

LRAM RECOVERY

Summary

Norfolk submits the following application for the approval and recovery of historical Lost Revenue Mechanism (LRAM) amounts related to 2005-2009 Conservation and Demand Management (CDM) activities between January 1 2011 and April 30 2012, as well as 2010 CDM activities between January 1 2010 and April 30 2012. A previous LRAM claim submitted by Norfolk (found within rates case EB-2011-0049) included all lost revenue before January 1 2011 from 2005-2009 CDM programs.

It is requested that the LRAM claim be recovered through a rate rider over a one-year period beginning May 1 2012. Total amount for recovery is \$135,137, including carrying charges of \$1,727. This LRAM claim is based on final results from 2010 OPA programs. It updates and replaces the LRAM claim of \$179,360 originally filed in OEB case number EB-2011-0272, which was based on estimates of 2010 OPA program results. All other calculations between the LRAM originally filed in EB-2011-0272 and the updated LRAM claim remain the same.

Amounts for LRAM recovery are summarized in Table 8.1.

Table 8.1: Summary of Requested LRAM Amounts

	LRAM	LRAM Carrying charges	Total
Residential	\$81,959	\$1,031	\$82,991
GS < 50 kW	\$39,625	\$560	\$40,185
GS 50 to 4,999 kW	\$11,826	\$135	\$11,962
Total	\$133,411	\$1,727	\$135,137

NOTES:

1. Totals may differ from the sum of rows or columns due to rounding
2. Carrying charges were calculated using OEB approved rates.

LRAM Amounts

The LRAM adjusts for volumetric variances between actual CDM results and the corresponding quantities used in rate setting. The requested LRAM amounts are derived from savings composed of Ontario Power Authority (OPA) and third tranche programs. Between the current LRAM claim and Norfolk's previous LRAM claim, all lost revenues from 2005-2010 CDM programs are accounted for up to April 30 2012.

None of the load reductions estimated were factored into the load forecast underpinning 2009, 2010 or 2011 rates. The calculation of the load reduction is based on the energy and demand savings and the lifespan of the technology by rate class. The reduction in demand related to these programs has been incorporated into the rate forecast for May 1, 2012 onward. However, energy savings related to OPA programs delivered in 2011 have not been captured. Load losses from CDM programs for the period of the LRAM claim, net of free riders, are shown in Table 8.2. Resulting lost revenues are summarized in Table 8.3.

Verification and Evaluation of Results

NPDI engaged IndEco Strategic Consulting Inc. to review its CDM program results and aid in the calculation of recovery amounts using OEB guidelines. IndEco reported that the values provided in this application are considered valid. The full report prepared by IndEco is available as Appendix E.

Recovery

NPDI requests recovery of the LRAM amounts by way of volumetric rate riders over a one-year period, effective May 1 2012, with the foregone revenue from each customer class allocated to that class for recovery.

Table 8.4 sets the corresponding amounts by class, as well as the corresponding rate rider based on forecasted 2012 volume.

Table 8.4: LRAM/SSM Amounts and Rate Riders by Class

	LRAM	Carrying charges	Total	Unit	2012 Forecasted Billed kWh / kW	Proposed Rate Rider
Residential	\$81,959	\$1,031	\$82,991	kWh	148,067,203	\$0.0006
GS < 50	\$39,625	\$560	\$40,185	kWh	61,517,376	\$0.0007
GS > 50	\$11,826	\$135	\$11,962	kW	346,440	\$0.0345
Total	\$133,411	\$1,727	\$135,137			

Impact on customer bills has been included in the Rate Generator Model and summarized in the applicant's Manager's Summary.

Table 8.2: Cumulative Net Energy and Demand Savings By Rate Class through April 30 2012 from CDM Programs

Funding source	Program	Year	Residential (kWh)	GS < 50 kW (kWh)	GS > 50 kW (kW-mo)
OPA	Cool Savings Rebate	2010	232,949		
	Cool Savings Rebate Program	2006	40,740		
		2007	129,988		
		2008	93,434		
		2009	126,803		
	ERIP	2007		13,775	238
		2008		11,578	78
		2009		295,250	1,763
		2010		6,494	55
	Every Kilowatt Counts - PSE	2008	496,298		
		2009	211,492		
		2010	149,949		
	Great Refrigerator Roundup	2007	93,747		
		2008	213,870		
		2009	173,684		
		2010	362,806		
	High Performance New Construction	2008		1,029	
		2009		31,415	
		2010		190,906	
	Multifamily Energy Efficiency Rebates	2010		25,913	
	peaksaver	2007			1
		2008	2,540	359	54
		2009	1,097	155	55
		2010	214	641	
	Power Savings Blitz	2009		1,500,828	
		2010		728,137	
	Secondary Fridge Retirement Pilot	2006	19,450		
Social Housing - Pilot	2007	51,591			
Summer Sweepstakes	2008	187,027			
OPA subtotal			2,587,677	2,806,480	2,243
Third Tranche	CFL Education and Giveaway	2006	48,983		
		2007	426,869		
		2008	160,076		
	Energy Audits for Major Customers	2005			86
		2006			970
Energy Star Appliance	2007	1,809			

Funding source	Program	Year	Residential (kWh)	GS < 50 kW (kWh)	GS > 50 kW (kW-mo)
	Rebate Program	2008	33,725		
	Energy Star Window Program	2005	5,990		
	Every Kilowatt Counts	2006	200,786		
		2007	560,717		
	LED Light Exchange	2006	11,813		
		2007	35,438		
	Lighten Your Electricity Bill	2005	148,135		
	Norfolk Power Facility Lighting Program	2007		50,303	
	Res Customer Program - Education	2007	2,668		
		2008	2,668		
	Water Heater Replacement Program	2005	47,819		
		2007	38,484		
Third Tranche subtotal			1,725,978	50,303	1,056
Total			4,313,655	2,856,782	3,299

NOTES:

