CHATHAM-KENT HYDRO
A Chatham-Kent Energy Company

January 11, 2010

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

Re: Chatham-Kent Hydro Inc. 2010 Cost of Service Application EB-2009-0261

Dear Ms. Walli:

Please find enclosed the Chatham-Kent Hydro Inc. responses to the Board Staff Interrogatories 63 to 68.

If you have further questions please contact me at the number provided.

Yours truly,

Cheryl Decaire
Co-ordinator of Regulatory and Rates
(519) 352-6300 ext 405
Email: cheryldecaire@ckenergy.com

CC: Dave Kenney, President of Chatham Kent Hydro
Chris Cowell, Chief Financial and Regulatory Officer

Chatham-Kent Hydro Inc.

EB-2009-0261

Responses to the Vulnerable Energy Consumer Coalition Interrogatories 26 to 31

Question #26

Reference: Exhibit 10/Tab 1/Schedule 1, page 3

Preamble:

In addition to the requirements with respect to the other aspects of this Application, the Filing Requirements contain provisions relating to applications for LRAM and SSM adjustments, and Chatham-Kent Hydro submits that it has relied on and complied with the LRAM/SSM provisions of the Report and, the OEB's TRC Guide and the Filing Requirements in preparing this request for LRAM/SSM adjustments for the years 2006 to 2009.

a) Does CKHI agree that the OEB Guidelines Section 7.5 indicate that savings and LRAM claims should be based on the "Best Available" input assumptions at the time that the LRAM claim was prepared?

b) Does CKHI agree that in the case estimation of 2005 -2008 KWh savings, this means using the best available 2007 and 2008 input assumptions, which were and are those of the OPA Measures and Input Assumptions List? If not explain why not.

c) Indicate whether or not the EnerSpectrum independent review of 2009 lost revenue associated with 2005 -2009 OPA Programs used the latest OPA input assumptions residential mass market measures and Affordable/Social housing (notably CFLs, Low Flow Showerheads and PTs) as demonstrated in the following OPA documents:
    i. OPA 2007 EKC Program Calculator
    ii. OPA 2008/2009 Measures and Assumptions list (now adopted by the OEB)

d) Provide a Copy of the 2006 and 2007 OPA Every Kilowatt Counts Program Calculators.

e) Confirm whether CKHI reported to the OPA on the 2006 and 2007 EKC campaigns using Mass Market measures assumptions (particularly CFLs) specified in the OPA 2006 and 2007 EKC Program Calculators.

f) Indicate whether or not the LRAM claim for 2005, 2006, 2007 and 2008 related to third tranche programs is based on using the OEB TRC Guide values for CFLs, showerheads and PTs, or the OPA 2007 EKC Calculator and/or OPA 2008/2009 Measures values.

g) With respect to the SSM Claim, does CKHI agree that the Board's Guidelines indicate that Assumptions used from the beginning of any year will be those assumptions in existence in the immediately prior year. For example, if any input assumptions change in 2007, those changes should apply for SSM purposes from the beginning of 2008 onwards until changed again.

h) Provide the rationale for using the recently published OPA Assumptions and measures list for all programs/projects, and how these align with section 7.3 of the Board's Guideline as quoted above.

Answer:

a) CK Hydro's understanding based on OEB Guidelines Section 7.3 is that LRAM input assumptions should be the best available at the time of third party assessment.

b) No, CK Hydro's understanding is that the OEB Guidelines 7.3 and 7.5 apply to programs funded in 2007 and beyond.

c) The applicable OPA input assumptions for each year were used. Please see CK Hydro's response to VECC question 28 b).

d) The 2006 and 2007 OPA Every Kilowatt Counts Program Calculator reports follows:

The 2006 Fall Program Results

Instructions for Calculating Total Resource Cost Test Results
2006 Fall Every KiloWatt Counts Campaign

Part 1
a. Enter Discount Rate (refer to page 5 of the Ontario Energy Board Total Resource Cost Test Guide, Revised October 2, 2006.)

Discount Rate **4.00%**

b. Enter number of coupons redeemed by technology.

Products	Number of Coupons
Baseboard Programmable Thermostats	5
Dimmers	40
Energy Star CFL's	498
Motion Sensor Light Switch	24
Programmable Thermostat	102
Seasonal LED Lights	252

c. Enter program dollars (refer to page 10 of the Ontario Energy Board Total Resource Cost Test Guide, Revised October 2, 2006.)

Program Costs: **$ 5,089,954**

Part 2
Program Total Resource Cost Test Results

Calculation of Program TRC Benefits
Sum of TRC Benefits for all technologies

Calculation of Program TRC Costs
Sum of TRC Costs for all technologies plus Program Costs

Calculation of Program TRC Net Benefits
= TRC Benefits - TRC Costs

Fall EKC		
Technology	**Number of Participants**	**Free Ridership**
Compact Fluorescent Bulbs	1424	10.00%
LED Christmas Lights (indoor or outdoor) Replacing 5w Christmas Lights C-7 (25 Lights)	126	5.00%
LED Christmas Lights (indoor or outdoor) Replacing Incandescent Mini Lights	126	5.00%
Programmable Thermostat - Space Heating, Existing Single Family Detached	18	10.00%
Programmable Thermostat - Space Cooling, Existing Single Family Detached	46	10.00%
pStat Baseboard	1	10.00%
Dimmer	40	10.00%
Motion Sensor	24	10.00%

Fall EKC					
Technology	**Summer Peak kW Savings**	**Winter Peak kW Savings**	**Annual kWh Savings in Year**	**Measure Life**	**Lifecycle kWh Savings**
Compact Fluorescent Bulbs	0	29.48	133,825	4	535,301.40
LED Christmas Lights (indoor or outdoor) Replacing 5w Christmas Lights C-7 (25 Lights)	0.00	2.27	5046.30	30	151,389.00
LED Christmas Lights (indoor or outdoor) Replacing Incandescent Mini Lights	0.00	0.84	1927.80	30	57,834.00
Programmable Thermostat - Space Heating, Existing Single Family Detached	0.00	2.75	23286.90	18	419,164.14
Programmable Thermostat - Space Cooling, Existing Single Family Detached	6.73	0.00	6572.42	18	118,303.58
pStat Baseboard	0.00	1.13	1649.59	18	29,692.58
Dimmer	0.00	3.24	5004.00	10	50,040.00
Motion Sensor		2.92	4514.40	20	90,288.00
Total	**6.73**	**42.62**	**181,827**		**1,452,013**

Fall EKC					
Technology	**TRC Benefits**	**Incremental Equipment Costs**	**Program Costs**	**TRC Net Benefits**	**TRC B/C Ratio**
Compact Fluorescent Bulbs	$31,782.93	$2,307.33		$29,476	13.77
LED Christmas Lights (indoor or outdoor) Replacing 5w Christmas Lights C-7 (25 Lights)	$9,142	$239		$8,903	38.19
LED Christmas Lights (indoor or outdoor) Replacing Incandescent Mini Lights	$3,484	$239		$3,245	14.55
Programmable Thermostat - Space Heating, Existing Single Family Detached	$24,261	$953		$23,308	25.46
Programmable Thermostat - Space Cooling, Existing Single Family Detached	$12,132	$2,479		$9,653	4.89
pStat Baseboard	$1,869	$68		$1,801	27.69
Dimmer	$3,097	$720		$2,377	4.30
Motion Sensor	$3,448	$151		$3,297	22.80
Utility Program Costs			$ 5,089,954.38		
Total	**$89,215**	**$7,156**	**$5,089,954**	**($5,007,896)**	**0.02**

The 2006 Spring Programs Results

	Table1 - Direct Mail Totals	**All products**	**CFLs**	**Timers**	**Pstats**	**Fans**
	Province wide program total	549385	483132	37518	16320	12415
	Province wide direct mail	79608	59923	9690	5844	4151
	Province wide in-store	469777	423209	27828	8264	10476
LDC # 57	**Chatham-Kent Hydro Inc. direct mail**	594	456	47	40	51

Table 2 - In-Store Coupon Totals	**All products**	**CFLs**	**Timers**	**Pstats**	**Fans**
Blenheim	75	72	3		
DRESDEN	16	14	2		
Thamesville	6	6			
Tilbury	1252	1215	21		16
Wallaceburg	175	167	2		6
Wheatley	25	22	2		1

The 2007 Fall Program Results

Overall Coupon Redemption

Type of Channel	Type of Products						
	Energy Star Residential Light Fixture	CFLs	Lighting/Appliance Control Device	Power Bar With Integrated Timer	Programmable Baseboard Heater Thermostat	Seasonal LED Lights	T8 Fluorescent Fixture
Instore Coupon	7,308	792,297	94,418	6,981	16,127	598,255	16,520
Unadressed Mail Booklet	988	18,541	2,351	1,215	2,222	5,287	1,350
Website Coupon	94	9,530	644	129	284	16,854	218
Event Coupon		1,486	311	117			

Redeemed Coupon Breakdown

Cities	Energy Star Residential Light Fixture	CFLs	Lighting/Appliance Control Device	Power Bar With Integrated Timer	Programmable Baseboard Heater Thermostat	Seasonal LED Lights	T8 Fluorescent Fixture
Blenheim	6	1080	170		3	106	2
Chatham	30	5680	780	95	19	3059	224
Dresden	10	135	11	1	7	97	10
Ridgetown		575	17	1	4	485	10
Thamesville		29	2		1	27	
Tilbury	5	1197	114		23	867	
Wallaceburg	12	1337	249	2	6	1216	6
Wheatley		12	1				
Total	**63**	**10,045**	**1,344**	**99**	**63**	**5,857**	**252**

The 2007 Spring Program Results

Overall Coupon Redemption

Type of Channel	Type of Products					
	Ceiling Fans	CFLs	Dimmer Switch	Furnace Filters	Outdoor Motion Sensors	Outdoor Solar Lights
Instore Coupon	13,348	431,200	14,730	12,853	17,589	551,043
Unadressed Mail Booklet	519	13,041	488	564	323	2,834
Website Coupon	289	5	195	189	124	21,410
OPA Booklet	17	225	13	27	10	129
All LDC Addressed Mail Booklet	4,993	49,319	3,964	12,109	5,428	22,714
Chatham-Kent Mail Booklet	33	640	30	103	42	228

Breakdown by Cities

Cities	Ceiling Fans	CFLs	Dimmer Switch	Furnace Filters	Outdoor Motion Sensors	Outdoor Solar Lights
Blenheim	10	321	7	12	32	86
Bothwell		1				
Chatham	113	3563	101	184	117	7071
Dresden	14	222	5	15	15	234
Ridgetown	2	390	6	10	3	1748
Thamesville		20				5
Tilbury	3	473	6	24	12	1587
Wallaceburg	6	709	13	17	17	1671
Wheatley	1	10				12
Total	**149**	**5709**	**138**	**262**	**196**	**12414**

2007 Input and Assumptions

Chatham-kent

Product	Annual kWh Saving / Unit	Peak Demand Reductions KW / Unit	Total Coupons	Units / Coupon	Estimated Useful Life	Free Ridership	Total kWh	Total kW
SPRING CAMPAIGN								
Energy Star CFL 15W	44.3	0.0017	5709	3.86	6	30%	252,909	
Energy Star Ceiling Fan	102.4	0.004	149	1	10	30%	15,258	
Outdoor Motion Sensor	161.1	0	196	1	10	30%	31,576	
Dimmer Switch	23.7	0.001	138	1	10	30%	3,271	
Outdoor Solar Lights	9.8	0	12414	1	5	30%	121,657	
Furnace / AC Filter	105.42	0.05	262	1	1	30%	27,620	
Electric Furnace	850.1	0		5%				
Natural Gas Furnace	60.6	0.089		57%				
Central AC	70	0		45%				
FALL CAMPAIGN								
Energy Star CFL 15W	44.3	0.0017	10045	3.86	6	30%	444,994	
Seasonal LEDs (SLEDs)	13.7	0	5857	1	5	30%	80,241	
T-8 Fixtures	37.2	0.0015	252	1	16	30%	9,374	
Energy Star Lighting Fixtures	124.9	0.004	63	1	20	30%	7,869	
Baseboard Programmable Thermostats	29.6	0	63	1	15	30%	1,865	
Lighting and Appliance Control Devices	86.6	0.002	1344	1	13	30%	116,390	
Power Bar with Integrated Timer	72.4	0.0077	99	1	10	30%	7,168	

e) No as CK Hydro did not deliver any Mass Market programs.

f) CK Hydro did not run any third tranche programs that included CFLs, Showerheads and PTs. The programs run with third traunche funding were:

Customer awareness, including school programs
Smart meter pilot
Street light retro fit
Line loss reduction
Demand loss

g) CK Hydro agrees with the Board Guidelines.

h) CK Hydro's understanding based on the example provided in OEB Guidelines Section 7.3 is that changes in input assumptions apply to the year of the change and subsequent years until there is a new update.

