

RCM #11

**PROVINCE OF MANITOBA
BEFORE THE PUBLIC UTILITY BOARD**

**Manitoba Hydro)
2010/11 & 2011/12 General Rate)
Application)**

Case No. 17/10

BOOK OF DOCUMENTS

**ON BEHALF OF
RESOURCE CONSERVATION MANITOBA
AND
TIME TO RESPECT EARTH'S ECOSYSTEMS**

Gange Goodman and French
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PROOF OF REVENUE

**Interim April 1, 2010 Rates vs Proposed April 1, 2011 Rates
for year ended March 31, 2012**

	Calculated Revenue Current Rate	Calculated Revenue Prop. Rate	Diff. in Revenue Dollars	Diff. in Revenue Percent
Basic	485,043,231	499,086,360	\$14,043,129	2.9%
Diesel ¹	651,521	664,037	\$12,516	1.9%
Seasonal	6,960,182	7,126,919	\$166,737	2.4%
FRWH	1,203,404	1,238,157	\$34,752	2.9%
Total Residential	\$493,858,338	\$508,115,472	\$14,257,135	2.9%
Small Non-Demand	\$119,982,951	\$123,479,338	\$3,496,387	2.9%
Small Demand	\$117,423,332	\$120,928,037	\$3,504,705	3.0%
Seasonal	\$501,126	\$516,156	\$15,030	3.0%
FRWH	\$503,942	\$518,547	\$14,606	2.9%
Total Small	\$238,411,350	\$245,442,079	\$7,030,729	3.0%
Total Medium	\$159,607,851	\$164,478,959	\$4,871,108	3.0%
Large 750 V-30 kV	\$72,223,955	\$74,294,731	\$2,070,776	2.9%
Large 30 - 100 kV	\$33,782,648	\$34,824,230	\$1,041,582	3.1%
Large > 100 kV	\$199,002,328	\$205,201,048	\$6,198,720	3.1%
Energy Intensive	7,508,753	7,508,753	\$0	0.0%
Total Large	\$312,517,684	\$321,828,762	\$9,311,077	3.0%
Diesel GS & Gov. ¹	4,200,049	4,203,968	\$3,919	0.1%
SEP	\$848,452	\$848,452	\$0	0.0%
Total GS	\$715,585,387	\$736,802,221	\$21,216,833	3.0%
Area & Roadway	\$20,916,070	\$20,916,070	\$0	0.0%
DSM Reduction	(\$27,222,635)	(\$28,111,228)	(\$888,593)	3.3%
Misc. Rev & Adjs.	\$7,251,803	\$7,462,500	\$210,697	2.9%
General Consumers	\$1,210,388,963	\$1,245,185,035	\$34,796,072	2.9%

¹ Does not reflect proposed changes to the Full Cost portion of the rate currently before the PUB.

PROOF OF REVENUE

**Proposed April 1, 2010 Rates vs Proposed April 1, 2011 Rates
for year ended March 31, 2012**

	Calculated Revenue Current Rate	Calculated Revenue Prop. Rate	Diff. in Revenue Dollars	Diff. in Revenue Percent
Basic	485,245,328	499,383,465	\$14,138,136	2.9%
Diesel	648,254	658,276	\$10,022	1.6%
Seasonal	6,962,503	7,065,794	\$103,292	1.5%
FRWH	1,203,404	1,238,157	\$34,752	2.9%
Residential	\$494,059,489	\$508,345,692	\$14,286,203	2.9%
Small Non-Demand	\$119,982,951	\$123,479,338	\$3,496,387	2.9%
Small Demand	\$117,423,332	\$120,928,037	\$3,504,705	3.0%
Seasonal	\$501,126	\$516,156	\$15,030	3.0%
FRWH	\$503,942	\$518,547	\$14,606	2.9%
GS Small	\$238,411,350	\$245,442,079	\$7,030,729	3.0%
GS Medium	\$159,607,851	\$164,478,959	\$4,871,108	3.0%
Large 750 V-30 kV	\$72,223,955	\$74,294,731	\$2,070,776	2.9%
Large 30 - 100 kV	\$33,782,648	\$34,824,230	\$1,041,582	3.1%
Large > 100 kV	\$199,002,328	\$205,201,048	\$6,198,720	3.1%
Energy Intensive	7,508,753	7,508,753	\$0	0.0%
GS Large	\$312,517,684	\$321,828,762	\$9,311,077	3.0%
Diesel GS & Gov.	\$4,200,049	\$4,203,968	\$3,919	0.1%
SEP	\$848,452	\$848,452	\$0	0.0%
Total GS	\$715,585,387	\$736,802,221	\$21,216,833	3.0%
A & R Lighting	\$21,528,632	\$22,165,953	\$637,321	3.0%
DSM Reduction	(\$27,556,693)	(\$28,821,102)	(\$1,264,408)	4.6%
Misc. Rev & Adjs	\$7,251,803	\$7,462,500	\$210,697	2.9%
GENERAL CONSUMERS	1,210,868,618	\$1,245,955,264	\$35,086,646	2.9%

MIPUG/MH I-20**Proof of Revenue**

- a) **Please provide a schedule that shows all billing determinants and rates used to calculate the class revenues in the Proof of Revenues in Appendix 10.1 and Appendix 10.2, including assumptions related to the Energy Intensive revenues.**

ANSWER:

The tables on the following pages provide billing determinants for the Residential and General Service rate classes based on:

- 1) Fiscal 2010/11 forecast data at current April 1, 2009 rates and interim-approved April 1, 2010 rates, which were revised in accordance with Board Order 18/10, for which final interim-approval is pending.
- 2) Fiscal 2011/12 forecast data at proposed April 1, 2010 rates and proposed April 1, 2011 rates.

Assumptions related to the Energy Intensive revenues are discussed in response to MIPUG/MH I-20(b).

Please note that Manitoba Hydro's response to MIPUG/MH I-20(c) which was filed on March 4, 2010 did not reflect the revised residential rates in accordance with Board Order 18/10. Incorporating the revised rates results in the 2010/11 DSM Savings for the Residential class to be \$10,575,268 rather than the \$10,664,700 as shown in the filed response.

RESIDENTIAL: Fiscal 2010/11 - Current April 1, 2009 Rates versus Proposed April 1, 2010 Rates

Forecast Data 2010/11	Cust Months	>200 A Custs	1 st Block of 900 kW.h	2 nd Block of 1100 kW.h	Balance of kW.h	Total kW.h
Basic	5,346,203	32,499	3,553,763,914	-	3,280,511,833	6,834,275,747
Diesel	6,952	-	5,354,638	2,350,911	215,891	7,921,440
Seasonal	(annual) 20,855	-	75,887,086	-	5,234,664	81,121,750
FRWH	55,233	-	-	-	22,975,349	22,975,349

Current April 2009 Rates	Basic Charge	>200 A Charge	1 st Block of 900 kWh	2 nd Block of 1100 kW.h	Balance of kW.h
Basic	\$6.85	\$6.85	\$0.0625	-	\$0.0630
Seasonal	(annual) \$82.20		\$0.0625	-	\$0.0630
Diesel	\$6.85		\$0.0625	\$0.0630	\$0.4127
FRWH	(average) \$22.29				

Forecast \$ @ Apr/09 Rates	\$ in BC & >200 Amp	\$ in 1 st Block	\$ in 2 nd Block	\$ in Balance	Total Revenue	Adj. Factor	Adjusted Revenue
Basic	\$36,844,109	\$222,110,245	-	\$206,672,245	\$465,626,599	1.000	\$465,809,667
Diesel	\$47,621	\$334,665	\$158,107	\$89,098	\$619,492	1.006	\$623,212
Seasonal	\$1,714,281	\$4,742,943	-	\$329,784	\$6,787,008	0.991	\$6,725,157
FRWH	\$1,231,144	-	-	-	\$1,231,144	1.000	\$1,231,235

Proposed April 2010 Rates	Basic Charge	>200 A Charge	1 st Block of 900 kWh	2 nd Block of 1100 kWh	Balance of kWh
Basic	\$6.85	\$6.85	\$0.0625	-	\$0.0671
Seasonal	(annual) \$84.60		\$0.0625	-	\$0.0671
Diesel	\$6.85		\$0.0625	\$0.0671	\$0.4127
FRWH	(average) \$22.94				

Forecast \$ @ Apr/10 Rates	\$ in BC & >200 Amp	\$ in 1 st Block	\$ in 2 nd Block	\$ in Balance	Total Revenue	Adj. Factor	Adjusted Revenue
Basic	\$36,844,109	\$222,110,245	-	\$220,122,344	\$479,076,697	1.000	\$479,265,053
Diesel	\$47,621	\$334,665	\$157,746	\$89,098	\$629,131	1.006	\$632,908
Seasonal	\$1,764,333	\$4,742,943	-	\$351,246	\$6,858,522	0.991	\$6,796,019
FRWH	\$1,266,919	-	-	-	\$1,266,919	1.000	\$1,266,919

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GENERAL SERVICE: Fiscal 2010/11 - Current April 1, 2009 Rates versus Proposed April 1, 2010 Rates