1. Totals may differ from the sum of rows or columns due to rounding

Table 8.3: Summary of LRAM Claim by Program and Rate Class

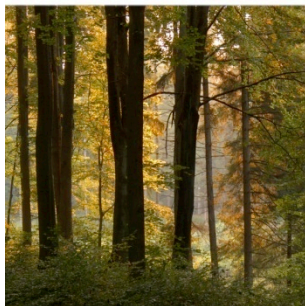
Funding	Program	Year	Residential	GS < 50 kW	GS 50 to 4,999 kW	LRAM	
OPA	Cool Savings Rebate	2010	\$4,506	\$0	\$0	\$4,506	
	Cool Savings Rebate Program	2006	\$784	\$0	\$0	\$784	
		2007	\$2,500	\$0	\$0	\$2,500	
		2008	\$1,797	\$0	\$0	\$1,797	
		2009	\$2,439	\$0	\$0	\$2,439	
	ERIP	2007	\$0	\$194	\$876	\$1,070	
		2008	\$0	\$77	\$142	\$219	
		2009	\$0	\$4,154	\$6,474	\$10,628	
		2010	\$0	\$92	\$204	\$296	
	Every Kilowatt Counts - PSE	2008	\$9,547	\$0	\$0	\$9,547	
		2009	\$4,068	\$0	\$0	\$4,068	
		2010	\$2,900	\$0	\$0	\$2,900	
	Great Refrigerator Roundup	2007	\$1,803	\$0	\$0	\$1,803	
		2008	\$4,113	\$0	\$0	\$4,113	
		2009	\$3,340	\$0	\$0	\$3,340	
		2010	\$7,018	\$0	\$0	\$7,018	
	High Performance New Construction	2008	\$0	\$14	\$0	\$14	
		2009	\$0	\$442	\$0	\$442	
		2010	\$0	\$2,701	\$0	\$2,701	
	Multifamily Energy Efficiency Rebates	2010	\$0	\$367	\$0	\$367	
	peaksaver	2008	\$49	\$5	\$198	\$251	
		2007	\$0	\$0	\$3	\$3	
		2009	\$21	\$2	\$201	\$225	
		2010	\$4	\$9	\$0	\$13	
	Power Savings Blitz	2009	\$0	\$21,117	\$0	\$21,117	
		2010	\$0	\$10,304	\$0	\$10,304	
	Secondary Fridge Retirement Pilot	2006	\$375	\$0	\$0	\$375	
	Social Housing - Pilot	2007	\$992	\$0	\$0	\$992	
	Summer Sweepstakes	2008	\$3,597	\$0	\$0	\$3,597	
	OPA subtotal			\$49,853	\$39,479	\$8,098	\$97,430
	Third Tranche	CFL Education and Giveaway	2006	\$939	\$0	\$0	\$939
2007			\$8,183	\$0	\$0	\$8,183	
2008			\$3,069	\$0	\$0	\$3,069	
Energy Audits for Major Customers		2005	\$0	\$0	\$315	\$315	
		2006	\$0	\$0	\$3,549	\$3,549	

Funding	Program	Year	Residential	GS < 50 kW	GS 50 to 4,999 kW	LRAM
	Energy Star Appliance Rebate Program	2007	\$35	\$0	\$0	\$35
		2008	\$646	\$0	\$0	\$646
	Energy Star Window Program	2005	\$115	\$0	\$0	\$115
	Every Kilowatt Counts	2006	\$3,862	\$0	\$0	\$3,862
		2007	\$10,785	\$0	\$0	\$10,785
	LED Light Exchange	2006	\$228	\$0	\$0	\$228
		2007	\$680	\$0	\$0	\$680
	Lighten Your Electricity Bill	2005	\$2,840	\$0	\$0	\$2,840
	Norfolk Power Facility Lighting Program	2007	\$0	\$705	\$0	\$705
	Res Customer Program - Education	2007	\$51	\$0	\$0	\$51
		2008	\$51	\$0	\$0	\$51
	Water Heater Replacement Program	2005	\$917	\$0	\$0	\$917
		2007	\$738	\$0	\$0	\$738
Third Tranche subtotal			\$33,137	\$705	\$3,864	\$37,707
Total			\$82,991	\$40,185	\$11,962	\$135,137

NOTES:

1. Totals may differ from the sum of rows or columns due to rounding

Norfolk Power Distribution Inc. LRAM



Third party review:

Norfolk Power Distribution Inc. LRAM claims



This document was prepared for Norfolk Power Distribution Inc. by IndEco Strategic Consulting Inc.

For additional information about this document, please contact:

IndEco Strategic Consulting Inc.
77 Mowat Avenue, Suite 412
Toronto, ON, Canada
M6K 3E3

Tel: 416 532-4333
E-mail: info@indecocom

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IndEco report B1699

18 November 2011

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Executive summary

A third party review of the Conservation and Demand Management (CDM) programs run by Norfolk Power Distribution Inc. (NPDI) was required as part of its application to the Ontario Energy Board (OEB) for collection of Lost Revenue Adjustment Mechanism (LRAM) claims.

IndEco Strategic Consulting Inc. (IndEco) acted as third party reviewer by examining the participant rates, equipment specifications, and calculations that enter into the energy savings associated with NPDI's CDM portfolio. The review was completed as detailed in the OEB *Guidelines for Electricity Distributor Conservation and Demand Management*.

The third party review included lost revenue for NPDI's 2005-2009 CDM activities between January 1 2011 and April 30 2012, as well as for 2010 CDM activities between January 1 2010 and April 30 2012. A previous LRAM claim submitted by NPDI (found within rates case EB-2011-0049) included all lost revenue before January 1 2011 from 2005-2009 CDM programs.

Lost revenues are calculated using estimated energy savings or monthly peak demand savings using the best available and most current input assumptions. In the span of the LRAM claim, these savings totalled approximately 4 GWh in the residential rate class and 2 GWh in the GS < 50 kW rate class. Savings in the GS 50 to 4,999 kW rate class totalled approximately 3.2 MW-months.

IndEco concludes that NPDI's electricity rates should be adjusted to reflect an LRAM claim of \$135,137. This LRAM claim is based on final results from 2010 OPA programs. It updates and replaces the LRAM claim of \$179,360 originally filed in OEB case number EB-2011-0272, which was based on estimates of 2010 OPA program results. All other calculations between the LRAM originally filed in EB-2011-0272 and the updated LRAM claim found within this report remain the same.

