energy bills. For example:

- by participating in Manitoba Hydro’s Demand Side management programs, customers will realize reduced energy bills; and
- by enrolling in the Equal Payment Plan, customers can spread their energy bills across the year which could assist the customers better manage their bill payments.

RCM/TREE/MH I-88

At page 3 of the Report, Manitoba Hydro states that “the updated Affordable Energy program is designed to provide sustainable bill relief to customers while providing them with the tools and resources to effectively become self sufficient in managing their energy bills.” Is this sentence intended to convey the message that the referenced “sustainable bill relief” is to be temporary relief (“while providing them”)?

ANSWER:

No. The phrase was not intended to mean temporary relief.

RCM/TREE/MH I-89

Please provide a copy of the initial Bill Assistance report dated February 2009 as referenced at page 3 of the Report.

ANSWER:

Please see Appendix 44 – Attachment 2.

RCM/TREE/MH I-90

Please provide a complete list of the “key considerations” that were “identified” in the February 2009 report as referenced at page 3 of the Report.

ANSWER:

On page 3, there is no reference to “key considerations”. If the question was intended to mean “key components”, these are listed on pages 1 and 2 of the Bill Assistance Report provided as Appendix 44, Attachment 2.

RCM/TREE/MH I-91

At page 3 of the Report, Manitoba Hydro states that it “must achieve a balance between improving the affordability of energy for lower income customers and maintaining social equity for the general body of rate payers.”

- a) Does the need to provide a “balance” indicate that Manitoba Hydro believes there to be a conflict between “improving the affordability of energy for lower income customers” and “maintaining social equity for the general body of ratepayers.”**
- b) If the response to the immediately preceding question is anything other than an unqualified “no,” please provide a detailed list of all ways in which “improving the affordability of energy for lower income customers” is in conflict with “maintaining social equity for the general body of ratepayers.”**
- c) Separately provide a complete list of circumstances under which “improving the affordability of energy for lower income customers” is not in conflict with “maintaining social equity for the general body of ratepayers.”**

ANSWER:

There can be a conflict between “improving the affordability of energy for lower income customers” and “maintaining social equity for the general body of ratepayers.” To the extent that it can be shown that low income programming can be achieved without imposing net costs on other ratepayers, that conflict is eliminated. To the extent that it is apparent that these programs represent cross-subsidies from other ratepayers to low income customers, that conflict exists.

As provided in response to PUB/MH I-213(a), the focus of Manitoba Hydro’s Affordable Energy Program is to assist its customers with managing their bills through the three components of the Program.

The precise point at which improving the affordability of energy for lower income customers comes into conflict with maintaining social equity for the general body of ratepayers is difficult to define. However, the PUB provided some guidance and insight on the issue of cross-subsidies in PUB Order 99/07. Although this Order was with respect to Centra Gas and specific to consideration for a Furnace Replacement Program, the general principles and

guidelines on cross-subsidies can be applied with varying degrees to both Centra Gas and Manitoba Hydro and to the Corporation's Affordable Energy Program.

In PUB Order 99/07, the Board concludes that a modest degree of cross-subsidization is warranted when various factors are considered including:

- The inability of low income customers to finance initial costs;
- The increased societal concern with conservation, global warming and climate change;
- The assumption that low income consumers largely have not participated in DSM programs to date, while having funded DSM expenditures then incurred to the benefit of other same class customers.

The Board further provides comments on the expectation that the utility will realize some direct economic benefits through lower delinquency, bad debts and service disconnection costs.

Manitoba Hydro interprets the PUB comments provided in PUB Order 99/07 that a modest amount of cross-subsidies is reasonable to the degree that these factors are all taken into account with respect to fairness in establishing rates, recovering costs for expenditures and allocating funds for specific purposes. For example, if a group of customers are financially contributing through rates towards overall DSM efforts and if this customer group is not realizing any of the associated benefits, then consideration could be given to allocating a portion of the DSM budget solely for this customer group to ensure fairness.

Manitoba Hydro does recognize that there are differences between its natural gas and electricity DSM programs in that all natural gas programs have a RIM which is less than 1.0 and with electric programs, the RIM is generally 1.0 or greater. In the latter case, all customers are better off as rates are impacted in a positive manner. With natural gas DSM programs, the associated RIM's are always lower than one and subsequently, all natural gas rate payers, including lower income customers, are subsidizing the natural gas DSM programs.

The term “Social equity” as used in the phrase “maintaining social equity for the general body of rate payers” is intended to refer to the fairness issue associated with ratepayers paying for and to some degree, the rationale for potentially subsidizing lower income programs to a modest degree as suggested by PUB in Order 99/07.

RCM/TREE/MH I-92

At page 3 of the Report, Manitoba Hydro references “maintaining social equity for the general body of ratepayers.” Please define the term “social equity” as used in this sentence.

ANSWER:

Please see Manitoba Hydro’s response to RCM-TREE-MH I-91(a).

RCM/TREE/MH I-93

At page 3 of the Report, Manitoba Hydro states that its proposed low-income program “enhancements, along with some of the lowest energy rates in North America, combine to facilitate efficient energy affordability for lower income energy consumers in Manitoba.” Please define the term “efficient energy affordability” as used in this sentence.

ANSWER:

The phrase “efficient energy affordability” was used in the context of the referenced sentence to simply mean that Manitoba Hydro’s Affordable Energy Program will assist in making energy use more affordable for the Corporation’s customers. This expression or meaning is relative to an environment whereby Manitoba Hydro did not have the elements of its Affordable Energy Program.

RCM/TREE/MH I-94

At page 3 of the Report, Manitoba Hydro references its ability to “facilitate efficient energy affordability for lower income energy consumers in Manitoba.” Does Manitoba Hydro distinguish between “facilitating efficient energy affordability” and “achieving efficient energy affordability?” If so, please provide a detailed explanation of the difference between those two objectives.

ANSWER:

Yes, there is a difference. As provided in response to RCM/TREE/MH I-93, the objective of Manitoba Hydro’s Affordable Energy Program is to improve the affordability of energy for lower income customers. As indicated in Manitoba Hydro’s response to PUB/MH I-213(a), the issue of whether energy is affordable is outside the scope of Manitoba Hydro’s mandate and is a matter of policy for legislators and government agencies responsible for these matters.

RCM/TREE/MH I-95

At page 3 of the Report, Manitoba Hydro references its ability to “facilitate efficient energy affordability for lower income energy consumers.”

- a) Please indicate whether Manitoba Hydro believes that there are discrete populations of lower income customers for whom it is not possible to achieve “efficient energy affordability” given current rates.**

ANSWER:

Please see Manitoba Hydro’s response to PUB/MH I-213(a).

RCM/TREE/MH I-95

At page 3 of the Report, Manitoba Hydro references its ability to “facilitate efficient energy affordability for lower income energy consumers.”

b) If so, separately indicate the characteristics that demarcate these populations.

ANSWER:

Please see Manitoba Hydro’s response to PUB/MH I-213(a).

RCM/TREE/MH I-96

Demand-Side Management

Please provide a copy of all internal procedures manuals for Company call center personnel that contain Company policies and procedures relating to:

- a) Levelized billing;**

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-56.

RCM/TREE/MH I-96

Demand-Side Management

Please provide a copy of all internal procedures manuals for Company call center personnel that contain Company policies and procedures relating to:

b) Deferred payment agreements;

ANSWER:

Please see Manitoba Hydro's response to CAC/MSOS/MH I-100(e).

RCM/TREE/MH I-96

Demand-Side Management

Please provide a copy of all internal procedures manuals for Company call center personnel that contain Company policies and procedures relating to:

- c) Disconnections for nonpayment;**

ANSWER:

Please see Manitoba Hydro's response to CAC/MSOS/MH I-100(e).

RCM/TREE/MH I-96

Demand-Side Management

Please provide a copy of all internal procedures manuals for Company call center personnel that contain Company policies and procedures relating to:

d) Late payment charges;

ANSWER:

Please see Manitoba Hydro's response to CAC/MSOS/MH I-100(e).

RCM/TREE/MH I-96

Demand-Side Management

Please provide a copy of all internal procedures manuals for Company call center personnel that contain Company policies and procedures relating to:

e) Reconnection fees;

ANSWER:

Please see Manitoba Hydro's response to CAC/MSOS/MH I-100(e).

RCM/TREE/MH I-96

Demand-Side Management

Please provide a copy of all internal procedures manuals for Company call center personnel that contain Company policies and procedures relating to:

f) Security deposits;

ANSWER:

Please see Attachment 1 for Manitoba Hydro's policy on security deposits.

1. Performance Guarantee

If the viability or duration of a proposed service is in doubt, the Corporation may require a refundable performance guarantee which will be held by the Corporation until performance is proven within five years (see Corporate Policy [G1-4, Ref. 180](#) regarding approval).

The performance guarantee will be the cost of an equivalent temporary service.

The Corporation will pay interest on the deposit as detailed in Corporate Policy [G932A](#).

[^TOP](#)

2. Credit Guarantee

Manitoba Hydro requires sufficient customer information to confirm the identity of customers and to assess their credit worthiness. For credit risk customers, additional information or a credit guarantee will be required. For customers unwilling or unable to provide sufficient information or a credit guarantee, Manitoba Hydro will require a deposit.

The deposit will be refunded when the customer establishes 12 consecutive months of good payment history. Interest will be paid on the refund of the deposit at a rate equal to the Corporation's average borrowing costs.

2.1 - Residential Customers (other than Credit Risk)

The following complete information is required:

- Full name(s) of all adults responsible for utility bills, and
- Two previous addresses (if less than 12 months at current address), and
- Phone number(s)
- Alternate phone number, and
- Place of employment or other source of income for all adults responsible for utility bills

2.2 - Residential Credit Risk Customers

The following complete information is required:

- Full name(s) of all adults responsible for utility bills, and
- Two previous addresses (if less than 12 months at current address), and
- Phone number(s)
- Alternate phone number, and
- Place of employment or other source of income for all adults responsible for utility bills

Plus:

- Pre-authorized Payment, or
- Photo Id, or
- Credit Guarantee letter (bank), or
- Credit Worthy Third Party Co-Signer.

In the event that this information is unavailable, a Monetary Guarantee Deposit will be assessed based on the following criteria:

Rental Home - \$300

Apartment (tenant pays the heat) - \$100

Apartment (landlord pays the heat) - \$50

2.3 - General Service/Commercial Customers (other than credit risk)

The following complete information is required:

- Type of business entity (proprietorship, partnership, corporation, limited partnership), and
- Legal name of corporate/business entity responsible for utility bills; and
- Full name of company principals, and
- Two previous addresses (if less than 12 months at current address), and
- Daytime phone numbers

2.4 - General Service/Commercial Credit Risk Customers

The following complete information is required:

- Type of business entity (proprietorship, partnership, corporation, limited partnership), and

- Legal name of corporate/business entity responsible for utility bills; and
- Full name of company principals, and
- Two previous addresses (if less than 12 months at current address), and
- Daytime phone numbers

Plus:

- Pre-authorized payment, or
- Credit Guarantee letter (bank), or
- Monetary guarantee deposit based on the highest three months of combined gas and electric energy consumption

[^TOP](#)

3. Special Dollar Minimum

The Corporation will establish a Special Dollar Minimum through a thirteenth bill contract to guarantee the required rate of revenue return on plant investment greater than \$2 000.00 for all General Service extensions and Capacity Increases.

Last Revised: 2009 11 05

RCM/TREE/MH I-96

Demand-Side Management

Please provide a copy of all internal procedures manuals for Company call center personnel that contain Company policies and procedures relating to:

g) Arrearge forgiveness.

ANSWER:

Manitoba Hydro does not have a documented policy on arrears forgiveness. Customers facing extenuating circumstances are referred to the Neighbours Helping Neighbours program or to other social agencies such as Employment & Income Assistance.

RCM/TREE/MH I-97

Please provide a copy of all internal procedures manuals for Company field office personnel that contain Company policies and procedures relating to:

a) Levelized billing;

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-56.

RCM/TREE/MH I-97

Please provide a copy of all internal procedures manuals for Company field office personnel that contain Company policies and procedures relating to:

b) Deferred payment agreements;

ANSWER:

Please see Manitoba Hydro's response to CAC/MSOS/MH I-100(e).

RCM/TREE/MH I-97

Please provide a copy of all internal procedures manuals for Company field office personnel that contain Company policies and procedures relating to:

c) Disconnections for nonpayment;

ANSWER:

Please see Manitoba Hydro's response to CAC/MSOS/MH I-100(e).

RCM/TREE/MH I-97

Please provide a copy of all internal procedures manuals for Company field office personnel that contain Company policies and procedures relating to:

d) Late payment charges;

ANSWER:

Please see Manitoba Hydro's response to CAC/MSOS/MH I-100(e).

RCM/TREE/MH I-97

Please provide a copy of all internal procedures manuals for Company field office personnel that contain Company policies and procedures relating to:

e) Reconnection fees;

ANSWER:

Please see Manitoba Hydro's response to CAC/MSOS/MH I-100(e).

RCM/TREE/MH I-97

Please provide a copy of all internal procedures manuals for Company field office personnel that contain Company policies and procedures relating to:

f) Security deposits;

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-96(f).

RCM/TREE/MH I-97

Please provide a copy of all internal procedures manuals for Company field office personnel that contain Company policies and procedures relating to:

g) Arrearage forgiveness.

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-96(g).

RCM/TREE/MH I-98

Please provide a copy of all staff training manuals for Company call center personnel that contain Company policies and procedures relating to:

a) Levelized billing;

ANSWER:

Call Centre and field office personnel receive classroom training in all aspects of customer billing including the items listed in this question. The training includes policies, procedures and instruction related to information provided in response to RCM/TREE/MH I-56. The training is only meaningful to our staff working within Manitoba Hydro's customer information/billing system. This information would not be meaningful outside of the direct operational areas.

RCM/TREE/MH I-98

Please provide a copy of all staff training manuals for Company call center personnel that contain Company policies and procedures relating to:

b) Deferred payment agreements;

ANSWER:

Call Centre and field office personnel receive classroom training in all aspects of customer billing including the items listed in this question. The training includes policies, procedures and instruction related to information provided in response to CAC/MSOS/MH I-100(e). The training is only meaningful to our staff working within Manitoba Hydro's customer information/billing system. This information would not be meaningful outside of the direct operational areas.

RCM/TREE/MH I-98

Please provide a copy of all staff training manuals for Company call center personnel that contain Company policies and procedures relating to:

c) Disconnections for nonpayment;

ANSWER:

Call Centre and field office personnel receive classroom training in all aspects of customer billing including the items listed in this question. The training includes policies, procedures and instruction related to information provided in response to CAC/MSOS/MH I-100(e). The training is only meaningful to our staff working within Manitoba Hydro's customer information/billing system. This information would not be meaningful outside of the direct operational areas.

RCM/TREE/MH I-98

Please provide a copy of all staff training manuals for Company call center personnel that contain Company policies and procedures relating to:

d) Late payment charges;

ANSWER:

Call Centre and field personnel receive classroom training in all aspects of customer billing including the items listed in this question. The training includes policies, procedures and instruction related to information provided in response to CAC/MSOS/MH I-100(e). The training is only meaningful to our staff working within Manitoba Hydro's customer information/billing system. This information would not be meaningful outside of the direct operational areas.

RCM/TREE/MH I-98

Please provide a copy of all staff training manuals for Company call center personnel that contain Company policies and procedures relating to:

e) Reconnection fees;

ANSWER:

The Call Centre personnel are not trained on this topic as disconnected accounts are referred to Credit and Recovery and District office personnel.

RCM/TREE/MH I-98

Please provide a copy of all staff training manuals for Company call center personnel that contain Company policies and procedures relating to:

f) Security deposits;

ANSWER:

Call centre and field personnel receive classroom training in all aspects of customer billing including the items listed in this question. The training includes policies, procedures and instruction related to information provided in response to RCM/TREE/MH I-96(f). The training is only meaningful to our staff working within Manitoba Hydro's customer information/billing system. This information would not be meaningful outside of the direct operational areas.

RCM/TREE/MH I-98

Please provide a copy of all staff training manuals for Company call center personnel that contain Company policies and procedures relating to:

g) Arrearage forgiveness.

ANSWER:

Call Centre and field personnel receive classroom training in all aspects of customer billing including the items listed in this question. The training includes policies, procedures and instruction related to information provided in response to RCM/TREE/MH I-96(g). The training is only meaningful to our staff working within Manitoba Hydro's customer information/billing system. This information would not be meaningful outside of the direct operational areas.

RCM/TREE/MH I-99

Please provide a copy of all staff training manuals for Company field office personnel that contain Company policies and procedures relating to:

- a) Levelized billing;**

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-98(a).

RCM/TREE/MH I-99

Please provide a copy of all staff training manuals for Company field office personnel that contain Company policies and procedures relating to:

b) Deferred payment agreements;

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-98(b).

RCM/TREE/MH I-99

Please provide a copy of all staff training manuals for Company field office personnel that contain Company policies and procedures relating to:

c) Disconnections for nonpayment;

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-98(c).

RCM/TREE/MH I-99

Please provide a copy of all staff training manuals for Company field office personnel that contain Company policies and procedures relating to:

d) Late payment charges;

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-98(d).

RCM/TREE/MH I-99

Please provide a copy of all staff training manuals for Company field office personnel that contain Company policies and procedures relating to:

e) Reconnection fees;

ANSWER:

Field personnel receive classroom training in all aspects of customer billing including the items listed in this question. The training includes policies, procedures and instruction related to information provided in response to CAC/MSOS/MH I-100(e). The training is only meaningful to our staff working within Manitoba Hydro's customer information/billing system. This information would not be meaningful outside of the direct operational areas.

RCM/TREE/MH I-99

Please provide a copy of all staff training manuals for Company field office personnel that contain Company policies and procedures relating to:

f) Security deposits;

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-98(f).

RCM/TREE/MH I-99

Please provide a copy of all staff training manuals for Company field office personnel that contain Company policies and procedures relating to:

g) Arrearage forgiveness.

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-98(g).

RCM/TREE/MH I-100

Please provide all procedures manuals setting forth Company policies and procedures for Neighbors Helping Neighbors.

ANSWER:

Manitoba Hydro does not administer the Neighbours Helping Neighbours Program, and therefore does not maintain Company policies or procedures specific to this program. The Salvation Army administers the Neighbours Helping Neighbours Program.

RCM/TREE/MH I-101

Please provide all staff training manuals setting forth Company policies and procedures for Neighbors Helping Neighbors.

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-100.

RCM/TREE/MH I-102

Please provide all procedures manuals setting forth Company policies and procedures regarding the referral of customers to social service agencies:

a) For call center personnel making outbound phone calls;

ANSWER:

Please see attached Payment Arrangement Guidelines. All credit representatives are provided with the following referral contact information for use during discussions in which customers indicate they are unable to pay due to financial difficulty or extenuating circumstances:

Community Financial Counseling Services	989-1900 (Winnipeg) 1-888-573-2383 (outside Winnipeg)
Employment and Income Assistance	948-4000 (Winnipeg) 1-866-626-4862 (outside Winnipeg)
Neighbours Helping Neighbours - Salvation Army District Offices	Winnipeg (204) 949-2106 Portage la Prairie (204) 239-7213 Brandon (204) 727 6271 Dauphin (204) 638-3764 Flin Flon (204) 687-7812 Thompson (204) 677 3658

If a credit representative identifies a situation that requires additional support, they can refer the account to a more senior credit representative within the Credit & Recovery Services Department. This individual may work with additional agencies to assist potentially vulnerable persons including those with medical health issues, the elderly or socially disadvantaged persons. Some of the agencies worked with include:

- City of Winnipeg Community Services social workers,
- Province of Manitoba Health Inspectors,
- City of Winnipeg Community By-law Enforcement & Health inspectors,
- Crisis Stabilization Unit,
- Winnipeg Regional Health Authority--Home Care,
- WRHA - Seniors Resource Centre-Health Action Centre,
- WRHA-Gpat-Geriatric Program Assessment Team, and
- Age & Opportunity Centre.