Forecast Data 2010/11	Cust Months	3 Phase Cust Months	1 st 11000 kWh	Next 8500 kW.h & ND Runoff	Balance of kWh	Total kW.h	Billable Demand
Small ND	613,993	136,906	1,464,475,544	130,592,135	0	1,596,067,679	0
Small Demand	136,642	88,260	769,089,647	433,209,272	714,397,146	1,916,696,065	2,201,433
Small LUBD	769	725			3,739,056	3,739,056	15,828
Seasonal	(annual) 830		4,650,000	0	0	4,650,000	0
FRWH	5,222				7,539,999	7,539,999	0
Medium	22,138		240,585,152	181,482,396	2,652,626,735	3,074,694,283	6,240,034*
Med. LUBD	263				4,426,482	4,426,482	72,441*
Large <30	2,883				1,574,302,879	1,574,302,879	3,702,760*
L<30 LUBD	222				2,057,000	2,057,000	34,192
Lrg30-100	357				853,454,110	853,454,110	1,698,636*
Lrg >100	156				5,354,440,000	5,354,440,000	9,037,304
L>100 LUBD	12				416,000	416,000	14,872
DFC Fed Govt	535				1,845,800	1,845,800	0
DFC Prov Gov	264				383,200	383,200	0
DFC Non-Gov	1367		(1 st 2000 kW.h)	1,316,1760	2,197,864	3,514,040	0
SEP Med	216				12,500,000	12,500,000	0
SEP Lrg <30	60				2,700,000	2,700,000	0

* Billable Demand reduced for these customers when applying the Proposed April 1, 2010 Rates due to elimination of the winter ratchet. Expected Billable kV.A to be:

Medium = 5,977,745 kV.A; Medium LUBD = 58,514; Large <30 kV = 3,661,324; Large 30-100 kV = 1,696,014 kV.A

Current April 2009 Rates	Basic Charge	3 Ph Charge	1 st 11000 kWh Chg	Next 8500 kW.h Chg & ND Bal.	Balance of kWh Charge	Demand Charge
Small ND	\$17.00	\$6.74	\$0.0666	\$0.0448		
Small Demand	\$17.00	\$6.74	\$0.0666	\$0.0448	\$0.0286	\$8.34
Small LUBD	\$17.00	\$6.74			\$0.0767	\$2.09
Seasonal	(annual) \$204.00		\$0.0666	\$0.0448		
FR WH	(average) \$98.58					
Medium	\$27.60		\$0.0642	\$0.0448	\$0.0286	\$8.34
Med. LUBD	\$27.60				\$0.0767	\$2.09
Large <30	\$0.00				\$0.0273	\$7.08
L<30 LUBD	\$0.00				\$0.0681	\$1.77
Large 30-100	\$0.00				\$0.0258	\$6.06
Large >100	\$0.00				\$0.0252	\$5.40
L>100 LUBD	\$0.00				\$0.0559	\$1.41
DFC Fed Govt	\$17.00				\$1.38363	
DFC Prov Gov	\$17.00				\$1.38363	
DFC Non-Gov	\$17.00		First 2000 kW.h @ \$0.0666		\$0.4127	
SEP Med	\$50.00		\$0.04761 average energy charge & \$0.0062 dist. charge (per kW.h)			
SEP Lrg <30	\$100.00		\$0.05561 average energy charge & \$0.0033 dist. charge (per kW.h)			

Forecast \$ @ Apr/09 Rates	Basic Chg Revenue.	3 Ph Chg Revenue	1 st Block Revenue	2 nd Block Rev. & ND Runoff	Run-Off Revenue	Demand Charge Revenue	Adj Factor	Adjusted Revenue
Small ND	\$10,437,881	\$922,746	\$97,534,071	\$5,850,528	\$0	\$0	1.001	\$114,876,398
Small D.	\$2,322,914	\$594,872	\$51,221,370	\$19,407,775	\$20,431,758	\$18,359,951	0.995	\$111,794,269
Small LUBD	\$13,073	\$4,887			\$286,786	\$33,081	1.000	\$337,826
Seasonal	\$169,320		\$309,690				1.010	\$483,687
FRWH	\$514,785						1.000	\$514,761
Medium	\$611,009		\$15,445,567	\$8,130,411	\$75,865,125	\$52,041,884	1.002	\$152,367,780
Med. LUBD	\$7,259				\$339,511	\$151,402	1.000	\$498,173
Lrg <30	\$0				\$42,978,469	\$26,215,541	1.000	\$69,194,015
L<30 LUBD	\$0				\$140,082	\$60,520	1.000	\$200,600
Lrg30-100	\$0				\$22,019,116	\$10,293,734	1.000	\$32,312,850
Lrg >100	\$0				\$134,931,888	\$48,806,842	1.000	\$183,738,729
L100 LUBD	\$0				\$23,254	\$20,970	1.000	\$44,224
DFC Fed G	\$9,095				\$2,553,904		1.000	\$2,563,037
DFC Prov G	\$4,488				\$530,207		1.000	\$534,651
DFC Non-G	\$23,239		\$87,657		\$907,058		1.022	\$1,039,542
SEP Med	\$10,800				\$672,600		1.000	\$683,400
SEP Lrg <30	\$6,000				\$159,052		1.000	\$165,052

Proposed April 2010 Rates	Basic Charge	3 Ph Charge	1 st 11000 kWh Chg	Next 8500 kW.h Chg & ND Bal.	Balance of kWh Charge	Demand Charge
Small ND	\$17.65	\$7.00	\$0.0684	\$0.0469		
Small Demand	\$17.65	\$7.00	\$0.0684	\$0.0469	\$0.0305	\$8.34
Small LUBD	\$17.65	\$7.00			\$0.0786	\$2.09
Seasonal	(annual) \$211.80		\$0.0684	\$0.0469		
FRWH	(average)\$101.44					
Medium	\$27.60		\$0.0684	\$0.0469	\$0.0305	\$8.34
Med. LUBD	\$27.60				\$0.0786	\$2.09
Large <30	\$0.00				\$0.0288	\$7.08
L<30 LUBD	\$0.00				\$0.0696	\$1.77
Large 30-100	\$0.00				\$0.0269	\$6.06
Large >100	\$0.00				\$0.0262	\$5.40
L>100 LUBD	\$0.00				\$0.0569	\$1.41
DFC Fed Govt	\$17.00				\$1.38363	
DFC Prov Gov	\$17.00				\$1.38363	
DFC Non-Gov	\$17.00				\$0.4127	
SEP Med	\$50.00		First 2000 kW.h @ \$0.0684			
SEP Lrg <30	\$100.00		\$0.04761 average energy charge & \$0.0062 dist. charge (per kW.h)			
			\$0.05561 average energy charge & \$0.0033 dist. charge (per kW.h)			

Forecast \$ @ Apr/10 Rates	Basic Chg Revenue.	3 Ph Chg Revenue	1 st Block Revenue	2 nd Block Rev. & ND Runoff	Run-Off Revenue	Demand Charge Revenue	Adj Factor	Adjusted Revenue
Small ND	\$10,836,976	\$958,342	\$100,170,127	\$6,124,771	\$0	\$0	1.001	\$118,225,213
Small D.	\$2,411,731	\$617,820	\$52,605,732	\$20,317,515	\$21,789,113	\$18,359,951	0.995	\$115,539,253
Sm LUBD	\$13,573	\$5,075			\$293,890	\$33,081	1.000	\$345,619
Seasonal	\$175,794		\$318,060				1.010	\$498,675
FRWH	\$529,720						1.000	\$529,707
Medium	\$611,009		\$16,456,024	\$8,511,524	\$80,905,115	\$49,854,393	1.002	\$156,619,491
Med. LUBD	\$7,259				\$347,921	\$122,294	1.000	\$477,475
Lrg <30	\$0				\$45,339,923	\$25,922,174	1.000	\$71,262,102
L <30 LUBD	\$0				\$143,167	\$60,520	1.000	\$203,687
Lrg30-100	\$0				\$22,957,916	\$10,277,845	1.000	\$33,235,760
Lrg > 100	\$0				\$140,286,328	\$48,806,842	1.000	\$189,093,169
L100 LUBD	\$0				\$23,670	\$20,970	1.000	\$44,640
DFC Fed G	\$9,443				\$2,553,904		1.000	\$2,563,385
DFC Prov G	\$4,660				\$530,207		1.000	\$534,823
DFC Non-G	\$24,128		\$90,026		\$907,058		1.022	\$1,043,723
SEP Med	\$10,800				\$672,600		1.000	\$683,400
SEP Lrg <30	\$6,000				\$159,052		1.000	\$165,052

RESIDENTIAL: Fiscal 2011/12 - Proposed April 1, 2010 Rates versus Proposed April 1, 2011 Rates

Forecast Data 2011/12	Customer Months	>200 A Customers	1 st Block of 900 kW.h	2 nd Block of 1100 kW.h	Balance of kW.h	Total kW.h
Basic	5,394,396	32,792	3,590,961,200	-	3,326,834,723	6,917,795,923
Diesel	7,044	-	5,433,195	2,411,104	228,576	8,072,875
Seasonal	(annual) 20,930	-	77,364,760	-	5,599,340	82,964,100
FRWH	52,464	-	-	-	21,825,048	21,825,048

Proposed April 2010 Rates	Basic Charge	>200 A Charge	1 st Block of 900 k.Wh	2 nd Block of 1100 kW.h	Balance of kWH
Basic	\$5.85	\$5.85	\$0.0637	-	\$0.0675
Seasonal	(annual) \$82.20		\$0.0637	-	\$0.0675
Diesel	\$5.85		\$0.0637	\$0.0675	\$0.4127
FRWH	(average) \$22.94				

Forecast \$ @ Apr/10 Rates	\$ in BC & >200 Amp	\$ in 1 st Block	\$ in 2 nd Block	\$ in Balance	Total Revenue	Adj. Factor	Adjusted Revenue
Basic	\$31,749,050	\$228,744,228	-	\$224,561,344	\$485,054,622	1.000	\$485,245,328
Diesel	\$41,207	\$346,095	\$162,750	\$94,333	\$644,385	1.006	\$648,254
Seasonal	\$1,720,446	\$4,928,135	-	\$377,955	\$7,026,537	0.991	\$6,962,503
FRWH	\$1,203,404	-	-	-	\$1,203,404	1.000	\$1,203,404