Question #27

Reference: Exhibit 10/Tab 1/Schedule 1, Appendix A, pages 5-6

Preamble:

The sum of all program LRAM calculations, including OPA sponsored programs is $569,637. Attachment B summarizes the CDM load impacts by program and rate class and the resultant revenue impacts.

The sum of all program NPVs, is $4,091,149, resulting in the SSM claim of $204,557. Attachment C summarizes the calculation of the SSM amounts by program and in total.

a) Provide a schedule for the *Residential Sector and GS<50 kw* CDM programs that breaks down by measure the components of the **as filed** LRAM claim and the total kwh and kw for each year 2005-2009 (including showing separately carry forward of prior years' savings):
   i. Third tranche Programs
   ii. OPA Funded programs
   iii. Other e.g. Rate funded programs (Smart meters etc)

b) Provide a Schedule that provides the details of the calculations of the SSM claim for the Residential and GS<50 kw classes.

c) Provide a reconciliation of the Residential and GS<50 kw Sectors Kwh savings and LRAM and SSM amounts in the Schedules in the responses to parts a and b with those shown in Exhibit 10 Tab 1 Schedule 1 Appendix A Pages 5-6 Columns 1 and 2.

d) Confirm that CKHI is not now claiming and in future will not claim, carrying costs on the 2006-2009 LRAM/SSM amounts.

e) Provide a schedule that shows the derivation of the Residential and GS<50kw Rate riders based on the kwh savings breakdown and carrying costs provided in response to parts a)-d) of this IR. Reconcile this with the Table at Exhibit 10 Tab 1 Schedule 1 Appendix A Page 6 and Exhibit 10 Tab 1 Schedule 3 Tables10-2 and 10-3

Answer:

a, b, c)

i. Third tranche Programs: Smart Meter pilot project of 1,000 units was for the residential class, Street Light conversion program.
ii. OPA Funded programs are provided separately.
iii. Other e.g. Rate funded programs (Smart meters etc): The only rate funded program was the full deployment of smart meters.

Further details of LRAM and SSM follows;

CDM Load Impacts by Class and Program											
		NET		NET		NET		NET		NET	
Class	Year Implemented	2006		2007		2008		2009		Total	
Program		kWh	kW	kWh	kW	kWh	kW	kWh	kW	kWh	kW
Residential											
Third Tranche											
Smart Meters (1,000 meters)	2006			355,000		355,000		355,000		**1,065,000**	-
Street Lighting											
Third Tranche											
Street Lights	2006			1,866,950	443	1,866,950	443	1,866,950	443	**5,600,850**	**1,330**
Subtotal Third Traunche		**0**	**0**	**2,221,950**	**443**	**2,221,950**	**443**	**2,221,950**	**443**	**6,665,850**	**1,330**
Residential											
Rate Funded											
Smart meters (all smart meters beyound 1,000 in pilot)	2006 & 2007			**4,180,875**		**9,771,540**		**9,771,540**		**23,723,955**	-
Residential											
OPA Conservation Programs											
Every Kilowatt Counts (spring)	2006	813,348.19	5.30	813,348.19	5.30	813,348.19	5.30	813,348.19	5.30	**3,253,393**	**21**
Cool Savings Rebate Program	2006 & 2007 & 2008	61,992.72	63.50	235,408.05	177.34	338,027	260	338,027	260	**973,455**	**761**
Secondary Fridge Retirement Pilot	2006	33,297.71	7.55	33,297.71	7.55	33,298	8	33,298	8	**133,191**	**30**
Every Kilowatt Counts (fall)	2006	1,319,497.16	19.85	1,319,497.16	19.85	1,319,497	20	1,319,497	20	**5,277,989**	**79**
Great Refrigerator Roundup	2007 & 2008			152,797.07	17.24	330,186	34	330,186	34	**813,170**	**85**
Aboriginal – Pilot	2007 & 2008			0.00	0.00	0	0	0	0	-	-
Every Kilowatt Counts	2007			758,448.66	29.12	749,251	26	749,251	26	**2,256,950**	**82**
peaksaver®	2007 & 2008			0.00	61.09	0	131	0	131	-	**323**
Summer Savings	2007			454,501.19	252.50	454,501	253	0	0	**909,002**	**505**
Affordable Housing – Pilot	2007			93,753.67	3.09	93,754	3	93,754	3	**281,261**	**9**
Social Housing – Pilot	2007			68,353.88	8.04	68,354	8	68,354	8	**205,062**	**24**
Energy Efficiency Assistance for Houses – Pilot	2007			0.00	0.00	0	0	0	0	-	-
Summer Sweepstakes	2008					0	1	0	0	-	**1**
Every Kilowatt Counts Power Savings Event	2008					256,618	17	254,509	17	**511,127**	**34**
Commercial											
OPA Conservation Programs											
Toronto Comprehensive	2007 & 2008			0.00	0.00	0	0	0	0	-	-
Electricity Retrofit Incentive Program	2007 & 2008			0.00	0.00	142,653	63	142,653	63	**285,305**	**125**
High Performance New Construction	2008					2,090	1	2,090	1	**4,180**	**2**
Power Savings Blitz	2008					5,186	1	5,186	1	**10,372**	**1**
Chiller Plant Re-Commissioning	2008					0	0	0	0	-	-
Demand Response 1	2006 & 2007 & 2008	0.00	1,430.45	0	2,311.62	0	2,312	0	0	-	**6,054**
Other Demand Response	2007 & 2008			0.00	192.27	0	213	0	0	-	**405**
Demand Response 3	2008					0	581	0	0	-	**581**
LDC Custom	2008					0	0	0	0	-	-
Other Customer Based Generation	2008					0	0	0	0	-	-
Renewable Energy Standard Offer Program (RESOP)	2007 & 2008			0.00	0.00	0	0	0	0	-	-
Total OPA Prgograms		**2,228,135.77**	**1,526.65**	**3,929,405.56**	**3,085.02**	**4,606,762.97**	**3,936.29**	**4,150,152.31**	**576.11**	**14,914,457**	**10,454**
Grand Total All Programs		**2,228,135.77**	**1,526.65**	**10,332,230.61**	**3,528.20**	**16,600,253.02**	**4,379.47**	**16,143,642.37**	**1,019.29**	**45,304,262**	**11,783**

Foregone Revenue by Class and Program														
Class		2006			2007			2008			2009			
Program	**Year Implemented**	Load Unit (kWh/kW)	Rate per Unit	Revenue	Load Unit (kWh/kW)	Rate per Unit	Revenue	Load Unit (kWh/kW)	Rate per Unit	Revenue	Load Unit (kWh/kW)	Rate per Unit	Revenue	**Total Revenue**
Residential														
Third Tranche														
Smart Meters (1,000 meters)	2006				355,000.00	0.0141	$4,993.67	355,000.00	0.0140	$4,981.83	355,000.00	0.0139	$4,946.33	**$14,921.83**
Street Lighting														
Third Tranche														
Street Lights (kW)	2006				443.18	3.1232	$1,380.01	443.18	3.1045	$1,378.61	443.18	3.1115	$1,377.91	**$4,136.53**
Subtotal Third Traunche		**0.00**		**0.00**	**355,443.18**		**$6,373.68**	**355,443.18**		**6,360.44**	**355,443.18**		**6,324.25**	**$19,058.37**
Residential														
Rate Funded														
Smart meters (all smart meters beyound 1,000 in pilot)		**0.00**		**$0.00**	**4,180,875.00**	**0.0141**	**$58,810.98**	**9,771,540.00**	**0.0140**	**$137,127.28**	**9,771,540.00**	**0.0139**	**$136,150.12**	**$332,088.38**
Residential														
OPA Conservation Programs														
Every Kilowatt Counts (spring)	2006	813,348.19	0.0140	$11,441.10	813,348.19	0.0141	$11,441.10	813,348.19	0.0140	$11,413.99	813,348.19	0.0139	$11,332.65	**$45,628.83**
Cool Savings Rebate Program	2006 & 2007 & 2008	61,992.72	0.0140	$872.03	235,408.05	0.0141	$3,311.41	338,027	0.0140	$4,743.65	338,027	0.0139	$4,709.84	**$13,636.93**
Secondary Fridge Retirement Pilot	2006	33,297.71	0.0140	$468.39	33,297.71	0.0141	$468.39	33,298	0.0140	$467.28	33,298	0.0139	$463.95	**$1,868.00**
Every Kilowatt Counts (fall)	2006	1,319,497.16	0.0140	$18,560.93	1,319,497.16	0.0141	$18,560.93	1,319,497	0.0140	$18,516.94	1,319,497	0.0139	$18,384.99	**$74,023.79**
Great Refrigerator Roundup	2007 & 2008				152,797.07	0.0141	$2,149.35	330,186	0.0140	$4,633.61	330,186	0.0139	$4,600.60	**$11,383.56**
Aboriginal – Pilot	2007 & 2008				0.00	0.0141	$0.00	0	0.0140	$0.00	0	0.0139	$0.00	**$0.00**
Every Kilowatt Counts	2007				758,448.66	0.0141	$10,668.84	749,251	0.0140	$10,514.49	749,251	0.0139	$10,439.56	**$31,622.89**
peaksaver®	2007 & 2008				0.00	0.0141	$0.00	0	0.0140	$0.00	0	0.0139	$0.00	**$0.00**
Summer Savings	2007				454,501.19	0.0141	$6,393.32	454,501	0.0140	$6,378.17	0	0.0139	$0.00	**$12,771.48**
Affordable Housing – Pilot	2007				93,753.67	0.0141	$1,318.80	93,754	0.0140	$1,315.68	93,754	0.0139	$1,306.30	**$3,940.78**
Social Housing – Pilot	2007				68,353.88	0.0141	$961.51	68,354	0.0140	$959.23	68,354	0.0139	$952.40	**$2,873.14**
Energy Efficiency Assistance for Houses – Pilot	2007				0.00	0.0141	$0.00	0	0.0140	$0.00	0	0.0139	$0.00	**$0.00**
Summer Sweepstakes	2008							0	0.0140	$0.00	0	0.0139	$0.00	**$0.00**
Every Kilowatt Counts Power Savings Event	2008							256,618	0.0140	$3,601.21	254,509	0.0139	$3,546.16	**$7,147.37**
		2,228,135.77		**$31,342.44**	**3,929,405.56**		**$55,273.64**	**4,456,834.30**		**$62,544.24**	**4,000,223.65**		**$55,736.45**	**$204,896.77**
Commercial														
OPA Conservation Programs														
Toronto Comprehensive	2007 & 2008				0.00	0.0093	$0.00	0	0.0092	$0.00	0	0.0092	$0.00	**$0.00**
Electricity Retrofit Incentive Program	2007 & 2008				0.00	0.0093	$0.00	142,653	0.0092	$1,317.16	142,653	0.0092	$1,312.40	**$2,629.56**
High Performance New Construction	2008							2,090	0.0092	$19.30	2,090	0.0092	$19.23	**$38.53**
Power Savings Blitz	2008							5,186	0.0092	$47.88	5,186	0.0092	$47.71	**$95.59**
Chiller Plant Re-Commissioning	2008													**$0.00**
Demand Response 1 (kW)	2006 & 2007 & 2008	1,430.45	1.5636	$2,010.83	2,312	1.5777	$3,636.17	2,312	1.5682	$3,632.74	0	1.5717	$0.00	**$9,279.74**
Other Demand Response (kW)	2007 & 2008	0.00	1.5636	$0.00	192	1.5777	$302.44	213	1.5682	$334.29	0	2.5717	$0.00	**$636.73**
Demand Response 3 (kW)	2008	0.00	1.5636	$0.00	0	1.5777	$0.00	581	1.5682	$913.71	0	3.5717	$0.00	**$913.71**
LDC Custom	2008													**$0.00**
Other Customer Based Generation	2008													**$0.00**
Renewable Energy Standard Offer Program (RESOP)	2007 & 2008													**$0.00**
Total OPA Prgograms		**1,430.45**		**$2,010.83**	**2,503.89**		**$3,938.62**	**153,034.71**		**$6,265.07**	**149,928.67**		**$1,379.34**	**$13,593.86**
Grand Total All Programs		**2,229,566.22**		**$33,353.27**	**8,468,227.62**		**$124,396.91**	**14,736,852.19**		**$212,297.04**	**14,277,135.49**		**$199,590.16**	**$569,637.38**