Establishing payment arrangements:

- Payment arrangements are entered on the consolidated account balance. If the customer asks if they can make a payment arrangement on just one service they must be advised that the payment arrangement is made on the consolidated account balance and that payments are automatically applied to oldest arrears first. If the customer insists on paying only one service they may do so, but they must tell us which service they want their payment applied to when they make their payment in order for it to be allocated appropriately. If the customer does not wish to make a payment arrangement on the consolidated account balance and pay only one service they must be advised that the gas and electric services will still be subject to disconnection during the non-heating season and load limiting during the heating season, regardless of which service is in arrears.
 - **Always start with making payment arrangements on the full amount owing.** This will include all charges for natural gas, electric, loans and/or other charges.
 - If the customer is unable to pay the full amount, use your discretion in making the payment arrangement. The objective is to get them out of arrears and/or to prevent them from getting further behind. You should consider working around the customer's paydays, child tax benefit, pension, etc.
 - Consider how long the customer has resided at the property, if they're the owner or a tenant, their payment history, if they've submitted any NSF payments, etc.
 - **Balance the customer's ability to pay with resolving the outstanding account balance over a reasonable length of time.**
 - If a customer advises they are unable to pay due to financial difficulty they should be informed of the various aid agencies and bill payment assistance programs in Manitoba such as Employment and Income Assistance and Neighbors Helping Neighbors.
- Don't forget to include the reconnection fee(s) and an estimate of additional monthly bills in the new payment arrangement total and advise the customer that it has been included. Reconnection fees are assessed per natural gas/electric service so if both services were disconnected for non-payment the customer will be charged one reconnection fee for the natural gas service(s) and one reconnection fee for the electric service(s).
- If unable to resolve the account you may consider Legal Action if there is a minimum balance of \$500 owing per service. **See the Legal Action section for more information.**
- If a payment is returned NSF on an account that was subject to disconnection or load limiting, make immediate payment arrangements for the returned amount plus the NSF fee.

Enter the payment arrangement into the Payment Arrangement Maintenance form.

Confirm the payment arrangement with the customer:

- The amount they are paying
- The date they are paying
- Method of payment – cash, money order, cheque, internet, telephone banking, drop box.
- The office where the payment will be made. Encourage payments be made at a Manitoba Hydro office if the account is subject to disconnection or load limiting.

Advise the customer:

- If any part of the payment arrangement is broken, either service may be disconnected or the electric service may be load limited regardless of which product or service is in arrears. These actions may occur without further notice.
- To call back if the terms of the arrangement need to be altered. As long as the customer is making regular payments and not falling further behind, reasonable changes can be accommodated.

RCM/TREE/MH I-102

Please provide all procedures manuals setting forth Company policies and procedures regarding the referral of customers to social service agencies:

b) For call center personnel accepting inbound phone calls;

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-102(a).

RCM/TREE/MH I-102

Please provide all procedures manuals setting forth Company policies and procedures regarding the referral of customers to social service agencies:

c) For field office personnel.

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-102(a).

RCM/TREE/MH I-103

Please provide all staff training manuals setting forth Company policies and procedures regarding the referral of customers to social service agencies:

- a) For call center personnel making outbound phone calls;**
- b) For call center personnel accepting inbound phone calls;**
- c) For field office personnel.**

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-102(a).

RCM/TREE/MH I-104

On page 4 of the Report, Manitoba Hydro states that “in reviewing the energy burden of Manitoba Hydro’s lower income customers, it has been determined that the energy burden is not at a crisis level.” Please provide:

- a) A copy of all electronic spreadsheets, data bases or other calculations generated in the review of the energy burden of Manitoba Hydro’s lower income customers.**

ANSWER:

Manitoba Hydro does not provide spreadsheets or databases for the reasons provided in response to RCM/TREE/MH I-3(a).

Calculations used for the energy cost part of the energy burden are detailed in the response to RCM/TREE/MH I-149 and 150.

Then energy burden is calculated as energy cost divided by income.

RCM/TREE/MH I-104

On page 4 of the Report, Manitoba Hydro states that “in reviewing the energy burden of Manitoba Hydro’s lower income customers, it has been determined that the energy burden is not at a crisis level.” Please provide:

- b) A copy of all raw data used in the review of the energy burden of Manitoba Hydro’s lower-income customers; and**

ANSWER:

The raw data contains personal information and therefore this data cannot be provided.

RCM/TREE/MH I-104

On page 4 of the Report, Manitoba Hydro states that “in reviewing the energy burden of Manitoba Hydro’s lower income customers, it has been determined that the energy burden is not at a crisis level.” Please provide:

- c) A copy of the source documents from which the raw data used in the review of the energy burden of Manitoba Hydro’s lower income customers was drawn.**

ANSWER:

Calculations of the energy burden were based on data using the raw 2003 survey data. This data can not be provided for the reasons provided in Manitoba Hydro’s response to RCM/TREE/MH I-104(b).

RCM/TREE/MH I-105

On page 4 of the Report, Manitoba Hydro states that “in reviewing the energy burden of Manitoba Hydro’s lower income customers, it has been determined that the burden is not at a crisis level.”

a) Please define the term “crisis level.”

ANSWER:

Please see Manitoba Hydro’s response to PUB/MH I-213(a).

RCM/TREE/MH I-105

On page 4 of the Report, Manitoba Hydro states that “in reviewing the energy burden of Manitoba Hydro’s lower income customers, it has been determined that the burden is not at a crisis level.”

- b) Separately provide a list of all indicators that a lower income customer has a home energy burden that is “at a crisis level.”**

ANSWER:

Please see Manitoba Hydro’s response to PUB/MH I-213(a).

RCM/TREE/MH I-105

On page 4 of the Report, Manitoba Hydro states that “in reviewing the energy burden of Manitoba Hydro’s lower income customers, it has been determined that the burden is not at a crisis level.”

- c) Separately provide a list of all data elements that Manitoba Hydro believes quantitatively measures the extent to which, if at all, a lower income customer is “at a crisis level.”**

ANSWER:

Please see Manitoba Hydro’s response to PUB/MH I-213(a).

RCM/TREE/MH I-106

On page 4 of the Report, Manitoba Hydro states that “in reviewing the energy burden of Manitoba Hydro’s lower income customers, it has been determined that the burden is not at a crisis level.” (emphasis added). The emphasized language indicates that a single energy burden was reviewed by Manitoba Hydro (“the” burden; “a” crisis level). Confirm or deny. In making the referenced statement, Manitoba Hydro refers to a single “energy burden” it considered for lower-income customers. If denied, provide a detailed explanation of the basis for the denial along with a description of the full range of energy burdens that were reviewed by Manitoba Hydro for the Company’s lower income customers.

ANSWER:

Please see Manitoba Hydro’s response to PUB/MH I-213(a).

On page 4 of the Report, Manitoba Hydro states that “in reviewing the energy burden of Manitoba Hydro’s lower income customers, it has been determined that the burden is not at a crisis level.” Please indicate whether the “review [of the] the energy burden of Manitoba Hydro’s lower income customers” that “determined that the energy burden is not at a crisis level” was done by an external consultant or was done in-house.

- a) If done by an external consultant, please provide the following for that consultant:
- i. A firm resume for the consultant undertaking the review;
 - ii. The name of the specific individual who was the lead researcher undertaking the review;
 - iii. A resume or vitae for that specific individual;
 - iv. The Request for Proposals (RFP) or Request for Qualifications (RFQ) issued for the review;
 - v. The response to the RFP/RFQ provided by the winning firm;
 - vi. The sole source justification submitted should no RFP/RFQ have been utilized;
 - vii. The contract entered into with the consultant;
 - viii. The scope of work provided to the consultant; and
 - ix. The budget for the work by the consultant.

ANSWER:

The assessment was undertaken in-house.

On page 4 of the Report, Manitoba Hydro states that “in reviewing the energy burden of Manitoba Hydro’s lower income customers, it has been determined that the burden is not at a crisis level.” Please indicate whether the “review [of the] the energy burden of Manitoba Hydro’s lower income customers” that “determined that the energy burden is not at a crisis level” was done by an external consultant or was done in-house.

b) If done in-house, please provide the following:

- i. The name of the specific individual who was the lead researcher undertaking the review;**
- ii. A resume or vitae for that specific individual;**
- iii. The job title and job description for that specific individual;**
- iv. The scope of work provided to (or provided by) that specific individual; and**
- v. The budget for the work (in time or dollars) by that specific individual.**

ANSWER:

The work was undertaken with contributions provided by Manitoba Hydro’s staff from various areas of the Corporation including the Affordable Energy and Load Research Departments. Specifics related to the time and dollars involved were not tracked.

RCM/TREE/MH I-108

On page 4 of the Report, Manitoba Hydro states that “in reviewing the energy burden of Manitoba Hydro’s lower income customers, it has been determined that the burden is not at a crisis level.” Please identify what home energy burden would place a lower income customer “at a crisis level.”

ANSWER:

Please see Manitoba Hydro’s response to PUB/MH I-213(a).

RCM/TREE/MH I-109

Please indicate the number of Manitoba Hydro lower income customers whose home energy burdens are at or above the burden identified in the immediately preceding question.

ANSWER:

Please see Manitoba Hydro's response to PUB/MH I-213(g).

RCM/TREE/MH I-110

At page 4 of the Report, Manitoba Hydro refers to “feedback from Manitoba stakeholders.” Please provide:

- a) A complete list of “Manitoba stakeholders” providing the “feedback” referenced in this statement;**

ANSWER:

Representatives from the following list of Manitoba stakeholders provided feedback:

RCM/TREE;
Winnipeg Harvest;
Consumers Association of Canada;
Salvation Army; and
Manitoba Society of Seniors.

RCM/TREE/MH I-110

At page 4 of the Report, Manitoba Hydro refers to “feedback from Manitoba stakeholders.” Please provide:

- b) A copy of each and every written document provided by such “stakeholders” to Manitoba Hydro providing such “feedback” from January 1, 2007 to present.**

ANSWER:

There are no such written documents. The “feedback” cited in the report arose from discussions held with stakeholders and Manitoba Hydro’s employees during a stakeholder meeting held at Manitoba Hydro Place on September 8th, 2009. The minutes associated with this meeting are attached.

Bill Assistance Stakeholder Meeting

**September 8th, 2009
3:00pm to 4:30pm
Manitoba Hydro Place - 360 Portage Avenue**

Attendees:

**Peter Miller (RCM/TREE)
Harold Dyck (Winnipeg Harvest)
Gloria Desorcy (Consumers Association of Canada)
Mark Young (Salvation Army)
Kim Weihs (Manitoba Society Of Seniors)
Shannon Johnson (Manitoba Hydro)
Daniel Yurkiw (Manitoba Hydro)
Colleen Battigelli-Smith (Manitoba Hydro)
Lloyd Kuczek (Manitoba Hydro)**

1. REVIEW OF AGENDA
 - Shannon Johnson reviewed the agenda. No revisions were made.
2. BACKGROUND
 - Shannon Johnson gave an overview of the background regarding the review and analysis of Manitoba Hydro's bill assistance programming.
3. EXISTING BILL ASSISTANCE PROGRAMMING
 - Shannon Johnson gave an overview of Manitoba Hydro's existing bill assistance programming focusing on the key components of:
 - Conservation and demand side management
 - Arrears management
 - Crisis intervention
 - Rate Affordability / Energy Burden
 - Mark Young from the Salvation Army gave a brief presentation on the Neighbours Helping Neighbours program run as a joint initiative between the Salvation Army and Manitoba Hydro. Mark mentioned that no applicant has been turned away due to a lack of funding.
4. RESEARCH FINDINGS
 - Daniel Yurkiw presented high level overviews of Manitoba lower income energy burden numbers, the Ontario Energy Board Staff and Board reports, and alternative bill assistance programs offered in the United States
 - Shannon Johnson tabled the "know before you rent" program idea

5. GENERAL DISCUSSION

- During the discussion several stakeholder recommendations were brought forth:
 - Focus program resources on demand side management to aid in reducing customers' energy burdens as it offers the most sustainable approach when compared to reduced rates or financial assistance programs.
 - Improve the follow-up process with program participants to ensure they stay on the right track.
 - Strengthen the link between Manitoba Hydro programming and other community social programming to offer a more holistic approach to helping lower income Manitobans.
 - Upgrade the educational component of the program to include information on energy efficiency, financial management, etc.
 - Ensure the program has the ability to accommodate vulnerable clients. (ie. The elderly, socially disadvantaged, etc.)
 - Implement some form of an arrears forgiveness program.
 - Implement programming to support customers in rental properties.
- Participation numbers for the various Manitoba Hydro bill assistance program offerings were discussed
- The process of “discretionary funding” of utility bills for social assistance recipients was explained by Harold Dyck from Winnipeg Harvest

RCM/TREE/MH I-110

At page 4 of the Report, Manitoba Hydro refers to “feedback from Manitoba stakeholders.” Please provide:

- c) A copy of each and every written document provided to such “stakeholders” by Manitoba Hydro soliciting “feedback” from January 1, 2007 to present.**

ANSWER:

There are no such written documents. The “feedback” cited in the report was solicited verbally during the stakeholder meeting held at Manitoba Hydro Place on September 8th, 2009.

On page 4 of the Report, Manitoba Hydro states that “assistance should be provided to those most in need and who genuinely cannot pay their bill.”

a) Please define the term “most in need.”

ANSWER:

Manitoba Hydro does not have a specific definition of customers “most in need”, or those who “genuinely cannot pay their bill”. Manitoba Hydro will work with stakeholders and interested parties to explore options for refining the eligibility criteria for Bill Management and Crisis Management portions of the program. Refining the criteria for Bill Management and Crisis Management programs may enable the identification of customers who genuinely find it difficult to pay their utility bills and are most in need of assistance. The most efficient way of defining the vulnerable customer may be to tie qualification to an existing form of government assistance, such as disability benefits. Many of Manitoba Hydro’s lower income customers may be customers in other areas of government and community and social groups. By drawing on the expertise from these various areas, a better understanding of our customers may be achieved in relation to need and ability to pay their energy bills. This objective may be achieved through the expansion of the Manitoba Hydro’s existing stakeholder group to include other stakeholders that may further provide insight into social programming criteria.

RCM/TREE/MH I-111

On page 4 of the Report, Manitoba Hydro states that “assistance should be provided to those most in need and who genuinely cannot pay their bill.”

- b) Provide a list of the metrics that Manitoba Hydro proposes to use to distinguish those lower income customers “most in need” from those lower income customers that are not “most in need.”**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-111(a).

RCM/TREE/MH I-111

On page 4 of the Report, Manitoba Hydro states that “assistance should be provided to those most in need and who genuinely cannot pay their bill.”

- c) Provide a list of the specific data elements that Manitoba Hydro proposes to use to distinguish whether a lower income customer is “most in need” as opposed to being a lower income customer that is not “most in need.”**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-111(a).

RCM/TREE/MH I-111

On page 4 of the Report, Manitoba Hydro states that “assistance should be provided to those most in need and who genuinely cannot pay their bill.”

d) Please define the term “genuinely cannot pay their bill.”

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-111(a).

RCM/TREE/MH I-111

On page 4 of the Report, Manitoba Hydro states that “assistance should be provided to those most in need and who genuinely cannot pay their bill.”

- e) Provide a list of the metrics that Manitoba Hydro proposes to use to distinguish those lower income customers who fall within the group of those “who genuinely cannot pay their bill” from those lower income customers who do not fall within the group of those who “genuinely cannot pay their bill.”**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-111(a).

RCM/TREE/MH I-111

On page 4 of the Report, Manitoba Hydro states that “assistance should be provided to those most in need and who genuinely cannot pay their bill.”

- f) Provide a list of the specific data elements that Manitoba Hydro proposes to use to distinguish those lower income customers who fall within the group of those “who genuinely cannot pay their bill” from those lower income customers who do not fall within the group of those who “genuinely cannot pay their bill.”**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-111(a).

RCM/TREE/MH I-112

On page 4 of the Report, Manitoba Hydro states that “key learnings from other programs include. . .bill assistance programs should focus on demand side management as it offers the best return on investment for the customers and the utility.” Please provide:

- a) A copy of all program evaluations finding that “bill assistance programs should focus on demand side management as it offers the best return on investment for the customers.”**

ANSWER:

Manitoba Hydro’s research efforts took a broad approach to reviewing what other utilities were doing in terms of affordable energy programs and the research also included reviewing some reports written on the subject matter. In undertaking this research, Manitoba Hydro did not place a significant amount of effort and resources towards documenting the research findings in terms of specifically articulating what each report stated, what each utility was doing and no specific calculations were made with respect to “return of investment” per se. The statement that “bill assistance programs should focus on demand side management as it offers the best return on investment for the customers and the utility” was a general and qualitative conclusion from Manitoba Hydro’s research efforts. The generic statement was a reflection of the long term and sustainable nature of the results which are achieved through Demand Side Management investments.

Manitoba Hydro recognizes the importance of having a comprehensive Affordable Energy Program and the Corporation intends to place an emphasis on all three components of its Affordable Energy Program.

RCM/TREE/MH I-112

On page 4 of the Report, Manitoba Hydro states that “key learnings from other programs include. . .bill assistance programs should focus on demand side management as it offers the best return on investment for the customers and the utility.” Please provide:

- b) For each such evaluation, provide the page citation at which page the evaluation finds that “bill assistance programs should focus on demand side management as it offers the best return on investment for the utility.”**

ANSWER:

Please Manitoba Hydro’s response to RCM/TREE/MH I-112(a).

RCM/TREE/MH I-113

On page 4 of the Report, Manitoba Hydro states that “key learnings from other programs include. . .bill assistance programs should focus on demand side management as it offers the best return on investment for the customers and the utility.” Please provide:

- a) A copy of all documents within the custody or control of the Company that set forth a methodology for calculating a “return on investment to customers” for an arrearage forgiveness program.**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-112(a).

RCM/TREE/MH I-113

On page 4 of the Report, Manitoba Hydro states that “key learnings from other programs include. . .bill assistance programs should focus on demand side management as it offers the best return on investment for the customers and the utility.” Please provide:

- b) A copy of all documents within the custody or control of the Company that set forth a methodology for calculating a “return on investment to the utility” for an arrearage forgiveness program.

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-112(a).

RCM/TREE/MH I-114

On page 4 of the Report, Manitoba Hydro states that “key learnings from other programs include. . .bill assistance programs should focus on demand side management as it offers the best return on investment for the customers and the utility.” Please provide:

- a) A copy of all documents within the custody or control of the Company that set forth a methodology for calculating a “return on investment to customers” of a crisis intervention program.

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-112(a).