Introduction

What is the lost revenue adjustment mechanism (LRAM)

Lost Revenue Adjustment Mechanism claims can benefit a local distribution company (LDC) by removing the disincentive for energy conservation.

LRAM is designed to ensure that the LDC does not have a disincentive to promote energy efficiency and energy conservation by compensating the LDC for revenues lost as a result of its conservation initiatives. Calculations require information on what the electricity use would have been in the absence of the LDC initiatives, and what it was with the LDC initiative. Some of the inputs to the calculation include: hours the equipment is used, wattage rating of the old and new equipment, and lifetime of the equipment if it is less than the period over which the LRAM is being claimed. Also required are the number of participants, or pieces of equipment installed, and an estimate of the free-rider rate, which is the fraction of the savings that would have occurred anyway, in the absence of the program. These savings are estimated for each rate class, and revenue losses are determined by multiplying those losses by the cost of distribution per unit for each rate class. Carrying charges are calculated using deferral and variance account interest rates prescribed by the OEB.¹

Sources of information

Although these input data requirements are sometimes measured, they sometimes are values from published sources, or assumptions provided by the Ontario Energy Board, or other reputable agencies. For some types of programs, such as large scale distribution of compact fluorescent bulbs, it would be impractical to measure the hours each bulb is used, for example, and therefore these published sources provide an average value that is typical for this equipment type.

In some cases, estimated values for a particular component of the calculation are available from multiple sources. In these cases, information is taken from the sources highest in the information hierarchy. The information hierarchy (from greatest to least confidence) for LRAM calculations is:

- 1 Information or results from an OPA conducted or sponsored evaluation of the specific program (e.g. OPA 2010)
- 2 Information or results from a third-party evaluation of the specific program

¹ For prescribed interest rates, see <http://www.oeb.gov.on.ca/OEB/Industry/Rules+and+Requirements/Rules+Codes+Guidelines+and+Forms/Prescribed+Interest+Rates>

- 3 Information or results from a site-specific assessment of the application of the technology, including on-site measurement or survey of the specific customer
- 4 Manufacturer specifications for energy use/demand of the specific technology installed
- 5 Information from the OPA's most current measures and assumptions lists (OPA 2011a, OPA 2011b)
- 6 Information from earlier OPA measures and assumptions lists
- 7 Information from the OEB's TRC guide list of measures and assumptions (OEB 2008b).

Scope

This review examines the measures, energy savings, and equipment specifications for third-tranche programs and programs run under contract to the Ontario Power Authority (OPA) between January 1 2010 and April 30 2012. Lost revenue were calculated for NPDI's 2005-2009 CDM activities between January 1 2011 and April 30 2012, as well as for 2010 CDM activities between January 1 2010 and April 30 2012. A previous LRAM claim submitted by NPDI (found within rates case EB-2011-0049) included all lost revenue before January 1 2011 from 2005-2009 CDM programs.

This LRAM claim is based on final results from 2010 OPA programs. It updates and replaces the LRAM claim of \$179,360 originally filed in OEB case number EB-2011-0272, which was based on estimates of 2010 OPA program results. All other calculations between the LRAM originally filed in EB-2011-0272 and the updated LRAM claim found within this report remain the same.

Requested LRAM amounts

LRAM inputs

Inputs used to calculate energy savings for each prescriptive and custom measure were reviewed to ensure accuracy and suitability.

IndEco finds that appropriate measure specifications were used to calculate prescriptive program energy savings. For the calculation of LRAM claims, prescriptive measures used values provided by the 2011 OPA Measures and Assumptions lists (OPA 2011a and OPA 2011b).

Exceptions to the sources of prescriptive measure input assumptions used in the calculation of LRAM claims are as follows:

- The '2006-2009 Final OPA CDM results Norfolk Power Distribution Inc.' and the '2010 Final OPA CDM Results Norfolk Power Distribution Inc.' were used as a source of inputs for OPA funded CDM programs. These evaluated results have been adopted in accordance with Board recommendations that "The Board would consider an evaluation by the OPA or a third party designated by the OPA to be sufficient."² OPA advises that these estimates are prepared in a manner consistent with OPA current practice, and are the same values used to report progress against provincial conservation targets.

Custom programs were substantiated through documentation such as invoices of equipment type, wattage, and savings provided by program-specific evaluations. All custom inputs remain unchanged from NPDI's previous board-approved LRAM claim (within EB-2011-0049).

A summary list of the assumption sources used for the calculation of the LRAM claim is provided in Table 1.

The measure inputs used to calculate LRAM claims can be found in Table 7 in Appendix A.

Table 2 and Table 3 show the net and gross energy savings or demand reductions of each program by rate class. OPA program energy savings in Table 2 and Table 3 were acquired directly from spreadsheets provided by the OPA.

Energy savings were converted to LRAM values by using NPDI distribution rates. Distribution rates are in Table 4.

The requested LRAM is presented in Table 5.

² OEB 2008a. Guidelines for Electricity Distributor Conservation and Demand Management. p.28