SSM Amounts by Class and Program						
Class / Program	Admin Costs $	Total Costs $	Total Benefits $	Net Benefits $ NPV	Benefits/ Cost Ratio	SSM Amount $
2006						
Residential						
Third Tranche						
Smart Meters (1,000 meters)	$15,384.95	$256,355.63	$412,248.68	$155,893.05	$1.61	$7,794.65
Street Lighting						
Third Tranche						
Street Lights	$21,203.58	$201,203.58	$532,605.59	$331,402.02	$2.65	$16,570.10
Residential						
Rate Funded						
Smart meters (all smart meters beyound 1,000 in pilot)	$342,395.05	$5,705,245.69	$9,174,676.70	$3,469,431.01	$1.61	$173,471.55
TOTALS	$378,983.58	$6,162,804.90	$10,119,530.97	$3,956,726.08	$1.64	$197,836.30

Rate Class				Appendix A, Page 6, Column 1 and 2			
	LRAM $	SSM $	Total	LRAM $	SSM $	Total	Difference $
Residential							
Third Tranche	$14,921.83	$7,794.65	$22,716.49	$347,010.21	$181,266.20	$528,276.41	-$505,559.92
Street Light							
Third Traunche	$4,136.53	$16,570.10	$20,706.64	$4,136.53	$23,291.25	$27,427.78	-$6,721.14
Residential							
Rate Funded	$332,088.38	$173,471.55	$505,559.93	$0.00	$0.00	$0.00	$505,559.93
Residential							
OPA Conservation Programs	$204,896.77		$204,896.77	$204,896.77	$0.00	$204,896.77	$0.00
Commercial							
OPA Conservation Programs	$13,593.86		$13,593.86	$13,593.86	$0.00	$13,593.86	$0.00
TOTALS	$569,637.38	$197,836.30	$767,473.68	$569,637.37	$204,557.45	$774,194.82	-$6,721.14
Total Summary							
Residential	$551,906.98	$181,266.20	$733,173.19	$551,906.98	$181,266.20	$733,173.18	$0.01
Commercial	$ 13,593.86	$0.00	$ 13,593.86	$ 13,593.86	$0.00	$ 13,593.86	$0.00
Street Lights	$4,136.53	$16,570.10	$20,706.64	$4,136.53	$23,291.25	$27,427.78	-$6,721.14

The SSM for street light has been updated. See CK Hydro's response to VECC Question #28. For detailed SSM calculations, please see Appendix A, attached. For a breakdown of current year versus carry forward savings, please see Appendix B attached.

d) CK Hydro is not claiming, now or in the future, any carrying costs.

e) The only change to the rate raiders are caused by the correction in the SSM for the street light customers.

Rate Rider											
	Amounts		Billing Units (2010)		Rate Riders			Two Year Rate Rider	Three Year Rate Rider	Number of Years to Use	Rate Rider to Use
	LRAM	SSM			LRAM	SSM	Total	Total	Total	(2 or 3)	Total
	$	$		Metrics	$/unit (kWh or kW)	$/unit (kWh or kW)	$/unit (kWh or kW)	$/unit (kWh or kW)	$/unit (kWh or kW)	3	$/unit (kWh or kW)
Residential											
Third Tranche	$14,921.83	$7,794.65	199,501,364	kWh	0.0001	0.0000	0.0001	0.00006	0.00004		
Street Light											
Third Traunche	$4,136.53	$16,570.10	16,969	kW	0.24	0.98	1.22	0.61	0.41		
Residential											
Rate Funded	$332,088.38	$173,471.55	199,501,364	kWh	0.0017	0.0009	0.0025	0.00127	0.00084		
Residential											
OPA Conservation Programs	$204,896.77	$0.00	199,501,364	kWh	0.0010	-	0.0010	0.00051	0.00034		
Commercial											
OPA Conservation Programs	$13,593.86	$0.00	86,923,094	kWh	0.0002	-	0.0002	0.00008	0.00005		
TOTALS											
Total Summary											
Residential	$551,906.98	$181,266.20	199,501,364	kWh	0.0028	0.0009	0.0037	0.00184	0.00123		
Commercial	$13,593.86	$0.00	86,923,094	kWh	0.0002	-	0.0002	0.00008	0.00005		
Street Lights	$4,136.53	$16,570.10	16,969	kW	0.24	0.98	1.22	0.61	0.41		

Question #28

Reference: Exhibit 10/Tab 1/Schedule 1, page 3
EnerSpectrum Report, Attachments A, B, and C

Preamble

In addition to the requirements with respect to the other aspects of this Application, the Filing Requirements contain provisions relating to applications for LRAM and SSM adjustments, and Chatham-Kent Hydro submits that it has relied on and complied with the LRAM/SSM provisions of the Report and, the OEB's TRC Guide and the Filing Requirements in preparing this request for LRAM/SSM adjustments for the years 2006 to 2009.

a) Provide a Table in the format below that shows for each of the Residential Programs for each year, which source(s) of input assumptions underpin the claimed kwh and kw savings. *(Note entries below are illustrative only)*. Indicate for OPA- Funded Programs whether the 2007 Every Kilowatt Counts (EKC) Calculator or the OPA Measures for 2008 was used.

LRAM Claim	**Third tranche** **Incl. 2006 Carryover**	**Rate funded**	**OPA Funded**	**Verification(s)**
2006	OEB Guide	OEB Guide	OPA EKC Calculator	EnerSpectrum
2006	OEB Guide	OEB Guide	OPA EKC Calculator	EnerSpectrum
2007	OEB Guide	OEB Guide	OPA EKC Calculator	EnerSpectrum
2008	OPA Measures	OPA Measures	OPA Measures	EnerSpectrum
SSM Claim				
2006	OEB Guide	OEB Guide	OPA EKC Calculator	EnerSpectrum
2006	OEB Guide	OEB Guide	OPA EKC Calculator	EnerSpectrum
2007	OEB Guide	OEB Guide	OPA EKC Calculator	EnerSpectrum
2008	OPA Measures		OPA Measures	EnerSpectrum

b) Provide a complete list by measure **by year** of the input assumptions used to prepare the residential and GS<50kw kwh and kw load impacts in the EnerSpectrum Report Exhibit 10Tab 1 Schedule 1 Attachments A, B and C and associated LRAM and SSM claims. In particular provide the detailed input assumptions for all mass market measures including CFLs and PTs.

i. Kwh and Kw savings
ii. Free ridership
iii. Cost of measure
iv. Measure life
v. Source(s)/authority(ies) for assumption(s)

c) For Smart Meters provide the following information:

i. Kwh and Kw savings
ii. Cost of measure
iii. Measure life
iv. Source(s)/authority(ies) for assumption(s)

Answer:

a) Third Tranche:

2006 – Smart Meters – Direct input assumptions were used. Assumptions based on data provided by CK Hydro.

2006 – Street Lights - Direct input assumptions were used. Assumptions based on data provided by CK Hydro.

OPA Funded Residential Programs:
Please see CK Hydro's response to Board staff Questions #64. Verification provided by EnerSpectrum/OPA.

b) Third Tranche did not include any programs that used CFLs and PTs. For the OPA Programs, a schedule of input assumptions is provided in Appendix C attached.

c) For Smart Meters information:

i. Kwh and Kw savings can be found in the EnerSpectrum Report, Exhibit 10, Tab 1, Schedule 1, Attachment A
ii. Cost of measure – please see EnerSpectrum TRC included in Appendix A
iii. Assumption of 25 Years Measures life
iv. Direct Input data used. Data provided by Chatham Kent.

Question #29

Reference: Exhibit 10/Tab 1/Schedule 1, Appendix A-EnerSpectrum Report and Attachments A, B, and C

Preamble

LRAM amounts were identified by rate class consistent with the approved guidelines. No forecast or other adjustment for the effects of CDM programs was made to the load quantities used in the preparation of Chatham-Kent Hydro's rate cases in prior years. It is Chatham-Kent Hydro's submission that the entire actual load reduction achieved by the two eligible CDM programs is subject to LRAM treatment. In addition, OPA sponsored programs, although ineligible for additional SSM incentives, represent lost revenue through their successful implementation and are included in LRAM calculations.

a) Confirm/correct/complete the following Input Assumptions and Kwh savings Comparison Table (based on Exhibit 10 Tab1 Schedule 1 EnerSpectrum Report Attachments A, B and C) in the format below for Residential Mass Market measures and Social Housing. Include any missing programs related to CFLs, PTs and Seasonal Lights:
[Note values provided are illustrative only – actual to be used for as filed and OPA Assumptions List]

Program	**Efficient Measure**	**Participants As filed**	**As Filed unit kw savings assumption**	**Free Ridership**	**Net Kwh Per Filed LRAM Claim**	**OPA 2007 EKC Calc or 2008 Measures List**	**Free Ridership**	**Adjusted Net kwh OPA 2008 Measures List**
2006								
Residential								
Third Tranche	CFls 13/15w		106.7	10%		43	30%	
OPA EKC Spring	E Star CFl 15w		104	10%		43	30%	
	PTs		216	10%		159	10%	
OPA EKC Fall	E Star CFl 15w		104	10%		43	30%	
	PTs		216	10%		55	54%	
OPA EKC Fall	SLED Xmas		45	5%		43	30%	

	Lights							
OTHER	Smart Meters							
GS<50kw								
Third Tranche **Social Housing**	CFls 13/15w		106.7	10%		43	30%	
OPA Affordable/Social Housing	CFls 13/15w		106.7	10%		43	30%	
Residential TOTAL 2006 kwh								
GS<50kw TOTALkwh								
2007								
Third Tranche	13/15 watt CFL		109.0	10%		43	30%	
EKC 2007	E Star CFl 15w		43	30%		43	30%	
	E Star CFL 20w+		62	22%		43	30%	
Cool Savings	PTs		55	54%		55	64%	
OTHER	Smart Meters							
Residential TOTAL 2007 kwh								
GS<50kw								
Third Tranche	CFls 13/15w		106.7	10%		43	30%	

Social Housing								
OPA Affordable/Social Housing	CFls 13/15w		106.7	10%		43	30%	
GS<50kw TOTALkwh								
2008								
Residential								
Third Tranche	CFls 13/15w		106.7	10%		43	30%	
OPA Cool Savings Rebate	PTs		54	54%		54	64%	
OTHER	CFLs							
TOTAL 2008 kwh								
2009								
Residential								
Third Tranche	CFls 13/15w		106.7	10%		43	30%	
OPA Cool Savings Rebate	PTs		54	54%		54	64%	
OTHER	Smart Meters							
TOTAL 2008 kwh								
TOTAL CUMULATIVE KWH SAVINGS								

b) Provide a revised version of the schedules provided in response to VECC IR #27 parts a and b) adjusted to reflect the OPA 2008/2009 measures and input assumptions list for CFLs and PTs and Smart meters provided in part a) of this IR.