Proposed April 2011 Rates	Basic Charge	>200 A Charge	1 st Block of 900 k.Wh	2 nd Block of 1100 kW.h	Balance of kWH
Basic	\$4.85	\$4.85	\$0.0647	-	\$0.0723
Seasonal	(annual) \$82.20		\$0.0647	-	\$0.0723
Diesel	\$4.85		\$0.0647	\$0.0723	\$0.4127
FRWH	(average) \$23.60				

Forecast \$ @ Apr/11 Rates	\$ in BC & >200 Amp	\$ in 1 st Block	\$ in 2 nd Block	\$ in Balance	Total Revenue	Adj. Factor	Adjusted Revenue
Basic	\$26,321,862	\$232,335,190	-	\$240,530,150	\$499,187,202	1.000	\$499,383,465
Diesel	\$34,163	\$351,528	\$174,323	\$94,333	\$654,347	1.006	\$658,276
Seasonal	\$1,720,446	\$5,005,500	-	\$404,832	\$7,130,778	0.991	\$7,065,794
FRWH	\$1,238,157	-	-	-	\$1,238,157	1.000	\$1,238,157

GENERAL SERVICE: Fiscal 2011/12 - Proposed April 1, 2010 Rates versus Proposed April 1, 2011 Rates

Forecast Data 2011/12	Cust Months	3 Phase Cust Months	1 st 11000 kWh	Next 8500 kW.h & ND Runoff	Balance of kWh	Total kW.h	Billable Demand
Small ND	617,376	137,660	1,485,660,618	135,745,318	0	1,621,405,936	0
Small Demand	137,394	88,745	774,406,811	438,480,562	734,724,003	1,947,611,375	2,236,941
Small LUBD	774	730			3,763,367	3,763,367	15,931
Seasonal	(annual) 835		4,670,000	0	0	4,670,000	0
FRWH	4,968				7,169,999	7,169,999	0
Medium	22,260		241,934,404	182,579,887	2,699,416,760	3,123,931,051	6,089,296
Med. LUBD	264				4,443,313	4,443,313	58,740
Large <30	2,896				1,590,819,485	1,590,819,485	3,700,832
L<30 LUBD	225				2,085,000	2,085,000	34,657
Lrg30-100	359				867,984,670	867,984,670	1,721,759
Lrg >100	156				5,635,200,000	5,635,200,000	9,502,861
L>100 LUBD	12				416,000	416,000	14,872
DFC Fed Govt	539				1,861,100	1,861,100	0
DFC Prov Gov	266				386,300	386,300	0
DFC Non-Gov	1,378		(1 st 2000 kW.h)	1,334,077	2,271,563	3,605,640	0
SEP Med	216				12,500,000	12,500,000	0
SEP Lrg <30	60				2,700,000	2,700,000	0

Proposed April 2010 Rates	Basic Charge	3 Ph Charge	1 st 11000 kWh Chg	Next 8500 kW.h Chg & ND Bal.	Balance of kWh Charge	Demand Charge
Small ND	\$17.65	\$7.00	\$0.0684	\$0.0469		
Small Demand	\$17.65	\$7.00	\$0.0684	\$0.0469	\$0.0305	\$8.34
Small LUBD	\$17.65	\$7.00			\$0.0786	\$2.09
Seasonal	(annual) \$211.80		\$0.0684	\$0.0469		
FRWH	(average)\$101.44					
Medium	\$27.60		\$0.0684	\$0.0469	\$0.0305	\$8.34
Med. LUBD	\$27.60				\$0.0786	\$2.09
Large <30	\$0.00				\$0.0288	\$7.08
L<30 LUBD	\$0.00				\$0.0696	\$1.77
Large 30-100	\$0.00				\$0.0259	\$6.06
Large >100	\$0.00				\$0.0252	\$5.40
L>100 LUBD	\$0.00				\$0.0569	\$1.41
DFC Fed Govt	\$17.00				\$1.38363	
DFC Prov Gov	\$17.00				\$1.38363	
DFC Non-Gov	\$17.00			First 2000 kW.h @ \$0.0684	\$0.4127	
SEP Med	\$50.00			\$0.04761 average energy charge & \$0.0062 dist. charge (per kW.h)		
SEP Lrg <30	\$100.00			\$0.05561 average energy charge & \$0.0033 dist. charge (per kW.h)		

Forecast \$ @ Apr/10 Rates	Basic Chg Revenue.	3 Ph Chg Revenue	1 st Block Revenue	2 nd Block Rev. & ND Runoff	Run-Off Revenue	Demand Charge Revenue	Adj Factor	Adjusted Revenue
Small ND	\$10,896,686	\$963,620	\$101,619,186	\$6,366,455	\$0	\$0	1.001	\$119,982,951
Small D.	\$2,425,004	\$621,215	\$52,969,426	\$20,564,738	\$22,409,082	\$18,656,085	0.995	\$117,075,464
Sm LUBD	\$13,661	\$5,110			\$295,801	\$33,296	1.000	\$347,867
Seasonal	\$176,853		\$319,428				1.010	\$501,126
FRWH	\$503,942						1.000	\$503,942
Medium	\$614,376		\$16,548,313	\$8,562,997	\$82,332,211	\$50,784,729	1.002	\$159,128,554
Med. LUBD	\$7,286				\$349,244	\$122,766	1.000	\$479,297
Lrg <30	\$0				\$45,815,601	\$26,201,895	1.000	\$72,017,496
L<30 LUBD	\$0				\$145,116	\$61,343	1.000	\$206,459
Lrg30-100	\$0				\$23,348,788	\$10,433,860	1.000	\$33,782,648
Lrg >100	\$0				\$147,642,240	\$51,315,448	1.000	\$198,957,688
L100 LUBD	\$0				\$23,670	\$20,970	1.000	\$44,640
DFC Fed G	\$9,521				\$2,575,074		1.000	\$2,584,633
DFC Prov G	\$4,703				\$534,496		1.000	\$539,151
DFC Non-G	\$24,324		\$91,251		\$937,474		1.022	\$1,076,265
SEP Med	\$10,800				\$672,600		1.000	\$683,400
SEP Lrg <30	\$6,000				\$159,052		1.000	\$165,052

Proposed April 2011 Rates	Basic Charge	3 Ph Charge	1 st 11000 kWh Chg	Next 8500 kW.h Chg & ND Bal.	Balance of kWh Charge	Demand Charge
Small ND	\$18.25	\$7.30	\$0.0703	\$0.0488		
Small Demand	\$18.25	\$7.30	\$0.0703	\$0.0488	\$0.0320	\$8.34
Small LUBD	\$18.25	\$7.30			\$0.0801	\$2.09
Seasonal	(annual) \$219.00		\$0.0703	\$0.0488		
FRWH	(average)\$104.38					
Medium	\$27.60		\$0.0703	\$0.0488	\$0.0320	\$8.34
Med. LUBD	\$27.60				\$0.0801	\$2.09
Large <30	\$0.00				\$0.0301	\$7.08
L<30 LUBD	\$0.00				\$0.0709	\$1.77
Large 30-100	\$0.00				\$0.0281	\$6.06
Large >100	\$0.00				\$0.0273	\$5.40
L>100 LUBD	\$0.00				\$0.0580	\$1.41
DFC Fed Govt	\$18.25				\$1.38363	
DFC Prov Gov	\$18.25				\$1.38363	
DFC Non-Gov	\$18.25				\$0.4127	
SEP Med	\$50.00		First 2000 kW.h @ \$0.0703			
SEP Lrg <30	\$100.00		\$0.04761 average energy charge & \$0.0062 dist. charge (per kW.h)			
			\$0.05561 average energy charge & \$0.0033 dist. charge (per kW.h)			

Forecast \$ @ Apr/11 Rates	Basic Chg Revenue.	3 Ph Chg Revenue	1 st Block Revenue	2 nd Block Rev. & ND Runoff	Run-Off Revenue	Demand Charge Revenue	Adj Factor	Adjusted Revenue
Small ND	\$11,267,112	\$1,004,918	\$104,441,942	\$6,624,372	\$0	\$0	1.001	\$123,479,338
Small D.	\$2,507,441	\$647,839	\$54,440,798	\$21,397,851	\$23,511,168	\$18,656,085	0.995	\$120,574,060
Sm LUBD	\$14,126	\$5,329			\$301,446	\$33,296	1.000	\$354,196
Seasonal	\$182,865		\$328,301				1.010	\$516,156
FRWH	\$518,547						1.000	\$518,547
Medium	\$614,376		\$17,007,988	\$8,919,898	\$86,381,336	\$50,784,729	1.002	\$163,992,997
Med. LUBD	\$7,286				\$355,909	\$122,766	1.000	\$485,962
Lrg <30	\$0				\$47,883,666	\$26,201,895	1.000	\$74,294,731
L <30 LUBD	\$0				\$147,827	\$61,343	1.000	\$209,169
Lrg 30-100	\$0				\$24,390,370	\$10,433,860	1.000	\$34,824,230
Lrg >100	\$0				\$153,840,960	\$51,315,448	1.000	\$205,156,408
L100 LUBD	\$0				\$24,128	\$20,970	1.000	\$45,098
DFC Fed G	\$9,845				\$2,575,074		1.000	\$2,584,957
DFC Prov G	\$4,863				\$539,359		1.000	\$539,311
DFC Non-G	\$25,150		\$93,786		\$937,474		1.022	\$1,079,701
SEP Med	\$10,800				\$672,625		1.000	\$683,400
SEP Lrg <30	\$6,000				\$159,052		1.000	\$165,052

	RII Calculation	MH's App 79	Diff (MH-RII)	
			\$	%
Basic	\$498,862,403	\$499,086,360	\$223,957	0.04%
Diesel	\$665,719	\$664,037	\$-1,682	-0.25%
Seasonal	\$7,083,295	\$7,126,919	\$43,624	0.62%
FRWH	\$1,238,150	\$1,238,157	\$7	0.00%
TOTAL	\$507,849,567	\$508,115,473	\$265,906	0.05%

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.