Table 1 – Source of information used for the calculation of the LRAM claim

Funding source	Rate class	Program	Source of LRAM inputs	
Third Tranche	GS < 50 kW and GS > 50 kW	2005 Energy Audits for Major Customers	OPA 2011b and program-specific evaluation	
	Residential	2005 Energy Star Window Program	Program-specific evaluation	
	Residential	2005 Water Heater Replacement Program	Program-specific evaluation	
	Residential	2005 Lighten Your Electricity Bill	OPA 2011a	
	GS < 50 kW and GS > 50 kW	2006 Energy Audits for Major Customers	OPA 2011a, OPA 2011b and program-specific evaluation	
	Residential	2006 CFL Education and Giveaway	OPA 2011a	
	Residential	2006 LED Light Exchange	OPA 2011a	
	Residential	2006 Every Kilowatt Counts	OPA 2010	
	Residential	2007 Water Heater Replacement Program	Program-specific evaluation	
	GS < 50 kW	2007 Norfolk Power Facility Lighting Program	OPA 2011b	
	Residential	2007 CFL Education and Giveaway	OPA 2011a	
	Residential	2007 LED Light Exchange	OPA 2011a	
	Residential	2007 Every Kilowatt Counts	OPA 2010	
	Residential	2007 Energy Star Appliance Rebate Program	OPA 2011a	
	Residential	2007 Res Customer Program - Education	OPA 2011a	
	Residential	2008 CFL Education and Giveaway	OPA 2011a	
	Residential	2008 Energy Star Appliance Rebate Program	OPA 2011a	
	Residential	2008 Res Customer Program - Education	OPA 2011a	
	OPA	Residential	2006 Cool Savings Rebate Program	OPA 2010
		Residential	2006 Secondary Fridge Retirement Pilot	OPA 2010
Residential		2007 Great Refrigerator Roundup	OPA 2010	
Residential		2007 Cool Savings Rebate Program	OPA 2010	
Residential, GS < 50 kW and GS > 50 kW		2007 peaksaver	OPA 2010	
Residential		2007 Summer Savings	OPA 2010	
Residential		2007 Social Housing - Pilot	OPA 2010	
GS < 50 kW and GS > 50 kW		2007 ERIP	OPA 2010	
Residential		2008 Great Refrigerator Roundup	OPA 2010	
Residential		2008 Cool Savings Rebate Program	OPA 2010	
Residential		2008 Summer Sweepstakes	OPA 2010	
Residential		2008 Every Kilowatt Counts - PSE	OPA 2010	
Residential, GS < 50 kW and GS > 50 kW		2008 peaksaver	OPA 2010	
GS < 50 kW and GS > 50 kW		2008 ERIP	OPA 2010	

Funding source	Rate class	Program	Source of LRAM inputs
	Residential	2008 High Performance New Construction	OPA 2010
	Residential	2009 Great Refrigerator Roundup	OPA 2010
	Residential	2009 Cool Savings Rebate Program	OPA 2010
	Residential	2009 Every Kilowatt Counts - PSE	OPA 2010
	Residential, GS < 50 kW and GS > 50 kW	2009 peaksaver	OPA 2010
	GS < 50 kW and GS > 50 kW	2009 ERIP	OPA 2010
	GS < 50 kW	2009 High Performance New Construction	OPA 2010
	GS < 50 kW	2009 Power Savings Blitz	OPA 2010
	Residential	2010 Great Refrigerator Roundup	OPA 2011c
	Residential	2010 Cool Savings Rebate Program	OPA 2011c
	Residential	2010 Every Kilowatt Counts - PSE	OPA 2011c
	Residential, GS < 50 kW	2010 peaksaver	OPA 2011c
	GS < 50 kW and GS > 50 kW	2010 ERIP	OPA 2011c
	GS < 50 kW	2010 High Performance New Construction	OPA 2011c
	GS < 50 kW	2010 Power Savings Blitz	OPA 2011c

Table 2 – Cumulative net program energy savings and demand savings by rate class through April 30 2012

Funding source	Program	Year	Residential (kWh)	GS < 50 kW (kWh)	GS > 50 kW (kW-mo)	
OPA	Cool Savings Rebate	2010	232,949			
		2006	40,740			
		2007	129,988			
		2008	93,434			
		2009	126,803			
	ERIP	2007			13,775	238
		2008			11,578	78
		2009			295,250	1,763
		2010			6,494	55
	Every Kilowatt Counts - PSE	2008	496,298			
		2009	211,492			
		2010	149,949			
	Great Refrigerator Roundup	2007	93,747			
		2008	213,870			
		2009	173,684			
		2010	362,806			
	High Performance New Construction	2008			1,029	
		2009			31,415	
		2010			190,906	
	Multifamily Energy Efficiency Rebates	2010			25,913	
	peaksaver	2007				1
		2008	2,540		359	54
		2009	1,097		155	55
		2010	214		641	
	Power Savings Blitz	2009			1,500,828	
		2010			728,137	
	Secondary Fridge Retirement Pilot	2006	19,450			
Social Housing - Pilot	2007	51,591				
Summer Sweepstakes	2008	187,027				
OPA subtotal			2,587,677	2,806,480	2,243	
Third Tranche	CFL Education and Giveaway	2006	48,983			
		2007	426,869			
		2008	160,076			
	Energy Audits for Major Customers	2005				86
		2006				970
	Energy Star Appliance Rebate	2007	1,809			
	2008	33,725				

Funding source	Program	Year	Residential (kWh)	GS < 50 kW (kWh)	GS > 50 kW (kW-mo)
	Program				
	Energy Star Window Program	2005	5,990		
	Every Kilowatt Counts	2006	200,786		
		2007	560,717		
	LED Light Exchange	2006	11,813		
		2007	35,438		
	Lighten Your Electricity Bill	2005	148,135		
	Norfolk Power Facility Lighting Program	2007		50,303	
	Res Customer Program - Education	2007	2,668		
		2008	2,668		
	Water Heater Replacement Program	2005	47,819		
		2007	38,484		
	Third Tranche subtotal		1,725,978	50,303	1,056
	Total		4,313,655	2,856,782	3,299

1. Rates for general service rate class of customers rated at greater than 50 kW are on a monthly demand basis (kW), not an energy one (kWh). Lost revenue results when the customer's monthly peak demand is lower than it otherwise would be as a result of the CDM initiatives. These are measured in kW-month, which is the reduction within one month of the peak kilowatt demand. (So a 2 kW-month reduction could be realized by reducing the peak demand in the month by 1 kW for two months, or by 2 kW for one month.) Excluded are peak demand reductions associated with demand response programs, which are not anticipated to impact on revenues.

