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February 8, 2010

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
P.O. Box 2319, 27th Floor
2300 Yonge Street
Toronto, Ontario
M4P 1E4

Dear Ms. Walli:

**Re: FINAL REPORT ON THIRD TRANCHE FUNDED CDM PROGRAM FOR
ATIKOKAN HYDRO**

Atikokan Hydro Inc. ("Atikokan") is pleased to submit to the Ontario Energy Board (the "Board") its final report on third tranche funded CDM program.

The report is composed of three items: a written summary [Atikokan Final Report on Third Tranche Funded CDM Programs.doc] supported by an Atikokan DCM Evaluation Jan 31, 2010.xls file and an Atikokan TRC calculations Jan 31, 2010.xls file

Atikokan's Final Report on Third Tranche Funded CDM Program will be sent to you in the following form:

- (a) One (1) electronic copy of the application in searchable /unrestricted PDF format and one (1) electronic copy in Microsoft Excel format of the completed schedule and supporting calculation file.
- (b) Two (2) paper copies of the report, along with a CD of the above (item (a)).

We would be pleased to provide any further information or details that you may require relative to this update.

Yours truly,

A handwritten signature in black ink that reads "Wilf Thorburn".

Wilf Thorburn
CEO/Secretary/Treasurer
Atikokan Hydro Inc.

Atikokan Hydro Inc.
Final Report on Third Tranche CDM Funding

FINAL REPORT ON THIRD TRANCHE FUNDED CDM PROGRAM FOR ATIKOKAN HYDRO

1. Introduction

In November 2003 the Ontario government announced that it would, "...permit local distribution companies to proceed to the Board to apply for the next installment of their allowable return on equity beginning March 1, 2005." The government also indicated that the Board's approval would be conditional on a financial commitment to reinvest in conservation and demand management initiatives, an amount equal to one year's incremental returns. For Atikokan Hydro's this amount represented \$48,230. The Board approved this amount to be collected in Atikokan Hydro's 2005 distribution rates and to be spent on CDM programs in the Atikokan Hydro service area. The purpose to this report is to provide the Board with information on how the \$48,230 was spent and the CDM results of the spending.

2. Evaluation of the CDM Plan

In accordance with the Board's requirements for reporting of CDM Funded under Third Tranche of MARR the required Appendix A, B, C and D have been included as part of this report. The following table summarizes the information in the appendices.

Description	Cost	Benefit	NPV-TRC = Benefits - Costs	Life Cycle kWh Saved	Cost per KWh saved (\$/kWh)
Staff time on appliance survey	\$512	\$000	(\$512)	0	
Casual help to do survey	\$635	\$000	(\$635)	0	
Purchase Enerspectrum Software	\$1,956	\$000	(\$1,956)	0	
Pool Lighting upgrade	\$24,692	\$7,244	(\$17,448)	92,160	\$0.27
System Optimization	\$20,435	\$22,317	\$1,882	446,760	\$0.05
Total	\$48,230	\$29,560	(\$18,670)		

3. Discussion of the Programs

The CDM plan that supported the expected CDM spending in the approved 2005 distribution rates identified projects that Atikokan Hydro had hoped to have brought forward, and some of the identified projects were successfully completed.

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The education portion, the purchase of a conservation package to take to the schools did not occur. The package to be purchased from a larger LDC did not materialize, and the schools were not able to respond to the program due to staffing constraints.

The conservation project to benefit the community went off successfully. The project involved replacing 20 Hg Vapour lights with 14 Metal Halide lights. This has reduced the pool lighting load from 8000 watts to 5600 watts or 2.4 Kw for the time the lights are on. The project has also improved the lighting in the pool area by focusing the lights in those areas where is most needed. The cost of this project was \$24,692

As a pilot project and as noted in our original plan, Atikokan Hydro completed a successful system optimization project at a cost of \$20,435. The project verified that the load on an installed capacity of 87.5 kVA [two 25 kVA units and one 37.5 kVA transformer] could be handled with one 50 kVA transformer. After the project was completed there was a noticed 0.6% drop in line losses over a 3 year period. Assuming a loss of 2% per transformer, and a load factor of 60%, we can attribute 0.1% savings in distribution losses to the pilot project. The project consisted of replacing the three old transformers with one 50 kVA transformer, reconductoring with a larger wire, and using ampacts and insulinks instead of split bolts.

In order to complete an appliance survey to better understand our customer patterns and reduced the work on the cost allocation study Atikokan Hydro spent \$1,147 on staff and casual labour

Finally, \$1,956 was used to purchase software and training on the software from EnerSpectrum which was supposed to do a lot of the work in terms of the reporting that needed to be completed for reports such as this one. Unfortunately, it did not match the OEB reporting requirements, so turned out to be a not good investment.

4. Lessons Learned

Atikokan Hydro learned that we were able to make our plan successful to some degree because we were able to be flexible. When the planned educational material did not materialize, and the intended audience did not have staff time to participate, we were able to concentrate on other items.

The appliance data is not easily quantified as a benefit, but believe it will have beneficial uses in the future.

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A load component calculation of the lighting project shows a significant load reduction. Unfortunately, the pay back is not great.

The system optimization would certainly seem to offer the best investment strategy. Careful analysis of the system must occur, and future planning must be considered to ensure the system is right sized.

5. Conclusion

Overall the results of the third tranche funded CDM programs were positive and balanced. The system optimization project produced the best results in energy savings however the public awareness of this projects was minimal. On the other hand, although the pool lighting project did not produce similar level of savings, the lighting conditions at the community pool have significant improved and have been noticeable to those using the pool. As a result, the public awareness of this CDM program was high.