RCM/TREE/MH I-114

On page 4 of the Report, Manitoba Hydro states that “key learnings from other programs include. . .bill assistance programs should focus on demand side management as it offers the best return on investment for the customers and the utility.” Please provide:

- b) A copy of all documents within the custody or control of the Company that set forth a methodology for calculating a “return on investment to the utility” of a crisis intervention program.

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-112(a).

RCM/TREE/MH I-115

On page 4 of the Report, Manitoba Hydro states that “key learnings from other programs include. . .bill assistance programs should focus on demand side management as it offers the best return on investment for the customers and the utility.” Please provide:

- a) A copy of all documents within the custody or control of the Company that set forth a methodology for calculating a “return on investment to customers” of a rate discount program.**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-112(a).

RCM/TREE/MH I-115

On page 4 of the Report, Manitoba Hydro states that “key learnings from other programs include. . .bill assistance programs should focus on demand side management as it offers the best return on investment for the customers and the utility.” Please provide:

- b) A copy of all documents within the custody or control of the Company that set forth a methodology for calculating a “return on investment to the utility” of a rate discount program.

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-112(a).

RCM/TREE/MH I-116

On page 4 of the Report, Manitoba Hydro states that “key learnings from other programs include. . .bill assistance programs should focus on demand side management as it offers the best return on investment for the customers and the utility.” Please provide:

- a) A copy of all documents within the custody or control of the Company that set forth a methodology for calculating a “return on investment to customers” of a percentage of income payment plan program.

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-112(a).

RCM/TREE/MH I-116

On page 4 of the Report, Manitoba Hydro states that “key learnings from other programs include. . .bill assistance programs should focus on demand side management as it offers the best return on investment for the customers and the utility.” Please provide:

- b) A copy of all documents within the custody or control of the Company that set forth a methodology for calculating a “return on investment to the utility” of a percentage of income payment plan program.

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-112(a).

RCM/TREE/MH I-117

On page 4 of the Report, Manitoba Hydro states that “key learnings from other programs include. . .bill assistance programs should focus on demand side management as it offers the best return on investment for the customers and the utility.” Please provide:

- a) A list of all rate assistance programs involving arrearage forgiveness for which a return on investment to the utility was calculated. For each identified program, specifically provide the return on investment to the utility that was reported and provide the name of the source document in which that return on investment was reported.

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-112(a).

RCM/TREE/MH I-117

On page 4 of the Report, Manitoba Hydro states that “key learnings from other programs include. . .bill assistance programs should focus on demand side management as it offers the best return on investment for the customers and the utility.” Please provide:

- b) A list of all rate assistance programs involving a rate discount for which a return on investment to the utility was calculated. For each identified program, specifically provide the return on investment that was reported and cite the name of the source document in which that return on investment was reported.

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-112(a).

RCM/TREE/MH I-117

On page 4 of the Report, Manitoba Hydro states that “key learnings from other programs include. . .bill assistance programs should focus on demand side management as it offers the best return on investment for the customers and the utility.” Please provide:

- c) A list of all rate assistance programs involving a percentage of income program for which a return on investment to the utility was calculated. For each identified program, specifically provide the return on investment to the utility that was reported and provide the name of the source document in which that return on investment was reported.

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-112(a).

RCM/TREE/MH I-118

On page 4 of the Report, Manitoba Hydro states that “key learnings from other programs include. . .bill assistance programs should focus on demand side management as it offers the best return on investment for the customers and the utility.” Please provide:

- a) The return on investment to Manitoba Hydro for the use of the disconnection of service for nonpayment;**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-112(a).

RCM/TREE/MH I-118

On page 4 of the Report, Manitoba Hydro states that “key learnings from other programs include. . .bill assistance programs should focus on demand side management as it offers the best return on investment for the customers and the utility.” Please provide:

- b) For that return on investment, provide the methodology and all electronic spreadsheets setting forth the calculation;**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-112(a).

RCM/TREE/MH I-118

On page 4 of the Report, Manitoba Hydro states that “key learnings from other programs include. . .bill assistance programs should focus on demand side management as it offers the best return on investment for the customers and the utility.” Please provide:

- c) The return on investment to Manitoba Hydro for the use of deferred payment plans.

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-112(a).

RCM/TREE/MH I-118

On page 4 of the Report, Manitoba Hydro states that “key learnings from other programs include. . .bill assistance programs should focus on demand side management as it offers the best return on investment for the customers and the utility.” Please provide:

- d) For that return on investment, provide the methodology and all electronic spreadsheets setting forth the calculation;**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-112(a).

RCM/TREE/MH I-118

On page 4 of the Report, Manitoba Hydro states that “key learnings from other programs include. . .bill assistance programs should focus on demand side management as it offers the best return on investment for the customers and the utility.” Please provide:

- e) The return on investment to Manitoba Hydro for the use of load limiters;

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-112(a).

RCM/TREE/MH I-118

On page 4 of the Report, Manitoba Hydro states that “key learnings from other programs include. . .bill assistance programs should focus on demand side management as it offers the best return on investment for the customers and the utility.” Please provide:

- f) For that return on investment, provide the methodology and all electronic spreadsheets setting forth the calculation;**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-112 (a).

RCM/TREE/MH I-118

On page 4 of the Report, Manitoba Hydro states that “key learnings from other programs include. . .bill assistance programs should focus on demand side management as it offers the best return on investment for the customers and the utility.” Please provide:

- g) The return on investment to Manitoba Hydro for the use of levelized budget billing;**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-112 (a).

RCM/TREE/MH I-118

On page 4 of the Report, Manitoba Hydro states that “key learnings from other programs include. . .bill assistance programs should focus on demand side management as it offers the best return on investment for the customers and the utility.” Please provide:

- h) For that return on investment, provide the methodology and all electronic spreadsheets setting forth the calculation.**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-112(a).

On page 5 of the Report, Manitoba Hydro states that “the most common challenge facing bill assistance programs is lack of program awareness amongst the target audience.” Please provide a copy of all program evaluations identifying “lack of program awareness amongst the target audience” as the “most common challenge.”

ANSWER:

Manitoba Hydro’s research efforts took a broad approach to reviewing what other utilities were doing in terms of affordable energy programs and the research also included reviewing some reports written on the subject matter. In undertaking this research, Manitoba Hydro did not place a significant amount of effort and resources towards documenting the research findings in terms of specifically articulating what each report stated and what each utility was doing. The statement that “the most common challenge facing bill assistance programs is lack of program awareness amongst the target audience”, was based on this broad research which also included discussions with several utilities and community groups engaged in low income assistance programs.

In Canada, overcoming barriers to successful participation through proactive promotion and recruitment through trusted channels was cited in the “Time for Action” road-map developed by Green Communities, which summarizes facilitated discussion by delegates at the Time for Action Conference, in Toronto, September 2008. In the United States, a research document from the Chartwell Customer Care series, entitled “Energy Assistance for Low Income Customers - Promoting Awareness” noted the following: “Chartwell found that one of the main challenges many utilities face in helping low-income customers is creating awareness of the programs and letting people know that funds are available. Several utilities told Chartwell that many of their eligible customers are unaware such programs exist for them to receive help to pay their utility bills. While one of the main hindrances for some customers is skepticism - they think strings might be attached in order to receive aid - a language barrier might exist for utilities dealing with the growing diversity in their customer base.”

RCM/TREE/MH I-120

On page 5 of the Report, Manitoba Hydro states that “the most common challenge facing bill assistance programs is lack of program awareness amongst the target audience.” Please explain whether, in making this statement, the Company intended to communicate that:

- a) The phrase “most common challenge” is synonymous with the phrase “most substantial challenge.”**

ANSWER:

No, the phrase “most common” was used to reflect the research finding which indicated that the issue of program awareness was a frequently mentioned challenge. Manitoba Hydro noted this frequently made comment during communication with other community groups, stakeholders and utilities. In those discussions, the challenge of program awareness was almost always raised as an issue.

RCM/TREE/MH I-120

On page 5 of the Report, Manitoba Hydro states that “the most common challenge facing bill assistance programs is lack of program awareness amongst the target audience.” Please explain whether, in making this statement, the Company intended to communicate that:

- b) The phrase “most common challenge” is synonymous with the phrase “most significant challenge.”**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-120(a).

RCM/TREE/MH I-120

On page 5 of the Report, Manitoba Hydro states that “the most common challenge facing bill assistance programs is lack of program awareness amongst the target audience.” Please explain whether, in making this statement, the Company intended to communicate that:

- c) The phrase “most common challenge” is synonymous with the phrase “biggest challenge.”**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-120(a).

RCM/TREE/MH I-121

On page 5 of the Report, Manitoba Hydro states that one of its “strategies” is to “provide emergency assistance funding and related services to customers who are in a state of energy financial hardship and who display a genuine difficulty in paying their utility bills.” Please:

a) Define the term “energy financial hardship.”

ANSWER:

The phrase was used to refer to customers who are in arrears with their energy bills. Manitoba Hydro does not have a specific definition for “energy financial hardship” or “genuine difficulty in paying”. Please see Manitoba Hydro’s response to RCM/TREE/MH I-111(a).

RCM/TREE/MH I-121

On page 5 of the Report, Manitoba Hydro states that one of its “strategies” is to “provide emergency assistance funding and related services to customers who are in a state of energy financial hardship and who display a genuine difficulty in paying their utility bills.” Please:

b) Define the term “genuine difficulty in paying.”

ANSWER:

Manitoba Hydro does not have a specific definition for “genuine difficulty in paying”. Manitoba Hydro recognizes that there are customers who wish to pay their energy bills but are challenged to do so due to financial hardship (e.g. energy bills combined with bills for other basic needs exceeds their available funds), unexpected costs that have arisen (e.g. medical expenses), or a sudden loss of income (e.g. loss of a family member or loss of employment). This list is not meant to be exhaustive; it is to demonstrate that all situations are unique and are assessed on a case by case basis.

RCM/TREE/MH I-122

On page 5 of the Report, Manitoba Hydro states that one of its “strategies” is to “provide emergency assistance funding and related services to customers who are in a state of energy financial hardship and who display a genuine difficulty in paying their utility bills.” Please explain:

- a) Whether (and, if so, how) someone can be in “financial hardship” without being in “energy financial hardship.”**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-121(a). Without getting into specific definitions of these terms, one can generally assume that if an individual is experiencing financial hardship, the individual will be experiencing financial hardships with the various components of the individual’s financial obligations which would include energy bills provided the customer is using and obligated to pay for the energy use.

RCM/TREE/MH I-122

On page 5 of the Report, Manitoba Hydro states that one of its “strategies” is to “provide emergency assistance funding and related services to customers who are in a state of energy financial hardship and who display a genuine difficulty in paying their utility bills.” Please explain:

- b) Whether (and, if so, how) someone can display a “difficulty in paying their utility bills” without displaying a “genuine difficulty in paying their utility bills.”**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-111 (a) and RCM/TREE/MH I-121 (a).

RCM/TREE/MH I-123

On page 5 of the Report, Manitoba Hydro states that one of its “strategies” is to “provide emergency assistance funding and related services to customers who are in a state of energy financial hardship and who display a genuine difficulty in paying their utility bills.” (emphasis added). Please identify and explain:

- a) The circumstances in which a customer may be in “a state of energy financial hardship” but not “display genuine difficulty in paying their utility bills.”**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-111 (a) and RCM/TREE/MH I-121 (a).

RCM/TREE/MH I-123

On page 5 of the Report, Manitoba Hydro states that one of its “strategies” is to “provide emergency assistance funding and related services to customers who are in a state of energy financial hardship and who display a genuine difficulty in paying their utility bills.” (emphasis added). Please identify and explain:

- b) The circumstances in which a customer may “display genuine difficulty in paying their utility bills” but not be “in a state of energy financial hardship.”**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-111 (a) and RCM/TREE/MH I-121 (a).

RCM/TREE/MH I-123

On page 5 of the Report, Manitoba Hydro states that one of its “strategies” is to “provide emergency assistance funding and related services to customers who are in a state of energy financial hardship and who display a genuine difficulty in paying their utility bills.” (emphasis added). Please identify and explain:

- c) Who within the Company determines whether customers are “in a state of energy financial hardship and. . .display a genuine difficulty in paying their utility bills.”**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-111 (a) and RCM/TREE/MH I-121 (a).

RCM/TREE/MH I-123

On page 5 of the Report, Manitoba Hydro states that one of its “strategies” is to “provide emergency assistance funding and related services to customers who are in a state of energy financial hardship and who display a genuine difficulty in paying their utility bills.” (emphasis added). Please identify and explain:

- d) The metrics the Company proposes to use to determine whether a customer is “in a state of energy financial hardship.”**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-111 (a) and RCM/TREE/MH I-121 (a).

RCM/TREE/MH I-123

On page 5 of the Report, Manitoba Hydro states that one of its “strategies” is to “provide emergency assistance funding and related services to customers who are in a state of energy financial hardship and who display a genuine difficulty in paying their utility bills.” (emphasis added). Please identify and explain:

- e) The data elements the Company proposes to use to determine whether a customer is “in a state of energy financial hardship.”**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-111 (a) and RCM/TREE/MH I-121 (a).

RCM/TREE/MH I-124

On page 6 of the Report, Manitoba Hydro states that “the program’s key focus is on demand side management through energy efficiency measures and customer education.” Please provide an estimate of:

- a) The number of lower income customers on the Manitoba Hydro system;**

ANSWER:

Please see Manitoba Hydro’s response to PUB/MH I-109(a).

RCM/TREE/MH I-124

On page 6 of the Report, Manitoba Hydro states that “the program’s key focus is on demand side management through energy efficiency measures and customer education.” Please provide an estimate of:

- b) The number of lower income customers on the Manitoba Hydro system who “are in a state of energy financial hardship and display genuine difficulty in paying their utility bills.”**

ANSWER:

Please see Manitoba Hydro’s responses to RCM/TREE/MH I-111(a) and RCM/TREE/MH I-121(a).

RCM/TREE/MH I-124

On page 6 of the Report, Manitoba Hydro states that “the program’s key focus is on demand side management through energy efficiency measures and customer education.” Please provide an estimate of:

- c) The number of lower income customers who “are in a state of energy financial hardship and display genuine difficulty in paying their utility bills” that would be eligible to receive demand side management through energy efficiency measures;**

ANSWER:

Please see Manitoba Hydro’s responses to RCM/TREE/MH I-111(a) and RCM/TREE/MH I-121(a). The number of customers that are eligible to receive demand side management through energy efficiency measures is defined by 125% of LICO. See Manitoba Hydro’s response to PUB/MH I-109 (a).

RCM/TREE/MH I-124

On page 6 of the Report, Manitoba Hydro states that “the program’s key focus is on demand side management through energy efficiency measures and customer education.” Please provide an estimate of:

- d) The number of lower income customers on the Manitoba Hydro system which the Company expects to serve through LIEEP on an annual basis (if this number is a range, provide the upper and lower bounds of the range).**

ANSWER:

With the recent cancellation of the ecoENERGY program, the availability of updated market information and a more aggressive marketing approach, Manitoba Hydro is currently reassessing its lower income program design. This includes developing a plan which takes a longer term view towards capturing the energy efficient opportunities within the lower income market. Including customers who heat their home with either natural gas or electricity, Manitoba Hydro is expecting that approximately 3000 homes will participate in its lower income program during 2010/11.

RCM/TREE/MH I-125

Provide a copy of all written documents supplying “industry feedback” as that “industry feedback” is referenced at page 6 of the Report.

ANSWER:

There are no written documents as requested. The industry feedback cited on page 6 is based on conversations between Manitoba Hydro employees and industry contacts. Manitoba Hydro did not keep minutes nor take transcripts of these conversations. Some of this feedback was also discussed at the Stakeholder meeting. See response to RCM/TREE/MH I-110 b).

RCM/TREE/MH I-126

At page 6 of the Report, Manitoba Hydro states that its program “is one of the few that incorporate all three disciplines of demand side management, bill management and emergency financial assistance into one holistic approach.”

- a) Provide a list of the “few utilities” (or “few utility programs”) that incorporate demand side management, emergency financial assistance and bill management into “one holistic approach.”**

ANSWER:

Based on Manitoba Hydro’s research, the Corporation obtained the impression that most utilities do not incorporate all three components into one holistic approach. Of the companies researched, Manitoba Hydro did observe that the following companies have the program components available to take a similar approach:

- Clark Public Utilities
- Dominion Virginia Power;
- Enbridge;
- NV Energy - Energy Assistance Expo;
- Pacific Gas & Electric;
- PSE&G;
- San Diego Gas & Electric;
- Seattle City Light;
- TXU Energy;
- Union Gas.

RCM/TREE/MH I-126

At page 6 of the Report, Manitoba Hydro states that its program “is one of the few that incorporate all three disciplines of demand side management, bill management and emergency financial assistance into one holistic approach.”

- b) Provide a copy of the list of all utility programs reviewed from which the list of the “few utility programs” that incorporate all three disciplines was drawn.**

ANSWER:

Manitoba Hydro made the referenced statement based on a broad assessment of websites and conversations with representatives of various utilities. No formal analysis of the utility programs of other utilities was undertaken.

At page 6 of the Report, Manitoba Hydro states that its program “is one of the few that incorporate all three disciplines of demand side management, bill management and emergency financial assistance into one holistic approach.”

- c) Separately describe the data collection process in which the Company engaged to identify those “few [programs] that incorporate all three disciplines. into one holistic approach.” This description should describe both the process of identifying utility programs and the process of reviewing program components to determine the extent to which, if at all, the programs incorporate all three disciplines into one holistic approach.**

ANSWER:

The research process involved reviewing utility websites, conversations with utility representatives, and reviews of third party research. The research was intended to identify the types of programs that other utilities offered, not to determine if they utilized a holistic approach to promote them. Those utilities that offered all three disciplines were considered to be more likely to be offering a holistic bill assistance approach versus those utilities that offered assistance in only one area.

RCM/TREE/MH I-126

At page 6 of the Report, Manitoba Hydro states that its program “is one of the few that incorporate all three disciplines of demand side management, bill management and emergency financial assistance into one holistic approach.”

- d) Indicate whether it is appropriate to conclude that those utility programs that are on the list provided in response to Section (b) above, but not on the list provided in response to Section (a) above, do not “incorporate all three disciplines of demand side management, bill management and emergency financial assistance into one holistic approach.”**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-126(c).

RCM/TREE/MH I-127

On page 8 of the Report, Manitoba Hydro states that it “researched many other bill assistance reports and consultation papers.” Please provide a complete bibliography of the “many other bill assistance reports and consultation papers” that Manitoba Hydro “researched.” For each document in the bibliography, indicate whether Manitoba Hydro has a copy of that “bill assistance report” or “consultation paper” in its custody or control as of the date of this proceeding.

ANSWER:

Page 8 of this report referred to a section taken from the initial Bill Assistance report which was provided in Manitoba Hydro’s response to RCM/TREE/MH I-89. Manitoba Hydro possesses copies of the following documents which were reviewed in preparation of the initial report:

- APPRISE and Fisher, Sheehan, and Colton (2007). Ratepayer-Funded Low-Income Energy Programs: Performance and Possibilities -- Final Report.
- Colton (2006). A Ratepayer Funded Home Energy Affordability Program For Low-Income Households: A Universal Service Program for Ontario’s Energy Utilities.
- Concentric Energy Advisors (2008). A Review Of Low Income Energy Assistance Measures Adopted In Other Jurisdictions.
- Low Income Energy Network (LIEN) (2008). “Making Progress” LIEN Annual Conference - Toronto
- Low Income Energy Network (LIEN) (2007). Working to End Poverty in Ontario

RCM/TREE/MH I-128

On page 8 of the Report, Manitoba Hydro refers to, amongst other things, “alternative payment methods” and “payment locations” as components of its “arrears management” program. Please provide:

- a) A complete list of all “payment methods” available to Manitoba Hydro residential customers along with the fees associated with each method;**
- b) A complete list of all “payment locations” available to Manitoba Hydro residential customers along with the fees associated with each location.**

ANSWER:

Please see Manitoba Hydro’s responses to RCM/TREE/MH I-78 and RCM/TREE/MH I-79(b).