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	Off Peak	Mid Peak	On Peak	Off Peak	Mid Peak	On Peak	Off Peak	Mid Peak	On Peak	Off Peak	Mid Peak	
2002-2003 Exports		5.79%	2.20%	7.95%	14.90%	24.99%	6.65%	5.30%	7.32%	7.93%	10.10%	4.29%	100.00%	
2003-2004 Exports		12.04%	4.90%	16.99%	17.92%	18.32%	7.05%	1.35%	3.03%	4.35%	5.96%	5.58%	100.00%	
2004-2005 Exports		3.14%	0.98%	4.01%	12.80%	21.74%	6.16%	5.29%	10.09%	8.10%	15.95%	7.52%	100.00%	
2005-2006 Exports		4.04%	5.63%	7.77%	9.17%	17.31%	11.65%	3.62%	7.59%	6.45%	12.77%	8.45%	100.00%	
2006-2007 Exports		5.41%	8.40%	11.50%	11.30%	20.71%	14.79%	3.31%	3.56%	6.76%	9.15%	2.99%	100.00%	
2007-2008 Exports		4.53%	2.81%	7.80%	10.61%	20.71%	14.26%	4.25%	1.05%	5.77%	11.22%	4.84%	100.00%	
Exports Average		5.82%	4.15%	9.34%	12.79%	20.80%	10.09%	3.86%	6.58%	6.49%	10.86%	5.61%	100.00%	
2002-2003 GSL030		3.87%	5.70%	7.17%	6.69%	12.84%	10.28%	3.94%	7.53%	8.27%	15.40%	12.23%	100.00%	
2003-2004 GSL030		3.21%	4.85%	6.50%	7.04%	13.32%	10.53%	3.88%	7.76%	8.60%	16.05%	12.29%	100.00%	
2004-2005 GSL030		3.49%	5.51%	7.14%	7.53%	13.96%	10.70%	3.86%	7.53%	7.79%	15.02%	11.53%	100.00%	
2005-2006 GSL030		3.51%	5.41%	6.64%	7.00%	12.90%	10.37%	3.71%	6.93%	8.85%	16.29%	12.84%	100.00%	
2006-2007 GSL030		3.40%	5.09%	6.70%	7.09%	13.65%	10.18%	4.07%	7.35%	7.95%	16.24%	12.36%	100.00%	
2007-2008 GSL030		3.50%	5.32%	6.83%	7.07%	13.33%	10.41%	3.92%	7.42%	8.29%	15.80%	12.25%	100.00%	
GSL030 Average		3.56%	5.33%	6.73%	7.07%	13.33%	10.41%	3.92%	7.42%	8.29%	15.80%	12.25%	100.00%	
2002-2003 GSL030CURT		3.33%	5.07%	6.73%	6.50%	12.74%	9.48%	4.05%	7.73%	8.50%	16.66%	12.82%	100.00%	
2003-2004 GSL030CURT		3.71%	5.64%	7.82%	7.68%	14.94%	11.49%	3.68%	7.44%	7.88%	14.71%	11.24%	100.00%	
2004-2005 GSL030CURT		3.86%	5.60%	7.32%	7.46%	14.64%	11.11%	3.52%	7.17%	7.47%	14.69%	11.16%	100.00%	
2005-2006 GSL030CURT		3.74%	5.62%	7.48%	6.96%	14.01%	10.54%	3.68%	7.39%	7.72%	14.67%	11.21%	100.00%	
2006-2007 GSL030CURT		3.64%	5.45%	7.21%	7.28%	14.15%	10.76%	3.81%	7.42%	7.80%	15.46%	11.44%	100.00%	
2007-2008 GSL030CURT		3.92%	5.64%	7.10%	6.96%	13.28%	10.31%	3.93%	7.41%	8.22%	15.44%	11.58%	100.00%	
GSL030CURT Average		3.81%	5.75%	7.42%	7.25%	14.34%	11.11%	3.97%	7.67%	8.63%	15.77%	12.03%	100.00%	
2002-2003 GSL100		3.72%	5.71%	7.50%	6.91%	13.10%	10.32%	3.83%	7.41%	8.09%	15.47%	11.91%	100.00%	
2003-2004 GSL100		3.96%	5.70%	7.36%	7.09%	12.66%	9.99%	3.92%	7.62%	8.33%	15.47%	12.16%	100.00%	
2004-2005 GSL100		3.73%	5.71%	7.35%	6.97%	13.01%	10.19%	3.98%	7.06%	7.66%	15.57%	11.80%	100.00%	
2005-2006 GSL100		3.83%	5.43%	7.08%	7.29%	14.44%	11.09%	3.93%	7.44%	8.19%	15.54%	12.05%	100.00%	
2006-2007 GSL100		3.77%	5.44%	7.07%	7.06%	14.63%	11.15%	3.78%	7.26%	7.78%	14.84%	11.32%	100.00%	
2007-2008 GSL100		3.65%	5.52%	7.17%	7.06%	14.48%	11.23%	3.72%	7.39%	7.86%	14.80%	11.52%	100.00%	
GSL100 Average		3.38%	5.31%	7.05%	6.93%	13.41%	10.41%	3.74%	7.45%	8.13%	16.20%	12.32%	100.00%	
2002-2003 GSL100CURT		3.62%	5.35%	7.22%	7.65%	14.53%	11.28%	3.70%	7.43%	7.74%	14.73%	11.37%	100.00%	
2003-2004 GSL100CURT		3.67%	5.50%	7.22%	7.39%	14.44%	11.09%	3.92%	7.03%	7.40%	15.31%	11.48%	100.00%	
2004-2005 GSL100CURT		3.62%	5.43%	7.08%	7.29%	14.30%	11.03%	3.77%	7.31%	7.78%	15.18%	11.60%	100.00%	
2005-2006 GSL100CURT		4.46%	4.75%	7.11%	8.62%	13.70%	8.91%	4.42%	7.21%	9.60%	15.77%	10.65%	100.00%	
2006-2007 GSL100CURT		4.22%	4.58%	7.13%	9.04%	14.45%	9.41%	4.31%	7.35%	9.31%	15.09%	10.28%	100.00%	
2007-2008 GSL100CURT		3.62%	4.12%	6.35%	9.31%	14.46%	9.46%	4.46%	7.50%	9.36%	15.77%	10.62%	100.00%	
GSL100CURT Average		4.34%	4.64%	7.13%	9.36%	14.61%	9.57%	4.39%	7.36%	9.03%	14.70%	10.01%	100.00%	
2002-2003 GSL750		4.25%	4.68%	7.23%	9.02%	14.53%	9.42%	4.57%	7.04%	8.77%	15.45%	10.21%	100.00%	
2003-2004 GSL750		4.18%	4.55%	6.99%	9.07%	14.35%	9.35%	4.43%	7.29%	8.85%	15.36%	10.36%	100.00%	
2004-2005 GSL750		4.09%	4.27%	6.73%	8.05%	13.23%	7.88%	4.32%	7.41%	10.16%	17.60%	11.55%	100.00%	
2005-2006 GSL750		3.97%	4.12%	6.90%	8.92%	14.27%	8.42%	4.32%	7.53%	9.73%	16.43%	10.76%	100.00%	
2006-2007 GSL750		3.39%	3.81%	6.31%	8.82%	14.32%	8.45%	4.37%	7.80%	9.63%	17.24%	11.13%	100.00%	
2007-2008 GSL750		4.02%	4.21%	7.00%	8.73%	14.27%	8.42%	4.50%	7.67%	9.65%	16.47%	10.68%	100.00%	
GSL750 Average		3.94%	4.37%	7.06%	8.51%	14.15%	8.60%	4.50%	7.18%	9.56%	16.93%	10.97%	100.00%	
2002-2003 GSM		3.88%	4.16%	6.80%	8.61%	14.05%	8.35%	4.37%	7.52%	9.66%	16.93%	11.02%	100.00%	
2003-2004 GSM		3.97%	4.12%	6.90%	8.92%	14.27%	8.42%	4.32%	7.53%	9.73%	16.43%	10.76%	100.00%	
2004-2005 GSM		3.39%	3.81%	6.31%	8.82%	14.32%	8.45%	4.37%	7.80%	9.63%	17.24%	11.13%	100.00%	
2005-2006 GSM		4.02%	4.21%	7.00%	8.73%	14.27%	8.42%	4.50%	7.67%	9.65%	16.47%	10.68%	100.00%	
2006-2007 GSM		3.94%	4.37%	7.06%	8.51%	14.15%	8.60%	4.50%	7.18%	9.56%	16.93%	10.97%	100.00%	
2007-2008 GSM		3.88%	4.16%	6.80%	8.61%	14.05%	8.35%	4.37%	7.52%	9.66%	16.93%	11.02%	100.00%	
GSM Average		3.88%	4.16%	6.80%	8.61%	14.05%	8.35%	4.37%	7.52%	9.66%	16.93%	11.02%	100.00%	