Atikokan Hydro TRC Calculations Jan 31, 2010

Date	Description	Cost	Benefit	NPV-TRC = Benefits - Costs
Jul-06	Staff time on appliance survey to assist in understanding customer patterns	\$511.77	\$0.00	(\$511.77)
	Casual help to do survey	\$635.00	\$0.00	(\$635.00)
Jul-06	Purchase Enerspectrum Software to assist in reporting	\$1,956.39	\$0.00	(\$1,956.39)
	Pool Lighting upgrade	\$24,691.75	\$7,243.82	(\$17,447.93)
	System Optimization	\$20,435.09	\$22,316.67	\$1,881.58
	Total	\$48,230.00	\$29,560.49	(\$18,669.51)

Atikokan Hydro TRC Calculations Jan 31, 2010

Year	Ontario Seasonal Average Avoided Energy Cost (CAD\$/MWh)								Avoided Generation Capacity Costs (CAD\$/kW-yr)	Avoided Transmission Capacity Costs (CAD\$/kW-yr)	Avoided Distribution Capacity Costs (CAD\$/kW-yr)
	Winter			Summer			Shoulder				
	On Peak	Mid Peak	Off Peak	On Peak	Mid Peak	Off Peak	Mid Peak	Off Peak			
Hours/Period	602	688	1614	522	783	1623	1305	1623			
2006	120.8	83.9	45.4	112.9	81.4	47.5	84.2	42.3	0	0	0.00
2007	124.6	84.3	45.2	111.5	79.6	45.9	81.4	40.8	0	0	0.00
2008	115.4	86.8	48.9	110.6	83.6	50.1	90.4	44.9	74.65	5.62	0.00
2009	111.9	77.1	48.9	104.5	79.5	47.6	85.8	43.4	83.57	5.76	7.17
2010	113.5	77.4	52.1	107.0	80.5	48.2	83.5	43.4	71.49	5.9	7.35
2011	110.2	77.3	52.7	103.2	81.3	48.5	84.2	43.0	85.42	6.05	7.54
2012	112.4	78.9	53.3	113.1	84.6	51.2	88.5	47.8	81.2	6.2	7.73
2013	125.2	86.4	59.9	116.9	91.3	54.0	92.5	51.9	61.6	6.36	7.92
2014	125.7	92.4	62.8	127.9	96.8	56.7	98.9	54.4	46.63	6.52	8.12
2015	127.4	94.7	69.6	151.6	106.7	62.5	102.8	59.9	23.16	6.68	8.32
2016	131.7	97.3	70.9	152.5	108.1	63.9	104.5	61.4	26.88	6.85	8.53
2017	136.0	100.0	72.1	153.5	109.5	65.3	106.2	62.8	29.94	7.02	8.74
2018	140.3	102.7	73.4	154.4	110.9	66.8	108.0	64.3	31.66	7.19	8.96
2019	144.6	105.4	74.6	155.3	112.3	68.2	109.7	65.7	32.41	7.37	9.18
2020	148.9	108.1	75.9	156.3	113.6	69.6	111.4	67.2	31.85	7.56	9.41
2021	152.4	110.4	78.0	157.1	116.5	71.5	114.7	69.1	38.27	7.74	9.65
2022	155.8	112.7	80.0	157.9	119.4	73.4	117.9	71.0	41.97	7.94	9.89
2023	159.3	115.0	82.1	158.7	122.4	75.3	121.1	72.9	44.22	8.14	10.14
2024	162.7	117.3	84.2	159.5	125.3	77.2	124.3	74.8	44.56	8.34	10.39
2025	166.1	119.7	86.3	160.3	128.2	79.1	127.5	76.7	42.02	8.55	10.65

	Quantity	Wattage	Annual Consumption (kWh)	Demand (kW)
Existing Pool Lights	20	400	15360	8
New Pool Lights	14	400	10752	5.6
Savings			4608	2.4

Winter Savings	2304
Summer Savings	2304

	Hours
Winter Weekday Peak	2
Winter Weekday Mid Peak	6
Summer Weekday Peak	6
Summer Weekday Mid Peak	2

The above table indicates there were 20 400 watt Hg [Mercury Vapour] fixtures that were replaced with 14 metal halide 400 watt fixtures. The cost of power is the total cost arrived at by dividing total amount of bill by total consumption. The time of operation is calculated at 8 hours per day for 20 days per month. The total cost for the installation was \$24,691.75, and the total load reduction was 2.4 kW.