Answer:

a) CK Hydro's belief and proposal are based on input assumptions that are applicable to each year. It is CK Hydro's opinion that the requested schedule is not relevant. See Appendix D attached for the schedule.

b) Please see attached schedules in Appendices E and F.

Question #30

Reference: Exhibit 10/Tab1/Schedule2, page 3, Table 10-1
Exhibit 10/Tab1/Schedule 6, page 1, Table 10-4

a) Provide the revised Kwh, LRAM/SSM Rate rider calculations using the complete set of updated OPA assumptions from the 2008/2009 Measures List for the Residential and GS<50 kw Sector LRAM/SSM claims.

b) Provide Revised Bill impacts using the complete set of updated OPA assumptions from the 2008/2009 Measures List for the Residential Sector LRAM/SSM claims.

c) Comment on the timing/implementation of the Rate riders given the above revisions

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Answer:

a) No revision is necessary as Third traunche funded CDM did not include prescriptive programs and as such the 2008/2009 Measures List is not relevant.

b) N/A

c) N/A

Question #31

Reference: Exhibit 10/Tab 1/Schedule 1, Appendix A, pages 3 and 9
Brattle Group Report

Preamble:

EnerSpectrum Group believes that it is both consistent with the review of multiple TOU studies undertaken by Faruqui and Sergicil,(Brattle Group Report) and specifically the OEB's Smart Price Pilot, that a 4% reduction in energy consumption can be reasonably attributed to the 28,522 smart meters installed, combined with its customer education and awareness programs. Based on customer feedback, the education activities undertaken motivated them to behave as though they were already on TOU rates once a smart meter was installed.[emphasis added] Therefore it is reasonable to attribute some savings for LRAM purposes to all smart meters installed. This attribution recognizes that the LDC was both an early promoter of conservation and implementer of smart meter technology.

a) Where did the EnerSpectrum assumption of a 4% reduction in energy consumption of customers on TOU rates come from? The OEB Ottawa Hydro TOU study indicated 6%. Please explain/ comment.

b) Provide class data on the average number of CKHI customers with smart meters by rate year 2005-2009.

c) Provide class data on the average number of CKHI customers billed on Time of Use Rates by rate year. Please report separately those customers on the Pilot TOU program.

d) Please provide a schedule setting out the derivation of the kWh attributed to Smart Meters for 2007, 2008 and 2009 in Attachment B (page 9).

e) Explain why, for customers billed on gross kwh (as opposed to TOU basis) any conservation impact is documented/proven. Cite key references and sources.

f) Provide details of the calculation of claimed 4% LRAM adjustment.

g) Provide a calculation in the form of a schedule that reflects adjustment of the claimed 4% kWh reduction to reflect only the average number of customers billed on TOU rates in each year.

h) Comment on the Conclusions #2 and #3 of the Navigant Report at page 23 as reproduced below:

2. There was no discernable conservation effect observed when comparing the pilot participants' consumption in the pre- TOU and TOU period and with the control group customers' consumption in the same periods, likely due to the earlier conservation efforts of these and other CK Hydro customers.

3. There were no statistically significant differences in the percentage of overall consumption by TOU period between the pilot participants and the control group during the pilot period.

Answer:

a) Please see CK Hydro's response to Board Staff Question #67.

b)

Rate Class	2005	2006	2007	2008	2009
Residential	0	13,789	20,830	24,412	28,589
GS < 50 kW	0	0	0	582	773

c) The TOU pilot in 2007 included 200 residential customers. These customers are still on TOU pricing. No other customers have been added.

d) The table below identifies how CK Hydro derived the kWh attributed to Smart Meters for 2007, 2008 and 2009 based on 1) trends in residential consumption (kWh per household), 2) degree days, 3) average volume savings based on 4% of 2006 volumes and 4) a prorated analysis of the number of customers on smart meters in each year.

Conservation Due to Smart Meters and Education

	2005	2006	2007	2008
Residential Avg kWh / Year	9,438	8,867	8,315	8,050
% Change		-6.1%	-6.2%	-3.2%
CDD[1]	605	497	613	539
% Change		-17.9%	23.3%	-12.1%
Conservation[2]		0%	4%	4%
Average Volume[3]		-	355	355
Number of Customers		28,347	28,391	28,552
Total Conservation kWhs[4]		-	4,535,875	10,126,540

(1) Average CDD is 511, conservation programs were implemented in 2005 and 2006, results started in 2007
(2) Conservation estimate due to smart meters and education
(3) Average volume savings is based upon 4% of the 2006 average consumption
(4) 2007 conservation is weighted for the number of customers with smart meters for the year

e) Please see response on Board Staff Question #67.

f) Please see response to Board Staff Question #67.

g) The schedule below reflects the amount of conservation resulting from customers on the TOU pilot based on a 4% kWh reduction in one year.

Conservation for customer on TOU prices		
Number of customers		200
Average Conservation		355
Annual Conservation		71,000

h) The conservation effects were the same for customers billed TOU prices and those that remained on the two tired RPP pricing. Due to the education and communication programs customers believed that once they received their smart meter they would begin being billed on TOU prices. The customers then changed their behaviour as if they were billed TOU prices. These were the findings from the Navigator report. Please see CK Hydro's response to Board Staff Question #67 for further information.

Appendices

CKH Smart Meter TRC

Discount Rate 8.02%

Year	Total	2006	2007	2008	2009	2010	2011	2012	2013
Costs									
Non-discounted									
Admin costs	357,780.00	357,780.00							
Other Costs	5,772,540.24	2,303,101.28	2,945,333.55	524,105.41					
Total Costs	6,130,320.24	2,660,881.28	2,945,333.55	524,105.41					
Discounted									
Admin costs	357,780.00	357,780.00							
Other Costs	5,603,821.32	2,303,101.28	2,833,886.15	466,833.90					
Total Costs	5,961,601.32	2,660,881.28	2,833,886.15	466,833.90					
Benefits									
Non-discounted									
Avoided Energy	22,256,608.13		296,919.29	697,601.59	665,615.02	673,007.28	671,050.17	704,492.38	759,016.63
Avoided Generation Capacity	1,322,022.06			86,295.23	96,606.73	82,642.27	98,745.32	93,867.01	71,209.46
Avoided Transmission Capacity	204,715.62			6,496.71	6,658.55	6,820.39	6,993.79	7,167.19	7,352.15
Avoided Distribution Capacity	246,928.00				8,294.03	8,501.38	8,713.92	8,931.77	9,155.06
Total Benefits	24,030,273.81	-	296,919.29	790,393.53	777,174.33	770,971.32	785,503.20	814,458.35	846,733.30
Discounted									
Avoided Energy	8,781,127.58		285,684.27	621,371.32	548,861.39	513,753.93	474,226.93	460,896.43	459,699.64
Avoided Generation Capacity	633,041.16		-	76,865.34	79,661.22	63,086.67	69,782.70	61,410.13	43,128.12
Avoided Transmission Capacity	80,136.51		-	5,786.78	5,490.59	5,206.48	4,942.47	4,688.95	4,452.84
Avoided Distribution Capacity	92,620.13		-	-	6,839.20	6,489.70	6,158.07	5,843.39	5,544.78
Total Benefits	9,586,925.38	-	285,684.27	704,023.44	640,852.40	588,536.79	555,110.17	532,838.91	512,825.39
Net Benefits $ NPV	3,625,324.06								
Discount Factor		1	0.962161	0.890725	0.824593	0.763371	0.706694	0.654225	0.605652

Year	2014	2015	2016	2017	2018	2019	2020	2021	2022
Costs									
Non-discounted									
Discounted									
Benefits									
Non-discounted									
Avoided Energy	800,574.40	866,620.59	883,922.18	900,989.44	918,709.04	935,715.96	953,066.90	976,465.45	999,456.98
Avoided Generation Capacity	53,904.17	26,772.91	31,073.22	34,610.57	36,598.89	37,465.88	36,818.53	44,240.03	48,517.22
Avoided Transmission Capacity	7,537.10	7,722.06	7,918.58	8,115.10	8,311.62	8,519.70	8,739.34	8,947.42	9,178.62
Avoided Distribution Capacity	9,383.94	9,618.54	9,859.00	10,105.47	10,358.11	10,617.06	10,882.49	11,154.55	11,433.42
Total Benefits	871,399.61	910,734.10	932,772.98	953,820.58	973,977.66	992,318.60	1,009,507.26	1,040,807.45	1,068,586.24
Discounted									
Avoided Energy	448,869.81	449,824.94	424,741.20	400,798.31	378,338.03	356,731.84	336,369.84	319,040.91	302,307.85
Avoided Generation Capacity	30,223.24	13,896.65	14,931.27	15,396.25	15,071.97	14,283.47	12,994.52	14,454.56	14,675.11
Avoided Transmission Capacity	4,225.94	4,008.18	3,805.03	3,609.94	3,422.85	3,248.05	3,084.41	2,923.39	2,776.28
Avoided Distribution Capacity	5,261.43	4,992.56	4,737.43	4,495.34	4,265.61	4,047.64	3,840.80	3,644.53	3,458.29
Total Benefits	488,580.43	472,722.34	448,214.93	424,299.84	401,098.46	378,311.00	356,289.57	340,063.39	323,217.52
Net Benefits $ NPV									
Discount Factor	0.560685	0.519056	0.480519	0.444842	0.411815	0.381239	0.352934	0.326730	0.302472

Year	2023	2024	2025	2026	2027	2028	2029	2030	2031
Costs									
Non-discounted									
Discounted									
Benefits									
Non-discounted									
Avoided Energy	1,022,795.18	1,045,973.28	1,069,230.91	1,069,230.91	1,069,230.91	1,069,230.91	1,069,230.91	1,069,230.91	1,069,230.91
Avoided Generation Capacity	51,118.22	51,511.26	48,575.02	48,575.02	48,575.02	48,575.02	48,575.02	48,575.02	48,575.02
Avoided Transmission Capacity	9,409.82	9,641.02	9,883.78	9,883.78	9,883.78	9,883.78	9,883.78	9,883.78	9,883.78
Avoided Distribution Capacity	11,719.25	12,012.23	12,312.54	12,312.54	12,312.54	12,312.54	12,312.54	12,312.54	12,312.54
Total Benefits	1,095,042.47	1,119,137.79	1,140,002.25	1,140,002.25	1,140,002.25	1,140,002.25	1,140,002.25	1,140,002.25	1,140,002.25
Discounted									
Avoided Energy	286,397.89	271,142.48	256,592.71	237,541.85	219,905.43	203,578.44	188,463.66	174,471.08	161,517.38
Avoided Generation Cap.	14,313.86	13,353.01	11,656.97	10,791.50	9,990.27	9,248.54	8,561.88	7,926.20	7,337.71
Avoided Transmission Cap.	2,634.89	2,499.19	2,371.90	2,195.79	2,032.77	1,881.84	1,742.12	1,612.78	1,493.04
Avoided Distribution Cap.	3,281.56	3,113.87	2,954.75	2,735.37	2,532.28	2,344.27	2,170.22	2,009.09	1,859.92
Total Benefits	306,628.21	290,108.55	273,576.32	253,264.51	234,460.76	217,053.10	200,937.88	186,019.15	172,208.06
Net Benefits $ NPV									
Discount Factor	0.280015	0.259225	0.239979	0.222161	0.205667	0.190397	0.176261	0.163174	0.151059

Net Present Value$_{TRC}$

Utility

Name of Utility:	Chatham Kent
Number of years in study:	25

Project Description

Name of Project:	Smart Meters
Description:	

- ○ OEB Residential Table
- ○ OEB Commercial Table
- ○ OEB Industrial Table
- ◉ Direct Input

- ○ k$
- ◉ $

User Inputs

Discount rate	8.02%	
Unit Annual Energy Savings	0	kW/unit
Number of Units Delivered	28347	
Free Ridership Rate	30%	