Table 3 – Cumulative gross program energy savings and peak demand savings by rate class through April 30 2012

Funding source	Program	Year	Residential (kWh)	GS < 50 kW (kWh)	GS > 50 kW (kW-mo)	
OPA	Cool Savings Rebate	2010	332,784			
		2006	45,266			
		2007	243,424			
		2008	174,237			
		2009	296,901			
	ERIP	2007			15,305	264
		2008			11,578	78
		2009			355,723	2,124
		2010			9,278	79
	Every Kilowatt Counts - PSE	2008	1,228,324			
		2009	543,871			
		2010	214,213			
	Great Refrigerator Roundup	2007	193,449			
		2008	393,994			
		2009	326,226			
		2010	518,294			
	High Performance New Construction	2008			1,471	
		2009			44,879	
		2010			272,723	
	Multifamily Energy Efficiency Rebates peaksaver	2010			35,178	
		2007				1
		2008	2,823		398	60
		2009	1,218		172	61
		2010	235		705	
	Power Savings Blitz	2009			1,579,819	
		2010			1,040,196	
	Secondary Fridge Retirement Pilot	2006	21,611			
	Social Housing - Pilot	2007	51,591			
	Summer Sweepstakes	2008	239,779			
	OPA subtotal			4,828,240	3,367,424	2,667
	Third Tranche	CFL Education and Giveaway	2006	69,976		
			2007	609,813		
			2008	228,680		
Energy Audits for Major Customers		2005				172
		2006				1,101
Energy Star Appliance Rebate Program	2007	2,584				
	2008	48,179				

Funding source	Program	Year	Residential (kWh)	GS < 50 kW (kWh)	GS > 50 kW (kW-mo)
	Energy Star Window Program	2005	8,557		
	Every Kilowatt Counts	2006	223,095		
		2007	782,651		
	LED Light Exchange	2006	16,875		
		2007	50,625		
	Lighten Your Electricity Bill	2005	211,621		
	Norfolk Power Facility Lighting Program	2007		50,303	
	Res Customer Program - Education	2007	3,811		
		2008	3,811		
	Water Heater Replacement Program	2005	47,819		
		2007	38,484		
Third Tranche subtotal			2,346,581	50,303	1,273
Total			7,174,820	3,417,727	3,940

Table 4 – Distribution rates per rate class

Rate Class	Units	2010	2011
Residential	\$/kWh	0.0190	0.0190
General Service < 50 kW	\$/kWh	0.0139	0.0139
General Service 50 to 4,999 kW	\$/kW	3.6220	3.6285

Table 5 – Summary of requested LRAM amounts in 2012\$

Funding	Program	Year	Residential	GS < 50 kW	GS 50 to 4,999 kW	LRAM	
OPA	Cool Savings Rebate	2010	\$4,506	\$0	\$0	\$4,506	
		2006	\$784	\$0	\$0	\$784	
		2007	\$2,500	\$0	\$0	\$2,500	
		2008	\$1,797	\$0	\$0	\$1,797	
		2009	\$2,439	\$0	\$0	\$2,439	
	ERIP	2007	\$0	\$194	\$876	\$1,070	
		2008	\$0	\$77	\$142	\$219	
		2009	\$0	\$4,154	\$6,474	\$10,628	
		2010	\$0	\$92	\$204	\$296	
	Every Kilowatt Counts - PSE	2008	\$9,547	\$0	\$0	\$9,547	
		2009	\$4,068	\$0	\$0	\$4,068	
		2010	\$2,900	\$0	\$0	\$2,900	
	Great Refrigerator Roundup	2007	\$1,803	\$0	\$0	\$1,803	
		2008	\$4,113	\$0	\$0	\$4,113	
		2009	\$3,340	\$0	\$0	\$3,340	
		2010	\$7,018	\$0	\$0	\$7,018	
	High Performance New Construction	2008	\$0	\$14	\$0	\$14	
		2009	\$0	\$442	\$0	\$442	
		2010	\$0	\$2,701	\$0	\$2,701	
	Multifamily Energy Efficiency Rebates	2010	\$0	\$367	\$0	\$367	
		peaksaver	2008	\$49	\$5	\$198	\$251
			2007	\$0	\$0	\$3	\$3
			2009	\$21	\$2	\$201	\$225
			2010	\$4	\$9	\$0	\$13
		Power Savings Blitz	2009	\$0	\$21,117	\$0	\$21,117
	2010		\$0	\$10,304	\$0	\$10,304	
	Secondary Fridge Retirement Pilot	2006	\$375	\$0	\$0	\$375	
	Social Housing - Pilot	2007	\$992	\$0	\$0	\$992	
	Summer Sweepstakes	2008	\$3,597	\$0	\$0	\$3,597	
	OPA subtotal			\$49,853	\$39,479	\$8,098	\$97,430
Third Tranche	CFL Education and Giveaway	2006	\$939	\$0	\$0	\$939	
		2007	\$8,183	\$0	\$0	\$8,183	
		2008	\$3,069	\$0	\$0	\$3,069	
	Energy Audits for Major Customers	2005	\$0	\$0	\$315	\$315	
		2006	\$0	\$0	\$3,549	\$3,549	
	Energy Star Appliance Rebate Program	2007	\$35	\$0	\$0	\$35	
		2008	\$646	\$0	\$0	\$646	
Energy Star Window	2005	\$115	\$0	\$0	\$115		

Funding	Program	Year	Residential	GS < 50 kW	GS 50 to 4,999 kW	LRAM
	Program					
	Every Kilowatt Counts	2006	\$3,862	\$0	\$0	\$3,862
		2007	\$10,785	\$0	\$0	\$10,785
	LED Light Exchange	2006	\$228	\$0	\$0	\$228
		2007	\$680	\$0	\$0	\$680
	Lighten Your Electricity Bill	2005	\$2,840	\$0	\$0	\$2,840
	Norfolk Power Facility Lighting Program	2007	\$0	\$705	\$0	\$705
	Res Customer Program - Education	2007	\$51	\$0	\$0	\$51
		2008	\$51	\$0	\$0	\$51
	Water Heater Replacement Program	2005	\$917	\$0	\$0	\$917
		2007	\$738	\$0	\$0	\$738
	Third Tranche subtotal		\$33,137	\$705	\$3,864	\$37,707
	Total		\$82,991	\$40,185	\$11,962	\$135,137

Findings

IndEco has reviewed the input values and custom project justifications used to calculate the energy savings resulting from 2005-2010 programs over the appropriate LRAM claim period.