	MWh	MWh	MWh	MWh	MWh	MWh	MWh	MWh	kW	kW	kW	Total	Discount Rate	NPV
Savings	0.6	1.7		1.7	0.6				2.4	2.4	2.4		6.72%	
2006	\$69.58	\$144.98	\$0.00	\$195.09	\$46.89	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$456.54	1.0336	\$441.70
2007	\$71.77	\$145.67	\$0.00	\$192.67	\$45.85	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$455.96	1.1031	\$413.36
2008	\$66.47	\$149.99	\$0.00	\$191.12	\$48.15	\$0.00	\$0.00	\$0.00	\$179.16	\$13.49	\$0.00	\$648.38	1.1772	\$550.79
2009	\$64.45	\$133.23	\$0.00	\$180.58	\$45.79	\$0.00	\$0.00	\$0.00	\$200.57	\$13.82	\$17.22	\$655.66	1.2563	\$521.90
2010	\$65.38	\$133.75	\$0.00	\$184.90	\$46.37	\$0.00	\$0.00	\$0.00	\$171.58	\$14.16	\$17.65	\$633.77	1.3407	\$472.71
2011	\$63.48	\$133.57	\$0.00	\$178.33	\$46.83	\$0.00	\$0.00	\$0.00	\$205.01	\$14.52	\$18.09	\$659.83	1.4308	\$461.16
2012	\$64.74	\$136.34	\$0.00	\$195.44	\$48.73	\$0.00	\$0.00	\$0.00	\$194.88	\$14.88	\$18.54	\$673.55	1.5270	\$441.11
2013	\$72.12	\$149.30	\$0.00	\$202.00	\$52.59	\$0.00	\$0.00	\$0.00	\$147.84	\$15.26	\$19.01	\$658.12	1.6296	\$403.86
2014	\$72.40	\$159.67	\$0.00	\$221.01	\$55.76	\$0.00	\$0.00	\$0.00	\$111.91	\$15.65	\$19.48	\$655.88	1.7391	\$377.14
2015	\$73.38	\$163.64	\$0.00	\$261.96	\$61.46	\$0.00	\$0.00	\$0.00	\$55.58	\$16.03	\$19.97	\$652.03	1.8559	\$351.32
2016	\$75.86	\$168.13	\$0.00	\$263.52	\$62.27	\$0.00	\$0.00	\$0.00	\$64.51	\$16.44	\$20.47	\$671.20	1.9807	\$338.88
2017	\$78.34	\$172.80	\$0.00	\$265.25	\$63.07	\$0.00	\$0.00	\$0.00	\$71.86	\$16.85	\$20.98	\$689.14	2.1138	\$326.03
2018	\$80.81	\$177.47	\$0.00	\$266.80	\$63.88	\$0.00	\$0.00	\$0.00	\$75.98	\$17.26	\$21.50	\$703.70	2.2558	\$311.95
2019	\$83.29	\$182.13	\$0.00	\$268.36	\$64.68	\$0.00	\$0.00	\$0.00	\$77.78	\$17.69	\$22.04	\$715.98	2.4074	\$297.41
2020	\$85.77	\$186.80	\$0.00	\$270.09	\$65.43	\$0.00	\$0.00	\$0.00	\$76.44	\$18.14	\$22.59	\$725.26	2.5692	\$282.30
2021	\$87.78	\$190.77	\$0.00	\$271.47	\$67.10	\$0.00	\$0.00	\$0.00	\$91.85	\$18.58	\$23.16	\$750.71	2.7418	\$273.80
2022	\$89.74	\$194.75	\$0.00	\$272.85	\$68.77	\$0.00	\$0.00	\$0.00	\$100.73	\$19.06	\$23.74	\$769.63	2.9260	\$263.03
2023	\$91.76	\$198.72	\$0.00	\$274.23	\$70.50	\$0.00	\$0.00	\$0.00	\$106.13	\$19.54	\$24.33	\$785.21	3.1227	\$251.45
2024	\$93.72	\$202.69	\$0.00	\$275.62	\$72.17	\$0.00	\$0.00	\$0.00	\$106.94	\$20.02	\$24.94	\$796.10	3.3325	\$238.89
2025	\$95.67	\$206.84	\$0.00	\$277.00	\$73.84	\$0.00	\$0.00	\$0.00	\$100.85	\$20.52	\$25.56	\$800.29	3.5565	\$225.02
Total	\$1,547.08	\$3,332.97	\$0.00	\$4,710.01	\$1,170.72	\$0.00	\$0.00	\$0.00	\$2,142.00	\$304.30	\$361.68	\$13,556.94		\$7,243.82

Atikokan Hydro TRC Calculations Jan 31, 2010

Year	Ontario Seasonal Average Avoided Energy Cost (CAD\$/MWh)								Avoided Generation Capacity Costs (CAD\$/kW-yr)	Avoided Transmission Capacity Costs (CAD\$/kW-yr)	Avoided Distribution Capacity Costs (CAD\$/kW-yr)
	Winter			Summer			Shoulder				
	On Peak	Mid Peak	Off Peak	On Peak	Mid Peak	Off Peak	Mid Peak	Off Peak			
Hours/Period	602	688	1614	522	783	1623	1305	1623	0	0	0.00
2006	120.8	83.9	45.4	112.9	81.4	47.5	84.2	42.3	0	0	0.00
2007	124.6	84.3	45.2	111.5	79.6	45.9	81.4	40.8	0	0	0.00
2008	115.4	86.8	48.9	110.6	83.6	50.1	90.4	44.9	74.65	5.62	0.00
2009	111.9	77.1	48.9	104.5	79.5	47.6	85.8	43.4	83.57	5.76	7.17
2010	113.5	77.4	52.1	107.0	80.5	48.2	83.5	43.4	71.49	5.9	7.35
2011	110.2	77.3	52.7	103.2	81.3	48.5	84.2	43.0	85.42	6.05	7.54
2012	112.4	78.9	53.3	113.1	84.6	51.2	88.5	47.8	81.2	6.2	7.73
2013	125.2	86.4	59.9	116.9	91.3	54.0	92.5	51.9	61.6	6.36	7.92
2014	125.7	92.4	62.8	127.9	96.8	56.7	98.9	54.4	46.63	6.52	8.12
2015	127.4	94.7	69.6	151.6	106.7	62.5	102.8	59.9	23.16	6.68	8.32
2016	131.7	97.3	70.9	152.5	108.1	63.9	104.5	61.4	26.88	6.85	8.53
2017	136.0	100.0	72.1	153.5	109.5	65.3	106.2	62.8	29.94	7.02	8.74
2018	140.3	102.7	73.4	154.4	110.9	66.8	108.0	64.3	31.66	7.19	8.96
2019	144.6	105.4	74.6	155.3	112.3	68.2	109.7	65.7	32.41	7.37	9.18
2020	148.9	108.1	75.9	156.3	113.6	69.6	111.4	67.2	31.85	7.56	9.41
2021	152.4	110.4	78.0	157.1	116.5	71.5	114.7	69.1	38.27	7.74	9.65
2022	155.8	112.7	80.0	157.9	119.4	73.4	117.9	71.0	41.97	7.94	9.89
2023	159.3	115.0	82.1	158.7	122.4	75.3	121.1	72.9	44.22	8.14	10.14
2024	162.7	117.3	84.2	159.5	125.3	77.2	124.3	74.8	44.56	8.34	10.39
2025	166.1	119.7	86.3	160.3	128.2	79.1	127.5	76.7	42.02	8.55	10.65