Output

NPV ($)	3,625,324.06

LDC Avoided Costs	Present	2007	2008	2009	2010	2011
Avoided Energy		296,919.29	697,601.59	665,615.02	673,007.28	671,050.17
Avoided Generation Capacity		-	86,295.23	96,606.73	82,642.27	98,745.32
Avoided Transmission Capacity		-	6,496.71	6,658.55	6,820.39	6,993.79
Avoided Distribution Capacity		-	-	8,294.03	8,501.38	8,713.92
Avoided Distribution Losses		-	-	-	-	-
Other Avoided Costs						
Other Benefits						
Total (undiscounted) Avoided Costs	-	296,919.29	790,393.52	777,174.33	770,971.32	785,503.20
LDC Program Costs						
LDC OM&A Costs						
Smart Meter Pilot Program Cost	-357,780.00					
Incremental Equipment Costs	-2,303,101.28	-2,945,333.55	-524,105.41			
Participant Costs						
Total Program Costs	-2,660,881.28	-2,945,333.55	-524,105.41	-	-	-
Total Avoided Costs less Program Costs	-2,660,881.28	-2,648,414.26	266,288.11	777,174.33	770,971.32	785,503.20

			2007	2008	2009	2010	2011
Present value factor	8.0%	1.000	0.962	0.891	0.825	0.763	0.707
Present value of cash flows		-2,660,881.28	-2,548,201.88	237,189.53	640,852.40	588,536.79	555,110.17
Accumulated present value of cash flows		-2,660,881.28	-5,209,083.16	-4,971,893.63	-4,331,041.23	-3,742,504.44	-3,187,394.27

NPV TRC	3,625,324.06

Notes:

Net Present Value$_{TRC}$

Utility

Name of Utility:	
Number of years in study:	

Project Description

Name of Project:	
Description:	

- ○ OEB Residential Table
- ○ OEB Commercial Table
- ○ OEB Industrial Table
- ◉ Direct Input

- ○ k$
- ◉ $

User Inputs

Discount rate	
Unit Annual Energy Savings	
Number of Units Delivered	
Free Ridership Rate	

LDC Avoided Costs	2012	2013	2014	2015	2016	2017	2018
Avoided Energy	704,492.38	759,016.63	800,574.40	866,620.59	883,922.18	900,989.44	918,709.04
Avoided Generation Capacity	93,867.01	71,209.46	53,904.17	26,772.91	31,073.22	34,610.57	36,598.89
Avoided Transmission Capacity	7,167.19	7,352.15	7,537.10	7,722.06	7,918.58	8,115.10	8,311.62
Avoided Distribution Capacity	8,931.77	9,155.06	9,383.94	9,618.54	9,859.00	10,105.47	10,358.11
Avoided Distribution Losses	-	-	-	-	-	-	-
Other Avoided Costs							
Other Benefits							
Total (undiscounted) Avoided Costs	814,458.34	846,733.29	871,399.61	910,734.10	932,772.98	953,820.59	973,977.66
LDC Program Costs							
LDC OM&A Costs							
Smart Meter Pilot Program Cost							
Incremental Equipment Costs							
Participant Costs							
Total Program Costs	-	-	-	-	-	-	-
Total Avoided Costs less Program Costs	814,458.34	846,733.29	871,399.61	910,734.10	932,772.98	953,820.59	973,977.66

	2012	2013	2014	2015	2016	2017	2018
Present value factor	0.654	0.606	0.561	0.519	0.481	0.445	0.412
Present value of cash flows	532,838.90	512,825.38	488,580.43	472,722.34	448,214.92	424,299.85	401,098.47
Accumulated present value of cash flows	-2,654,555.37	-2,141,729.99	-1,653,149.56	-1,180,427.22	-732,212.30	-307,912.45	93,186.02

NPV TRC

Notes:

Net Present Value$_{TRC}$

Utility

Name of Utility:	
Number of years in study:	

Project Description

Name of Project:	
Description:	

- ○ OEB Residential Table
- ○ OEB Commercial Table
- ○ OEB Industrial Table
- ◉ Direct Input

- ○ k$
- ◉ $

User Inputs

Discount rate	
Unit Annual Energy Savings	
Number of Units Delivered	
Free Ridership Rate	

LDC Avoided Costs	2019	2020	2021	2022	2023	2024	2025
Avoided Energy	935,715.96	953,066.90	976,465.45	999,456.98	1,022,795.18	1,045,973.28	1,069,230.91
Avoided Generation Capacity	37,465.88	36,818.53	44,240.03	48,517.22	51,118.22	51,511.26	48,575.02
Avoided Transmission Capacity	8,519.70	8,739.34	8,947.42	9,178.62	9,409.82	9,641.02	9,883.78
Avoided Distribution Capacity	10,617.06	10,882.49	11,154.55	11,433.42	11,719.25	12,012.23	12,312.54
Avoided Distribution Losses	-	-	-	-	-	-	-
Other Avoided Costs							
Other Benefits							
Total (undiscounted) Avoided Costs	992,318.61	1,009,507.26	1,040,807.46	1,068,586.24	1,095,042.47	1,119,137.79	1,140,002.26
LDC Program Costs							
LDC OM&A Costs							
Smart Meter Pilot Program Cost							
Incremental Equipment Costs							
Participant Costs							
Total Program Costs	-	-	-	-	-	-	-
Total Avoided Costs less Program Costs	992,318.61	1,009,507.26	1,040,807.46	1,068,586.24	1,095,042.47	1,119,137.79	1,140,002.26

	2019	2020	2021	2022	2023	2024	2025
Present value factor	0.381	0.353	0.327	0.302	0.280	0.259	0.240
Present value of cash flows	378,311.00	356,289.57	340,063.40	323,217.52	306,628.21	290,108.55	273,576.32
Accumulated present value of cash flows	471,497.02	827,786.60	1,167,849.99	1,491,067.51	1,797,695.72	2,087,804.28	2,361,380.60

NPV TRC	

Notes:

Net Present Value$_{TRC}$

Utility

Name of Utility:	
Number of years in study:	

Project Description

Name of Project:	
Description:	

- ○ OEB Residential Table
- ○ OEB Commercial Table
- ○ OEB Industrial Table
- ◉ Direct Input

- ○ k$
- ◉ $

User Inputs

Discount rate	
Unit Annual Energy Savings	
Number of Units Delivered	
Free Ridership Rate	

LDC Avoided Costs	2026	2027	2028	2029	2030	2031
Avoided Energy	1,069,230.91	1,069,230.91	1,069,230.91	1,069,230.91	1,069,230.91	1,069,230.91
Avoided Generation Capacity	48,575.02	48,575.02	48,575.02	48,575.02	48,575.02	48,575.02
Avoided Transmission Capacity	9,883.78	9,883.78	9,883.78	9,883.78	9,883.78	9,883.78
Avoided Distribution Capacity	12,312.54	12,312.54	12,312.54	12,312.54	12,312.54	12,312.54
Avoided Distribution Losses	-	-	-	-	-	-
Other Avoided Costs						
Other Benefits						
Total (undiscounted) Avoided Costs	1,140,002.26	1,140,002.26	1,140,002.26	1,140,002.26	1,140,002.26	1,140,002.26
LDC Program Costs						
LDC OM&A Costs						
Smart Meter Pilot Program Cost						
Incremental Equipment Costs						
Participant Costs						
Total Program Costs	-	-	-	-	-	-
Total Avoided Costs less Program Costs	1,140,002.26	1,140,002.26	1,140,002.26	1,140,002.26	1,140,002.26	1,140,002.26

	2026	2027	2028	2029	2030	2031
Present value factor	0.222	0.206	0.190	0.176	0.163	0.151
Present value of cash flows	253,264.51	234,460.76	217,053.10	200,937.88	186,019.15	172,208.06
Accumulated present value of cash flows	2,614,645.11	2,849,105.87	3,066,158.97	3,267,096.85	3,453,116.00	3,625,324.06

NPV TRC	

Notes:

CKH Street Lights TRC

Discount Rate	8.02%							
Year	Total	Present	2007	2008	2009	2010	2011	2012
Costs								
Non-discounted								
Admin costs	21,203.58	21,203.58						
Other Costs	180,000.00	180,000.00						
Total Costs	201,203.58	201,203.58	-	-				
Discounted								
Admin costs	21,203.58	21,203.58						
Other Costs	180,000.00	180,000.00	-	-				
Total Costs	201,203.58	201,203.58	-	-				
Benefits								
Non-discounted								
Avoided Energy	667,028.65		106,741.38	113,582.94	109,074.08	110,748.42	110,855.23	116,026.60
Avoided Generation Capacity	-							
Avoided Transmission Capacity	-							
Avoided Distribution Capacity	-							
Total Benefits	667,028.65	-	106,741.38	113,582.94	109,074.08	110,748.42	110,855.23	116,026.60
Discounted								
Avoided Energy	532,605.59		102,702.43	101,171.19	89,941.71	84,542.08	78,340.69	75,907.49
Avoided Generation Capacity	-		-	-	-	-	-	-
Avoided Transmission Capacity	-		-	-	-	-	-	-
Avoided Distribution Capacity	-		-	-	-	-	-	-
Total Benefits	532,605.59	-	102,702.43	101,171.19	89,941.71	84,542.08	78,340.69	75,907.49
Net Benefits $ NPV	331,402.01							
Discount Factor		1	0.962161	0.890725	0.824593	0.763371	0.706694	0.654225

Net Present Value$_{TRC}$

Utility

Name of Utility:	Chatham Kent
Number of years in study:	6

Project Description

Name of Project:	Street Light Retrofits
Description:	2006 Retrofit Program

- (○) OEB Residential Table
- (○) OEB Commercial Table
- (○) OEB Industrial Table
- (●) Direct Input

- (○) k$
- (●) $

User Inputs

Discount rate	8.02%	
Unit Annual Energy Savings	0.24	kW/unit
Number of Units Delivered	1869	
Free Ridership Rate	30%	

Output

NPV ($)	331,402.01

LDC Avoided Costs	Present	2007	2008	2009	2010
Avoided Energy		106,741.38	113,582.94	109,074.08	110,748.42
Avoided Generation Capacity		-	-	-	-
Avoided Transmission Capacity		-	-	-	-
Avoided Distribution Capacity		-	-	-	-
Avoided Distribution Losses		-	-	-	-
Other Avoided Costs					
Other Benefits					
Total (undiscounted) Avoided Costs	-	106,741.38	113,582.94	109,074.08	110,748.42
LDC Program Costs					
LDC OM&A Costs	-21,203.58				
LDC Capital Costs					
Incremental Equipment Costs	-180,000.00				
Participant Costs					
Total Program Costs	-201,203.58	-	-	-	-
Total Avoided Costs less Program Costs	-201,203.58	106,741.38	113,582.94	109,074.08	110,748.42

			2007	2008	2009	2010
Present value factor	8.0%	1.000	0.962	0.891	0.825	0.763
Present value of cash flows		-201,203.58	102,702.43	101,171.19	89,941.71	84,542.08
Accumulated present value of cash flows		-201,203.58	-98,501.15	2,670.04	92,611.75	177,153.83

NPV TRC	331,402.01

Net Present Value$_{TRC}$

Utility

Name of Utility:	
Number of years in study:	

Project Description

Name of Project:	
Description:	

- ○ OEB Residential Table
- ○ OEB Commercial Table
- ○ OEB Industrial Table
- ◉ Direct Input

- ○ k$
- ◉ $

User Inputs

Discount rate	
Unit Annual Energy Savings	
Number of Units Delivered	
Free Ridership Rate	

LDC Avoided Costs	2011	2012
Avoided Energy	110,855.23	116,026.60
Avoided Generation Capacity	-	-
Avoided Transmission Capacity	-	-
Avoided Distribution Capacity	-	-
Avoided Distribution Losses	-	-
Other Avoided Costs		
Other Benefits		
Total (undiscounted) Avoided Costs	110,855.23	116,026.60
LDC Program Costs		
LDC OM&A Costs		
LDC Capital Costs		
Incremental Equipment Costs		
Participant Costs		
Total Program Costs	-	-
Total Avoided Costs less Program Costs	110,855.23	116,026.60