IndEco has concluded that sufficient detail and documentation exists to recommend increasing Norfolk Power Distribution Inc.'s distribution rates in order to collect \$135,137 in LRAM, allocated by rate class as shown in Table 6.

Table 6 – LRAM amounts by rate class in 2012\$

Rate class	LRAM
Residential	\$82,991
General Service < 50 kW	\$40,185
General Service 50 to 4,999 kW	\$11,962
Sentinel Lights	\$0
Street Lighting	\$0
Unmetered Scattered Load	\$0
Total	\$135,137

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Appendix A. Inputs used for TRC and energy savings calculations

Table 7 – LRAM inputs and contribution to the total LRAM for all measures.

Program	Energy Efficient Measure	Units	Free rider rate	Annual energy savings (kWh/a)	LRAM (2012\$)	Assumption Source
2005 Energy Star Window Program	Energy Star Windows	185	30%	27	\$115	Program-specific analysis
2005 Water Heater Replacement Program	40 Gallon Efficient Tanks	104	0%	219	\$750	Program-specific analysis
2005 Water Heater Replacement Program	60 Gallon Efficient Tanks	24	0%	210	\$166	Program-specific analysis
2005 Lighten Your Electricity Bill	15W CFL	1,338	30%	44	\$1,369	OPA 2011a
2005 Lighten Your Electricity Bill	Pstat - Space Heating	20	30%	2,151	\$992	OPA 2011a
2005 Lighten Your Electricity Bill	Pstat - Space Cooling	52	30%	203	\$243	OPA 2011a
2005 Lighten Your Electricity Bill	Outdoor Timer	32	30%	68	\$50	OPA 2011a
2005 Lighten Your Electricity Bill	Indoor Timer	8	30%	219	\$40	OPA 2011a
2005 Lighten Your Electricity Bill	Indoor Timer for AC	7	30%	109	\$18	2006 SeeLine
2005 Lighten Your Electricity Bill	Ceiling Fan	45	30%	123	\$127	OPA 2011a
2006 CFL Education and Giveaway	15W CFL	918	30%	44	\$939	OPA 2011a
2006 LED Light Exchange	Seasonal LED Lights - 5W	2,500	30%	14	\$228	OPA 2011a
2007 Norfolk Power Facility Lighting Program	2Lamp - T8 23W	152	0%	80	\$291	OPS 2011b

Program	Energy Efficient Measure	Units	Free rider rate	Annual energy savings (kWh/a)	LRAM (2012\$)	Assumption Source
2007 Norfolk Power Facility Lighting Program	4Lamp - T8 32W	108	0%	159	\$414	OPS 2011b
2007 CFL Education and Giveaway	15W CFL	8,000	30%	44	\$8,183	OPA 2011a
2007 LED Light Exchange	Seasonal LED Lights - 5W	2,500	30%	14	\$680	OPA 2011a
2007 Energy Star Appliance Rebate Program	Energy Star Dishwasher	1	30%	7	\$0	OPA 2011a
2007 Energy Star Appliance Rebate Program	Energy Star Freezer	4	30%	46	\$4	OPA 2011a
2007 Energy Star Appliance Rebate Program	Energy Star Refrigerator	2	30%	113	\$5	OPA 2011a
2007 Energy Star Appliance Rebate Program	Energy Star Front Load Washer	6	30%	181	\$25	OPA 2011a
2007 Res Customer Program - Education	15W CFL	50	30%	44	\$51	OPA 2011a
2007 Water Heater Replacement Program	40 Gallon Efficient Tanks	84	0%	219	\$606	Program-specific analysis
2007 Water Heater Replacement Program	60 Gallon Efficient Tanks	19	0%	210	\$132	Program-specific analysis
2008 CFL Education and Giveaway	15W CFL	3,000	30%	44	\$3,069	OPA 2011a
2008 Energy Star Appliance Rebate Program	Energy Star Dishwasher	38	30%	7	\$6	OPA 2011a
2008 Energy Star Appliance Rebate	Energy Star Freezer	15	30%	46	\$16	OPA 2011a

Program	Energy Efficient Measure	Units	Free rider rate	Annual energy savings (kWh/a)	LRAM (2012\$)	Assumption Source
Program						
2008 Energy Star Appliance Rebate Program	Energy Star Refrigerator	44	30%	113	\$114	OPA 2011a
2008 Energy Star Appliance Rebate Program	Energy Star Front Load Washer	122	30%	181	\$510	OPA 2011a
2008 Res Customer Program - Education	15W CFL	50	30%	44	\$51	OPA 2011a
2006 Every Kilowatt Counts	Electric Timers	130	10%	183	\$516	OPA 2010
2006 Every Kilowatt Counts	Programmable Thermostats	57	10%	216	\$265	OPA 2010
2006 Every Kilowatt Counts	Energy Star® Ceiling Fans	43	10%	141	\$132	OPA 2010
2006 Every Kilowatt Counts	Seasonal Light Emitting Diode Light String	1,660	10%	31	\$1,105	OPA 2010
2006 Every Kilowatt Counts	Programmable Thermostats	109	10%	522	\$1,236	OPA 2010
2006 Every Kilowatt Counts	Dimmers	87	10%	139	\$260	OPA 2010
2006 Every Kilowatt Counts	Indoor Motion Sensors	31	10%	209	\$140	OPA 2010
2006 Every Kilowatt Counts	Programmable Baseboard Thermostats	7	10%	1,466	\$207	OPA 2010
2006 Cool Savings Rebate Program	Energy Star® Air Conditioner	50	10%	351	\$380	OPA 2010
2006 Cool Savings Rebate Program	Programmable Thermostats	38	10%	159	\$131	OPA 2010
2006 Cool Savings Rebate Program	Air Conditioner Tune-Up	34	10%	369	\$272	OPA 2010