Estimated Reduction in System Losses	0.09%
Annual Billed Energy (kWh)	23,853,664
Estimated Energy Savings (kWh)	22,338
System Load Factor	60%
Estimated System Peak (kW)	4,538.4
Estimated Demand Savings (kW)	4.3


Existing Transformers	87.5
Replacement Transformer	50
Existing yearly loss	27,594
Replacement yearly loss	5,256
Savings in kWh	22,338
Est. Reduction in System loss	0.09%

	Hours	%
Winter Weekday Peak	602	6.9%
Winter Weekday Mid Peak	688	7.9%
Winter Weekday Off Peak	1614	18.4%
Summer Weekday Peak	522	6.0%
Summer Weekday Mid Peak	783	8.9%
Summer Weekday Off Peak	1623	18.5%
Shoulder Weekday Mid Peak	1305	14.9%
Shoulder Weekday Off Peak	1623	18.5%
Total	8760	100.0%

Savings	MWh	MWh	MWh	MWh	MWh	MWh	MWh	MWh	kW	kW	kW	Total	Discount Rate	NPV
2006	\$185.44	\$147.19	\$186.85	\$150.28	\$162.53	\$196.59	\$280.20	\$175.06	\$0.00	\$0.00	\$0.00	\$1,484.14	1.0336	\$1,435.90
2007	\$191.27	\$147.90	\$186.03	\$148.42	\$158.93	\$189.96	\$270.88	\$168.86	\$0.00	\$0.00	\$0.00	\$1,462.25	1.1031	\$1,325.63
2008	\$177.15	\$152.28	\$201.26	\$147.22	\$166.92	\$207.35	\$300.83	\$185.83	\$317.26	\$23.89	\$0.00	\$1,879.98	1.1772	\$1,597.02
2009	\$171.78	\$135.26	\$201.26	\$139.10	\$158.73	\$197.00	\$285.52	\$179.62	\$355.17	\$24.48	\$30.49	\$1,878.42	1.2563	\$1,495.21
2010	\$174.23	\$135.79	\$214.43	\$142.43	\$160.73	\$199.48	\$277.87	\$179.62	\$303.83	\$25.08	\$31.26	\$1,844.74	1.3407	\$1,375.94
2011	\$169.17	\$135.62	\$216.90	\$137.37	\$162.33	\$200.72	\$280.20	\$177.96	\$363.04	\$25.71	\$32.04	\$1,901.04	1.4308	\$1,328.65
2012	\$172.55	\$138.42	\$219.37	\$150.55	\$168.92	\$211.90	\$294.51	\$197.83	\$345.10	\$26.35	\$32.84	\$1,958.32	1.5270	\$1,282.50
2013	\$192.19	\$151.58	\$246.53	\$155.61	\$182.29	\$223.49	\$307.82	\$214.80	\$261.80	\$27.03	\$33.66	\$1,996.79	1.6296	\$1,225.35
2014	\$192.96	\$162.11	\$268.47	\$170.25	\$193.28	\$234.66	\$329.11	\$225.14	\$198.18	\$27.71	\$34.50	\$2,026.36	1.7391	\$1,165.20
2015	\$195.57	\$166.14	\$286.45	\$201.79	\$213.04	\$258.67	\$342.09	\$247.91	\$98.43	\$28.39	\$35.56	\$2,073.85	1.8559	\$1,117.42
2016	\$202.17	\$170.70	\$291.80	\$202.99	\$215.84	\$264.46	\$347.75	\$254.11	\$114.24	\$29.11	\$36.25	\$2,129.43	1.9807	\$1,075.12
2017	\$208.77	\$175.44	\$296.74	\$204.32	\$218.63	\$270.25	\$353.41	\$259.91	\$127.25	\$29.84	\$37.15	\$2,181.71	2.1138	\$1,032.15
2018	\$215.37	\$180.18	\$302.09	\$205.52	\$221.43	\$276.46	\$359.40	\$266.12	\$134.56	\$30.56	\$38.08	\$2,229.76	2.2558	\$988.46
2019	\$221.98	\$184.91	\$307.03	\$206.72	\$224.22	\$282.26	\$365.05	\$271.91	\$137.74	\$31.32	\$39.03	\$2,272.18	2.4074	\$943.84
2020	\$228.58	\$189.65	\$312.38	\$208.05	\$226.82	\$288.05	\$370.71	\$278.12	\$135.36	\$32.13	\$40.01	\$2,309.86	2.5692	\$899.07
2021	\$233.95	\$193.69	\$321.02	\$209.12	\$232.61	\$295.91	\$381.69	\$285.98	\$162.65	\$32.90	\$41.01	\$2,390.52	2.7418	\$871.88
2022	\$239.17	\$197.72	\$329.26	\$210.18	\$238.40	\$303.78	\$392.34	\$293.84	\$178.37	\$33.75	\$42.03	\$2,458.84	2.9260	\$840.33
2023	\$244.54	\$201.76	\$337.90	\$211.25	\$244.39	\$311.64	\$402.99	\$301.71	\$187.94	\$34.60	\$43.09	\$2,521.79	3.1227	\$807.57
2024	\$249.76	\$205.79	\$346.54	\$212.31	\$250.18	\$319.50	\$413.64	\$309.57	\$189.38	\$35.45	\$44.16	\$2,576.29	3.3325	\$773.07
2025	\$254.98	\$210.00	\$355.18	\$213.38	\$255.97	\$327.37	\$424.29	\$317.43	\$178.59	\$36.34	\$45.27	\$2,618.79	3.5565	\$736.35
Total	\$4,123.13	\$3,383.89	\$5,421.61	\$3,628.18	\$4,058.19	\$5,063.64	\$6,783.62	\$4,795.45	\$3,793.13	\$538.86	\$640.47	\$42,195.07		\$22,316.67

Appendix A - Evaluation of the CDM Plan

Highlighted boxes are to be completed manually, white boxes are linked to Appendix C and will be brought forward automatically.