On page 8 of the Report, Manitoba Hydro identifies, “based on this [referenced] research,” “bill messaging,” “alternative payment methods,” and “payment locations” as “key components with related activities [that] have been identified for consideration in the development of a comprehensive bill assistance program.”

- a) Please define “bill messaging” and provide a detailed explanation of how “bill messaging” promotes rate affordability.**

ANSWER:

Bill messaging consists of text and graphical messages that appear on a customer’s bill. Bill messages are a marketing channel to provide information on programs, initiatives and options to customers. Through this messaging, customers can be made aware of bill assistance and other programming.

Manitoba Hydro uses bill messaging to promote programs, initiatives and payment options to its customer base and sees this effort as one of the activities that will assist in Bill Management. An example of this is bill messaging on past due accounts. When certain criteria are met, a social service message is printed on the bill along with the inclusion of a bill insert identifying where to obtain financial assistance. This may provide information that may assist customers in managing their bills.

RCM/TREE/MH I-129

On page 8 of the Report, Manitoba Hydro identifies, “based on this [referenced] research,” “bill messaging,” “alternative payment methods,” and “payment locations” as “key components with related activities [that] have been identified for consideration in the development of a comprehensive bill assistance program.”

- b) Separately identify each “bill assistance report and consultation paper” that identified “bill messaging” as a key component to a comprehensive rate affordability program.**

ANSWER:

Manitoba Hydro’s research efforts took a broad approach to reviewing what other utilities were doing in terms of affordable energy programs and the research also included reviewing some reports written on the subject matter. In undertaking this research, Manitoba Hydro did not place a significant amount of effort and resources towards documenting the research findings in terms of specifically articulating what each report stated and what each utility was doing. In undertaking this research, Manitoba Hydro determined that bill messaging is one component of a comprehensive rate affordability program.

RCM/TREE/MH I-129

On page 8 of the Report, Manitoba Hydro identifies, “based on this [referenced] research,” “bill messaging,” “alternative payment methods,” and “payment locations” as “key components with related activities [that] have been identified for consideration in the development of a comprehensive bill assistance program.”

- c) Separately provide a copy of each written program evaluation of a rate affordability program using “bill messaging” as a key component of the rate affordability program.**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-129(b).

On page 8 of the Report, Manitoba Hydro identifies, “based on this [referenced] research,” “bill messaging,” “alternative payment methods,” and “payment locations” as “key components with related activities [that] have been identified for consideration in the development of a comprehensive bill assistance program.”

- d) Please define “alternative payment methods” and provide a detailed explanation of how “alternative payment methods” promote rate affordability.**

ANSWER:

Manitoba Hydro’s research efforts took a broad approach to reviewing what other utilities were doing in terms of affordable energy programs and the research also included reviewing some reports written on the subject matter. In undertaking this research, Manitoba Hydro did not place a significant amount of effort and resources towards documenting the research findings in terms of specifically articulating what each report stated and what each utility was doing. In undertaking this research, Manitoba Hydro determined that alternative payment methods is one component of a comprehensive rate affordability program.

Alternative payment methods include a variety of options for making payments including holding outstanding arrears in a separate area of the customer’s account and excluding this amount from accumulating late payment charges. Each month an agreed upon amount is moved into the customer’s current charges. This allows Manitoba Hydro to work within the customer’s financial ability to pay. In addition, customers can pay their accounts on-line, via telephone banking, in person at their financial institution, directly to Manitoba Hydro, or at over 100 external payment agencies across Manitoba. These alternative payment methods provide options that allow customers to better manage their payments.

RCM/TREE/MH I-129

On page 8 of the Report, Manitoba Hydro identifies, “based on this [referenced] research,” “bill messaging,” “alternative payment methods,” and “payment locations” as “key components with related activities [that] have been identified for consideration in the development of a comprehensive bill assistance program.”

- e) Separately identify each “bill assistance report and consultation paper” that identified “alternative payment methods” as a key component to a comprehensive rate affordability program.**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-129(d).

RCM/TREE/MH I-129

On page 8 of the Report, Manitoba Hydro identifies, “based on this [referenced] research,” “bill messaging,” “alternative payment methods,” and “payment locations” as “key components with related activities [that] have been identified for consideration in the development of a comprehensive bill assistance program.”

- f) Separately provide a copy of each written program evaluation of a rate affordability program using “alternative payment methods” as a key component of the rate affordability program.**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-129(d).

RCM/TREE/MH I-129

On page 8 of the Report, Manitoba Hydro identifies, “based on this [referenced] research,” “bill messaging,” “alternative payment methods,” and “payment locations” as “key components with related activities [that] have been identified for consideration in the development of a comprehensive bill assistance program.”

- g) Please define “payment locations” and provide a detailed explanation of how “payment locations” promotes rate affordability.**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-129(d).

RCM/TREE/MH I-129

On page 8 of the Report, Manitoba Hydro identifies, “based on this [referenced] research,” “bill messaging,” “alternative payment methods,” and “payment locations” as “key components with related activities [that] have been identified for consideration in the development of a comprehensive bill assistance program.”

- h) Separately identify each “bill assistance report and consultation paper” that identified “payment locations” as a key component to a comprehensive rate affordability program.**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-129(d).

RCM/TREE/MH I-129

On page 8 of the Report, Manitoba Hydro identifies, “based on this [referenced] research,” “bill messaging,” “alternative payment methods,” and “payment locations” as “key components with related activities [that] have been identified for consideration in the development of a comprehensive bill assistance program.”

- i) Separately provide a copy of each written program evaluation of a rate affordability program using “payment locations” as a key component of the rate affordability program.**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-129(d).

RCM/TREE/MH I-130

On page 10 of the Report, Manitoba Hydro states that in “compelling situations,” the Company will “consider” “negotiable reconnection fees” and “negotiable security deposits.”

a) Please define the term “compelling situations.”

ANSWER:

Each customer’s situation is unique and will be assessed on a case-by-case basis consistent with other Manitoba Hydro policies.

Please refer to Section 21.6 of the Attachment to Manitoba Hydro’s response to CAC/MSOS/MH I-100(e) for a description of extenuating circumstances that may be used as a guideline for consideration of negotiable reconnection fees and negotiable security deposits.

RCM/TREE/MH I-130

On page 10 of the Report, Manitoba Hydro states that in “compelling situations,” the Company will “consider” “negotiable reconnection fees” and “negotiable security deposits.”

- b) Please identify the complete list of metrics that Manitoba Hydro uses to determine that a customer presents a “compelling situation.”**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-130(a).

RCM/TREE/MH I-130

On page 10 of the Report, Manitoba Hydro states that in “compelling situations,” the Company will “consider” “negotiable reconnection fees” and “negotiable security deposits.”

- c) Please identify the complete list of empirical data elements that Manitoba Hydro uses to determine that a customer presents a “compelling situation.”**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-130(a).

RCM/TREE/MH I-130

On page 10 of the Report, Manitoba Hydro states that in “compelling situations,” the Company will “consider” “negotiable reconnection fees” and “negotiable security deposits.”

- d) Please provide a printout of the screen that is available to a call center staffperson with an illustrative example of a customer that presents a “compelling situation.”**

ANSWER:

There is no screen specifically illustrating compelling situations for considering negotiable reconnection fees and negotiable security deposits. Staff are regularly coached on working with customers facing challenging circumstances and encouraged to consider the customer’s ability to pay.

RCM/TREE/MH I-130

On page 10 of the Report, Manitoba Hydro states that in “compelling situations,” the Company will “consider” “negotiable reconnection fees” and “negotiable security deposits.”

- e) Please provide a printout of the screen that is available to a field office staffperson with an illustrative example of a customer that presents a “compelling situation.”**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-130(d).

RCM/TREE/MH I-130

On page 10 of the Report, Manitoba Hydro states that in “compelling situations,” the Company will “consider” “negotiable reconnection fees” and “negotiable security deposits.”

- f) Please provide a copy of all staff procedures manuals that document Company policies and procedures regarding the offer of “negotiable reconnection fees” and “negotiable security deposits” in a “compelling situation.”**

ANSWER:

Please see Manitoba Hydro’s responses to CAC/MSOS/MH I-100(e) and RCM/TREE/MH I-96(f).

RCM/TREE/MH I-130

On page 10 of the Report, Manitoba Hydro states that in “compelling situations,” the Company will “consider” “negotiable reconnection fees” and “negotiable security deposits.”

- g) Please provide a copy of all staff training manuals used for call center and/or field office personnel regarding what circumstances present a “compelling situation,” and when those circumstances present themselves, how to provide a “negotiable reconnection fee” and/or a “negotiable security deposit.”

ANSWER:

Please refer to Manitoba Hydro’s responses to RCM/TREE/MH I-130 (f), RCM/TREE/MH I-98(e) and RCM/TREE/MH I-98(f).

RCM/TREE/MH I-131

On page 11 of the Report, Manitoba Hydro refers to “specially trained staff member who deals specifically with vulnerable clients.” The Company states that a “vulnerable client” includes “socially disadvantaged persons.”

a) Please define the term “socially disadvantaged person.”

ANSWER:

“Socially disadvantaged person” is meant to provide broader scope to the term “vulnerable clients” to include those customers who may be facing extenuating circumstances [refer to Section 21.6 of Attachment 1 provided in response to CAC/MSOS/MH I-100(e)] beyond the descriptors specifically listed, such as elderly persons, persons experiencing medical health and/or mental/emotional health issues, and therefore not be limited in its definition to specified circumstances only.

RCM/TREE/MH I-131

On page 11 of the Report, Manitoba Hydro refers to “specially trained staff member who deals specifically with vulnerable clients.” The Company states that a “vulnerable client” includes “socially disadvantaged persons.”

- b) Please identify the complete list of metrics that Manitoba Hydro uses to determine that a customer represents a “socially disadvantaged person.”**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-131(a).

RCM/TREE/MH I-131

On page 11 of the Report, Manitoba Hydro refers to “specially trained staff member who deals specifically with vulnerable clients.” The Company states that a “vulnerable client” includes “socially disadvantaged persons.”

- c) Please identify the complete list of empirical data elements that Manitoba Hydro uses to determine that a customer represents a “socially disadvantaged person.”**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-131(a).

RCM/TREE/MH I-131

On page 11 of the Report, Manitoba Hydro refers to “specially trained staff member who deals specifically with vulnerable clients.” The Company states that a “vulnerable client” includes “socially disadvantaged persons.”

- d) Please provide a printout of the screen that is available to a call center staffperson with an illustrative example of a customer that represents a “socially disadvantaged person” that should be referred to a “specially trained staff member.”**

ANSWER:

There is no screen specifically illustrating a customer that represents a “socially disadvantage person”. Staff are regularly coached on working with customers facing challenging circumstances.

RCM/TREE/MH I-131

On page 11 of the Report, Manitoba Hydro refers to “specially trained staff member who deals specifically with vulnerable clients.” The Company states that a “vulnerable client” includes “socially disadvantaged persons.”

- e) Please provide a printout of the screen that is available to a field office staffperson with an illustrative example of a customer that represents a “socially disadvantaged person” that should be referred to a “specially trained staff member.”**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-131(d).

RCM/TREE/MH I-131

On page 11 of the Report, Manitoba Hydro refers to “specially trained staff member who deals specifically with vulnerable clients.” The Company states that a “vulnerable client” includes “socially disadvantaged persons.”

- f) Please provide a copy of all staff procedures manuals that document Company policies and procedures regarding how the “specially trained staff member” should address the issues presented by a “socially disadvantaged person.”**

ANSWER:

Manitoba Hydro does not have a procedures manual for the “specially trained staff member who deals specifically with vulnerable clients”.

RCM/TREE/MH I-131

On page 11 of the Report, Manitoba Hydro refers to “specially trained staff member who deals specifically with vulnerable clients.” The Company states that a “vulnerable client” includes “socially disadvantaged persons.”

- g) Please provide a copy of all staff training manuals used to train the “specially trained staff member” on how to address the issues presented by a “socially disadvantaged person.”**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-131(f). The specially trained staff member possesses a Bachelors Degree in Social Work and prior experience working with both municipal and provincial social assistance agencies.

RCM/TREE/MH I-132

On page 11 of the Report, Manitoba Hydro states that “if any client is deemed to require more assistance than Manitoba Hydro can offer, they can be referred to” specified agencies.

- a) Please identify the complete list of metrics that Manitoba Hydro uses to determine that a customer “requires more assistance than Manitoba Hydro can offer.”**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-130(a).

RCM/TREE/MH I-132

On page 11 of the Report, Manitoba Hydro states that “if any client is deemed to require more assistance than Manitoba Hydro can offer, they can be referred to” specified agencies.

- b) Please identify the complete list of empirical data elements that Manitoba Hydro uses to determine that a customer “requires more assistance than Manitoba Hydro can offer.”**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-130(a).

RCM/TREE/MH I-132

On page 11 of the Report, Manitoba Hydro states that “if any client is deemed to require more assistance than Manitoba Hydro can offer, they can be referred to” specified agencies.

- c) Please provide a printout of the screen that is available to a call center staffperson with an illustrative example of a customer that represents a customer that “requires more assistance than Manitoba Hydro can offer.”**

ANSWER:

There is no screen specifically illustrating a customer that requires more assistance than Manitoba Hydro can offer.

RCM/TREE/MH I-132

On page 11 of the Report, Manitoba Hydro states that “if any client is deemed to require more assistance than Manitoba Hydro can offer, they can be referred to” specified agencies.

- d) Please provide a printout of the screen that is available to a field office staffperson with an illustrative example of a customer that “requires more assistance than Manitoba Hydro can offer.”**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-132(c).

RCM/TREE/MH I-132

On page 11 of the Report, Manitoba Hydro states that “if any client is deemed to require more assistance than Manitoba Hydro can offer, they can be referred to” specified agencies.

- e) Please provide a copy of all staff procedures manuals that document Company policies and procedures regarding how to determine that a customer “requires more assistance than Manitoba Hydro can offer.”**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-102(a).

RCM/TREE/MH I-132

On page 11 of the Report, Manitoba Hydro states that “if any client is deemed to require more assistance than Manitoba Hydro can offer, they can be referred to” specified agencies.

- f) Please provide a copy of all staff training manuals used to train call center and/or field office staff on when a customer “requires more assistance than Manitoba Hydro can offer.”**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-102(a).

RCM/TREE/MH I-133

On page 12 of the Report, Manitoba Hydro states that NHN assists families “who are unable to pay their energy bills due to personal hardship or crisis.”

- a) Define the term “personal hardship” as used in this sentence.**
- b) Define the term “crisis” as used in this sentence.**
- c) Provide a complete list of all metrics used by NHN to determine whether a customer is in “personal hardship.”**
- d) Provide a complete list of all data elements used to determine whether a customer is in “personal hardship.”**
- e) Provide a complete list of all metrics used by NHN to determine whether a customer is in “crisis.”**
- f) Provide a complete list of all data elements used by NHN to determine whether a customer is in “crisis.”**

ANSWER:

The Neighbours Helping Neighbours Program is administered by the Salvation Army. Customers who are struggling to pay their energy bill and facing disconnection are referred to the NHN program.

Social workers and other trained program staff working for the Salvation Army assess client needs and situations consistent with all other social services and programming offered by the organization.

RCM/TREE/MH I-134

On page 12 of the Report, Manitoba Hydro states that “the NHN program was designed to target Manitoba Hydro customers who are considered lower income and who find themselves in an emergency situation.”

- a) Define the term “emergency situation” as used in this sentence.**
- b) Provide a complete list of all metrics used by NHN to determine whether a lower income customer is “in an emergency situation.”**
- c) Provide a complete list of all data elements used by NHN to determine whether a customer is “in an emergency situation.”**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-133(a).

RCM/TREE/MH I-135

On page 12 of the Report, Manitoba Hydro reports that 472 customers received NHN assistance through a referral to NHN by Manitoba Hydro in Fiscal Year 08/09. Of those 472 customers receiving assistance, please provide:

- a) A distribution of the arrears of those customers, at the time they applied for assistance, in bands of \$100 (e.g., \$0, \$1 - \$100, \$101 - \$200, etc.).**

ANSWER:

A distribution of the arrears for NHN participants at the time they applied for assistance is not readily available. To obtain the above mentioned summary would require a manual search and review of each individual NHN account within Manitoba Hydro's customer billing system.

RCM/TREE/MH I-135

On page 12 of the Report, Manitoba Hydro reports that 472 customers received NHN assistance through a referral to NHN by Manitoba Hydro in Fiscal Year 08/09. Of those 472 customers receiving assistance, please provide:

- b) A distribution of the arrears of those customers, at the time they applied for assistance, by age of arrears.**

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-135(a).

RCM/TREE/MH I-135

On page 12 of the Report, Manitoba Hydro reports that 472 customers received NHN assistance through a referral to NHN by Manitoba Hydro in Fiscal Year 08/09. Of those 472 customers receiving assistance, please provide:

- c) A distribution of those customers by whether or not they had a pending disconnection of service at the time they applied for assistance.**

ANSWER:

To be eligible for the financial assistance component of the Neighbours Helping Neighbours Program, the customer will have received a disconnection notice.

RCM/TREE/MH I-135

On page 12 of the Report, Manitoba Hydro reports that 472 customers received NHN assistance through a referral to NHN by Manitoba Hydro in Fiscal Year 08/09. Of those 472 customers receiving assistance, please provide:

- d) A distribution of the arrears of those customers, in the sixth month after receiving NHN assistance, in bands of \$100;**

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-135(a).

RCM/TREE/MH I-135

On page 12 of the Report, Manitoba Hydro reports that 472 customers received NHN assistance through a referral to NHN by Manitoba Hydro in Fiscal Year 08/09. Of those 472 customers receiving assistance, please provide:

- e) A distribution of the arrears of those customers, by the age of arrears, in the sixth month after receiving NHN assistance;**

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-135(a).

RCM/TREE/MH I-135

On page 12 of the Report, Manitoba Hydro reports that 472 customers received NHN assistance through a referral to NHN by Manitoba Hydro in Fiscal Year 08/09. Of those 472 customers receiving assistance, please provide:

- f) A distribution of those customers by the number of disconnections for nonpayment they experienced in the 12 months after receiving NHN assistance;**

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-135(a).

RCM/TREE/MH I-135

On page 12 of the Report, Manitoba Hydro reports that 472 customers received NHN assistance through a referral to NHN by Manitoba Hydro in Fiscal Year 08/09. Of those 472 customers receiving assistance, please provide:

- g) A distribution of those customers by the number of disconnect notices they received in the 12 months after receiving NHN assistance.**

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-135(a).

RCM/TREE/MH I-135

On page 12 of the Report, Manitoba Hydro reports that 472 customers received NHN assistance through a referral to NHN by Manitoba Hydro in Fiscal Year 08/09. Of those 472 customers receiving assistance, please provide:

- h) A distribution of those customers by whether the arrears on their account, in the sixth month after receiving NHN assistance, was lower than, greater than, or the same as, the level of arrears at the time they received NHN assistance.**

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-135(a).