Program	Energy Efficient Measure	Units	Free rider rate	Annual energy savings (kWh/a)	LRAM (2012\$)	Assumption Source
2006 Secondary Fridge Retirement Pilot	Refrigerator Retirement	17	10%	1,200	\$363	OPA 2010
2006 Secondary Fridge Retirement Pilot	Freezer Retirement	1	10%	900	\$12	OPA 2010
2007 Great Refrigerator Roundup	Refrigerator	205	52%	745	\$1,438	OPA 2010
2007 Great Refrigerator Roundup	Freezer	61	50%	515	\$345	OPA 2010
2007 Great Refrigerator Roundup	Small Refrigerator	3	62%	490	\$11	OPA 2010
2007 Great Refrigerator Roundup	Small Freezer	2	62%	339	\$5	OPA 2010
2007 Great Refrigerator Roundup	Window Air Conditioner	2	57%	240	\$4	OPA 2010
2007 Cool Savings Rebate Program	ENERGY STAR® Central Air Conditioner	115	43%	152	\$241	OPA 2010
2007 Cool Savings Rebate Program	Programmable Thermostat	163	73%	55	\$59	OPA 2010
2007 Cool Savings Rebate Program	Furnace with Electronically Commutated Motor	180	41%	832	\$2,131	OPA 2010
2007 Cool Savings Rebate Program	Central Air Conditioning Tune Up	97	84%	235	\$69	OPA 2010
2007 Every Kilowatt Counts	15 W CFL	8,241	22%	43	\$6,645	OPA 2010
2007 Every Kilowatt Counts	20 W+ CFLs	1,342	22%	62	\$1,562	OPA 2010
2007 Every Kilowatt Counts	Project Porchlight CFLs	1,734	24%	43	\$1,362	OPA 2010
2007 Every Kilowatt Counts	Energy Star Ceiling Fan	66	45%	90	\$79	OPA 2010
2007 Every Kilowatt Counts	Solar Lights	1,058	87%	33	\$87	OPA 2010

Program	Energy Efficient Measure	Units	Free rider rate	Annual energy savings (kWh/a)	LRAM (2012\$)	Assumption Source
2007 Every Kilowatt Counts	Outdoor Motion Sensor	106	45%	160	\$224	OPA 2010
2007 Every Kilowatt Counts	Dimmer Switch	67	45%	24	\$21	OPA 2010
2007 Every Kilowatt Counts	Energy Star Light Fixtures	32	45%	123	\$52	OPA 2010
2007 Every Kilowatt Counts	SLEDs	2,183	51%	14	\$282	OPA 2010
2007 Every Kilowatt Counts	T8	63	23%	37	\$43	OPA 2010
2007 Every Kilowatt Counts	Programmable Thermostat	65	45%	75	\$64	OPA 2010
2007 Every Kilowatt Counts	Power Bar with Timer	29	23%	72	\$39	OPA 2010
2007 Every Kilowatt Counts	Lighting Control Devices	339	45%	72	\$324	OPA 2010
2007 peaksaver	Residential Programmable Thermostat	3	10%	0	\$3	OPA 2010
2007 Social Housing - Pilot	Custom Retrofit Projects	34	0%	1,229	\$992	OPA 2010
2007 ERIP	Custom Retrofit Projects	1	10%	76,527	\$1,070	OPA 2010
2008 Great Refrigerator Roundup	Refrigerator	323	45%	775	\$3,310	OPA 2010
2008 Great Refrigerator Roundup	Freezer	85	48%	740	\$786	OPA 2010
2008 Great Refrigerator Roundup	Room Air Conditioner	10	64%	197	\$17	OPA 2010
2008 Cool Savings Rebate Program	2007 Efficient Furnace with Electronically Commutable Motor	32	46%	837	\$349	OPA 2010
2008 Cool Savings Rebate Program	2007 ENERGYSTAR® Central Air Conditioner	15	48%	155	\$30	OPA 2010
2008 Cool Savings	2007 Programmable Thermostat	25	54%	54	\$15	OPA 2010

Program	Energy Efficient Measure	Units	Free rider rate	Annual energy savings (kWh/a)	LRAM (2012\$)	Assumption Source
Rebate Program						
2008 Cool Savings Rebate Program	2008 Efficient Furnace with Electronically Commutable Motor	115	46%	819	\$1,226	OPA 2010
2008 Cool Savings Rebate Program	2008 ENERGYSTAR® Central Air Conditioner	76	48%	125	\$119	OPA 2010
2008 Cool Savings Rebate Program	2008 Programmable Thermostat	98	54%	54	\$58	OPA 2010
2008 Every Kilowatt Counts - PSE	Energy Star® Qualified Compact Fluorescent Floods (Indoor & Outdoor)	1,467	63%	88	\$1,158	OPA 2010
2008 Every Kilowatt Counts - PSE	Energy Star® Qualified Light Fixtures	2,277	67%	133	\$2,439	OPA 2010
2008 Every Kilowatt Counts - PSE	Heavy Duty Timers	52	67%	301	\$124	OPA 2010
2008 Every Kilowatt Counts - PSE	T8 Fluorescent Fixtures	414	67%	37	\$122	OPA 2010
2008 Every Kilowatt Counts - PSE	ENERGY STAR Decorative CFLs	5,285	61%	30	\$1,193	OPA 2010
2008 Every Kilowatt Counts - PSE	ENERGY STAR Dimmable CFLs	341	62%	98	\$302	OPA 2010
2008 Every Kilowatt Counts - PSE	Power Bars with Timers	24	59%	53	\$13	OPA 2010
2008 Every Kilowatt Counts - PSE	Programmable Thermostats - Baseboard	144	53%	64	\$102	OPA 2010
2008 Every Kilowatt Counts - PSE	Energy Star® Qualified Compact Fluorescent Light Bulbs	3,128	48%	53	\$2,081	OPA 2010
2008 Every Kilowatt Counts - PSE	Lighting Control Devices	445	55%	102	\$497	OPA 2010
2008 Every Kilowatt Counts - PSE	Pipe Wrap	2,918	53%	38	\$1,248	OPA 2010
2008 Every Kilowatt Counts - PSE	Keep Cool – Dehumidifier	1	65%	500	\$4	OPA 2010