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	Off Peak Every Day 23:01 - 07:00	On Peak MTWRF 07:01 - 20:00	Mid Peak MTWRF 07:01 - 12:00, 20:01 - 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	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	Off Peak Every Day 23:01 - 07:00	
2002-2003	GSSD	3.92%	6.61%	3.99%	7.59%	12.61%	7.05%	4.35%	7.59%	4.67%	10.87%	18.86%	12.09%	100.00%
2003-2004	GSSD	3.74%	6.72%	3.83%	7.59%	13.23%	7.84%	4.36%	7.78%	4.76%	10.49%	17.80%	11.56%	100.00%
2004-2005	GSSD	3.12%	5.62%	3.42%	7.49%	11.76%	6.90%	4.77%	8.27%	5.11%	10.97%	19.41%	13.15%	100.00%
2005-2006	GSSD	3.97%	6.70%	4.27%	8.22%	13.23%	7.96%	4.37%	7.58%	4.78%	9.93%	17.30%	11.69%	100.00%
2007-2008	GSSD	3.60%	6.55%	3.96%	7.78%	13.03%	7.69%	4.56%	7.34%	4.74%	9.92%	18.63%	12.21%	100.00%
	GSSD Average	3.87%	6.44%	3.91%	7.81%	12.77%	7.45%	4.48%	7.71%	4.81%	10.39%	18.40%	12.14%	100.00%
2002-2003	GSSND	3.84%	6.53%	3.84%	8.02%	11.99%	6.56%	4.29%	7.50%	4.70%	10.81%	19.18%	12.74%	100.00%
2003-2004	GSSND	3.63%	6.61%	3.82%	8.79%	12.86%	7.44%	4.21%	7.62%	4.63%	10.39%	17.94%	12.04%	100.00%
2004-2005	GSSND	3.60%	6.74%	3.91%	9.22%	12.94%	7.29%	4.49%	8.01%	4.69%	9.98%	17.89%	11.25%	100.00%
2005-2006	GSSND	3.87%	6.70%	3.80%	8.73%	12.39%	6.98%	4.50%	7.64%	4.46%	10.96%	18.60%	11.37%	100.00%
2007-2008	GSSND	3.63%	6.70%	3.91%	8.21%	12.51%	6.80%	4.53%	7.24%	4.40%	10.43%	19.26%	12.38%	100.00%
	GSSND Average	3.72%	6.66%	3.86%	8.59%	12.54%	7.01%	4.40%	7.60%	4.58%	10.51%	18.57%	11.96%	100.00%
2002-2003	Residential	3.52%	6.27%	4.04%	5.96%	11.34%	5.55%	4.21%	7.78%	4.66%	11.54%	20.98%	14.15%	100.00%
2003-2004	Residential	3.18%	6.19%	3.55%	6.53%	11.88%	5.82%	4.25%	8.07%	4.75%	11.46%	20.30%	14.02%	100.00%
2004-2005	Residential	3.10%	6.22%	3.90%	5.98%	11.23%	5.95%	4.10%	7.72%	4.95%	11.29%	20.82%	14.74%	100.00%
2005-2006	Residential	3.24%	5.94%	4.12%	6.37%	11.97%	6.36%	4.23%	7.64%	5.22%	11.24%	20.31%	13.39%	100.00%
2007-2008	Residential	3.07%	6.01%	4.04%	6.19%	11.56%	5.76%	4.46%	7.35%	4.54%	11.16%	21.48%	14.38%	100.00%
	Residential Average	3.22%	6.12%	3.93%	6.20%	11.60%	5.89%	4.25%	7.71%	4.83%	11.34%	20.78%	14.14%	100.00%

	Unadjusted Prices			Inflation Adj.	Adjusted Prices		
	peak	shoulder	offpeak		peak	shoulder	offpeak
April 1, 2000	\$36.34	\$26.16	\$21.80	118%	\$42.89	\$30.88	\$25.73
April 2, 2000	\$33.43	\$23.26	\$20.35	118%	\$39.46	\$27.45	\$24.02
April 3, 2000	\$34.88	\$34.88	\$21.09	118%	\$41.17	\$41.17	\$24.90
April 4, 2000	\$34.88	\$34.88	\$21.82	118%	\$41.17	\$41.17	\$25.75
April 5, 2000	\$34.88	\$34.88	\$20.37	118%	\$41.17	\$41.17	\$24.04
April 6, 2000	\$34.88	\$34.88	\$21.78	118%	\$41.17	\$41.17	\$25.70
April 7, 2000	\$34.88	\$34.88	\$23.32	118%	\$41.17	\$41.17	\$27.52
April 8, 2000	\$51.01	\$40.81	\$23.32	118%	\$60.21	\$48.17	\$27.52
April 9, 2000	\$29.15	\$29.15	\$21.13	118%	\$34.41	\$34.41	\$24.94
April 10, 2000	\$34.88	\$34.88	\$23.38	118%	\$41.17	\$41.17	\$27.59
April 11, 2000	\$34.88	\$34.88	\$29.28	118%	\$41.17	\$41.17	\$34.56
April 12, 2000	\$34.88	\$34.88	\$23.40	118%	\$41.17	\$41.17	\$27.61
April 13, 2000	\$34.88	\$34.88	\$20.52	118%	\$41.17	\$41.17	\$24.22
April 14, 2000	\$34.88	\$34.88	\$20.67	118%	\$41.17	\$41.17	\$24.40
April 15, 2000	\$59.06	\$44.29	\$24.36	118%	\$69.70	\$52.28	\$28.75
April 16, 2000	\$29.53	\$23.62	\$20.67	118%	\$34.85	\$27.88	\$24.40
April 17, 2000	\$34.88	\$34.88	\$19.30	118%	\$41.17	\$41.17	\$22.78
April 18, 2000	\$34.88	\$34.88	\$20.77	118%	\$41.17	\$41.17	\$24.52
April 19, 2000	\$34.88	\$34.88	\$20.66	118%	\$41.17	\$41.17	\$24.39
April 20, 2000	\$34.88	\$34.88	\$20.62	118%	\$41.17	\$41.17	\$24.33
April 21, 2000	\$34.88	\$34.88	\$19.14	118%	\$41.17	\$41.17	\$22.60
April 22, 2000	\$22.09	\$22.09	\$19.14	118%	\$26.07	\$26.07	\$22.60
April 23, 2000	\$17.67	\$13.25	\$11.78	118%	\$20.86	\$15.64	\$13.90
April 24, 2000	\$34.88	\$34.88	\$14.76	118%	\$41.17	\$41.17	\$17.42
April 25, 2000	\$34.88	\$34.88	\$18.37	118%	\$41.17	\$41.17	\$21.69
April 26, 2000	\$34.88	\$34.88	\$16.23	118%	\$41.17	\$41.17	\$19.16
April 27, 2000	\$34.88	\$34.88	\$16.27	118%	\$41.17	\$41.17	\$19.20
April 28, 2000	\$34.88	\$34.88	\$14.81	118%	\$41.17	\$41.17	\$17.48
April 29, 2000	\$25.18	\$19.25	\$16.29	118%	\$29.72	\$22.73	\$19.23
April 30, 2000	\$25.18	\$20.74	\$16.29	118%	\$29.72	\$24.47	\$19.23
May 1, 2000	\$46.20	\$46.20	\$16.26	118%	\$54.53	\$54.53	\$19.19
May 2, 2000	\$46.20	\$46.20	\$17.08	118%	\$54.53	\$54.53	\$20.16
May 3, 2000	\$46.20	\$46.20	\$17.16	118%	\$54.53	\$54.53	\$20.25
May 4, 2000	\$46.20	\$46.20	\$17.22	118%	\$54.53	\$54.53	\$20.33
May 5, 2000	\$46.20	\$46.20	\$17.22	118%	\$54.53	\$54.53	\$20.33
May 6, 2000	\$74.13	\$41.93	\$19.47	118%	\$87.50	\$49.49	\$22.98
May 7, 2000	\$89.86	\$29.95	\$20.97	118%	\$106.06	\$35.35	\$24.75
May 8, 2000	\$46.20	\$46.20	\$25.37	118%	\$54.53	\$54.53	\$29.95
May 9, 2000	\$46.20	\$46.20	\$22.42	118%	\$54.53	\$54.53	\$26.46
May 10, 2000	\$46.20	\$46.20	\$19.44	118%	\$54.53	\$54.53	\$22.95
May 11, 2000	\$46.20	\$46.20	\$18.62	118%	\$54.53	\$54.53	\$21.97
May 12, 2000	\$46.20	\$46.20	\$18.59	118%	\$54.53	\$54.53	\$21.94
May 13, 2000	\$26.77	\$24.54	\$14.13	118%	\$31.99	\$28.96	\$16.67
May 14, 2000	\$23.79	\$22.31	\$13.38	118%	\$28.08	\$26.33	\$15.80
May 15, 2000	\$46.20	\$46.20	\$13.40	118%	\$54.53	\$54.53	\$15.82
May 16, 2000	\$46.20	\$46.20	\$14.86	118%	\$54.53	\$54.53	\$17.54
May 17, 2000	\$46.20	\$46.20	\$15.74	118%	\$54.53	\$54.53	\$18.57
May 18, 2000	\$46.20	\$46.20	\$21.01	118%	\$54.53	\$54.53	\$24.79
May 19, 2000	\$46.20	\$46.20	\$20.93	118%	\$54.53	\$54.53	\$24.71
May 20, 2000	\$41.87	\$29.91	\$17.20	118%	\$49.42	\$35.30	\$20.30
May 21, 2000	\$32.90	\$20.93	\$17.94	118%	\$38.83	\$24.71	\$21.18
May 22, 2000	\$46.20	\$46.20	\$17.94	118%	\$54.53	\$54.53	\$21.17
May 23, 2000	\$46.20	\$46.20	\$18.04	118%	\$54.53	\$54.53	\$21.29
May 24, 2000	\$46.20	\$46.20	\$18.10	118%	\$54.53	\$54.53	\$21.36
May 25, 2000	\$46.20	\$46.20	\$18.07	118%	\$54.53	\$54.53	\$21.33
May 26, 2000	\$46.20	\$46.20	\$18.05	118%	\$54.53	\$54.53	\$21.30
May 27, 2000	\$31.58	\$21.06	\$18.05	118%	\$37.28	\$24.85	\$21.30
May 28, 2000	\$24.06	\$21.06	\$18.05	118%	\$28.40	\$24.85	\$21.30
May 29, 2000	\$20.98	\$17.98	\$14.98	118%	\$24.76	\$21.22	\$17.69
May 30, 2000	\$46.20	\$46.20	\$15.04	118%	\$54.53	\$54.53	\$17.75
May 31, 2000	\$46.20	\$46.20	\$17.97	118%	\$54.53	\$54.53	\$21.21
June 1, 2000	\$91.13	\$91.13	\$17.89	118%	\$107.56	\$107.56	\$21.12
June 2, 2000	\$91.13	\$91.13	\$17.74	118%	\$107.56	\$107.56	\$20.93
June 3, 2000	\$22.17	\$20.69	\$17.00	118%	\$26.17	\$24.42	\$20.06
June 4, 2000	\$17.74	\$17.74	\$17.00	118%	\$20.93	\$20.93	\$20.06
June 5, 2000	\$91.13	\$91.13	\$14.78	118%	\$107.56	\$107.56	\$17.44
June 6, 2000	\$91.13	\$91.13	\$13.30	118%	\$107.56	\$107.56	\$15.70
June 7, 2000	\$91.13	\$91.13	\$14.78	118%	\$107.56	\$107.56	\$17.45
June 8, 2000	\$91.13	\$91.13	\$17.76	118%	\$107.56	\$107.56	\$20.96
June 9, 2000	\$91.13	\$91.13	\$11.81	118%	\$107.56	\$107.56	\$13.94
June 10, 2000	\$28.77	\$28.77	\$11.81	118%	\$33.96	\$33.96	\$13.94
June 11, 2000	\$28.77	\$28.77	\$11.81	118%	\$33.96	\$33.96	\$13.94
June 12, 2000	\$91.13	\$91.13	\$11.81	118%	\$107.56	\$107.56	\$13.94
June 13, 2000	\$91.13	\$91.13	\$11.75	118%	\$107.56	\$107.56	\$13.87
June 14, 2000	\$91.13	\$91.13	\$11.76	118%	\$107.56	\$107.56	\$13.87
June 15, 2000	\$91.13	\$91.13	\$11.80	118%	\$107.56	\$107.56	\$13.93
June 16, 2000	\$91.13	\$91.13	\$11.76	118%	\$107.56	\$107.56	\$13.88
June 17, 2000	\$28.66	\$28.66	\$11.76	118%	\$33.82	\$33.82	\$13.88
June 18, 2000	\$28.66	\$28.66	\$11.76	118%	\$33.82	\$33.82	\$13.88
June 19, 2000	\$91.13	\$91.13	\$11.72	118%	\$107.56	\$107.56	\$13.84
June 20, 2000	\$91.13	\$91.13	\$11.76	118%	\$107.56	\$107.56	\$13.89
June 21, 2000	\$91.13	\$91.13	\$11.78	118%	\$107.56	\$107.56	\$13.91
June 22, 2000	\$91.13	\$91.13	\$11.78	118%	\$107.56	\$107.56	\$13.91
June 23, 2000	\$91.13	\$91.13	\$11.83	118%	\$107.56	\$107.56	\$13.97
June 24, 2000	\$28.83	\$28.83	\$11.83	118%	\$34.03	\$34.03	\$13.97
June 25, 2000	\$28.83	\$28.83	\$11.83	118%	\$34.03	\$34.03	\$13.97
June 26, 2000	\$91.13	\$91.13	\$11.86	118%	\$107.56	\$107.56	\$13.99