	2011	2012
Present value factor	0.707	0.654
Present value of cash flows	78,340.69	75,907.48
Accumulated present value of cash flows	255,494.52	331,402.01
NPV TRC		

CDM Load Impacts by Class and Program		kWh	kWh			kWh			kWh
Class	**Year Implemented**	2006		2007			2008		2009
Program		Current Year	Carry Forward	Current Year	Total	Carry Forward	Current Year	Total	Carry Forward
Residential									
Third Tranche									
Smart Meters	2006			4,535,875.42	4,535,875.42	4,535,875.42	5,590,664.18	10,126,539.60	10,126,539.60
Street Lighting									
Third Tranche									
Street Lights	2006			1,866,950.05	1,866,950.05	1,866,950.05		1,866,950.05	1,866,950.05
Residential									
OPA Conservation Programs						0.00			
Every Kilowatt Counts (spring)	2006	813,348.19	813,348.19	-	813,348.19	813,348.19	-	813,348.19	813,348.19
Cool Savings Rebate Program	2006 & 2007 & 2008	61,992.72	61,992.72	173,415.33	235,408.05	235,408.05	102,618.92	338,026.97	338,026.97
Secondary Fridge Retirement Pilot	2006	33,297.71	33,297.71	-	33,297.71	33,297.71	-	33,297.71	33,297.71
Every Kilowatt Counts (fall)	2006	1,319,497.16	1,319,497.16	-	1,319,497.16	1,319,497.16	-	1,319,497.16	1,319,497.16
Great Refrigerator Roundup	2007 & 2008			152,797.07	152,797.07	152,797.07	177,389.24	330,186.31	330,186.31
Aboriginal – Pilot	2007 & 2008				-	-	-	-	-
Every Kilowatt Counts	2007			758,448.66	758,448.66	749,250.86	-	749,250.86	749,250.86
peaksaver®	2007 & 2008			-	-	-	-	-	-
Summer Savings	2007			454,501.19	454,501.19	454,501.19	-	454,501.19	-
Affordable Housing – Pilot	2007			93,753.67	93,753.67	93,753.67	-	93,753.67	93,753.67
Social Housing – Pilot	2007			68,353.88	68,353.88	68,353.88	-	68,353.88	68,353.88
Energy Efficiency Assistance for Houses – Pilot	2007			-	-	-	-	-	-
Summer Sweepstakes	2008					-	-	-	-
Every Kilowatt Counts Power Savings Event	2008					-	256,618.37	256,618.37	254,508.90
Commercial									
OPA Conservation Programs									
Toronto Comprehensive	2007 & 2008							-	-
Electricity Retrofit Incentive Program	2007 & 2008						142,652.61	142,652.61	142,652.61
High Performance New Construction	2008						2,090.21	2,090.21	2,090.21
Power Savings Blitz	2008						5,185.84	5,185.84	5,185.84
Chiller Plant Re-Commissioning	2008							-	-
Demand Response 1	2006 & 2007 & 2008							-	-
Other Demand Response	2007 & 2008							-	-
Demand Response 3	2008							-	-
LDC Custom	2008							-	-
Other Customer Based Generation	2008							-	-
Renewable Energy Standard Offer Program (RESOP)	2007 & 2008							-	-
TOTALS		2,228,135.77	2,228,135.77	8,104,095.26	10,332,231.03	10,323,033.23	6,277,219.39	16,600,252.62	16,143,641.97

OPA Conservation & Demand Management Programs

Measure Results

Chatham-Kent Hydro

Initiative Name	Measure Name	Unit Savings Assumptions			Net-to-Gross Adjustments (%)						LDC Total (# Units)
		Summer Peak Demand Savings per Unit (kW)	Annual Energy Savings per Unit (kWh)	Effective Useful Life (EUL)	Free Rider (#1)	Spill Over (#2)	Exclusions (#3)	Part Use (#4)	Other (#5)	Aggregate (#6)	
2006											
2006 Every Kilowatt Counts (spring)	Energy Star® Compact Fluorescent Light Bulb	0.00	104	4	90%	100%	100%	100%	100%	90%	7,964
2006 Every Kilowatt Counts (spring)	Electric Timers	0.00	183	20	90%	100%	100%	100%	100%	90%	223
2006 Every Kilowatt Counts (spring)	Programmable Thermostats	0.05	216	15	90%	100%	100%	100%	100%	90%	97
2006 Every Kilowatt Counts (spring)	Energy Star® Ceiling Fans	0.01	141	20	90%	100%	100%	100%	100%	90%	74
2006 Cool Savings Rebate Program	Energy Star® Air Conditioner	0.36	351	14	90%	100%	100%	100%	100%	90%	86
2006 Cool Savings Rebate Program	Programmable Thermostats	0.16	159	18	90%	100%	100%	100%	100%	90%	65
2006 Cool Savings Rebate Program	Air Conditioner Tune-Up	0.04	369	8	90%	100%	100%	100%	100%	90%	58
2006 Secondary Fridge Retirement Pilot	Refrigerator Retirement	0.27	1,200	6	90%	100%	100%	100%	100%	90%	30
2006 Secondary Fridge Retirement Pilot	Freezer Retirement	0.20	900	6	90%	100%	100%	100%	100%	90%	1
2006 Every Kilowatt Counts (fall)	Energy Star® Compact Fluorescent Light Bulb	0.00	104	4	90%	100%	100%	100%	100%	90%	11,809
2006 Every Kilowatt Counts (fall)	Seasonal Light Emitting Diode Light String	0.00	31	30	90%	100%	100%	100%	100%	90%	2,842
2006 Every Kilowatt Counts (fall)	Programmable Thermostats	0.12	522	18	90%	100%	100%	100%	100%	90%	187
2006 Every Kilowatt Counts (fall)	Dimmers	0.00	139	10	90%	100%	100%	100%	100%	90%	148
2006 Every Kilowatt Counts (fall)	Indoor Motion Sensors	0.00	209	20	90%	100%	100%	100%	100%	90%	53
2006 Every Kilowatt Counts (fall)	Programmable Basebaord Thermostats	0.00	1,466	18	90%	100%	100%	100%	100%	90%	11
2007											
2007 Great Refrigerator Roundup	Refrigerator	0.07	745	9	48%	100%	100%	81%	100%	39%	425
2007 Great Refrigerator Roundup	Freezer	0.07	515	8	50%	100%	100%	91%	100%	46%	113
2007 Great Refrigerator Roundup	Small Refrigerator	0.05	490	9	38%	100%	100%	79%	100%	30%	7
2007 Great Refrigerator Roundup	Small Freezer	0.04	339	8	38%	100%	100%	79%	100%	30%	3
2007 Great Refrigerator Roundup	Window Air Conditioner	0.56	240	5	43%	100%	100%	100%	100%	43%	8
2007 Cool Savings Rebate	ENERGY STAR® Central Air Conditioner	0.17	152	18	52%	5%	100%	100%	100%	57%	191
2007 Cool Savings Rebate	Programmable Thermostat	0.03	55	15	46%	0%	60%	100%	100%	27%	270
2007 Cool Savings Rebate	Furnace with Electronically Commutated Motor	0.49	832	15	54%	5%	100%	100%	100%	59%	299
2007 Cool Savings Rebate	Central Air Conditioning Tune Up	0.26	235	5	42%	0%	38%	100%	100%	16%	161
2007 Every Kilowatt Counts	15 W CFL	0.00	43	8	78%	100%	100%	100%	100%	78%	13,648
2007 Every Kilowatt Counts	20 W+ CFLs	0.00	62	8	78%	100%	100%	100%	100%	78%	2,222
2007 Every Kilowatt Counts	Project Porchlight CFLs	0.00	43	8	76%	100%	100%	100%	100%	76%	2,872
2007 Every Kilowatt Counts	Energy Star Ceiling Fan	0.00	90	10	55%	100%	100%	100%	100%	55%	110
2007 Every Kilowatt Counts	Furnace Filter	0.01	38	1	55%	100%	100%	100%	100%	55%	444
2007 Every Kilowatt Counts	Solar Lights	0.00	33	5	13%	100%	100%	100%	100%	13%	1,752
2007 Every Kilowatt Counts	Outdoor Motion Sensor	0.00	160	10	55%	100%	100%	100%	100%	55%	175
2007 Every Kilowatt Counts	Dimmer Switch	0.00	24	10	55%	100%	100%	100%	100%	55%	111
2007 Every Kilowatt Counts	Energy Star Light Fixtures	0.01	123	16	55%	100%	100%	100%	100%	55%	53
2007 Every Kilowatt Counts	SLEDs	0.00	14	5	49%	100%	100%	100%	100%	49%	3,616
2007 Every Kilowatt Counts	T8	0.00	37	18	77%	100%	100%	100%	100%	77%	104
2007 Every Kilowatt Counts	Programmable Thermostat	0.00	75	15	55%	100%	100%	100%	100%	55%	107
2007 Every Kilowatt Counts	Power Bar with Timer	0.01	72	10	77%	100%	100%	100%	100%	77%	48
2007 Every Kilowatt Counts	Lighting Control Devices	0.02	72	10	55%	100%	100%	100%	100%	55%	561
2007 Summer Savings	Household	0.44	787	2	12%	100%	100%	100%	100%	12%	4,815
2007 Affordable Housing – Pilot	1 - T8 32W w/EL ballast	0.01	30	14	100%	100%	100%	100%	100%	100%	37
2007 Affordable Housing – Pilot	Ceiling Fan (common area)	0.00	7	14	100%	100%	100%	100%	100%	100%	7
2007 Affordable Housing – Pilot	Ceiling Fan (in-suite)	0.00	7	14	100%	100%	100%	100%	100%	100%	12
2007 Affordable Housing – Pilot	CFL Screw-In 15W - in suite	0.01	180	14	100%	100%	100%	100%	100%	100%	48