RCM/TREE/MH I-136

At page 13 of the Report, Manitoba Hydro states that “the Salvation Army reports quarterly on the program’s overall performance. . .An annual report is prepared at the end of each fiscal year.”

a) Provide a copy of each quarterly report filed for January 2006 to present;

ANSWER:

The Salvation Army NHN program staff meet with representatives of Manitoba Hydro on a quarterly basis to provide program updates. A formal written report is not provided.

RCM/TREE/MH I-136

At page 13 of the Report, Manitoba Hydro states that “the Salvation Army reports quarterly on the program’s overall performance. . .An annual report is prepared at the end of each fiscal year.”

b) Provide a copy of each annual report filed FY 2006 to present.

ANSWER:

Please see Attachments 1 and 2 for the 2006/07 and 2007/08. For the 2008/09 annual reports please see Manitoba Hydro’s response to CAC/MSOS/MH I-196(c) – Attachment 1.



2006 - 2007 Annual Report

Once again, I am proud to report that the Neighbours Helping Neighbours Program has successfully met its goal of providing support to Manitobans facing unforeseen circumstances that temporarily impact their ability to meet their financial commitments. In 2006/2007, over 425 families and individuals in the province were given that support, either by way of financial assistance, or through referrals to social agencies that help them to maintain their self-sufficiency.

Donations made to the program are distributed to qualifying families or individuals who, due to unexpected events such as illness or job loss, are temporarily unable to make payments on their energy bill. The funds provide one-time help for recipients, who often need a helping hand only until they get back on a solid financial footing.

Manitoba Hydro's partnership with The Salvation Army is another key factor in the program's success. Through the efforts of The Salvation Army, program applicants are introduced to a host of agencies from which they can get various types of support to help them overcome a wide range of hurdles and provide for a brighter future.

I am pleased to take this opportunity to thank all contributors for their generous donations, and The Salvation Army for their commitment and dedication to the program.



Bob Brennan
CEO and President
Manitoba Hydro

RCM/TREE/MH I-136(b)

Who Are The People We Help?

They are families trying to put food on the table, to pay the bills, to clothe their children, to cover the rent — Life's basic essentials.

People living at or near the poverty level stretch every penny and, even if they make ends meet, many can be one minor crisis away from a financial emergency. If this occurs, Neighbours Helping Neighbours helps provide energy assistance for families in need of support.

This program is designed to assist individuals who have been impacted by personal hardships and are struggling to meet their financial commitments. Individuals with lower incomes typically spend a higher proportion of their income on their natural gas and electricity bills. They also tend to consume more energy to meet their needs than other customers. These families often rent homes that have little insulation, old appliances, and the least efficient heating systems.

To date, Neighbours Helping Neighbours has assisted over 1,000 families and individuals in need of support.

Attachment 1

Helping others to have hope and find a solution in their time of need is one of the greatest gifts we can give to our neighbours.

We have appreciated the keen social conscience of Manitoba Hydro in their generous support of this program. They care about the people of Manitoba and want to help others when they experience crisis in their lives. Many of you in Manitoba are constantly experiencing this joy as you partner with Manitoba Hydro and The Salvation Army in supporting our Neighbours Helping Neighbours Program.

Again this year many households have been able to keep the electricity on and feel warm. They have also felt the warmth of dialoguing with our coordinator, Lenore Sylvester. She is a good friend and has a great deal of compassion and is eager to help those who are in need.

The Salvation Army takes the words of Jesus "love your neighbour" very seriously and is grateful for the opportunity God has given us to help and empower others in our community. While many of you are already making personal contributions towards this important program, we would encourage others to give their support and experience the joy in "Neighbours helping Neighbours"



Major Wilbert Abbott
Divisional Commander
The Salvation Army,
Manitoba &
N.W. Ontario Division

Page 1 of 4

VISION

Strengthening our communities by empowering and guiding individuals towards independence.

Community Council

The Neighbours Helping Neighbours Program was developed by a Community Council that oversees the program. The group is made up of individuals representing a number of community minded organizations.

Philip Fenn

*Business Representative
President Global 2000*

Jo Anne Gallagher

*Administrative Officer
Customer Services & Marketing
Manitoba Hydro*

Major Al Hoeft

*Divisional Secretary for Public Relations
The Salvation Army*

Major Dora & Gary Keeping

Major Kristiana & Bruce Mackenzie

*Corps Officer
The Salvation Army, Brandon*

Brian Ketcheson

*Division Manager
Customer Services & Marketing
Manitoba Hydro*

Derek Pachal

*Manager of Community Economic
Development
United Way*

Tara Rudy

*Policy Analyst
Social Planning Council of Winnipeg*

Major Susan van Duinen

*Assistant Divisional Secretary for
Program
The Salvation Army*

Program Management

The Salvation Army manages the program and will meet with individuals and families who are seeking assistance and will be responsible for determining whether approval will be granted.

Lenore Sylvester (Winnipeg)

*Neighbours Helping Neighbours
Program Coordinator
The Salvation Army*



By supporting the Neighbours Helping Neighbours Energy Assistance Program you:

- Help families in crisis
- Strengthen families and communities
- Help people learn new life skills

Filling the Gap with Community and Government Programs

Referral Agencies

- Community Financial Counseling Services
- Community Resources (rent assistance, housing renovations, clothing, furniture)
- Disability Issues
- Employment Programs
- Food Banks
- Health Care Facilities
- Individuals Counseling (addictions, abuse, grief, support groups)
- Legal Aid
- Social Assistance

Programs

- Age & Opportunity
- Canada Pension Plan Disability
- Child Related Income Support Program
- Community Financial Counseling Services
- Employment and Income Assistance
- Independent Living Resource Centre
- Clinic
- North End Women's Counseling Services
- PATH Resource Centre
- Salvation Army Weetamah Community Church
- Seed Winnipeg Inc
- The Salvation Army Work Readiness Program
- Winnipeg Harvest

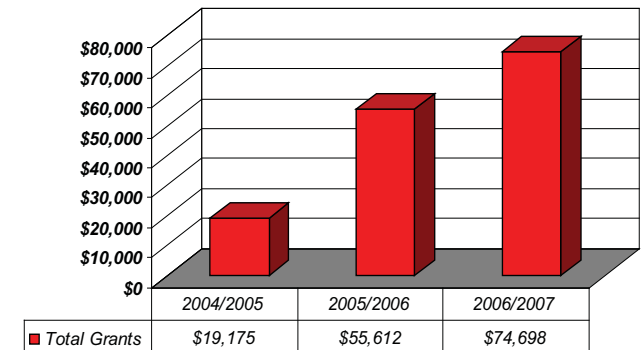


Neighbours Helping Neighbours Statement Of Activities

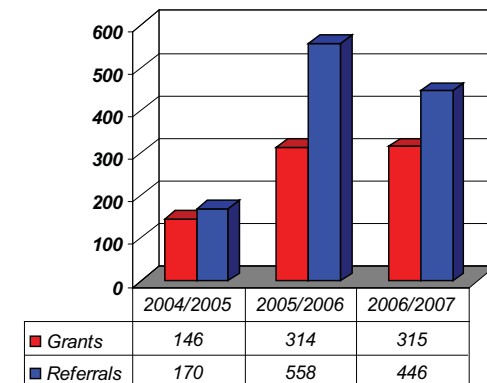
Year Ended March 31, 2007

	Winnipeg	Brandon	Combined
INCOME			
Prior Year Surplus/(Deficit) Brought Forward	523	4,479	5,002
Customer and Manitoba Hydro Donations	69,360	11,042	80,402
Administration Grants - MB Hydro	41,000	22,500	63,500
Total Income	\$110,883	\$38,021	\$148,904
EXPENSES			
Support Services	42,780	8,323	51,103
General Operations	3,680	1,006	4,687
Equip., Furniture & Property	7,085	4,200	11,285
Assistance Grants	64,875	9,823	74,698
Total Expenses	\$118,420	\$23,352	\$141,773
Surplus/(Deficit)	(\$7,537)	\$14,669	7,131
Transfer of Surplus from Brandon to Wpg	9,768	(9,768)	
Surplus/(Deficit) to be Carried Forward	\$2,231	\$4,901	\$7,131

Total Grants to Assist Families



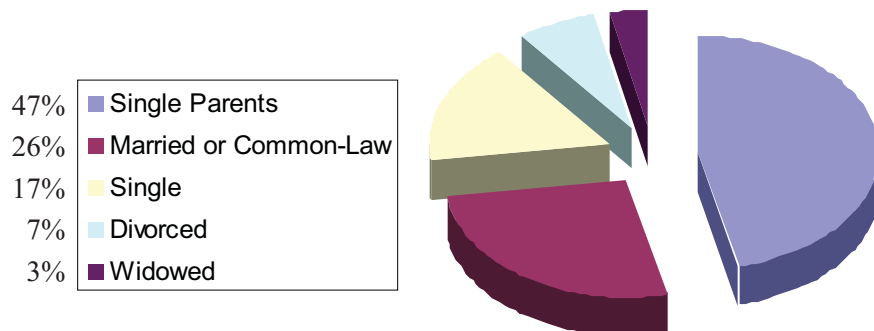
Families Helped



Note: Bar Graphs figures have changed from the previous year due to reporting updates.

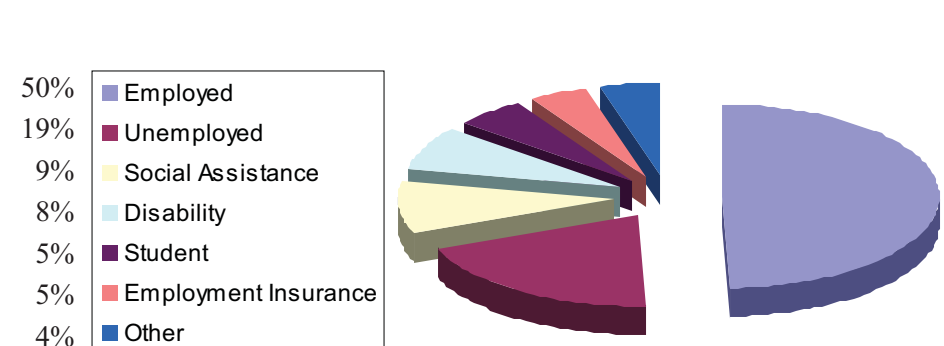
Family Status of People Assisted 2006/2007

Winnipeg Program Only



Employment Status of People Assisted 2006/2007

Winnipeg Program Only





"My hydro was disconnected, my house was cold. I came in the office and the worker showed kindness, sincerity, and courtesy. My power was restored by nightfall and I took advantage of all the resources that I was given.

Thank You!" Rachel



Highlights (April 2004 - March 2007)

- Over 1200 families have contacted the program; most through referrals from Manitoba Hydro staff working with these customers in dealing with collection issues.
- Over 1000 referrals to additional community programs have been made. Perhaps the greatest outcome of the relationship between The Salvation Army and Manitoba Hydro is The Salvation Army's ability to provide applicants with additional community support through a referral process that helps address underlying factors that can impact a household.
- Over 775 grants have been provided to qualifying families. The program has made a difference to these families by relieving some financial stress and helping to redirect money they would spend on their energy bills toward other basic needs, such as food and shelter.
- The Neighbours Helping Neighbours Program currently operates in Winnipeg and the Brandon/Westman area. The intent is that all Manitobans will have access to the program in 2007.

The Forecast: Busy

Every year is a busy year for Neighbours Helping Neighbours. The next twelve months will be no exception. The program is expanding and will be available to all Manitoba Hydro customers in 2007. In addition to the current program locations in Winnipeg and Brandon, the program will soon be available through The Salvation Army district offices located in Dauphin, Thompson, Flin Flon and Portage la Prairie.

At Neighbours Helping Neighbours we provide assistance with life's basic needs and hope for families who have no where else to turn. Unplanned events such as a sick child, a rent increase or a reduction in work hours are things that most families painfully absorb, but can throw a working poor family into a financial crisis.

The Board and staff of Neighbours Helping Neighbours look forward to their continued role in helping people face emergency situations and regain their self-reliance and thank you for your generous donations. On behalf of all the people you helped support last year, thank you.



Neighbours Helping Neighbours
c/o The Salvation Army
949-2106
Winnipeg, Manitoba

www.neighbourshelpingneighbours.com



Vision

Strengthening our communities by empowering and guiding individuals towards independence.



Major Susan van Duinen
Divisional Commander
The Salvation Army,
Manitoba and North West
Ontario Division

Neighbours Helping Neighbours is about people helping people. Since 2004, The Salvation Army and Manitoba Hydro have partnered to help people in our communities. Everything done through the Neighbours Helping Neighbours Program is about people.

The program provides one-time emergency funding to assist families and individuals living at or near the poverty level. More importantly, the program provides these families and individuals with referrals to community programs to help develop personal budgeting skills, enhance job search skills, and provide support for the needs of children and emergency assistance for food.

I am pleased to share with you that in 2008, we expanded the program to reach all residents of Manitoba. Working together, The Salvation Army and Manitoba Hydro are strengthening our communities by empowering and guiding individuals towards independence – and bringing hope to our province.

Thank you for supporting the Neighbours Helping Neighbours Program.



**Giving
Hope
Today**



Bob Brennan
President and CEO
Manitoba Hydro

The Neighbours Helping Neighbours Program has been truly successful in helping support people in our society who need it most. It has been an especially rewarding year given the fact that in September the program became available to all Manitobans.

Since the program began in May 2004, over 1200 families and individuals have been provided with the support they need, either by way of financial assistance, or through referrals to social agencies that help them to maintain their self-sufficiency.

The program was designed to assist individuals who have been impacted by personal hardships and are struggling to meet their financial commitments. Donations made to the program are distributed to qualifying families or individuals who are temporarily unable to make payments on their energy bill.

Manitoba Hydro is honoured to work with such a well-respected organization as The Salvation Army and we look forward to continued success in the years ahead.

I would like to take this opportunity to extend a big thank-you to all contributors for their generous donations. I also thank The Salvation Army for their commitment and dedication to the program.



Annual Report

2007-2008



To date, Neighbours Helping Neighbours has
assisted over

1200 families
and individuals in need of support.

Who Neighbours helps

In every community, there are individuals, families and seniors trying to make ends meet who experience problems beyond their control. When personal hardship happens, it can cause a financial emergency. Neighbours Helping Neighbours assists people who need support.

One-time emergency funding to assist with energy bills may also be provided. Individuals with lower incomes typically spend a higher proportion of their income on their natural gas and electricity bills. These families also often rent homes that have little insulation, old appliances, and inefficient heating systems - factors which can cause a greater impact on their energy bills.

Christine left a violent relationship to raise her three children on her own. She had difficulty balancing the demands of her job, going back to school and raising her kids without child support or financial aid. *"I am determined to make it on my own, and I was grateful for Neighbours Helping Neighbours. It was a place that helped me when I needed assistance,"* she says.

Michelle participated in the program and was provided with resources that helped her turn her situation around. *"I was given support and was able to connect with other social services in the community, which I had no prior knowledge of."*

The emergency assistance on her energy bill helped Theresa get her finances under control. *"I am grateful for the onetime donation – this motivates me to continue making payments on my account."*

Neighbours offers people the opportunity to change their circumstances. The program connects people to community support services, counseling and job training.

Program Management

The Salvation Army manages the program and meets with individuals and families who are seeking assistance and is responsible for determining whether approval will be granted.

Community Council

Neighbours Helping Neighbours was developed by a Community Council that oversees the program. The group is made up of individuals representing a number of community minded organizations.

Philip Fenn

Business Representative
President Global 2000

Major Al Hoeft

Divisional Secretary for Public Relations
The Salvation Army

Major Dora & Gary Keeping Major Kristiana & Bruce Mackenzie

Corps Officer
The Salvation Army, Brandon

Lois Morrison

Division Manager
Customer Service & Marketing
Manitoba Hydro

Derek Pachal

Manager of Community Economic Development
United Way

Cindy Roy

Customer Care Manager
Customer Service & Marketing
Manitoba Hydro

Captain Robert Russell

The Salvation Army Weetamah

Major Dirk van Duinen

Assistant Divisional Secretary for Program
The Salvation Army

Highlights (April 2004- March 2008)

Over 1200 families have been helped by the program.

Most through referrals from Manitoba Hydro staff assisting customers with collection issues.

Over 1500 referrals to additional community programs.

Through Neighbours Helping Neighbours, the Salvation Army can access a significant number of community members that they may not normally reach. Connecting these individuals to community support services helps address underlying factors that impact their household.

Over 1100 grants have been provided.

The program relieves an individual's financial stress and enables a family to redirect money toward other basic needs, such as food and shelter in an emergency situation.

Access to community and government programs

Referral agencies

- Community financial counseling services
- Community resources (rent assistance, housing renovations, clothing, furniture)
- Disability issues
- Employment programs
- Food banks
- Health care facilities
- Individual counseling (addictions, abuse, grief, support groups)
- Legal aid
- Social assistance

Programs

- Age & Opportunity
- Canada Pension Plan Disability
- Child Related Income Support Program
- Community Financial Counseling Services
- Employment and Income Assistance
- Independent Living Resource Centre
- Clinic
- North End Women's Counseling Services
- PATH Resource Centre
- Salvation Army Weetamah Community Church
- Seed Winnipeg Inc
- The Salvation Army Work Readiness Program
- Winnipeg Harvest

You can make a difference in your community.

With your support, Neighbours Helping Neighbours:

- Assists individuals, families and seniors in crisis
- Strengthens families and our community
- Helps people learn new life skills to make positive changes

Helping all Manitobans

In September 2007, Neighbours Helping Neighbours was made available to all Manitobans.

A busy forecast

With the recent expansion of the Neighbours Helping Neighbours Program to provide access to all Manitobans, we anticipate a very busy year ahead. The Board and Staff of Neighbours Helping Neighbours look forward to their continued role helping people manage emergency situations. Without your generous donations, this program would not be possible.

On behalf of all the people you helped regain their self-reliance last year, *thank you*.



you can make a difference.