	Total for 2008	Residential	⁵ Low Income	Commercial	Institutional	Industrial	Agricultural	LDC System	⁴ Smart Meters	Other #1	Other #2
<i>Net TRC value (\$):</i>	-\$ 18,670	\$ -	\$	\$ (17,448)	\$ -	\$ -	\$ -	\$ 1,882		\$ (3,103)	\$ -
<i>Benefit to cost ratio:</i>	0.61	0.00		0.29	0.00	0.00	0.00	1.09		0.00	0.00
<i>Number of participants or units delivered:</i>											
<i>Lifecycle (kWh) Savings:</i>	538,920	0		92,160	0	0	0	446,760		0	0
<i>Report Year Total kWh saved (kWh):</i>	26,946	0		4,608	0	0	0	22,338		0	0
<i>Total peak demand saved (kW):</i>	7	0		2.4	0	0	0	4.3		0	0
<i>Total kWh saved as a percentage of total kWh delivered (%):</i>				0.02%				0.09%			
<i>Peak kW saved as a percentage of LDC peak kW load (%):</i>				0.05%				0.09%			
¹ <i>Report Year Gross C&DM expenditures (\$):</i>	\$ 48,230	\$ -	\$	\$ 24,692	\$ -	\$ -	\$ -	\$ 20,435	\$ -	\$ 3,103	\$ -
² <i>Expenditures per kWh saved (\$/kWh):</i>	\$ 0.09	\$ -	\$	\$ 0.27	\$ -	\$ -	\$ -	\$ 0.05		\$ -	\$ -
³ <i>Expenditures per kW saved (\$/kW):</i>	\$ 7,252.63	\$ -	\$	\$ 10,288.23	\$ -	\$ -	\$ -	\$ 4,808.26		\$ -	\$ -
<i>Utility discount rate (%):</i>	 6.72%										

¹ Expenditures are reported on accrual basis.

² Expenditures include all utility program costs (direct and indirect) for all programs which primarily generate energy savings.

³ Expenditures include all utility program costs (direct and indirect) for all programs which primarily generate capacity savings.

⁴ Please report spending related to 3rd tranche of MARR funding only. TRC calculations are not required for Smart Meters. Only actual expenditures for the year need to be reported.

⁵ Includes totals from Low Income programs that fall under both commercial and residential.

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** Pool Lighting Upgrade

Description of the program (including intent, design, delivery, partnerships and evaluation):

The project involves replacing 20 Hg Vapour lights with 14 Metal Halide lights. This will reduce the pool lighting load from 8000 watts to 5600 watts or 2.4 Kw for the time the lights are on which is 9 am to 5 pm five days a week

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
Base case technology:	20 Hg [Mercury Vapour] 400 watt fixtures		
Efficient technology:	14 metal halide 400 watt fixtures.		
Number of participants or units delivered for reporting year:	1 participant - the community pool		
Measure life (years):	20		
Number of Participants or units delivered life to date	1 participant - the community pool		

B. TRC Results:	Reporting Year	TRC Results:
¹ TRC Benefits (\$):		\$7,243.82
² TRC Costs (\$):		
Utility program cost (excluding incentives):		
Incremental Measure Costs (Equipment Costs)		\$24,691.75
Total TRC costs:		\$24,691.75
Net TRC (in year CDN \$):		
Benefit to Cost Ratio (TRC Benefits/TRC Costs):		29.34%

C. Results: (one or more category may apply)	Cumulative Results:		
Conservation Programs:			
Demand savings (kW):	Summer		2.4
	Winter		2.4
	lifecycle	in year	
Energy saved (kWh):	92,160	4,608	
Other resources saved :			
Natural Gas (m3):			
Other (specify):			
Demand Management Programs:			
Controlled load (kW)			
Energy shifted On-peak to Mid-peak (kWh):			
Energy shifted On-peak to Off-peak (kWh):			
Energy shifted Mid-peak to Off-peak (kWh):			
Demand Response Programs:			
Dispatchable load (kW):			
Peak hours dispatched in year (hours):			
Power Factor Correction Programs:			
Amount of KVar installed (KVar):			
Distribution system power factor at beginning of year (%):			
Distribution system power factor at end of year (%):			
Line Loss Reduction Programs:			
Peak load savings (kW):			
	lifecycle	in year	
Energy savings (kWh):			
Distributed Generation and Load Displacement Programs:			
Amount of DG installed (kW):			
Energy generated (kWh):			
Peak energy generated (kWh):			
Fuel type:			
Other Programs (specify):			
Metric (specify):			

D. Actual Program Costs:	Reporting Year	Cumulative Life to Date
Utility direct costs (\$):		\$24,691.75
Incremental capital:		

<i>Incremental O&M:</i>		
<i>Incentive:</i>		
<i>Total:</i>		\$24,691.75

<i>Utility indirect costs (\$):</i>	<i>Incremental capital:</i>	
	<i>Incremental O&M:</i>	
	<i>Total:</i>	

E. Assumptions & Comments:

¹ Benefits should be estimated if costs have been incurred and the technology has been deployed. Benefits reflect the present value of the measure for the number of units deployed in the year, i.e. the number of units times the net present value per unit benefit specified in the TRC Guide.