OPA Conservation & Demand Management Programs

Measure Results

Chatham-Kent Hydro

Initiative Name	Measure Name	Unit Savings Assumptions			Net-to-Gross Adjustments (%)						LDC Total (# Units)
		Summer Peak Demand Savings per Unit (kW)	Annual Energy Savings per Unit (kWh)	Effective Useful Life (EUL)	Free Rider (#1)	Spill Over (#2)	Exclusions (#3)	Part Use (#4)	Other (#5)	Aggregate (#6)	
2007 Affordable Housing – Pilot	Energy Star Clotheswasher	0.03	287	14	100%	100%	100%	100%	100%	100%	1
2007 Affordable Housing – Pilot	Occupancy Sensors	0.00	209	14	100%	100%	100%	100%	100%	100%	22
2007 Affordable Housing – Pilot	Other CFL Screw-in Light (please specify)	0.01	383	14	100%	100%	100%	100%	100%	100%	173
2007 Affordable Housing – Pilot	Other Exterior Lighting (please specify)	0.01	160	14	100%	100%	100%	100%	100%	100%	6
2007 Affordable Housing – Pilot	Programmable Thermostat	0.01	631	14	100%	100%	100%	100%	100%	100%	12
2007 Affordable Housing – Pilot	Timer - Outdoor Light	0.00	292	14	100%	100%	100%	100%	100%	100%	14
2007 Affordable Housing – Pilot	Ventilating Fan (in-suite)	0.00	12	14	100%	100%	100%	100%	100%	100%	12
2007 Social Housing – Pilot	Custom Retrofit Projects	Custom	Custom	10	100%	100%	100%	100%	100%	100%	56
2008											
2008 Great Refrigerator Roundup	Refrigerator	0.06	745	9	56%	100%	100%	81%	100%	45%	436
2008 Great Refrigerator Roundup	Freezer	0.06	515	8	55%	100%	100%	91%	100%	50%	116
2008 Great Refrigerator Roundup	Small Refrigerator	0.04	490	9	38%	100%	100%	79%	100%	30%	1
2008 Great Refrigerator Roundup	Window Air Conditioner	0.24	240	5	43%	100%	100%	100%	100%	43%	9
2008 Cool Savings Rebate	ENERGY STAR® Central Air Conditioner	0.21	155	18	52%	5%	100%	100%	100%	57%	124
2008 Cool Savings Rebate	Programmable Thermostat	0.04	54	15	46%	0%	60%	100%	100%	27%	158
2008 Cool Savings Rebate	Furnace with Electronically Commutated Motor	0.61	819	15	54%	5%	100%	100%	100%	59%	184
2008 Every Kilowatt Counts Power Savings Event	Energystar dehumidifiers - product amnesty & new purchase	0.04	141	6	70%	100%	100%	100%	100%	70%	64
2008 Every Kilowatt Counts Power Savings Event	Energystar room air conditioners - product amnesty & new purchase	0.08	192	6	70%	100%	100%	100%	100%	70%	62
2008 Every Kilowatt Counts Power Savings Event	T-8 Lighting	0.00	37	18	77%	100%	100%	100%	100%	77%	275
2008 Every Kilowatt Counts Power Savings Event	Energystar Lighting Fixtures	0.01	123	16	55%	100%	100%	100%	100%	55%	1,148
2008 Every Kilowatt Counts Power Savings Event	CFL Flood Lights (Outdoor)	0.00	77	8	93%	100%	100%	100%	100%	93%	1,226
2008 Every Kilowatt Counts Power Savings Event	CFL Flood Lights (Indoor)	0.00	44	8	93%	100%	100%	100%	100%	93%	1,226
2008 Every Kilowatt Counts Power Savings Event	Plugin pool/spa timer	0.97	1,158	15	30%	100%	100%	100%	100%	30%	17
2008 Every Kilowatt Counts Power Savings Event	Furance Filters - purchase of 2	0.01	38	1	55%	100%	100%	100%	100%	55%	102
2008 Every Kilowatt Counts Power Savings Event	Programmable Thermostats - Baseboard	0.00	30	15	70%	100%	100%	100%	100%	70%	125
2008 Every Kilowatt Counts Power Savings Event	Power Bar with Timer	0.01	72	10	70%	100%	100%	100%	100%	70%	27
2008 Every Kilowatt Counts Power Savings Event	Block Heater Timer	0.00	180	15	70%	100%	100%	100%	100%	70%	50
2008 Electricity Retrofit Incentive	Lighting System ENERGY STAR® Rated CFLs, Screw in. All sizes < 40 W	0.04	101	20	70%	100%	100%	100%	100%	70%	45
2008 Electricity Retrofit Incentive	Lighting System Standard Performance T8, Double lamp standard T8 fixture	0.03	60	20	70%	100%	100%	100%	100%	70%	306
2008 Electricity Retrofit Incentive	Lighting System Standard Performance T8, Quadruple lamp standard T8 fixture	0.05	114	20	70%	100%	100%	100%	100%	70%	760
2008 Electricity Retrofit Incentive	Lighting System T5 Fixtures, T5 fixture with 1, 2, or 3 lamps and 1 electronic ballast	0.03	59	20	70%	100%	100%	100%	100%	70%	5
2008 Electricity Retrofit Incentive	Lighting System T5 Fixtures, High Bay T5. Maximum 6 lamps/fixture.	0.03	75	20	70%	100%	100%	100%	100%	70%	32
2008 Electricity Retrofit Incentive	Custom	Custom	Custom	20	70%	100%	100%	100%	100%	70%	1
2008 Power Savings Blitz	1 Lamp - 8' T12 w/ 75W Magnetic Ballasts to 1 Lamp - 8' T8, 32W, 80% Ballast Fac	0.02	146	16	70%	100%	100%	100%	100%	70%	31
2008 Power Savings Blitz	2 Lamps - 4' T12 w/ 40W Magnetic Ballasts to 2 Lamps - 4' T8, either 32W 80% Ba	0.02	120	16	70%	100%	100%	100%	100%	70%	24
2008 High Performance New Construction	Custom New Construction Project	Custom	Custom	15	70%	100%	100%	100%	100%	70%	0.015

OPA Conservation & Demand Management Programs

Measure Results

Chatham-Kent Hydro

Initiative Name	Measure Name	LDC Total (# Units)	Annual Energy Savings per Unit (kWh)	Net-to-Gross Adjustments (%) Aggregate*	Net kWh Per Filed LRAM Claim	2008 OPA Measures: Annual Energy Savings per Unit (kWh)	2008 OPA Measures: Net-to-Gross Adjustments (%) Aggregate*	Adjusted Net kWh OPA 2008 Measures List**
2006								
2006 Every Kilowatt Counts (spring)	Energy Star® Compact Fluorescent Light Bulb	7,964	104	90%		43	78%	267,120
2006 Every Kilowatt Counts (spring)	Electric Timers	223	183	90%		72	70%	11,316
2006 Every Kilowatt Counts (spring)	Programmable Thermostats	97	216	90%		75	55%	4,012
2006 Every Kilowatt Counts (spring)	Energy Star® Ceiling Fans	74	141	90%		90	55%	3,649
					813,348			286,096
2006 Cool Savings Rebate Program	Energy Star® Air Conditioner	86	351	90%		155	57%	7,605
2006 Cool Savings Rebate Program	Programmable Thermostats	65	159	90%		54	27%	946
2006 Cool Savings Rebate Program	Air Conditioner Tune-Up	58	369	90%		235	16%	2,161
					61,993			10,712
2006 Secondary Fridge Retirement Pilot	Refrigerator Retirement	30	1,200	90%		745	45%	10,022
2006 Secondary Fridge Retirement Pilot	Freezer Retirement	1	900	90%		515	50%	259
					33,298			10,280
2006 Every Kilowatt Counts (fall)	Energy Star® Compact Fluorescent Light Bulb	11,809	104	90%		43	78%	396,060
2006 Every Kilowatt Counts (fall)	Seasonal Light Emitting Diode Light String	2,842	31	90%		14	49%	19,081
2006 Every Kilowatt Counts (fall)	Programmable Thermostats	187	522	90%		54	27%	2,716
2006 Every Kilowatt Counts (fall)	Dimmers	148	139	90%		24	55%	1,931
2006 Every Kilowatt Counts (fall)	Indoor Motion Sensors	53	209	90%		209	90%	10,000
2006 Every Kilowatt Counts (fall)	Programmable Basebaord Thermostats	11	1,466	90%		30	70%	231
					1,319,497			430,019
2007								
2007 Great Refrigerator Roundup	Refrigerator	425	745	39%		745	45%	142,628
2007 Great Refrigerator Roundup	Freezer	113	515	46%		515	50%	29,215
2007 Great Refrigerator Roundup	Small Refrigerator	7	490	30%		490	30%	1,032
2007 Great Refrigerator Roundup	Small Freezer	3	339	30%		339	30%	305
2007 Great Refrigerator Roundup	Window Air Conditioner	8	240	43%		240	43%	828
					152,797			174,009
2007 Cool Savings Rebate	ENERGY STAR® Central Air Conditioner	191	152	57%		155	57%	16,920
2007 Cool Savings Rebate	Programmable Thermostat	270	55	27%		54	27%	3,980
2007 Cool Savings Rebate	Furnace with Electronically Commutated Motor	299	832	59%		819	59%	144,586
2007 Cool Savings Rebate	Central Air Conditioning Tune Up	161	235	16%		235	16%	5,961
					173,415			171,446
2007 Every Kilowatt Counts	15 W CFL	13,648	43	78%		43	78%	457,757
2007 Every Kilowatt Counts	20 W+ CFLs	2,222	62	78%		62	78%	107,619
2007 Every Kilowatt Counts	Project Porchlight CFLs	2,872	43	76%		43	76%	93,857

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Measure Results

Chatham-Kent Hydro

Initiative Name	Measure Name	LDC Total (# Units)	Annual Energy Savings per Unit (kWh)	Net-to-Gross Adjustments (%) Aggregate*	Net kWh Per Filed LRAM Claim	2008 OPA Measures: Annual Energy Savings per Unit (kWh)	2008 OPA Measures: Net-to-Gross Adjustments (%) Aggregate*	Adjusted Net kWh OPA 2008 Measures List**
2007 Every Kilowatt Counts	Energy Star Ceiling Fan	110	90	55%		90	55%	5,437
2007 Every Kilowatt Counts	Furnace Filter	444	38	55%		38	55%	9,203
2007 Every Kilowatt Counts	Solar Lights	1,752	33	13%		33	13%	7,471
2007 Every Kilowatt Counts	Outdoor Motion Sensor	175	160	55%		160	55%	15,406
2007 Every Kilowatt Counts	Dimmer Switch	111	24	55%		24	55%	1,452
2007 Every Kilowatt Counts	Energy Star Light Fixtures	53	123	55%		123	55%	3,583
2007 Every Kilowatt Counts	SLEDs	3,616	14	49%		14	49%	24,273
2007 Every Kilowatt Counts	T8	104	37	77%		37	77%	2,978
2007 Every Kilowatt Counts	Programmable Thermostat	107	75	55%		75	55%	4,421
2007 Every Kilowatt Counts	Power Bar with Timer	48	72	77%		72	70%	2,458
2007 Every Kilowatt Counts	Lighting Control Devices	561	72	55%		72	55%	22,294
					758,449			758,210
2007 Summer Savings	Household	4,815	787	12%	454,501	787	12%	454,501
2007 Affordable Housing – Pilot	1 - T8 32W w/EL ballast	37	30	100%		30	100%	1,116
2007 Affordable Housing – Pilot	Ceiling Fan (common area)	7	7	100%		7	100%	49
2007 Affordable Housing – Pilot	Ceiling Fan (in-suite)	12	7	100%		7	100%	84
2007 Affordable Housing – Pilot	CFL Screw-In 15W - in suite	48	180	100%		180	100%	8,640
2007 Affordable Housing – Pilot	Energy Star Clotheswasher	1	287	100%		287	100%	287
2007 Affordable Housing – Pilot	Occupancy Sensors	22	209	100%		209	100%	4,598
2007 Affordable Housing – Pilot	Other CFL Screw-in Light (please specify)	173	383	100%		383	100%	66,216
2007 Affordable Housing – Pilot	Other Exterior Lighting (please specify)	6	160	100%		160	100%	960
2007 Affordable Housing – Pilot	Programmable Thermostat	12	631	100%		631	100%	7,572
2007 Affordable Housing – Pilot	Timer - Outdoor Light	14	292	100%		292	100%	4,088
2007 Affordable Housing – Pilot	Ventilating Fan (in-suite)	12	12	100%		12	100%	144
					93,754			93,754
2007 Social Housing – Pilot	Custom Retrofit Projects	56	Custom	100%	68,354	Custom	100%	68,354
2008								
2008 Great Refrigerator Roundup	Refrigerator	436	745	45%		745	45%	146,319
2008 Great Refrigerator Roundup	Freezer	116	515	50%		515	50%	29,991
2008 Great Refrigerator Roundup	Small Refrigerator	1	490	30%		490	30%	147
2008 Great Refrigerator Roundup	Window Air Conditioner	9	240	43%		240	43%	932
					177,389			177,389
2008 Cool Savings Rebate	ENERGY STAR® Central Air Conditioner	124	155	52%		155	57%	10,983
2008 Cool Savings Rebate	Programmable Thermostat	158	54	27%		54	27%	2,329
2008 Cool Savings Rebate	Furnace with Electronically Commutated Motor	184	819	54%		819	59%	89,307
					102,619			102,619