Neighbours *helping* Neighbours

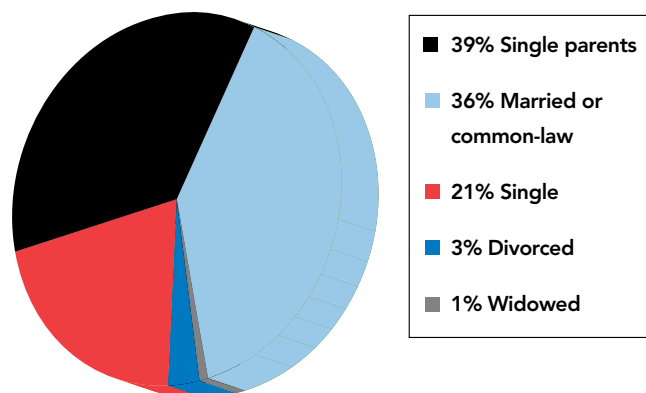
Statement of Activities

year ended March 31, 2008

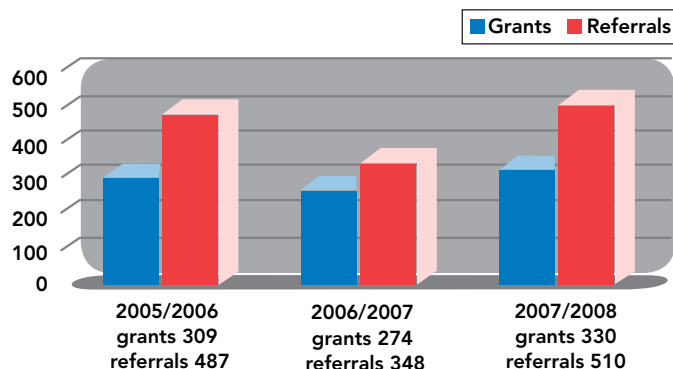
Income	
Prior Year Surplus/(Defecit) brought forward	\$ 7,131
Customer and Manitoba Hydro donations	\$ 91,408
Administration Grants	\$ 78,750
Total Income	\$177,289
Expenses	
Support services	\$ 51,799
General operations	\$ 13,833
Equipment, furniture, and property	\$ 8,955
Assistance grants	\$ 95,564
Total expenses	\$ 170,181
Surplus (defecit) to be carried forward	\$ 7,138

Family status of individuals assisted 2007-2008

Winnipeg program only

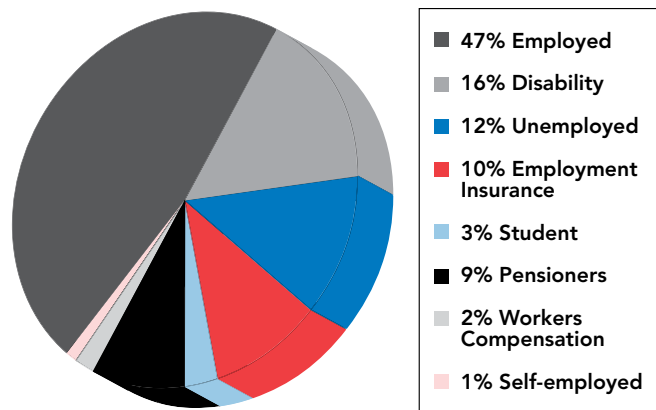


Individuals Helped

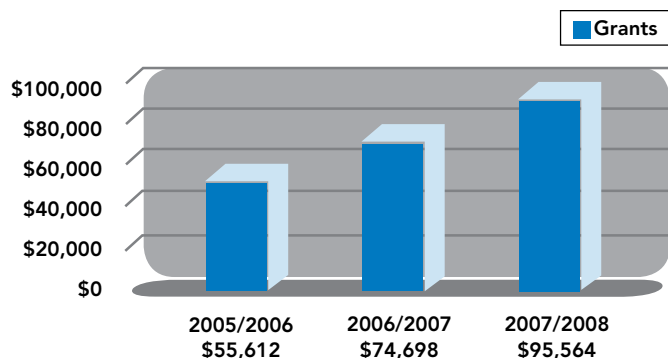


Employment status of individuals assisted 2007-2008

Winnipeg program only



Total assistance grants



RCM/TREE/MH I-137

At page 13 of the Report, Manitoba Hydro states that “the Salvation Army reports quarterly on the program’s overall performance. . .”

- a) Provide a copy of each report, prepared during the period January 2006 to present, setting forth an report of the outcomes generated by the distribution of NHN funds;**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-136(b).

RCM/TREE/MH I-137

At page 13 of the Report, Manitoba Hydro states that “the Salvation Army reports quarterly on the program’s overall performance. . .”

- b) Provide a copy of each written document proposing, assessing, or deciding upon outcome measures for NHN prepared January 2006 to present;**

ANSWER:

Manitoba Hydro does not have a written document proposing, assessing or deciding upon outcome measures for NHN.

RCM/TREE/MH I-137

At page 13 of the Report, Manitoba Hydro states that “the Salvation Army reports quarterly on the program’s overall performance. . .”

- c) Provide a copy of all program evaluations of NHN prepared January 2006 to present.**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-136(b).

RCM/TREE/MH I-138

Confirm or deny. In Fiscal Year 2008/2009, Neighbors Helping Neighbors spent 37.4% (\$81,250 of \$217,172) of total contributions on “administrative costs.” If denied, provide a detailed explanation of the basis for the denial.

ANSWER:

Of the \$217,172 budgeted for the 2008/09 fiscal year, the Salvation Army forecasted \$81,250 or 37% of the anticipated costs to be for administration of the program.

RCM/TREE/MH I-139

Confirm or deny. In Fiscal Year 2008/2009, Neighbors Helping Neighbors spent an additional 2.7% (\$5,788 of \$217,172) of total contributions, above and beyond administrative costs, on “marketing costs.” If denied, provide a detailed explanation of the basis for the denial.

ANSWER:

In 2008/09, Manitoba Hydro contributed an additional \$5,788 or 2.7% of the 2008/09 fiscal year budget to support marketing of the NHN program.

RCM/TREE/MH I-140

At page 14 of the Report, Manitoba Hydro states that NHN distributed 472 grants with an average grant of \$254 each ($472 \times \$254 = \$119,888$). At page 14, Manitoba Hydro states that NHN distributed \$130,134 in grants. Please reconcile the \$130,134 figure with the \$119,888 number.

ANSWER:

The \$130,134 represents the 2008/09 budget or forecast for NHN grants, not actual expenditures for the 2008/09 fiscal year.

RCM/TREE/MH I-141

Confirm or deny. For each grant averaging \$254 each (page 14 of the Report), the Company spent \$172 in administrative costs ($\$81,250 / 472 = \$172$). If denied, please provide a detailed explanation of the basis for the denial. If denied, separately provide the total administrative cost per grant provided in FY 2008/2009.

ANSWER:

The \$81,250 represents the 2008/09 budget or forecast for NHN program administration costs. Actual program administration costs in 2008/09, excluding grants awarded, were \$72,514 which represents program implementation costs of approximately \$154 per grant awarded in 2008/09.

RCM/TREE/MH I-142

Confirm or deny. For each grant averaging \$254 (page 14 of the Report), the Company spent \$184 in combined administrative and marketing costs ($\$81,250 + \$5,788 = \$87,038 / 472 = \$184$). If denied, please provide a detailed explanation of the basis for the denial. If denied, separately provide the total combined administrative cost/marketing cost per grant provided in FY 2008/2009.

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-141.

Actual expenditures for administration and marketing for 2008/09 were $\$72,514 + \$5,788 = \$78,302$ for an average cost of approximately \$166 per grant awarded.

RCM/TREE/MH I-143

Confirm or deny. The Administration Costs are derived from 1.75 full time staff members at the Salvation Army, who made 472 grants in Fiscal Year 2008/2009. NHN made 270 grants per Full Time Equivalent staffperson (472 grants / 1.75 full time staff = 270 per staff person). If denied, provide a detailed explanation of the basis for the denial. Separately provide the number of grants per full time equivalent staffperson provided in Fiscal Year 2008/2009.

ANSWER:

Based upon the 2008/09 forecast of 1.75 equivalent full time staff being committed to the NHN program compared to the actual number of grants awarded in 2008/09, 270 grants would be awarded per equivalent full time staff person.

RCM/TREE/MH I-144

At page 15 of the Report, Manitoba Hydro references “over 1,300” LIEEP applications through the “individual approach” and “over 400” LIEEP applications through the “community approach.” Is this combined 1,700 applications the same “over 1,700 applications” referenced at Section 1.2 of the Marketing Plan?

ANSWER:

Confirmed.

RCM/TREE/MH I-145

Confirm or deny. The LIEEP has a “target market” of approximately 76,000 households as referenced at page 17 of the Report. If denied, please provide a detailed explanation of the basis for the denial. Separately provide an estimate of the number of customers in the LIEEP “target market.”

ANSWER:

The LIEEP target market of 76,000 was based on survey data which was undertaken during 2003. The market includes those customers who pay the utility bill, have qualifying housing types and meet income eligibility. Please see Manitoba Hydro’s response to PUB/MH I-109(a) for updated market information based on a 2009 residential survey.

RCM/TREE/MH I-146

Please provide a copy of the raw data from the Manitoba Hydro 2003 Residential Energy Use Survey used in the review of energy burdens discussed at pages 17 – 18 of the Report. Provide this data in an electronic spreadsheet with all formulae intact. Separately provide all data dictionaries or other documents needed to explain the data and the corresponding calculations.

ANSWER:

Please see Manitoba Hydro's responses to RCM/TREE/MH I-3(a) and RCM/TREE/MH I-104(b).

RCM/TREE/MH I-147

For the LICO x 125% customer base served by Manitoba Hydro of 93,197 customers directly paying their own energy bills, provide a distribution of the number of such customers by the following ranges of LICO:

a) 0 – 25% of LICO;

ANSWER:

When the 2003 Residential Energy Use Survey was undertaken, income information was only asked for in larger blocks consisting of \$10,000. Due to these broad ranges, a combination of the income range and people per household could be used to only approximate the true LICO-125 definitions. As a result, it is impossible to divide the LICO-125 groups any further than income groups of \$10,000.

The following table provides the distribution by income range and people per household, which is the most detailed level that is available using the 2003 data (PPH is persons per household).

Income/PPH	1	2	3	4	5	6	7+	Total
< \$10,000	5,296	2,322	526	364	0	0	0	8,508
\$10 - \$19,999	18,904	13,129	1,950	1,856	512	449	160	36,960
\$20 - \$29,999	0	15,869	4,102	1,705	1,079	418	37	23,210
\$30 - \$39,999	0	0	6,151	4,225	1,166	526	174	12,242
\$40 - \$49,999	0	0	0	5,737	1,888	894	337	8,856
\$50 - \$59,999	0	0	0	0	2,104	682	63	2,849
\$60 - \$69,999	0	0	0	0	0	501	71	572
Total	24,200	31,320	12,729	13,887	6,749	3,470	842	93,197

RCM/TREE/MH I-147

For the LICO x 125% customer base served by Manitoba Hydro of 93,197 customers directly paying their own energy bills, provide a distribution of the number of such customers by the following ranges of LICO:

b) 26 – 50% of LICO;

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-147(a).

RCM/TREE/MH I-147

For the LICO x 125% customer base served by Manitoba Hydro of 93,197 customers directly paying their own energy bills, provide a distribution of the number of such customers by the following ranges of LICO:

c) 51 – 75% of LICO;

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-147(a).

RCM/TREE/MH I-147

For the LICO x 125% customer base served by Manitoba Hydro of 93,197 customers directly paying their own energy bills, provide a distribution of the number of such customers by the following ranges of LICO:

d) 76 – 100% of LICO; and

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-147(a).

RCM/TREE/MH I-147

For the LICO x 125% customer base served by Manitoba Hydro of 93,197 customers directly paying their own energy bills, provide a distribution of the number of such customers by the following ranges of LICO:

e) 101 – 125% of LICO.

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-147(a).

RCM/TREE/MH I-148

For each band of LICO in the immediately preceding response, provide:

a) The average income;

ANSWER:

The survey responses only provided income ranges and therefore the average income within each range can not be determined.

RCM/TREE/MH I-148

For each band of LICO in the immediately preceding response, provide:

b) The median income.

ANSWER:

The survey responses only provided income ranges and therefore, the median income within each range can not be determined.

RCM/TREE/MH I-149

At page 18 of the Report, Manitoba Hydro reports an “energy cost” of \$1,517 for electric heating customers. Provide the calculation of that \$1,517 figure in sufficient detail, including all input variables, to allow replication. Provide the calculation in a “live” electronic spreadsheet with all formulae intact.

ANSWER:

The energy cost calculation is based on the average electricity consumption for a LICO +125 consumer, as determined in Manitoba Hydro’s 2003 Residential Energy Use Survey. On a weather normalized basis, this represented an annual consumption of 24,079 kWh.

The annual cost for this level of consumption was calculated using the residential electricity rates that were in effect for the 2003 calendar year, as shown below:

Monthly Basic Charge < 200 Amp	\$6.25
Energy Charge (per month):	
First 175 kW.h @	\$0.05780
Balance of kW.h @	\$0.05160

The annual energy cost was calculated as follows:]

Annual consumption (kWh)	24,079	
Annual Consumption in first block (assumes 175 kWh/month X 12 months)	2,100	
First block energy charge (per kWh)	<u>\$0.05780</u>	
Total first block charges for 12 months		\$121
Annual consumption in excess of first block (kWh)	21,979	
Tail block energy charge (per kWh)	<u>\$0.05160</u>	
Total tail block charges for 12 months		\$1,134
Total basic monthly charges for 12 months		\$75
Total cost before applicable taxes		<u>\$1,331</u>
Applicable taxes (7% GST, 1.4% PST, 0.5% City Tax)		<u>\$118</u>
Total		<u>\$1,449</u>

Please note that the energy cost calculation provided on page 18 of the Manitoba Hydro Affordable Energy Program report assumed a 14% applicable tax rate; however, the applicable tax rate should have been 7% GST, 1.4% PST and 0.5% City Tax (in 2003) based on a representative customer who uses electricity for space heat and appliances and resides within the city of Winnipeg. The revised energy cost calculation is \$1,449, when calculated with the appropriate tax rate, instead of \$1,517 as stated in the report.

For the reasons outlined in RCM/TREE/MH I-3(a), Manitoba Hydro declines to provide the requested materials in Excel format.

RCM/TREE/MH I-150

At page 18 of the Report, Manitoba Hydro reports an “energy cost” of \$1,633 for natural gas heating customers. Provide the calculation of that \$1,633 figure in sufficient detail, including all input variables, to allow replication. Provide the calculation in a “live” electronic spreadsheet with all formulae intact.

ANSWER:

The energy cost calculation is based on the average electricity and natural gas consumption for a LICO +125 consumer, as determined in Manitoba Hydro’s 2003 Residential Energy Use Survey. On a weather normalized basis, this represented an annual residential energy consumption of 7,839 kWh of electricity and 2,769 m³ of natural gas.

The annual electricity cost for this level of consumption was calculated using the residential electricity rates that were in effect for the 2003 calendar year, as shown in the response to RCM/TREE/MH I-149. The calculation for the electricity consumption is shown below:

Annual consumption (kWh)	7,839	
Annual Consumption in first block (assumes 175 kWh/month X 12 months)	2,100	
First block energy charge (per kWh)	<u>\$0.05780</u>	
Total first block charges for 12 months		\$121
Annual consumption in excess of first block (kWh)	5,739	
Tail block energy charge (per kWh)	<u>\$0.05160</u>	
Total tail block charges for 12 months		\$296
Total basic monthly charges for 12 months		\$75
Total cost before applicable taxes		<u>\$493</u>
Applicable taxes (7% GST, 7% PST, 2.5% City Tax)		<u>\$81</u>
Total annual electricity cost		<u><u>\$574</u></u>

The annual natural gas cost for this level of consumption was calculated using the Primary Gas rates and the Small General Service class rates that were in effect for the 2003 calendar year. The calculation for the natural gas consumption is shown below, and assumes that natural gas is only used for space heating purposes:

The annual energy cost was calculated as follows:

Annual Natural Gas Bill

Annual natural gas consumption (m ³)	2,769	
Weighted average natural gas rate (per m ³)	<u>\$0.3547</u>	
Total variable natural gas charges		\$982
Total natural gas basic monthly charges		\$120
Total annual natural gas cost before taxes		<u>\$1,102</u>
Applicable taxes (7% GST)		<u>\$77</u>
Total annual natural gas cost		<u><u>\$1,179</u></u>

Annual Residential Energy Bill

Total annual electricity cost	\$574
Total annual natural gas cost	<u>\$1,179</u>
Total annual residential energy bill	<u><u>\$1,753</u></u>

Please note that the calculation of the energy costs presented on page 18 of the Manitoba Hydro Affordable Energy Program report inadvertently omitted the impact of natural gas basic monthly charges for the year, in addition to incorrectly applying the applicable taxes. The revised annual energy cost is \$1,753. Please see the attached schedule for the calculation of the weighted average natural gas rate.

For the reasons outlined in RCM/TREE/MH I-3(a), Manitoba Hydro declines to provide the requested materials in Excel format.

RCM/TREE/MH I-150
Attachment 1
Page 1 of 1

RCM/TREE/MH I -150
Attachment
Calculation of the weighted average Natural Gas Rate

2003 Consumption		Billing Rates				Billing Percentage split		Total Billing				
Month	Volume M ³	Transportation (to Centra)	Distribution (to Customer)	Primary Gas	Supplemental Gas	Primary Gas	Supplemental Gas	Transportation (to Centra)	Distribution (to Customer)	Primary Gas	Supplemental Gas	Total
January	511 M ³	\$ 0.0399	\$ 0.0717	\$ 0.2239	\$ 0.0784	95%	5%	\$ 20.39	\$ 36.64	\$ 108.69	\$ 2.00	\$ 167.72
February	410 M ³	\$ 0.0399	\$ 0.0717	\$ 0.2577	\$ 0.0784	100%	0%	\$ 16.36	\$ 29.40	\$ 105.66	\$ -	\$ 151.41
March	345 M ³	\$ 0.0399	\$ 0.0717	\$ 0.2577	\$ 0.0784	100%	0%	\$ 13.77	\$ 24.74	\$ 88.91	\$ -	\$ 127.41
April	204 M ³	\$ 0.0399	\$ 0.0717	\$ 0.2577	\$ 0.0784	100%	0%	\$ 8.14	\$ 14.63	\$ 52.57	\$ -	\$ 75.34
May	100 M ³	\$ 0.0399	\$ 0.0717	\$ 0.2648	\$ 0.0784	81%	19%	\$ 3.99	\$ 7.17	\$ 21.45	\$ 1.49	\$ 34.10
June	57 M ³	\$ 0.0399	\$ 0.0717	\$ 0.2648	\$ 0.0784	81%	19%	\$ 2.27	\$ 4.09	\$ 12.23	\$ 0.85	\$ 19.44
July	47 M ³	\$ 0.0399	\$ 0.0717	\$ 0.2648	\$ 0.0784	81%	19%	\$ 1.88	\$ 3.37	\$ 10.08	\$ 0.70	\$ 16.03
August	51 M ³	\$ 0.0419	\$ 0.0716	\$ 0.2213	\$ 0.3874	81%	19%	\$ 2.14	\$ 3.65	\$ 9.14	\$ 3.75	\$ 18.68
September	77 M ³	\$ 0.0419	\$ 0.0716	\$ 0.2213	\$ 0.3874	81%	19%	\$ 3.23	\$ 5.51	\$ 13.80	\$ 5.67	\$ 28.21
October	188 M ³	\$ 0.0419	\$ 0.0716	\$ 0.2213	\$ 0.3874	81%	19%	\$ 7.88	\$ 13.46	\$ 33.70	\$ 13.84	\$ 68.88
November	319 M ³	\$ 0.0419	\$ 0.0716	\$ 0.2332	\$ 0.3874	96%	4%	\$ 13.37	\$ 22.84	\$ 71.42	\$ 4.94	\$ 112.56
December	460 M ³	\$ 0.0419	\$ 0.0716	\$ 0.2332	\$ 0.3874	96%	4%	\$ 19.27	\$ 32.94	\$ 102.98	\$ 7.13	\$ 162.32
Total Avg (LICO +125)	2,769							\$ 112.67	\$ 198.43	\$ 630.62	\$ 40.37	\$ 982.10

Weighted Avg Natural Gas Rate: **0.3547**

RCM/TREE/MH I-151

At page 18 of the Report, Manitoba Hydro reports the “average” income for the LICO x 125% population. Please provide the median income for that population.