² For technologies which have not been deployed but for which the LDC has incurred costs, report only the TRC costs on a present value basis. Incentives (e.g. rebates) from the LDC to a customer are not a component of the TRC costs. However, payments made to a third party service provider to run an incentives program are program costs, and are to be included as TRC costs under the "Utility Program Costs" line.

Appendix B - Discussion of the Program

(complete this Appendix for each program)

A. **Name of the Program:** System Optimization

Description of the program (including intent, design, delivery, partnerships and evaluation):

Notes on System Optimization:

As a pilot project and as noted in our original plan, we did some system optimization. The case in point was done as follows:

1. Check total load on 3 transformers in close proximity to each other
2. Verify that the load on an installed capacity of 87.5 kVA [two 25 kVA units and one 37.5 kVA transformer] could be handled with one 50 kVA transformer.
3. We noticed a .6% drop in line losses over a 3 year period
4. Assuming a loss of 2% per transformer, and a load factor of 60%, we can attribute .1% to the pilot project.
5. The project consisted of replacing the three old transformers with one 50 kVA transformer, reconductoring with a larger wire, and using ampacts and insulinks instead of split bolts.

Measure(s):

	Measure 1	Measure 2 (if applicable)	Measure 3 (if applicable)
<i>Base case technology:</i>	two 25 kVA units and one 37.5 kVA transformer		
<i>Efficient technology:</i>	one 50 kVA transformer.		
<i>Number of participants or units delivered for reporting year:</i>	The participant is Atikokan Hydro		
<i>Measure life (years):</i>	20		
<i>Number of Participants or units delivered life to date</i>	The participant is Atikokan Hydro		

B. TRC Results:	Reporting Year	TRC Results:
¹ TRC Benefits (\$):		\$22,316.67
² TRC Costs (\$):		
<i>Utility program cost (excluding incentives):</i>		
<i>Incremental Measure Costs (Equipment Costs):</i>		\$20,435.09
<i>Total TRC costs:</i>		\$20,435.09
Net TRC (in year CDN \$):		
<i>Benefit to Cost Ratio (TRC Benefits/TRC Costs):</i>		109.21%

C. **Results:** (one or more category may apply) **Cumulative Results:**

Conservation Programs:

<i>Demand savings (kW):</i>	Summer		
	Winter		
	<i>lifecycle</i>		<i>in year</i>
<i>Energy saved (kWh):</i>			
<i>Other resources saved :</i>			
<i>Natural Gas (m3):</i>			
<i>Other (specify):</i>			

Demand Management Programs:

<i>Controlled load (kW)</i>		
<i>Energy shifted On-peak to Mid-peak (kWh):</i>		
<i>Energy shifted On-peak to Off-peak (kWh):</i>		
<i>Energy shifted Mid-peak to Off-peak (kWh):</i>		

Demand Response Programs:

<i>Dispatchable load (kW):</i>		
<i>Peak hours dispatched in year (hours):</i>		

Power Factor Correction Programs:

<i>Amount of KVar installed (KVar):</i>		
<i>Distribution system power factor at beginning of year (%):</i>		
<i>Distribution system power factor at end of year (%):</i>		

Line Loss Reduction Programs:

<i>Peak load savings (kW):</i>			4.25
	<i>lifecycle</i>	<i>in year</i>	
<i>Energy savings (kWh):</i>	446,760	22,338	

Distributed Generation and Load Displacement Programs:

<i>Amount of DG installed (kW):</i>		
<i>Energy generated (kWh):</i>		
<i>Peak energy generated (kWh):</i>		
<i>Fuel type:</i>		

Other Programs (specify):

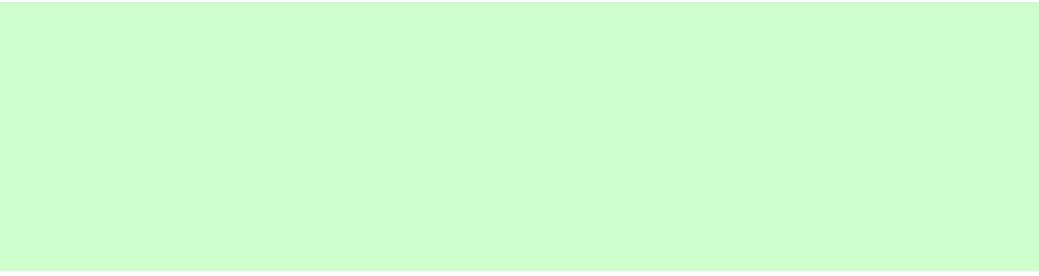
<i>Metric (specify):</i>		
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D. Actual Program Costs:	Reporting Year	Cumulative Life to Date
<i>Utility direct costs (\$):</i>		
<i>Incremental capital:</i>		
<i>Incremental O&M:</i>		
<i>Incentive:</i>		
<i>Total:</i>		
<i>Utility indirect costs (\$):</i>		
<i>Incremental capital:</i>		
<i>Incremental O&M:</i>		

Total:



E. Assumptions & Comments:



¹ Benefits should be estimated if costs have been incurred and the technology has been deployed. Benefits reflect the present value of the measure for the number of units deployed in the year, i.e. the number of units times the net present value per unit b

² For technologies which have not been deployed but for which the LDC has incurred costs, report only the TRC costs on a present value basis. Incentives (e.g. rebates) from the LDC to a customer are not a component of the TRC costs. However, payments made

Appendix C - Program and Portfolio Totals

Report Year:

1. Residential Programs

List each Appendix B in the cells below; Insert additional rows as required.

Note: To ensure the integrity of the formulas, please insert the additional rows in the middle of the list below.