SEP AVERAGE INFLATION-ADJUSTED PRICES
 April 01, 2000 - March 31, 2008

HOURS X PRICE IN MONTH

HOURS IN MONTH

Month	Peak	Shoulder	Off-Peak	Days	Peak	Shoulder	Off-Peak	Peak	Shoulder	Off-Peak
1	\$83.02	\$56.43	\$43.91	31.0	177.14	318.86	248.00	14,705.82	17,994.19	10,889.60
2	\$83.41	\$61.68	\$51.90	28.3	161.43	290.57	226.00	13,464.20	17,923.25	11,729.53
3	\$77.29	\$58.37	\$48.24	31.0	177.14	318.86	248.00	13,690.65	18,611.40	11,962.70
4	\$64.60	\$51.21	\$36.31	30.0	171.43	308.57	240.00	11,074.53	15,800.68	8,714.95
5	\$54.09	\$51.23	\$24.19	31.0	177.14	318.86	248.00	9,582.23	16,336.08	5,998.93
6	\$68.81	\$49.75	\$17.03	30.0	171.43	308.57	240.00	11,795.84	15,350.96	4,087.43
7	\$89.31	\$57.93	\$21.09	31.0	177.14	318.86	248.00	15,821.09	18,472.81	5,231.41
8	\$81.91	\$64.84	\$26.14	31.0	177.14	318.86	248.00	14,510.58	20,676.23	6,481.51
9	\$59.52	\$44.16	\$23.03	30.0	171.43	308.57	240.00	10,203.49	13,626.14	5,527.81
10	\$54.20	\$51.16	\$27.71	31.0	177.14	318.86	248.00	9,600.93	16,312.27	6,871.07
11	\$68.10	\$49.54	\$35.36	30.0	171.43	308.57	240.00	11,674.27	15,287.92	8,486.17
12	\$92.36	\$55.63	\$39.73	31.0	177.14	318.86	248.00	16,361.05	17,738.93	9,854.12

COSTING PERIODS (SAME AS TOU REPORT):

Season	Period	Hour Weighted Average Price (Cdn\$ per kW.h)
Spring	April through May	
Peak	7:00 to 11:00 a.m. to 4:00 p.m. to 8:00 p.m. Weekdays	0.0593
Shoulder	11:00 a.m. to 4:00 p.m. Weekdays; 8:00 p.m. to 11:00 p.m. Weekdays	0.0751
Off Peak	7:00 a.m. to 11:00 p.m. Weekends	0.0610
	11:00 p.m. to 7:00 a.m. all days	0.0840
Summer	June through September	
Peak	12:00 Noon to 8:00 p.m. Weekdays	0.0512
Shoulder	7:00 a.m. to 12:00 noon ; 8:00 p.m. to 11:00 p.m. Weekdays.	0.0543
Off Peak	7:00 a.m. to 11:00 p.m. Weekends	0.0504
	11:00 p.m. to 7:00 a.m. all days	0.0579
Fall	October through November	
Peak	7:00 to 11:00 a.m. to 4:00 p.m. to 8:00 p.m. Weekdays	2.712
Shoulder	11:00 a.m. to 4:00 p.m. Weekdays; 8:00 p.m. to 11:00 p.m. Weekdays	3.435
Off Peak	7:00 a.m. to 11:00 p.m. Weekends	2.793
	11:00 p.m. to 7:00 a.m. all days	3.845
Winter	December through March	
Peak	7:00 to 11:00 a.m. to 4:00 p.m. to 8:00 p.m. Weekdays	2.712
Shoulder	11:00 a.m. to 4:00 p.m. Weekdays; 8:00 p.m. to 11:00 p.m. Weekdays	3.435
Off Peak	7:00 a.m. to 11:00 p.m. Weekends	2.793
	11:00 p.m. to 7:00 a.m. all days	3.845

Season	Period	Marginal Cost Weighting
Spring	April through May	
Peak	7:00 to 11:00 a.m. to 4:00 p.m. to 8:00 p.m. Weekdays	1.380
Shoulder	11:00 a.m. to 4:00 p.m. Weekdays; 8:00 p.m. to 11:00 p.m. Weekdays	1.000
Off Peak	7:00 a.m. to 11:00 p.m. Weekends	1.440
	11:00 p.m. to 7:00 a.m. all days	2.096
Summer	June through September	
Peak	12:00 Noon to 8:00 p.m. Weekdays	2.712
Shoulder	7:00 a.m. to 12:00 noon ; 8:00 p.m. to 11:00 p.m. Weekdays.	3.435
Off Peak	7:00 a.m. to 11:00 p.m. Weekends	2.793
	11:00 p.m. to 7:00 a.m. all days	3.845
Fall	October through November	
Peak	7:00 to 11:00 a.m. to 4:00 p.m. to 8:00 p.m. Weekdays	2.712
Shoulder	11:00 a.m. to 4:00 p.m. Weekdays; 8:00 p.m. to 11:00 p.m. Weekdays	3.435
Off Peak	7:00 a.m. to 11:00 p.m. Weekends	2.793
	11:00 p.m. to 7:00 a.m. all days	3.845
Winter	December through March	
Peak	7:00 to 11:00 a.m. to 4:00 p.m. to 8:00 p.m. Weekdays	2.712
Shoulder	11:00 a.m. to 4:00 p.m. Weekdays; 8:00 p.m. to 11:00 p.m. Weekdays	3.435
Off Peak	7:00 a.m. to 11:00 p.m. Weekends	2.793
	11:00 p.m. to 7:00 a.m. all days	3.845