ANSWER:

The survey responses only provided income ranges. An average was determined using midpoints of the ranges. Because of income ranges being used, a median can not be determined for the population.

RCM/TREE/MH I-152

At page 18 of the Report, Manitoba Hydro presents an analysis based on income of the LICO x 125% population served by the Company. Provide a distribution of the number of customers in the LICO x 125% population by quintiles of income. For each quintile, provide:

- a) The average income of the customers in that quintile;**

ANSWER:

The survey responses only provided income ranges. Therefore the income cannot be divided into quintiles.

Please see Manitoba Hydro's response to RCM/TREE/MH I-147(a) for the most detailed breakdown of customers that is available from the 2003 Residential Survey.

RCM/TREE/MH I-152

At page 18 of the Report, Manitoba Hydro presents an analysis based on income of the LICO x 125% population served by the Company. Provide a distribution of the number of customers in the LICO x 125% population by quintiles of income. For each quintile, provide:

b) The median income of the customers in that quintile;

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-152(a).

RCM/TREE/MH I-152

At page 18 of the Report, Manitoba Hydro presents an analysis based on income of the LICO x 125% population served by the Company. Provide a distribution of the number of customers in the LICO x 125% population by quintiles of income. For each quintile, provide:

- c) The number of electric heating customers in that quintile;**

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-152(a).

RCM/TREE/MH I-152

At page 18 of the Report, Manitoba Hydro presents an analysis based on income of the LICO x 125% population served by the Company. Provide a distribution of the number of customers in the LICO x 125% population by quintiles of income. For each quintile, provide:

d) The number of natural gas heating customers in that quintile;

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-152(a).

RCM/TREE/MH I-152

At page 18 of the Report, Manitoba Hydro presents an analysis based on income of the LICO x 125% population served by the Company. Provide a distribution of the number of customers in the LICO x 125% population by quintiles of income. For each quintile, provide:

- e) The average energy cost of the electric heating customers in that quintile;**

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-152(a).

RCM/TREE/MH I-152

At page 18 of the Report, Manitoba Hydro presents an analysis based on income of the LICO x 125% population served by the Company. Provide a distribution of the number of customers in the LICO x 125% population by quintiles of income. For each quintile, provide:

- f) The average energy cost of the natural gas heating customers in that quintile.**

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-152(a).

RCM/TREE/MH I-153

For Manitoba Hydro's LICO x 125% population who pay their bill directly as identified by Manitoba Hydro at page 17 of the Report, please distribute the electric heating customers by energy costs in bands of \$250 (e.g., \$1 - \$250; \$251 - \$500; \$501 - \$750; etc.). For each band, provide:

- a) The number of customers;**

ANSWER:

The following table provides the number of LICO-125 electric heated customers categorized by electricity costs in \$250 blocks.

Total	Customers
below \$250	219
\$251 - \$500	2,137
\$501 - \$750	2,960
\$751 - \$1000	2,623
\$1001 - \$1250	3,955
\$1251 - \$1500	4,770
\$1501 - \$1750	4,446
\$1751 - \$2000	3,315
\$2001 - \$2250	2,244
\$2251 - \$2500	1,121
\$2501 - \$2750	622
\$2751 - \$3000	583
\$3001 - \$3250	554
\$3251 - \$3500	187
\$3501 and above	375
Total	30,111

RCM/TREE/MH I-153

For Manitoba Hydro's LICO x 125% population who pay their bill directly as identified by Manitoba Hydro at page 17 of the Report, please distribute the electric heating customers by energy costs in bands of \$250 (e.g., \$1 - \$250; \$251 - \$500; \$501 - \$750; etc.). For each band, provide:

b) The average energy cost.

ANSWER:

The following table provides the annual average electricity costs for LICO-125 electric heated customers categorized into \$250 blocks.

Total	Average
below \$250	\$222
\$251 - \$500	\$414
\$501 - \$750	\$606
\$751 - \$1000	\$868
\$1001 - \$1250	\$1,127
\$1251 - \$1500	\$1,375
\$1501 - \$1750	\$1,625
\$1751 - \$2000	\$1,849
\$2001 - \$2250	\$2,129
\$2251 - \$2500	\$2,399
\$2501 - \$2750	\$2,624
\$2751 - \$3000	\$2,819
\$3001 - \$3250	\$3,111
\$3251 - \$3500	\$3,415
\$3501 and above	\$4,668
Overall	\$1,469

RCM/TREE/MH I-154

For Manitoba Hydro's LICO x 125% population who pay their bill directly as identified by Manitoba Hydro at page 17 of the Report, please distribute the natural gas heating customers by energy costs in bands of \$250 (e.g., \$1 - \$250; \$251 - \$500; \$501 - \$750; etc.). For each band, provide:

- a) The number of customers;**

ANSWER:

The following table provides the number of LICO-125 non-electric heated customers categorized by annual electricity and natural gas costs in \$250 blocks.

Total	Customers
below \$250	4,515
\$251 - \$500	8,084
\$501 - \$750	2,707
\$751 - \$1000	1,814
\$1001 - \$1250	3,117
\$1251 - \$1500	7,152
\$1501 - \$1750	11,696
\$1751 - \$2000	10,370
\$2001 - \$2250	5,937
\$2251 - \$2500	3,794
\$2501 - \$2750	2,061
\$2751 - \$3000	705
\$3001 - \$3250	460
\$3251 - \$3500	362
\$3501 and above	311
Total	63,085

RCM/TREE/MH I-154

For Manitoba Hydro's LICO x 125% population who pay their bill directly as identified by Manitoba Hydro at page 17 of the Report, please distribute the natural gas heating customers by energy costs in bands of \$250 (e.g., \$1 - \$250; \$251 - \$500; \$501 - \$750; etc.). For each band, provide:

b) The average energy cost.

ANSWER:

The following table provides the annual average electricity and natural gas costs for LICO-125 non-electric heated customers categorized into \$250 blocks.

Total	Average
below \$250	\$230
\$251 - \$500	\$328
\$501 - \$750	\$599
\$751 - \$1000	\$903
\$1001 - \$1250	\$1,156
\$1251 - \$1500	\$1,374
\$1501 - \$1750	\$1,627
\$1751 - \$2000	\$1,872
\$2001 - \$2250	\$2,105
\$2251 - \$2500	\$2,351
\$2501 - \$2750	\$2,613
\$2751 - \$3000	\$2,840
\$3001 - \$3250	\$3,118
\$3251 - \$3500	\$3,381
\$3501 and above	\$3,786
Overall	\$1,450

RCM/TREE/MH I-155

On page 29 of the Report, Manitoba Hydro states that “it is estimated the current average customer arrears is approximately \$900.” Confirm or deny. The reference to an “average customer arrears” is to customers receiving NHN assistance.

- a) If denied, provide a detailed explanation of the basis for the denial. Indicate the “average customer” to which the statement applies and indicate its relevance to the Report.**
- b) If denied, separately provide the average arrears of a Manitoba Hydro customer receiving NHN assistance.**

ANSWER:

The “average customer arrears” referred to above reflects the average arrears of all residential customers more than 60 days in arrears. This value was used as for a customer to be eligible for financial assistance under the NHN program they must be more than 60 days in arrears and have received a disconnection notice.

The average arrears for those customers receiving NHN assistance at the time of receiving the grant are not readily available. To obtain the above mentioned average arrears would require a manual search and review of each individual NHN account within Manitoba Hydro’s customer billing system.

RCM/TREE/MH I-156

Confirm or deny. The estimated NHN participation, given a 50% increase in participation, of 708 customers per year is drawn from the “target market” of 93,197 LICO x 125% customers who pay their bill directly. If denied, please provide a detailed explanation of the basis for the denial. Separately provide the size of the “target market” for NHN.

ANSWER:

Manitoba Hydro has not made an effort to estimate the targeted market for NHN. Manitoba Hydro has been working with the Salvation Army who administers the program. To date, no one has been turned away from the program due to a lack of funds. The 50% increase in participation is a high level estimate based on an expected increase in awareness of the program.

RCM/TREE/MH I-157

At page 18 of the Report, Manitoba Hydro presents energy burdens given an annual income of \$17,000. Manitoba Hydro states that \$17,000 “represents an estimated income threshold below which customers may begin to start accessing different forms of social assistance.” Confirm or deny. Customers in the LICO x 125% population with an annual income equal to \$17,000 are the most vulnerable Manitoba Hydro customers in the LICO x 125% population. If denied, provide a detailed explanation of the basis for the denial. Separately indicate whether the income of the “most vulnerable” customers would be higher or lower than \$17,000.

ANSWER:

Manitoba Hydro is not an expert in shelter allowance and how much a family or an individual receives under social programs and hence \$17,000 is meant to represent an estimated income threshold below which customers may begin to gain access to different forms of social assistance. The two levels of income were used in the report to provide an indication of the energy burden at these two income levels.

Manitoba Hydro does not have a definition of “most vulnerable” customers. Income is only one variable that could state of an individual’s financial situation. There are many other variables that might impact the state of an individual’s financial situation including household size, level of debt and other household expenses.

RCM/TREE/MH I-158

At page 18 of the Report, Manitoba Hydro presents energy burdens given an annual income of \$24,000. Manitoba Hydro states that \$24,000 represents the average income of the LICO x 125% population. Confirm or deny. Customers in the LICO x 125% population with an annual income equal to \$24,000 are the most vulnerable Manitoba Hydro customers in the LICO x 125% population. If denied, provide a detailed explanation of the basis for the denial. Separately indicate whether the income of the “most vulnerable” customers would be higher or lower than \$24,000.

ANSWER:

The \$24,000 was an estimate of the average income for LICO x 125% population and based on data obtained from a 2003 residential survey.

Manitoba Hydro does not have a definition of “most vulnerable” customers. Income is only one variable that could state of an individual’s financial situation. There are many other variables that might impact the state of an individual’s financial situation including household size, level of debt and other household expenses.

At page 31 of the Report, Manitoba Hydro states that “other jurisdictions have identified the complexity associated with the specific rate discounts, waivers or cash subsidies.”

a) Please identify each utility offering a “rate discount” studied for the Report;

ANSWER:

Manitoba Hydro’s research and analysis was done at a high level. Specifics of programming were not analyzed in-depth and a complete list of utilities offering a rate discount was not kept.

The line cited in this request refers to the broad information gathered specifically from the following four reports and the associated content within each report.

- 1) The “Ontario Energy Board - Report of the Board” (2009) -- page 6
 - “The Board also believes that it would be unwise to attempt to create a group of low-income energy ratepayers. To create a category of customers whose rates are based on their ability-to-pay could result in a distortion of prices and ratepayer costs.” -- page 6
- 2) The “Ontario Energy Board - Staff Report to the Board” (2009) -- page 6, 16-18
 - “Assistance should not distort price signals to consumers. The commodity price should continue to reflect the true cost of energy used by low-income energy consumers, consistent with the Government’s goal of creating a conservation culture, and distribution rates should continue to reflect cost causality as well as other central principles of rate setting.” -- page 6
 - “None of the participants in the consultation expressly advocated for the Board to establish a separate customer class with lower rates. Rather, those stakeholders that supported the notion of funding low-income programs through rates supported discount programs or other funding mechanisms that could be sourced at the utility level.

In its comments, EnviroCentre pointed to the confusion arising out of the perceived difference between a separate rate class for low-income energy consumers, as opposed to reduced rates or subsidies. EnviroCentre noted that “low-income rates are cumbersome, if not ‘messy’, in other jurisdictions and would almost certainly be very inefficient to administer in Ontario”.

While VECC commented that rate setting has always had a component beyond cost causality or strict non-discriminatory principles, it opposed the idea of a separate rate class. Rather, VECC indicated that rate assistance should be recovered on a system wide basis in a manner similar to the funding of the CRTC’s High Cost Serving Area fund. VECC proposed the creation of a system wide “Connectedness Fund” to provide rate assistance, discounts, and remission of charges.

Participants opposed to a new rate class argued that it would be discriminatory and would violate the fundamental principle of cost causality. They stated that rates should continue to be cost-based (or cost related) and recovered from the customer class that causes the costs. They added that cost shifts would increase rates for other consumers and some indicated that the uneven distribution of low-income energy consumers would create a disproportionate burden on some utilities.

Some participants further argued that a low-income rate would reduce the incentive to conserve. Many others noted that funding at the utility level would create redundancy since multiple utilities would be administering similar programs which would add to their capital and administrative costs. Some described the funding of low-income programs as a hidden, indirect and regressive form of taxation and stated that it would lead to less transparency in rate-making. Some stakeholders suggested that if the Board created a new rate class or gave special dispensation to low-income energy consumers, that this would open the door to other groups who could argue that their circumstances warrant the Board deviating from traditional rate-making principles. Finally, a few participants indicated that the Board is not a social agency that regulated energy charges are ill suited to affect distributive justice and that existing social welfare programs should be used and strengthened to address low-income concerns as they relate to energy.

LIEN took issue with the suggestion by other participants that the Board would have to depart from traditional rate-making principles in order to facilitate the funding of

low income or rate affordability programs within the construct of utility rates, arguing that in fact such programs in other jurisdictions have sound regulatory foundations grounded in Staff Report to the Board Consultation on Energy Issues Relating to Low-Income Consumers fundamental utility regulatory principles, stemming mainly from reduced collections costs.

LIEN suggested in both its presentation at the stakeholder conference and in its written comments that distribution rates could still be cost-based but have an affordability constraint amounting to an adjustment, the net effect of which would be to result in affordable bills.

Board Staff Comments

Board staff does not believe that it would be appropriate for the Board to create a separate rate sub-class for low-income energy consumers. Such a concept is impractical and violates the basic cost causality premise of rate making. Board staff suggests that the only way such a class could be implemented is by cross-subsidization from other consumers and at significant cost burden to utilities.” -- Page 16-18 Note VECC is the Vulnerable Energy Consumers Coalition and LIEN is the Low Income Energy Network.

- 3) “A Review of Low Income Energy Assistance Measures Adopted in Other Jurisdictions” by Concentric Energy Advisors (2008) -- pages 2, 3, and 26
 - “However, Concentric has not found any evidence that a separate rate class has been implemented for the benefit of low-income energy consumers.” -- page 2
 - “To the extent that a low income energy program involves charging higher rates to some customers in order to subsidize low-income customers, that program is properly seen as harnessing the market power of a monopoly in order to overcharge certain customers who lack sufficient competitive alternatives to allow them to leave the system when faced with monopoly pricing. In other words, discriminatory rates that take advantage of a utility’s market power may be incompatible with the primary underlying purpose of public utility regulation which is to act as a substitute for competitive markets.” -- page 3

- “From a policy perspective, rate discounts that waive or reduce the fixed monthly charge usually are perceived as more equitable because they improve the affordability of electric and natural gas service for low-income customers without regard to energy consumption levels. A waiver of the commodity charge portion of the customer bill might be very beneficial to the low-income customer, but the policy has been criticized as not providing the appropriate incentive for low-income customers to reduce their energy consumption. The regulatory authority should consider whether the waiver or reduction of the commodity component of the customer bill sends the correct price signal to the low-income customer regarding conservation. Waivers of security deposits and late payment charges are discussed in more detail later in this section.” -- page 26

4) “Ratepayer-Funded Low-Income Energy Programs: Performance and Possibilities” by APPRISE and Fisher, Sheehan, and Colton (2007) -- page 28

- “In 1979, the Colorado supreme court issued a decision that has stalled the implementation of permanent discount utility rates for the poor. In Mountain States Legal Foundation v. Public Utilities Commission, the state supreme court overturned the PUC's approval of discount rates for low-income elderly and low-income disabled customers. Such discounts, the court held, violated the statutory prohibition against preferential rates.

The Colorado Mountain States court recognized the economic difficulties of the target populations, observing "that many of our state's elderly live on fixed incomes which are severely strained by today's inflationary economy, as are low-income disabled persons who are often shut out of the employment market." The court held, however:

While efforts to provide economic relief to such needy persons are laudatory, the PUC has limited authority to implement a rate structure which is designed to provide financial assistance as a social policy to a narrow group of utility customers, especially where that low rate is financed by its remaining customers. . .It is clear in the case before us that the PUC's authority to order preferential rates has, in fact, been restricted by the legislature's enactment of [the no undue preference statute].

The court ultimately concluded that:

In this instance, the discount rate benefits an unquestionably deserving group, the low-income elderly and the low-income disabled. This, unfortunately, does not make the rate less preferential. . .[A]lthough the PUC has been granted broad rate making powers. . .the PUC's power to effect social policy through preferential rate making is restricted by statute no matter how deserving the group benefiting from the preferential rates may be." -- page.28

RCM/TREE/MH I-159

At page 31 of the Report, Manitoba Hydro states that “other jurisdictions have identified the complexity associated with the specific rate discounts, waivers or cash subsidies.”

- b) For each utility offering a rate discount studied for the Report, identify each utility that “identified the complexity associated with the specific rate discount” as a problem with offering the discount;**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-159(a).

RCM/TREE/MH I-159

At page 31 of the Report, Manitoba Hydro states that “other jurisdictions have identified the complexity associated with the specific rate discounts, waivers or cash subsidies.”

- c) For each utility offering a rate discount studied for the Report, who identified the “complexity associated with the specific rate discount” as a problem, provide the written document in which the utility identified the complexity of the rate discount as a problem. Include a page reference to the place in the document where the “complexity associated with the specific rate discount” was identified as a problem.**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-159(a).

RCM/TREE/MH I-160

At page 31 of the Report, Manitoba Hydro states that “reducing rates for lower income customers has been criticized due to the fact that it does not encourage energy conservation as a result of lower rates being charged on current consumption.” For each utility offering a “rate discount” studied for this report:

- a) Identify each utility offering a rate discount studied for this report who “criticized [the rate discount] due to the fact that it does not encourage energy conservation as a result of lower rates being charged on current consumption.”**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-159(a).

RCM/TREE/MH I-160

At page 31 of the Report, Manitoba Hydro states that “reducing rates for lower income customers has been criticized due to the fact that it does not encourage energy conservation as a result of lower rates being charged on current consumption.” For each utility offering a “rate discount” studied for this report:

- b) For each utility offering a rate discount studied for the Report that criticized the rate discount due to the fact that it does not encourage energy conservation, provide the written document in which the “criticism” is contained. Provide a specific page reference to the cited “criticism.”**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-159(a).

RCM/TREE/MH I-161

At page 31 of the Report, Manitoba Hydro states that “reducing rates for lower income customers has been criticized due to the fact that it does not encourage energy conservation as a result of lower rates being charged on current consumption.”

- a) Please provide a copy of each program evaluation of a rate discount, within the custody or control of Manitoba Hydro, which empirically found that the low-income program participants increased their consumption “as a result of lower rates being charged on current consumption.” Provide a specific page citation to that finding in each program evaluation provided.**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-159(a).

RCM/TREE/MH I-161

At page 31 of the Report, Manitoba Hydro states that “reducing rates for lower income customers has been criticized due to the fact that it does not encourage energy conservation as a result of lower rates being charged on current consumption.”

- b) Please provide a copy of each program evaluation of a rate discount, within the custody or control of Manitoba Hydro, which empirically found that the low-income program participants did not increase their consumption “as a result of lower rates being charged on current consumption.” Provide a specific page citation to that finding in each program evaluation provided.**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-159(a).