OPA Conservation & Demand Management Programs

Measure Results

Chatham-Kent Hydro

Initiative Name	Measure Name	LDC Total (# Units)	Annual Energy Savings per Unit (kWh)	Net-to-Gross Adjustments (%) Aggregate*	Net kWh Per Filed LRAM Claim	2008 OPA Measures: Annual Energy Savings per Unit (kWh)	2008 OPA Measures: Net-to-Gross Adjustments (%) Aggregate*	Adjusted Net kWh OPA 2008 Measures List**
2008 Every Kilowatt Counts Power Savings Event	Energystar dehumidifiers - product amnesty & new purchase	64	141	70%		141	70%	6,302
2008 Every Kilowatt Counts Power Savings Event	Energystar room air conditioners - product amnesty & new purchase	62	192	70%		192	70%	8,350
2008 Every Kilowatt Counts Power Savings Event	T-8 Lighting	275	37	77%		37	77%	7,872
2008 Every Kilowatt Counts Power Savings Event	Energystar Lighting Fixtures	1,148	123	55%		123	55%	77,616
2008 Every Kilowatt Counts Power Savings Event	CFL Flood Lights (Outdoor)	1,226	77	93%		77	93%	87,769
2008 Every Kilowatt Counts Power Savings Event	CFL Flood Lights (Indoor)	1,226	44	93%		44	93%	50,495
2008 Every Kilowatt Counts Power Savings Event	Plugin pool/spa timer	17	1,158	30%		1,158	30%	5,893
2008 Every Kilowatt Counts Power Savings Event	Furance Filters - purchase of 2	102	38	55%		38	55%	2,109
2008 Every Kilowatt Counts Power Savings Event	Programmable Thermostats - Baseboard	125	30	70%		30	70%	2,596
2008 Every Kilowatt Counts Power Savings Event	Power Bar with Timer	27	72	70%		72	70%	1,371
2008 Every Kilowatt Counts Power Savings Event	Block Heater Timer	50	180	70%		180	70%	6,246
					256,618			256,618
2008 Electricity Retrofit Incentive	Lighting System ENERGY STAR® Rated CFLs, Screw in. All sizes < 40 W	45	101	70%		101	70%	3,184
2008 Electricity Retrofit Incentive	Lighting System Standard Performance T8, Double lamp standard T8 fixture	306	60	70%		60	70%	12,942
2008 Electricity Retrofit Incentive	Lighting System Standard Performance T8, Quadruple lamp standard T8 fixture	760	114	70%		114	70%	60,648
2008 Electricity Retrofit Incentive	Lighting System T5 Fixtures, T5 fixture with 1, 2, or 3 lamps and 1 electronic ballast	5	59	70%		59	70%	205
2008 Electricity Retrofit Incentive	Lighting System T5 Fixtures, High Bay T5. Maximum 6 lamps/fixture.	32	75	70%		75	70%	1,685
2008 Electricity Retrofit Incentive	Custom	1	Custom	70%		Custom	70%	63,989
					142,653			142,653
2008 Power Savings Blitz	1 Lamp - 8' T12 w/ 75W Magnetic Ballasts to 2 Lamps - 4' T8, end to end, 32W, 80	31	146	70%		146	70%	3,170
2008 Power Savings Blitz	2 Lamps - 4' T12 w/ 40W Magnetic Ballasts to 2 Lamps - 4' T8, either 32W 80% Ba	24	120	70%		120	70%	2,016
					5,186			5,186
2008 High Performance New Construction	Custom New Construction Project	0.015	Custom	70%	2,090	Custom	70%	2,090

CDM Load Impacts by Class and Program		kWh	kWh			kWh			kWh
Class	**Year Implemented**	2006		2007			2008		2009
Program		Current Year	Carry Forward	Current Year	Total	Carry Forward	Current Year	Total	Carry Forward
Residential									
Third Tranche									
Smart Meters	2006			4,535,875.42	4,535,875.42	4,535,875.42	5,590,664.18	10,126,539.60	10,126,539.60
Street Lighting									
Third Tranche									
Street Lights	2006			1,866,950.05	1,866,950.05	1,866,950.05		1,866,950.05	1,866,950.05
Residential									
OPA Conservation Programs						0.00			
Every Kilowatt Counts (spring)	2006	286,096.38	286,096.38	-	286,096.38	286,096.38	-	286,096.38	286,096.38
Cool Savings Rebate Program	2006 & 2007 & 2008	10,711.97	10,711.97	171,446.24	182,158.21	182,158.21	102,618.92	284,777.14	284,777.14
Secondary Fridge Retirement Pilot	2006	10,280.28	10,280.28	-	10,280.28	10,280.28	-	10,280.28	10,280.28
Every Kilowatt Counts (fall)	2006	430,019.07	430,019.07	-	430,019.07	430,019.07	-	430,019.07	430,019.07
Great Refrigerator Roundup	2007 & 2008			174,008.72	174,008.72	174,008.72	177,389.24	351,397.97	351,397.97
Aboriginal – Pilot	2007 & 2008				-	-	-	-	-
Every Kilowatt Counts	2007			758,209.60	758,209.60	749,250.86	-	749,250.86	749,250.86
peaksaver®	2007 & 2008			-	-	-	-	-	-
Summer Savings	2007			454,501.19	454,501.19	454,501.19	-	454,501.19	-
Affordable Housing – Pilot	2007			93,753.67	93,753.67	93,753.67	-	93,753.67	93,753.67
Social Housing – Pilot	2007			68,353.88	68,353.88	68,353.88	-	68,353.88	68,353.88
Energy Efficiency Assistance for Houses – Pilot	2007			-	-	-	-	-	-
Summer Sweepstakes	2008					-	-	-	-
Every Kilowatt Counts Power Savings Event	2008					-	256,618.37	256,618.37	254,508.90
Commercial									
OPA Conservation Programs									
Toronto Comprehensive	2007 & 2008							-	-
Electricity Retrofit Incentive Program	2007 & 2008						142,652.61	142,652.61	142,652.61
High Performance New Construction	2008						2,090.21	2,090.21	2,090.21
Power Savings Blitz	2008						5,185.84	5,185.84	5,185.84
Chiller Plant Re-Commissioning	2008							-	-
Demand Response 1	2006 & 2007 & 2008							-	-
Other Demand Response	2007 & 2008							-	-
Demand Response 3	2008							-	-
LDC Custom	2008							-	-
Other Customer Based Generation	2008							-	-
Renewable Energy Standard Offer Program (RESOP)	2007 & 2008							-	-
TOTALS		737,107.70	737,107.70	8,123,098.77	8,860,206.47	8,851,247.73	6,277,219.39	15,128,467.11	14,671,856.46

Foregone Revenue by Class and Program

Class		2006			2007			2008			2009			
Program	**Year Implemented**	Load Unit (kWh/kW)	Rate per Unit	Revenue	Load Unit (kWh/kW)	Rate per Unit	Revenue	Load Unit (kWh/kW)	Rate per Unit	Revenue	Load Unit (kWh/kW)	Rate per Unit	Revenue	**Total Revenue**
Residential														
Third Tranche														
Smart Meters (1,000 meters)	2006				355,000.00	0.0141	$4,993.67	355,000.00	0.0140	$4,981.83	355,000.00	0.0139	$4,946.33	**$14,921.83**
Street Lighting														
Third Tranche														
Street Lights (kW)	2006				443.18	3.1232	$1,380.01	443.18	3.1045	$1,378.61	443.18	3.1115	$1,377.91	**$4,136.53**
Subtotal Third Traunche		**0.00**		**0.00**	**355,443.18**		**$6,373.68**	**355,443.18**		**6,360.44**	**355,443.18**		**6,324.25**	**$19,058.37**
Residential														
Rate Funded														
Smart meters (all smart meters beyound 1,000 in pilot)		**0.00**		**$0.00**	**4,180,875.00**	**0.0141**	**$58,810.98**	**9,771,540.00**	**0.0140**	**$137,127.28**	**9,771,540.00**	**0.0139**	**$136,150.12**	**$332,088.38**
Residential														
OPA Conservation Programs														
Every Kilowatt Counts (spring)	2006	286,096.38	0.0140	$4,024.42	286,096.38	0.0141	$4,024.42	286,096.38	0.0140	$4,014.89	286,096.38	0.0139	$3,986.28	**$16,050.01**
Cool Savings Rebate Program	2006 & 2007 & 2008	10,711.97	0.0140	$150.68	182,158.21	0.0141	$2,562.36	284,777	0.0140	$3,996.37	284,777	0.0139	$3,967.89	**$10,677.31**
Secondary Fridge Retirement Pilot	2006	10,280.28	0.0140	$144.61	10,280.28	0.0141	$144.61	10,280	0.0140	$144.27	10,280	0.0139	$143.24	**$576.72**
Every Kilowatt Counts (fall)	2006	430,019.07	0.0140	$6,048.93	430,019.07	0.0141	$6,048.93	430,019	0.0140	$6,034.60	430,019	0.0139	$5,991.60	**$24,124.07**
Great Refrigerator Roundup	2007 & 2008				174,008.72	0.0141	$2,447.72	351,398	0.0140	$4,931.28	351,398	0.0139	$4,896.15	**$12,275.15**
Aboriginal – Pilot	2007 & 2008				0.00	0.0141	$0.00	0	0.0140	$0.00	0	0.0139	$0.00	**$0.00**
Every Kilowatt Counts	2007				758,209.60	0.0141	$10,665.48	749,251	0.0140	$10,514.49	749,251	0.0139	$10,439.56	**$31,619.53**
peaksaver®	2007 & 2008				0.00	0.0141	$0.00	0	0.0140	$0.00	0	0.0139	$0.00	**$0.00**
Summer Savings	2007				454,501.19	0.0141	$6,393.32	454,501	0.0140	$6,378.17	0	0.0139	$0.00	**$12,771.48**
Affordable Housing – Pilot	2007				93,753.67	0.0141	$1,318.80	93,754	0.0140	$1,315.68	93,754	0.0139	$1,306.30	**$3,940.78**
Social Housing – Pilot	2007				68,353.88	0.0141	$961.51	68,354	0.0140	$959.23	68,354	0.0139	$952.40	**$2,873.14**
Energy Efficiency Assistance for Houses – Pilot	2007				0.00	0.0141	$0.00	0	0.0140	$0.00	0	0.0139	$0.00	**$0.00**
Summer Sweepstakes	2008							0	0.0140	$0.00	0	0.0139	$0.00	**$0.00**
Every Kilowatt Counts Power Savings Event	2008							256,618	0.0140	$3,601.21	254,509	0.0139	$3,546.16	**$7,147.37**
		737,107.70		**$10,368.65**	**2,457,381.00**		**$34,567.16**	**2,985,048.79**		**$41,890.18**	**2,528,438.14**		**$35,229.57**	**$122,055.56**
Commercial														
OPA Conservation Programs														
Toronto Comprehensive	2007 & 2008				0.00	0.0093	$0.00	0	0.0092	$0.00	0	0.0092	$0.00	**$0.00**
Electricity Retrofit Incentive Program	2007 & 2008				0.00	0.0093	$0.00	142,653	0.0092	$1,317.16	142,653	0.0092	$1,312.40	**$2,629.56**
High Performance New Construction	2008							2,090	0.0092	$19.30	2,090	0.0092	$19.23	**$38.53**
Power Savings Blitz	2008							5,186	0.0092	$47.88	5,186	0.0092	$47.71	**$95.59**
Chiller Plant Re-Commissioning	2008													**$0.00**
Demand Response 1 (kW)	2006 & 2007 & 2008	1,430.45	1.5636	$2,010.83	2,312	1.5777	$3,636.17	2,312	1.5682	$3,632.74	0	1.5717	$0.00	**$9,279.74**
Other Demand Response (kW)	2007 & 2008	0.00	1.5636	$0.00	192	1.5777	$302.44	213	1.5682	$334.29	0	2.5717	$0.00	**$636.73**
Demand Response 3 (kW)	2008	0.00	1.5636	$0.00	0	1.5777	$0.00	581	1.5682	$913.71	0	3.5717	$0.00	**$913.71**
LDC Custom	2008													**$0.00**
Other Customer Based Generation	2008													**$0.00**
Renewable Energy Standard Offer Program (RESOP)	2007 & 2008													**$0.00**
Total OPA Prgograms		**1,430.45**		**$2,010.83**	**2,503.89**		**$3,938.62**	**153,034.71**		**$6,265.07**	**149,928.67**		**$1,379.34**	**$13,593.86**
Grand Total All Programs		**738,538.15**		**$12,379.48**	**6,996,203.07**		**$103,690.43**	**13,265,066.68**		**$191,642.98**	**12,805,349.98**		**$179,083.29**	**$486,796.17**