RCM/TREE/MH I-3(e)(iii)
Attachment 4
Page 1 of 1

2019 Prospective Cost of Service Study
Prospective Peak Load Responsibility (Report)

Thermal Generation	Energy (MW-h) Weighted by Marginal Cost (Hydraulic for Domestic and Export Classes)									
	Spring		Summer		Fall		Winter		Total	
	Peak	Off Peak	Shoulder	Peak	Off Peak	Shoulder	Peak	Off Peak	Shoulder	Off Peak
Residential	352,186,339	307,843,591	508,179,338	485,872,434	332,979,991	664,943,107	888,099,681	1,072,361,716	1,107,069,530	1,107,069,530
Res FRWH	479,649,560	490,964,886	1,647,696	839,482	952,966	1,522,664	1,625,440	2,978,772	2,026,413	19,991,874
Res Seasonal	81,126	8,642,431	17,421,100	3,062,230	3,476,191	5,555,645	4,997,938	9,159,194	6,230,861	83,957,616
GS Small Non-Demand	63,169,625	65,546,472	213,601,387	74,882,670	77,800,874	129,202,012	178,237,740	316,750,239	203,273,558	1,699,975,517
GS Small Non-Demand FRWH	294,766	323,671	279,126	279,126	290,004	481,002	538,319	951,007	612,118	6,394,394
GS Small Demand	843,885	1,061,949	1,266,314	1,061,949	1,061,949	290,080	189,759	335,230	5,382,794	12,839
GS Small Demand FRWH	146,991,856	89,102,491	291,148,879	187,366,326	109,782,832	175,923,815	237,144,144	335,230	276,957,347	2,281,353,953
GS Medium	236,401,141	44,903,448	299,399,167	151,709,928	161,893,682	213,162,524	335,858,518	586,708,834	383,008,183	3,476,648,890
GS Large <100kV	72,794,420	79,899,038	158,098,200	77,257,646	84,510,777	116,402,366	161,893,682	276,235,792	180,516,176	1,740,068,864
GS Large 10-100kV	36,017,417	13,231,349	17,679,172	40,843,284	19,491,362	19,491,362	85,376,414	163,000,968	126,235,822	2,040,400,052
GS Large 30-100kV Curtable	8,812,789	179,879,534	408,120,391	92,845,266	18,109,663	18,109,663	18,109,663	231,179,427	28,099,404	242,666,448
GS Large > 100kV	120,097,255	230,388,001	217,935,677	123,161,343	141,814,562	231,179,427	18,109,663	18,109,663	378,036,182	572,157
GS > 100kV Curtable	108,157,981	162,298,696	427,598,356	329,943,466	112,870,159	238,683,896	232,164,416	463,953,439	47,099,160	3,116,017,512
Streetslights	4,402,240	10,831,828	463,394	3,559,604	1,032,489,881	8,603,160	2,469,838,340	4,337,228,642	3,085,251,741	24,664,587,563
Totals	885,072,765	1,112,876,823	1,807,889,201	3,189,884,162	2,019,933,452	4,232,821,900	4,162,219,624	6,972,752,991	3,861,514,212	6,424,000,000
Exports	374,082,464	599,973,034	821,308,537	1,336,495,478	648,409,140	422,821,900	2,793	2,105	2,652	13,786,874
Weighting Factor	2,712	2,344	3,435	2,484	1,000	2,793	3,845	2,652	2,096	

Energy (MW-h) Weighted by Marginal Cost (Thermal for Domestic Classes)

Thermal Generation	Energy (MW-h) Weighted by Marginal Cost (Thermal for Domestic Classes)									
	Spring		Summer		Fall		Winter		Total	
	Peak	Off Peak	Shoulder	Peak	Off Peak	Shoulder	Peak	Off Peak	Shoulder	Off Peak
Residential	1,613,172	3,072,897	5,817,748	2,392,916	2,421,404	3,869,467	5,068,541	10,424,790	7,091,827	50,171,014
Res FRWH	5,151	6,286	11,135	10,355	9,753	9,753	10,412	12,981	12,981	127,626
Res Seasonal	34,844	419,287	1,113,959	56,644	22,268	35,583	32,017	58,673	39,915	517,828
GS Small Non-Demand	464,684	74,146	1,365,591	763,459	498,398	827,661	1,144,984	2,022,679	1,101,903	10,809,930
GS Small Non-Demand FRWH	3,148	3,148	5,997	3,355	1,858	3,065	3,459	6,092	3,921	40,386
GS Small Demand	1,942	2,015	4,110	1,078	1,121	1,661	1,216	2,147	1,382	34,482
GS Small Demand FRWH	516,154	941,617	1,141,970	654,982	703,295	1,127,017	1,519,132	2,689,035	1,774,178	14,614,229
GS Medium	864,406	572,467	1,864,352	1,088,441	1,037,082	1,473,979	2,151,478	3,771,650	2,654,014	22,271,223
GS Large <100kV	466,311	505,964	1,012,772	973,389	941,371	1,028,939	1,028,939	1,156,377	1,156,377	11,166,084
GS Large 10-100kV	230,705	450,795	3,142,977	1,687,159	387,440	489,672	547,307	1,042,394	808,602	6,600,943
GS Large 30-100kV Curtable	56,502	112,120	113,338	167,564	167,564	167,564	121,178	236,806	180,603	1,554,508
GS Large > 100kV	769,336	1,475,853	2,618,972	2,046,615	2,046,615	1,693,370	1,644,337	3,123,235	2,421,679	20,089,157
GS > 100kV Curtable	692,854	1,357,132	2,719,172	2,131,000	1,039,477	1,490,378	1,490,378	2,908,204	2,233,400	19,160,712
Streetslights	742,119	38,201	2,968	139,147	31,521	42,301	13,847,730	84,973	165,868	262,119
Totals	5,669,728	7,129,023	12,579,318	12,939,582	8,032,733	11,984,512	13,847,730	28,044,347	19,639,091	158,000,000
Exports										
Weighting Factor	2,712	2,344	3,435	2,484	1,000	2,793	3,845	2,652	2,096	

Definition of Periods
 Spring (April 1 to May 31)
 Peak = 7:00 am to 11:00 am and 4:00 pm to 8:00 pm weekdays
 Shoulder = 11:00 am to 4:00 pm weekdays; 8:00 pm to 11:00 pm weekdays; 7:00 am to 11:00 pm weekends & holidays
 Off-Peak = 11:00 pm to 7:00 am everyday
 Summer (June 1 to Sep 30)
 Peak = 12:00 noon to 8:00 pm weekdays
 Shoulder = 7:00 am to 12:00 noon weekdays; 8:00 pm to 11:00 pm weekdays; 7:00 am to 11:00 pm weekends & holidays
 Off-Peak = 11:00 pm to 7:00 am everyday
 Fall (Oct 1 to Nov 30)
 Peak = 7:00 am to 11:00 am and 4:00 pm to 8:00 pm weekdays
 Shoulder = 11:00 am to 4:00 pm weekdays; 8:00 pm to 11:00 pm weekdays; 7:00 am to 11:00 pm weekends & holidays
 Off-Peak = 11:00 pm to 7:00 am everyday
 Winter (December 1 to March 31)
 Peak = 7:00 am to 11:00 am and 4:00 pm to 8:00 pm weekdays
 Shoulder = 11:00 am to 4:00 pm weekdays; 8:00 pm to 11:00 pm weekdays; 7:00 am to 11:00 pm weekends & holidays
 Off-Peak = 11:00 pm to 7:00 am everyday

PUB/MH/RISK-114**Reference: KPMG Report - Page 239, NYC Report Issues #204-#210****Risk Issue: Risk Analytics VAR**

- b) Please confirm the recommendation to assign probabilities to its drought stress scenarios will improve the understanding of a financial loss associated with a likely extreme event. Please explain.

ANSWER:

Confirmed. Manitoba Hydro is reviewing its current drought stress analytics and is developing a model that uses both, historical and Monte Carlo simulation in order to analyze the financial loss associated with its drought stress scenarios which will assist in combined event drought risk management.

Manitoba Hydro agrees with the recommendation to assign probabilities to scenarios that combine the consequences of multiple risk sensitivities.

Please see the attachment to RCM/TREE/MH I-38 entitled, "Risk Analysis Using PRISM".

RCM/TREE/MH I-119

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-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-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.”

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-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-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-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-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-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-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-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-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-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.”

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.

PUB/MH I-109

Subject: Tab 9: Demand Side Management

Reference: Appendix 9.1 LIEEP

- a) Please provide demographic data on Low income households broken down by dwelling type and ownership [actual numbers and % of total]

ANSWER:

The following two tables are based on data obtained from the 2003 survey.

DWELLING TYPE	<u>LICO-Standard</u>		
	OWN	RENT	TOTAL
Single Detached	45,467	5,344	50,811
Multiplex	3,961	2,876	6,836
Rowhouse	1,410	3,066	4,476
Mobile Home	2,613	507	3,120
Apartment Suite	2,145	14,762	16,907
TOTAL	55,596	26,555	82,151
Single Detached	81.8%	20.1%	61.9%
Multiplex	7.1%	10.8%	8.3%
Rowhouse	2.5%	11.6%	5.4%
Mobile Home	4.7%	1.9%	3.8%
Apartment Suite	3.9%	55.5%	20.6%
TOTAL	100.0%	100.0%	100.0%

DWELLING TYPE	<u>LICO-125</u>		
	OWN	RENT	TOTAL
Single Detached	54,426	5,696	60,122
Multiplex	4,704	3,001	7,706
Rowhouse	1,510	3,066	4,577
Mobile Home	2,993	507	3,500
Apartment Suite	2,145	15,147	17,292
TOTAL	65,779	27,417	93,197
Single Detached	82.7%	20.8%	64.5%
Multiplex	7.1%	11.0%	8.3%
Rowhouse	2.3%	3.3%	4.9%
Mobile Home	3.5%	0.5%	3.8%
Apartment Suite	4.5%	16.3%	18.5%
TOTAL	100.0%	100.0%	100.0%

The following two tables are based on data obtained from the 2009 survey.