RCM/TREE/MH I-162

At page 31 of the Report, Manitoba Hydro states as one problem with low-income discounts that “for example, senior citizens who own their residence free and clear may fall within the household income guidelines, but might not qualify if the value of their assets is considered when determining their eligibility.” Please provide:

- a) A complete list of federal and/or provincial social assistance programs available to Manitoba Hydro lower income customers that employ an “assets test” for determining eligibility.**

ANSWER:

Manitoba Hydro is not an expert on the federal and provincial social assistance programs including the criteria used by these various programs to determine eligibility.

At page 31 of the Report, Manitoba Hydro states as one problem with low-income discounts that “for example, senior citizens who own their residence free and clear may fall within the household income guidelines, but might not qualify if the value of their assets is considered when determining their eligibility.” Please provide:

- b) A complete list of utilities offering a rate discount known to Manitoba Hydro to employ an “assets test” in determining eligibility for the rate discount.**

ANSWER:

Manitoba Hydro’s research efforts took a broad approach to reviewing what other utilities were doing in terms of affordable energy programs and the research also included reviewing some reports written on the subject matter. In undertaking this research, Manitoba Hydro did not place a significant amount of effort and resources towards documenting the research findings in terms of specifically articulating what each report stated and what each utility was doing.

Manitoba Hydro does not have a list of utilities which offer a rate discount and employ an “assets test” in determining eligibility for rate discounts.

RCM/TREE/MH I-163

At page 31 of the Report, Manitoba Hydro states as one problem with low-income discounts that “for example, senior citizens who own their residence free and clear may fall within the household income guidelines, but might not qualify if the value of their assets is considered when determining their eligibility.”

- a) Confirm or deny. Homeowners which place them in the LICO x 125% population might have negative assets if the debt on their mortgage is subtracted from their accrued equity. If denied, please provide a detailed explanation of the basis for the denial.**

ANSWER:

A homeowner could have negative assets if the mortgage on the home is greater than the value of the home however this would require an assessment of all the homeowners assets and debts.

RCM/TREE/MH I-163

At page 31 of the Report, Manitoba Hydro states as one problem with low-income discounts that “for example, senior citizens who own their residence free and clear may fall within the household income guidelines, but might not qualify if the value of their assets is considered when determining their eligibility.”

- b) Confirm or deny. Younger customers, who have recently purchased a home, may not fall within the household income guidelines but might qualify if the value of their assets is considered when determining their eligibility. If denied, please provide a detailed explanation of the basis for the denial.**

ANSWER:

Manitoba Hydro has no guidelines to determine eligibility in this example.

RCM/TREE/MH I-164

At page 31 of the Report, Manitoba Hydro states as one problem with low-income discounts that “for example, senior citizens who own their residence free and clear may fall within the household income guidelines, but might not qualify if the value of their assets is considered when determining their eligibility.”

- a) Confirm or deny. Manitoba Hydro does not take the value of assets into account in determining income eligibility for LIEEP. If denied, provide a detailed basis for the denial. Separately indicate how the value of assets is taken into account in determining the LIEEP eligibility.**

ANSWER:

Manitoba Hydro does not take assets into consideration when determining eligibility under the Corporation’s LIEEP.

At page 31 of the Report, Manitoba Hydro states as one problem with low-income discounts that “for example, senior citizens who own their residence free and clear may fall within the household income guidelines, but might not qualify if the value of their assets is considered when determining their eligibility.”

- b) Confirm or deny. Manitoba Hydro does not take the value of assets into account in determining income eligibility for NHN. If denied, provide a detailed basis for the denial. Separately indicate how the value of assets is taken into account in determining the NHN eligibility.**

ANSWER:

Manitoba Hydro does not take the value of assets into account when referring customers to NHN. Manitoba Hydro also understands that the Salvation Army does not consider the value of assets when determining eligibility for financial assistance under NHN.

RCM/TREE/MH I-164

At page 31 of the Report, Manitoba Hydro states as one problem with low-income discounts that “for example, senior citizens who own their residence free and clear may fall within the household income guidelines, but might not qualify if the value of their assets is considered when determining their eligibility.”

- c) Confirm or deny. Manitoba Hydro does not take the value of assets into account in negotiating deferred payment plans for arrears. If denied, provide a detailed basis for the denial. Separately indicate how the value of assets is taken into account in negotiating deferred payment plans for arrears.**

ANSWER:

Manitoba Hydro does not take the value of assets into account when negotiating deferred payment plans for arrears.

RCM/TREE/MH I-164

At page 31 of the Report, Manitoba Hydro states as one problem with low-income discounts that “for example, senior citizens who own their residence free and clear may fall within the household income guidelines, but might not qualify if the value of their assets is considered when determining their eligibility.”

- d) Confirm or deny. Manitoba Hydro does not take the value of assets into account in deciding whether to offer “not yet due” payments. If denied, provide a detailed basis for the denial. Separately indicate how the value of assets is taken into account in deciding whether to offer “not yet due” payments.**

ANSWER:

Manitoba Hydro does not take the value of assets into account in deciding whether or not to offer “not yet due” payments.

RCM/TREE/MH I-164

At page 31 of the Report, Manitoba Hydro states as one problem with low-income discounts that “for example, senior citizens who own their residence free and clear may fall within the household income guidelines, but might not qualify if the value of their assets is considered when determining their eligibility.”

- e) Confirm or deny. Manitoba Hydro does not take the value of assets into account in offering negotiable reconnect fees. If denied, provide a detailed basis for the denial. Separately indicate how the value of assets is taken into account in offering negotiable reconnect fees.**

ANSWER:

Manitoba Hydro does not take the value of assets into account in offering negotiable reconnect fees.

RCM/TREE/MH I-164

At page 31 of the Report, Manitoba Hydro states as one problem with low-income discounts that “for example, senior citizens who own their residence free and clear may fall within the household income guidelines, but might not qualify if the value of their assets is considered when determining their eligibility.”

- f) Confirm or deny. Manitoba Hydro does not take the value of assets into account in offering negotiable security deposits. If denied, provide a detailed basis for the denial. Separately indicate how the value of assets is taken into account in offering negotiable security deposits.**

ANSWER:

Manitoba Hydro does not take the value of assets into account in offering negotiable security deposits.

RCM/TREE/MH I-164

At page 31 of the Report, Manitoba Hydro states as one problem with low-income discounts that “for example, senior citizens who own their residence free and clear may fall within the household income guidelines, but might not qualify if the value of their assets is considered when determining their eligibility.”

- g) Confirm or deny. Manitoba Hydro does not take the value of assets into account in offering negotiable late payment charges. If denied, provide a detailed basis for the denial. Separately indicate how the value of assets is taken into account in offering negotiable late payment charges.**

ANSWER:

Manitoba Hydro does not take the value of assets into account in offering negotiable late payment charges.

At page 18 of the Report, Manitoba Hydro states that “in reviewing the energy burden of Manitoba Hydro’s lower income customers, it has been determined the energy burden is not at a crisis level.”

- a) Please restate the income levels presented in the Table on page 18 of the Report after adjusting the income to take into account the assets of these lower income customers. In calculating the assets, limit the identification of assets to homes, including a negative asset value in those circumstances where a customer’s mortgage debt exceeds the customer’s accrued equity in the home.**

ANSWER:

Manitoba Hydro does not collect or record customer information related to assets, equity or mortgage obligations and as such is unable to provide this information.

RCM/TREE/MH I-165

At page 18 of the Report, Manitoba Hydro states that “in reviewing the energy burden of Manitoba Hydro’s lower income customers, it has been determined the energy burden is not at a crisis level.”

- b) Please restate the energy burdens presented in the Table on page 18 of the Report after adjusting the income to take into account the assets of these lower income customers. In calculating the assets, limit the identification of assets to homes, including a negative asset value in those circumstances where a customer’s mortgage debt exceeds the customer’s accrued equity in the home.**

ANSWER:

Please see Manitoba Hydro’s response to RCM/TREE/MH I-165(a).

RCM/TREE/MH I-166

For each year 2006 to present, please provide:

- a) The number of lower income customers receiving NHN assistance;**

ANSWER:

Please see Manitoba Hydro's response to PUB/MH I-219. For the first three quarters of the 2009/10 fiscal year, there were 442 grants provided through the program.

RCM/TREE/MH I-166

For each year 2006 to present, please provide:

b) The number of lower income customers receiving LIEEP assistance;

ANSWER:

The number of lower income customers from all fuel sources receiving LIEEP assistance is provided in the following table. Please note that this is based on “participation” which is defined as homes that have completed all the LIEEP program recommendations and completed an ecoENERGY E evaluation, or comparable verification. In addition to those “participants” below, many additional LIEEP customers had some measures implemented, however not all work has been completed (e.g. furnaces may have been installed but insulation was not completed).

Category	Participants in LIEEP				
	2006-07 Total	2007-08 Total	2008-09 Total	First three quarters of 09/10	TOTAL
LIEEP Customers	31	108	143	231	513

RCM/TREE/MH I-166

For each year 2006 to present, please provide:

- c) The number of lower-income customers receiving both NHN and LIEEP assistance;**

ANSWER:

Manitoba Hydro launched LIEEP in December of 2007. All LIEEP participants for the 2006/07 and 2007/08 fiscal years became involved through community housing initiatives which were run by not-for-profit organizations and Manitoba Housing Authority (MHA). Manitoba Hydro does not have customer information for these participants and therefore, a cross reference between LIEEP participants and NHN participants for the 06/07 and 07/08 fiscal years can not be undertaken. Similar, Manitoba Hydro can not cross transfer any participants which occurred in subsequent years.

For the 2008/09 fiscal year and excluding MHA participants, there was one customer who received both NHN and LIEEP assistance. For the first three quarters of the 09/10 fiscal year there were three customers who received both NHN and LIEEP assistance.

RCM/TREE/MH I-166

For each year 2006 to present, please provide:

- d) The unduplicated total number of lower-income customers receiving NHN and LIEEP assistance;**

ANSWER:

Please see Manitoba Hydro's response to RCM/TREE/MH I-166(c).

For 2008/09, there were 143 LIEEP participants and 469 NHN participants. With one known customer participating in both programs, the total net number of participants is 611.

For 2009/10, there were 231 LIEEP participants and 442 NHN participants. With three known customers participating in both programs, the total number of participants is 670.

RCM/TREE/MH I-166

For each year 2006 to present, please provide:

- e) **The number of lower-income customers receiving NHN assistance who had previously received LIEEP assistance.**

ANSWER:

There are no other customers who participated in both programs other than those identified in Manitoba Hydro's response to RCM/TREE/MH I-166(d).

RCM/TREE/MH I-167

At page 29 of the Report, Manitoba Hydro states that the “current average arrears” (of an NHN recipient) is \$900. At page 14 of the Report, Manitoba Hydro states that the “average value” of an NHN grant was \$254.

- a) Confirm or deny. NHN grants are used only to reduce arrears. They are not applied against a bill for current usage. If denied, provide a detailed explanation of the basis for the denial.**
- b) If denied, provide the number of the 472 NHN grants in FY 2008/2009 that were applied in whole or part against bills for current usage.**
- c) If denied, provide the average value of the average \$254 NHN grant that was applied against bills for current usage.**

ANSWER:

The Salvation Army assesses client needs on a case-by-case basis and determines the value of the NHN grant up to the maximum of \$450, previously \$300. It is Manitoba Hydro’s understanding that the grants do not exceed the value of the arrears.

RCM/TREE/MH I-168

At page 18 of the Report, Manitoba Hydro reports an “energy cost” of \$1,517 for electric heating customers. Please identify what portion of that \$1,517 represents arrears and not a bill for current consumption.

ANSWER:

The amount of \$1,517 represents 0% arrears and 100% annual consumption.

RCM/TREE/MH I-169

At page 18 of the Report, Manitoba Hydro reports an “energy cost” of \$1,633 for natural gas heating customers. Please identify what portion of that \$1,633 represents arrears and not a bill for current consumption.

ANSWER:

The amount of \$1,633 represents 0% arrears and 100% annual consumption.

RCM/TREE/MH I-170

At page 18 of the Report, Manitoba Hydro reports an “energy cost” of \$1,633 for natural gas heating At page 45, Manitoba Hydro lists the utilities whose “Bill Assistance Programs” were researched for this report. Please identify each utility on that list whose operating company (companies) include service territories in:

a) New Hampshire;

ANSWER:

Manitoba Hydro understands that none of the companies listed on page 45 operate in New Hampshire.

RCM/TREE/MH I-170

At page 18 of the Report, Manitoba Hydro reports an “energy cost” of \$1,633 for natural gas heating At page 45, Manitoba Hydro lists the utilities whose “Bill Assistance Programs” were researched for this report. Please identify each utility on that list whose operating company (companies) include service territories in:

b) Massachusetts;

ANSWER:

Of the companies listed on page 45, Manitoba Hydro understands that Direct Energy operates in Massachusetts. The extent of services offered by Direct Energy within Massachusetts is uncertain.

RCM/TREE/MH I-170

At page 18 of the Report, Manitoba Hydro reports an “energy cost” of \$1,633 for natural gas heating At page 45, Manitoba Hydro lists the utilities whose “Bill Assistance Programs” were researched for this report. Please identify each utility on that list whose operating company (companies) include service territories in:

c) Pennsylvania;

ANSWER:

Of the companies listed on page 45, Manitoba Hydro understands that Direct Energy operates in Pennsylvania. The extent of services offered by Direct Energy within Pennsylvania is uncertain.

RCM/TREE/MH I-170

At page 18 of the Report, Manitoba Hydro reports an “energy cost” of \$1,633 for natural gas heating At page 45, Manitoba Hydro lists the utilities whose “Bill Assistance Programs” were researched for this report. Please identify each utility on that list whose operating company (companies) include service territories in:

d) New Jersey;

ANSWER:

Of the companies listed on page 45, Manitoba Hydro understands that Direct Energy and Public Service Electric and Gas Company operate in New Jersey. The extent of services offered by Direct Energy within New Jersey is uncertain. Public Service Electric and Gas Company operates as a typical utility within New Jersey.

RCM/TREE/MH I-170

At page 18 of the Report, Manitoba Hydro reports an “energy cost” of \$1,633 for natural gas heating At page 45, Manitoba Hydro lists the utilities whose “Bill Assistance Programs” were researched for this report. Please identify each utility on that list whose operating company (companies) include service territories in:

e) Maryland;

ANSWER:

Of the companies listed on page 45, Manitoba Hydro understands that Direct Energy operates in Maryland. The extent of services offered by Direct Energy within Maryland is uncertain.

RCM/TREE/MH I-170

At page 18 of the Report, Manitoba Hydro reports an “energy cost” of \$1,633 for natural gas heating At page 45, Manitoba Hydro lists the utilities whose “Bill Assistance Programs” were researched for this report. Please identify each utility on that list whose operating company (companies) include service territories in:

f) Ohio;

ANSWER:

Of the companies listed on page 45, Manitoba Hydro understands that Direct Energy operates in Ohio. The extent of services offered by Direct Energy within Ohio is uncertain.

RCM/TREE/MH I-170

At page 18 of the Report, Manitoba Hydro reports an “energy cost” of \$1,633 for natural gas heating At page 45, Manitoba Hydro lists the utilities whose “Bill Assistance Programs” were researched for this report. Please identify each utility on that list whose operating company (companies) include service territories in:

g) Colorado;

ANSWER:

Manitoba Hydro understands that none of the companies listed on page 45 operate in Colorado.

RCM/TREE/MH I-170

At page 18 of the Report, Manitoba Hydro reports an “energy cost” of \$1,633 for natural gas heating At page 45, Manitoba Hydro lists the utilities whose “Bill Assistance Programs” were researched for this report. Please identify each utility on that list whose operating company (companies) include service territories in:

h) Nevada.

ANSWER:

Of the companies listed on page 45, Manitoba Hydro understands that NV Energy operates in Nevada. The extent of services offered by NV Energy within Nevada is uncertain.

At page 45 of the Report, Manitoba Hydro lists a series of reports that were used as “research sources.” Please indicate for each report listed below, whether Manitoba Hydro reviewed the report as a “research source” for this report:

- a) Colton (2009). An Outcome Evaluation of Indiana’s Low-Income Rate Affordability Programs: 2008 – 2009.
- b) Apprise, Inc. (2008). PPL Electric Utilities Universal Service Programs: Final Evaluation Report.
- c) Colton (2007). Best Practices: Low-Income Affordability Programs, Articulating and Applying Rating Criteria.
- d) Colton (2007). An Outcome Evaluation of Indiana’s Low-Income Rate Affordability Programs.
- e) Apprise, Inc. and Colton (2007). A Multi-state Study of Low-Income Programs.
- f) PA Consulting Group (2007). Electric Universal Service Program Evaluation: Final Evaluation Report.
- g) Colton (2006). Experimental Low-Income Program (ELIP): Empire District Electric Company, Final Program Evaluation.
- h) Apprise, Inc. (2006). Impact Evaluation and Concurrent Process Evaluation of the New Jersey Universal Service Fund.
- i) Apprise, Inc. (2006). PECO Energy Customer Assistance Program For Customers Below 50 Percent of Poverty Final Evaluation Report.
- j) Apprise, Inc. (2006). PECO Energy Universal Services Program Final Evaluation Report.
- k) Apprise Inc. (2006). PG Energy Universal Services & Energy Conservation Programs Evaluation: Final Report.
- l) H. Gil Peach and Associates (2006). State Fiscal Year 2005 Evaluation of the NRS 701 Energy Assistance Program and Weatherization Assistance Program.
- m) Colton (2005). Impact Evaluation of NIPSCO Winter Warmth Program.
- n) Apprise, Inc. (2006). PPL Electric Utilities Winter Relief Assistance Program: Final Evaluation Report (2006).
- o) Quantec, llc (2005). Utah HELP: Program Evaluation (HELP: Home Energy Lifeline Program).
- p) Triad Research Group (2005). Focus Groups with PIPP Participants (PIPP: Percentage of Income Payment Program, Ohio).

- q) **Apprise, Inc. (2005). Philadelphia Gas Works Customer Responsibility Program: Final Evaluation Report.**
- r) **Apprise, Inc. (2004). Niagara Mohawk Power Corporation LICAP Program Evaluation: Final Report.**
- s) **Quantec, llc (2004). Oregon Energy Assistance Program Final Evaluation.**
- t) **Colton (2003). The Impact of Missouri Gas Energy's Experimental Low-Income Rate (ELIR) On Utility Bill Payments by Low-Income Customers: Preliminary Assessment.**
- u) **Quantec, llc (2003). Washington Los-Income Bill Assistance Program: Phase II Impact Analysis.**
- v) **Apprise, Inc. (2002). Niagara Mohawk Power Corporation LICAP Program Evaluation: Final Report.**
- w) **Apprise, Inc. (2002). Niagara Mohawk Power Corporation Low Income Customer Assistance Program : Impacts on Payments and Arrearages.**
- x) **Quantec, llc (2002). Oregon REACH Final Evaluation.**
- y) **Quantec, llc (2001). Final Findings: Indiana REACH Evaluation.**
- z) **Colton (revised 1995). Models of Low-Income Utility Rates.**
- aa) **Colton (1990). Nonparticipation in Public Benefit Programs: Lessons for Fuel Assistance.**
- bb) **Colton (1990). Why Customers Don't Pay: The Need for Flexible Collection Techniques.**

ANSWER:

The reports that Manitoba Hydro referenced in preparing its Affordable Energy Report are provided in Appendix D of the Report and in response to RCM/TREE/MH I-127.