	TRC Benefits (PV)	TRC Costs (PV)	\$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures (\$)
Name of Program A			\$ -	0.00				
Name of Program B			\$ -	0.00				
Name of Program C			\$ -	0.00				
Name of Program D			\$ -	0.00				
Name of Program E			\$ -	0.00				
Name of Program F			\$ -	0.00				
Name of Program G			\$ -	0.00				
Name of Program H			\$ -	0.00				
Name of Program I			\$ -	0.00				
Name of Program J			\$ -	0.00				
*Totals App. B - Residential	\$ -	\$ -	\$ -	0.00	0	0	0	\$ -
Residential Indirect Costs not attributable to any specific program	→							
Total Residential TRC Costs		\$ -						
**Totals TRC - Residential	\$ -	\$ -	\$ -	0.00				

2. Commercial Programs

List each Appendix B in the cells below; Insert additional rows as required.

Note: To ensure the integrity of the formulas, please insert the additional rows in the middle of the list below.

	TRC Benefits (PV)	TRC Costs (PV)	\$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures (\$)
Pool Lighting Upgrade	\$ 7,244	\$ 24,692	-\$ 17,448	0.29	4,608	92,160	2.4	\$ 24,692
Name of Program B			\$ -	0.00				
Name of Program C			\$ -	0.00				
Name of Program D			\$ -	0.00				
Name of Program E			\$ -	0.00				
Name of Program F			\$ -	0.00				
Name of Program G			\$ -	0.00				
Name of Program H			\$ -	0.00				
Name of Program I			\$ -	0.00				
Name of Program J			\$ -	0.00				
*Totals App. B - Commercial	\$ 7,244	\$ 24,692	-\$ 17,448	0.29	4,608	92,160	2	\$ 24,692

Commercial Indirect Costs not attributable to any specific program



Total TRC Costs		\$	24,692				
**Totals TRC - Commercial	\$	7,244	\$	24,692	-\$	17,448	0.29

3. Institutional Programs

List each Appendix B in the cells below; Insert additional rows as required.

Note: To ensure the integrity of the formulas, please insert the additional rows in the middle of the list below.

	TRC Benefits (PV)	TRC Costs (PV)	\$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures (\$)
Name of Program A			\$ -	0.00				
Name of Program B			\$ -	0.00				
Name of Program C			\$ -	0.00				
Name of Program D			\$ -	0.00				
Name of Program E			\$ -	0.00				
Name of Program C			\$ -	0.00				
Name of Program G			\$ -	0.00				
Name of Program H			\$ -	0.00				
Name of Program I			\$ -	0.00				
Name of Program J			\$ -	0.00				
*Totals App. B - Institutional	\$ -	\$ -	\$ -	0.00	0	0	0	\$ -

Institutional Indirect Costs not attributable to any specific program



Total TRC Costs		\$	-				
**Totals TRC - Institutional	\$	-	\$	-	\$	-	0.00

4. Industrial Programs

List each Appendix B in the cells below; Insert additional rows as required.

Note: To ensure the integrity of the formulas, please insert the additional rows in the middle of the list below.

	TRC Benefits (PV)	TRC Costs (PV)	\$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures (\$)
Name of Program A			\$ -	0.00				
Name of Program C			\$ -	0.00				
Name of Program C			\$ -	0.00				
Name of Program D			\$ -	0.00				
Name of Program E			\$ -	0.00				
Name of Program F			\$ -	0.00				
Name of Program G			\$ -	0.00				
Name of Program H			\$ -	0.00				

Name of Program I			\$	-	0.00				
Name of Program J			\$	-	0.00				
*Totals App. B - Industrial	\$	-	\$	-	0.00	0	0	0	\$ -
Industrial Indirect Costs not attributable to any specific program	→								
Total TRC Costs		\$		-					
**Totals TRC - Industrial	\$	-	\$	-	0.00				

5. Agricultural Programs

List each Appendix B in the cells below; Insert additional rows as required.

Note: To ensure the integrity of the formulas, please insert the additional rows in the middle of the list below.

	TRC Benefits (PV)	TRC Costs (PV)	\$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures (\$)
Name of Program A			\$ -	0.00				
Name of Program C			\$ -	0.00				
Name of Program C			\$ -	0.00				
Name of Program D			\$ -	0.00				
Name of Program E			\$ -	0.00				
Name of Program F			\$ -	0.00				
Name of Program G			\$ -	0.00				
Name of Program H			\$ -	0.00				
Name of Program I			\$ -	0.00				
Name of Program J			\$ -	0.00				
*Totals App. B - Agricultural	\$	-	\$	-	0	0	0	\$ -
Agricultural Indirect Costs not attributable to any specific program	→							
Total TRC Costs		\$		-				
**Totals TRC - Agricultural	\$	-	\$	-	0.00			

6. LDC System Programs

List each Appendix B in the cells below; Insert additional rows as required.

Note: To ensure the integrity of the formulas, please insert the additional rows in the middle of the list below.

	TRC Benefits (PV)	TRC Costs (PV)	\$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures (\$)
System Optimization	\$ 22,317	\$ 20,435	\$ 1,882	1.09	22,338	446,760	4.3	\$ 20,435
Name of Program B			\$ -	0.00				
Name of Program C			\$ -	0.00				
Name of Program D			\$ -	0.00				
Name of Program E			\$ -	0.00				

Name of Program F			\$	-	0.00				
Name of Program G			\$	-	0.00				
Name of Program H			\$	-	0.00				
Name of Program I			\$	-	0.00				
Name of Program C			\$	-	0.00				
*Totals App. B - LDC System	\$ 22,317	\$ 20,435	\$	1,882	1.09	22,338	446,760	4	\$ 20,435
LDC System Indirect Costs not attributable to any specific program	→								
Total TRC Costs	\$ 20,435								
**Totals TRC - LDC System	\$ 22,317	\$ 20,435	\$	1,882	1.09				

7. Smart Meters Program

Only spending information that was authorized under the 3rd tranche of MARR is required to be reported for Smart Meters.