DWELLING TYPE	<u>LICO-Standard</u>		
	OWN	RENT	TOTAL
Single Detached	44,200	3,908	48,108
Multiplex	2,809	1,194	4,003
Rowhouse	1,327	1,438	2,765
Mobile Home	1,787	55	1,842
Apartment Suite	4,205	14,015	18,220
TOTAL	54,328	20,610	74,938
Single Detached	81.4%	19.0%	64.2%
Multiplex	5.2%	5.8%	5.3%
Rowhouse	2.4%	7.0%	3.7%
Mobile Home	3.3%	0.3%	2.5%
Apartment Suite	7.7%	68.0%	24.3%
TOTAL	100.0%	100.0%	100.0%

DWELLING TYPE	<u>LICO-125</u>		
	OWN	RENT	TOTAL
Single Detached	64,024	4,720	68,744
Multiplex	5,164	1,822	6,986
Rowhouse	1,735	1,654	3,389
Mobile Home	2,777	102	2,879
Apartment Suite	5,156	18,630	23,786
TOTAL	78,856	26,928	105,784
Single Detached	81.2%	17.5%	65.0%
Multiplex	6.5%	6.8%	6.6%
Rowhouse	2.2%	6.1%	3.2%
Mobile Home	3.5%	0.4%	2.7%
Apartment Suite	6.5%	69.2%	22.5%
TOTAL	100.0%	100.0%	100.0%

PUB/MH I-109**Subject: Tab 9: Demand Side Management****Reference: Appendix 9.1 LIEEP**

b) Please provide similar data on customers in Manitoba Social Housing Sector.

ANSWER:

Manitoba Hydro does not identify accounts as Social Housing on its billing system, and this information was not obtained from the Residential Survey. As such, Manitoba Hydro does not have this data.

PUB/MH I-213**Reference: Tab 13, 13.4 (8) Affordable Energy Page 4 of 46**

- a) **Please describe how MH determined that the energy burden for its low-income customers is “not at a crisis level.”**

ANSWER:

Manitoba Hydro does not have its own definition of levels of energy burden. The comment that the energy burden for its low income customers is not at a critical level was based on a high level assessment and used the benchmark of 15%, which was drawn from the referenced “severe energy burden” which was provided by the witness for RCM/TREE during the 2008/09 Manitoba Hydro General Rate Application.

In preparing the Manitoba Hydro’s Affordable Energy Program, a high level assessment was undertaken on the energy burden within Manitoba. This assessment simply looked at two levels of income and assessed the energy burden based on the average energy cost of customers falling within the LICO x 125% category. As provided in Manitoba Hydro’s Affordable Energy Program report, the energy burden ranged from 6.3% to 9.6%. Manitoba Hydro recognizes that the assessment was based on two levels of incomes and average energy costs. Individual customers will have a broad range of income levels and these customers will have a broad range of energy costs.

The concept of customers’ “energy burden” is not used in the design or assessment of Manitoba Hydro’s Affordable Energy Programs. The focus of Manitoba Hydro’s Affordable Energy Program is to assist its customers with managing their energy bills through the three components of the Program: Demand Side Management, Bill Management, and Emergency Financial Assistance. The issue of affordability is outside the scope of Manitoba Hydro’s mandate and is a matter of policy for legislators and government agencies responsible for these matters.

PUB/MH I-213

Reference: Tab 13, 13.4 (8) Affordable Energy Page 4 of 46

- b) Please re-file the chart on page 18 utilizing 2009 energy rates compared with the 2003 LICO chart as it forms the current eligibility criteria for the program.**

ANSWER:

The chart on page 18 of the Bill Assistance Report was recalculated as shown below by applying 2009 energy rates to the consumption for electricity and natural gas based upon the 2003 Residential Energy Use Survey. The 2003 Residential Energy Use Survey identified average annual energy consumption of 24,079 kWh for the all-electric occupancy and a combined energy consumption of 7,839 kWh of electricity and 2,769 m³ of natural gas for the gas heated occupancy. The results are shown below.

Heat Source	Energy Cost	Income	Energy Burden
Electric	\$1,684	\$17,000	9.9%
Electric	\$1,684	\$24,000	7.0%
Gas	\$1,940	\$17,000	11.4%
Gas	\$1,940	\$24,000	8.1%

PUB/MH I-213

Reference: Tab 13, 13.4 (8) Affordable Energy Page 4 of 46

- c) **Please re-file the chart utilizing 2009 energy rates and an updated LICO table.**

ANSWER:

The chart on page 18 of the Bill Assistance Report was recalculated as shown below by applying 2009 energy rates to the consumption for electricity and natural gas based upon the 2009 Residential Energy Use Survey. The 2009 Residential Energy Use Survey identified average annual energy consumption of 21,116 kWh for the all-electric occupancy and a combined energy consumption of 7,250 kWh of electricity and 2,499 m³ of natural gas for the gas heated occupancy. The results are shown below.

Heat Source	Energy Cost	Income	Energy Burden
Electric	\$1,487	\$17,000	8.7%
Electric	\$1,487	\$24,000	6.2%
Gas	\$1,790	\$17,000	10.5%
Gas	\$1,790	\$24,000	7.5%

Note that the \$17,000 is the estimated income threshold below which customers may begin to start accessing different forms of social assistance.

The \$24,000 income level represents the average income of Manitoba Hydro LICO-125 customers. In the 2003 Residential Energy Use Survey this average was \$23,813 and was rounded to \$24,000 for the table. In the 2009 Residential Energy Use Survey this average was \$23,597 which also rounds to \$24,000 for the table. The average of LICO-125 customers will always be in this range because the maximum income limits prevent it from increasing. The 2009 Residential Energy Use Survey utilized income increments of \$5,000 compared to the \$10,000 increments of the 2003 Residential Energy Use Survey which resulted in the slight change in average income.

PUB/MH I-213

Reference: Tab 13, 13.4 (8) Affordable Energy Page 4 of 46

d) Please discuss to what extent is the energy burden impacted by the number of individuals in a household where household income levels remains the same.

ANSWER:

The following table was compiled using the estimated energy cost for all residential customers with incomes from \$20,000 to \$24,999.

Heat Source	People in household	2009 Energy Cost	Average Income	2009 Energy Burden
Electric	One Person	\$ 1,374	\$ 22,500	6.1%
Electric	Two People	\$ 1,672	\$ 22,500	7.4%
Electric	Three People	\$ 1,915	\$ 22,500	8.5%
Electric	Four People	n/a*	\$ 22,500	n/a
Electric	Five or more People	n/a*	\$ 22,500	n/a
Gas	One Person	\$ 1,655	\$ 22,500	7.4%
Gas	Two People	\$ 1,843	\$ 22,500	8.2%
Gas	Three People	\$ 1,912	\$ 22,500	8.5%
Gas	Four People	\$ 2,029	\$ 22,500	9.0%
Gas	Five or more People	\$ 2,355	\$ 22,500	10.5%

* There were insufficient electricity heated survey respondents with 4 or more people to estimate the energy use with any significance of accuracy within this group.

Generally, for a fixed income, the energy burden will rise as the family size increases.

PUB/MH I-213

Reference: Tab 13, 13.4 (8) Affordable Energy Page 4 of 46

- e) **Based on the 2009 energy costs and utilizing average monthly consumption for both Electric and Gas, with respect to a single parent with two children on social assistance, please indicate what percentage of his/her maximum shelter allowance, energy represents.**

ANSWER:

The 2009 Residential survey had insufficient returns for LICO-125 families of 1 adult and 2 children to estimate average use with any statistical validity. Manitoba Hydro is also not an expert in shelter allowances and what factors determine how much an individual or family receives under social programs.

PUB/MH I-213

Reference: Tab 13, 13.4 (8) Affordable Energy Page 4 of 46

- f) Please provide a similar example of the current pretax income energy burden [electric & natural gas] for a single individual working 40 hours a week at the current Manitoba minimum wage.**

ANSWER:

A single individual earning \$9.00 an hour (Manitoba minimum wage as of October 1, 2009) would earn \$18,720 in 52 weeks at 40 hours a week. Using the 2009 survey data, customers that earn under \$20,000 have average energy costs of \$1,091 for all electric customers and \$1,597 for natural gas heated customers.

The specific energy burden of a customer earning \$18,720 per year and having these energy costs would be as provided in the following table. The specific energy burden of any specific customer would depend on their specific energy costs.

Heat Source	2009 Energy Cost	Average Income	2009 Energy Burden
Electric	\$1,091	\$18,720	5.8%
Gas	\$1,597	\$18,720	8.5%

The energy burden for low income single individuals is lower for electric heat source because many of these people are apartment dwellers.

PUB/MH I-213

Reference: Tab 13, 13.4 (8) Affordable Energy Page 4 of 46

g) Please indicate the number of Low Income customers who have a severe energy burden, high-energy burden and normal energy burden. Please define each of the parameters.

ANSWER:

Manitoba Hydro does not define levels of energy burden [see response to PUB/MH I-213(a)].

The following table provides an estimate of the number of LICO standard and LICO-125 customers by energy burden ranges compared with all Manitoba Hydro residential customers:

Energy Burden	LICO Customers	LICO Percent	LICO-125 Customers	LICO-125 Percent	Overall Customers	Overall Customers
3.00% or Less	13,979	18.7%	20,380	19.3%	208,458	47.5%
3.01% to 6.00%	12,505	16.7%	23,861	22.6%	145,742	33.2%
6.01% to 9.00%	18,766	25.0%	29,563	27.9%	47,178	10.7%
9.01% to 12.00%	15,440	20.6%	16,930	16.0%	21,139	4.8%
12.01% to 15.00%	9,313	12.4%	9,635	9.1%	10,634	2.4%
Over 15.00%	4,935	6.6%	5,415	5.1%	5,945	1.4%
Total	74,938	100.0%	105,784	100.0%	439,096	100.0%