Report Year Gross C&DM Expenditures (\$) →

8. Other #1 Programs

List each Appendix B in the cells below; Insert additional rows as required.

Note: To ensure the integrity of the formulas, please insert the additional rows in the middle of the list below.

	TRC Benefits (PV)	TRC Costs (PV)	\$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures (\$)
Staff time on appliance survey		\$ 512	-\$ 512	0.00				\$ 512
Casual help to do survey		\$ 635	-\$ 635	0.00				\$ 635
Purchase Enerspectrum Software		\$ 1,956	-\$ 1,956	0.00				\$ 1,956
Name of Program D			\$ -	0.00				
Name of Program E			\$ -	0.00				
Name of Program F			\$ -	0.00				
Name of Program G			\$ -	0.00				
Name of Program H			\$ -	0.00				
Name of Program I			\$ -	0.00				
Name of Program J			\$ -	0.00				
*Totals App. B - Other #1	\$ -	\$ 3,103	-\$ 3,103	0.00	0	0	0	\$ 3,103
Other #1 Indirect Costs not attributable to any specific program	→							
Total TRC Costs	\$ 3,103							
**Totals TRC - Other #1	\$ -	\$ 3,103	-\$ 3,103	0.00				

9. Other #2 Programs

List each Appendix B in the cells below; Insert additional rows as required.

Note: To ensure the integrity of the formulas, please insert the additional rows in the middle of the list below.

	TRC Benefits (PV)	TRC Costs (PV)	\$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures (\$)
Name of Program A			\$ -	0.00				
Name of Program B			\$ -	0.00				
Name of Program C			\$ -	0.00				
Name of Program D			\$ -	0.00				
Name of Program E			\$ -	0.00				
Name of Program C			\$ -	0.00				
Name of Program G			\$ -	0.00				
Name of Program H			\$ -	0.00				
Name of Program I			\$ -	0.00				
Name of Program J			\$ -	0.00				
*Totals App. B - Other #2	\$ -	\$ -	\$ -	0.00	0	0	0	\$ -
Other #2 Indirect Costs not attributable to any specific program								
Total TRC Costs		\$ -						
**Totals TRC - Other #2	\$ -	\$ -	\$ -	0.00				

LDC's CDM PORTFOLIO TOTALS

	TRC Benefits (PV)	TRC Costs (PV)	\$ Net TRC Benefits	Benefit/Cost Ratio	Report Year Total kWh Saved	Lifecycle (kWh) Savings	Total Peak Demand (kW) Saved	Report Year Gross C&DM Expenditures (\$)
*TOTALS FOR ALL APPENDIX B	\$ 29,560	\$ 48,230	-\$ 18,670	0.61	\$ 26,946	\$ 538,920	\$ 6.7	\$ 48,230
Any other Indirect Costs not attributable to any specific program								
TOTAL ALL LDC COSTS		\$ 48,230						
**LDC' PORTFOLIO TRC	\$ 29,560	\$ 48,230	-\$ 18,670	0.61				

* The savings and spending information from this row is to be carried forward to Appendix A.

** The TRC information from this row is to be carried forward to Appendix A.

Appendix D - Total Life Evaluation of the CDM Plan

Table is to be completed manually by totalling the information from each year of activity

	⁵ Cumulative Totals Life-to-date	Residential	⁶ Low Income	Commercial	Institutional	Industrial	Agricultural	LDC System	⁴ Smart Meters	Appliance Survey and EnerSpectrum Software	Other #2
<i>Net TRC value (\$):</i>	\$	\$	\$	-\$ 17,447.93	\$	\$	\$	\$ 1,881.58		- 3,103.16	\$
<i>Benefit to cost ratio:</i>				0.29				1.09		0.00	
<i>Number of participants or units delivered:</i>				1				1			
<i>Lifecycle (kWh) Savings:</i>				92,160				446,760		0	
<i>Total kWh saved (kWh):</i>				4,608				22,338		0	
<i>Total peak demand saved (kW):</i>				2.4				4.3		0	
<i>Total kWh saved as a percentage of total kWh delivered (%):</i>				0.02%				0.09%		0%	
<i>Peak kW saved as a percentage of LDC peak kW load (%):</i>				0.05%				0.09%		0%	
¹ <i>Gross C&DM expenditures (\$):</i>	\$	\$	\$	\$ 24,691.75	\$	\$	\$	\$ 20,435.09	\$	\$ 3,103.16	\$
² <i>Expenditures per kWh saved (\$/kWh):</i>	\$	\$	\$	\$ 0.27	\$	\$	\$	\$ 0.05		\$ -	\$
³ <i>Expenditures per kW saved (\$/kW):</i>	\$	\$	\$	\$ 10,288.23	\$	\$	\$	\$ 4,808.26		\$ -	\$
<i>Utility discount rate (%):</i>											

¹ Expenditures are reported on cumulative basis.

² Expenditures include all utility program costs (direct and indirect) for all programs which primarily generate energy savings.

³ Expenditures include all utility program costs (direct and indirect) for all programs which primarily generate capacity savings.

⁴ Please report spending related to 3rd tranche of MARR funding only. TRC calculations are not required for Smart Meters. Actual expenditures for the total third tranche period need to be reported.

⁵ Includes total for the reporting year, plus prior years, if any (for example, 2008 CDM Annual report for third tranche will include 2007, 2006, 2005 and 2004 numbers, if any).

⁶ Includes totals from Low Income programs that fall under both commercial and residential.