Program	Energy Efficient Measure	Units	Free rider rate	Annual energy savings (kWh/a)	LRAM (2012\$)	Assumption Source
2008 Every Kilowatt Counts - PSE	Keep Cool – Room Air Conditioner	1	58%	141	\$1	OPA 2010
2008 Every Kilowatt Counts - PSE	Rewards for Recycling – Dehumidifier	27	56%	500	\$145	OPA 2010
2008 Every Kilowatt Counts - PSE	Rewards for Recycling – Room Air Conditioner	30	56%	141	\$44	OPA 2010
2008 Every Kilowatt Counts - PSE	Rewards for Recycling - Halogen Lamp	24	52%	275	\$75	OPA 2010
2008 peaksaver	Residential Programmable Thermostat	71	10%	17	\$116	OPA 2010
2008 peaksaver	Residential Air Conditioner Switch	74	10%	17	\$121	OPA 2010
2008 peaksaver	Commercial Programmable Thermostat	2	10%	74	\$14	OPA 2010
2008 ERIP	Custom Retrofit Projects	1	Custom	0	\$219	OPA 2010
2008 High Performance New Construction	Custom New Construction Project	1	30%	1,177	\$14	OPA 2010
2008 Summer Sweepstakes	Households	1	22%	191,823	\$3,597	OPA 2010
2005 Energy Audits for Major Customers	Installation of PStats for HVAC rooftop units AC	1	50%	10,000	\$315	Program-specific analysis and OPA 2011b
2006 Energy Audits for Major Customers	15W CFL	6	0%	56	\$20	Program-specific analysis and OPA 2011a
2006 Energy Audits for Major Customers	15W CFL	17	0%	42	\$58	Program-specific analysis and OPA 2011a
2006 Energy Audits for Major Customers	15W CFL	13	0%	42	\$44	Program-specific analysis and OPA 2011a
2006 Energy Audits for	15W CFL	3	0%	42	\$10	Program-specific

Program	Energy Efficient Measure	Units	Free rider rate	Annual energy savings (kWh/a)	LRAM (2012\$)	Assumption Source
Major Customers						analysis and OPA 2011a
2006 Energy Audits for Major Customers	T5 fixture, 4' 28W – 3 Lamps	9	50%	102	\$23	Program-specific analysis and OPA 2011b
2006 Energy Audits for Major Customers	T5 fixture, 4' 28W – 1 Lamp	1	50%	88	\$0	Program-specific analysis and OPA 2011b
2006 Energy Audits for Major Customers	T5 fixture, 4' 28W – 1 Lamp	3	50%	88	\$0	Program-specific analysis and OPA 2011b
2006 Energy Audits for Major Customers	T5 fixture, 4' 28W – 1 Lamp	5	50%	88	\$0	Program-specific analysis and OPA 2011b
2006 Energy Audits for Major Customers	T5 fixture, 4' 28W – 1 Lamp	40	50%	88	\$2	Program-specific analysis and OPA 2011b
2006 Energy Audits for Major Customers	T5 fixture, 4' 28W – 1 Lamp	40	50%	88	\$2	Program-specific analysis and OPA 2011b
2006 Energy Audits for Major Customers	T5 fixture, 4' 28W – 1 Lamp	13	50%	88	\$1	Program-specific analysis and OPA 2011b
2006 Energy Audits for Major Customers	T5 fixture, 4' 28W – 1 Lamp	13	50%	88	\$1	Program-specific analysis and OPA 2011b
2006 Energy Audits for Major Customers	2 foot, 1 tube, T16, electronic ballast	2	50%	31	\$0	Program-specific analysis and OPA 2011b
2006 Energy Audits for Major Customers	2 foot, 1 tube, T16, electronic ballast (Note 1)	2	50%	31	\$0	Program-specific analysis and OPA 2011b

Program	Energy Efficient Measure	Units	Free rider rate	Annual energy savings (kWh/a)	LRAM (2012\$)	Assumption Source
2006 Energy Audits for Major Customers	Replace "jackshaft" type boiler controls on the 3 boilers	1	50%	22,788	\$99	Program-specific analysis
2006 Energy Audits for Major Customers	HWH Reduced Digester Flaring	1	0%	91,657	\$3,171	Program-specific analysis
2006 Energy Audits for Major Customers	Sewage Pump Optimization	1	75%	65,664	\$118	Program-specific analysis
2009 Great Refrigerator Roundup	Bottom Freezer Fridge - Not Replaced - Running Part Time (38% of the time)	0	46%	674	\$1	OPA 2010
2009 Great Refrigerator Roundup	Bottom Freezer Fridge - Standard Efficiency Unit Replacement - Running Part Time (38% of the time)	0	46%	454	\$0	OPA 2010
2009 Great Refrigerator Roundup	Bottom Freezer Fridge - Energy Star Unit Replacement - Running Part Time (38% of the time)	0	46%	498	\$1	OPA 2010
2009 Great Refrigerator Roundup	Bottom Freezer Fridge - Not Replaced - Running All Time (100% of time t	1	46%	1,769	\$12	OPA 2010
2009 Great Refrigerator Roundup	Bottom Freezer Fridge - Standard Efficiency Unit Replacement - Running All Time (100% of time)	0	46%	1,193	\$3	OPA 2010
2009 Great Refrigerator Roundup	Bottom Freezer Fridge - Energy Star Unit Replacement - Running All Time (100% of time)	1	46%	1,308	\$17	OPA 2010
2009 Great Refrigerator Roundup	Chest Freezer - Not Replaced - Running Part Time (26% of the time)	2	48%	282	\$8	OPA 2010
2009 Great Refrigerator Roundup	Chest Freezer - Standard Efficiency Unit Replacement - Running Part Time (26% of the time)	1	48%	247	\$2	OPA 2010
2009 Great Refrigerator Roundup	Chest Freezer - Energy Star Unit Replacement - Running Part Time (26% of the time)	3	48%	261	\$9	OPA 2010
2009 Great Refrigerator Roundup	Chest Freezer - Not Replaced - Running All Time (100% of time)	22	48%	1,096	\$300	OPA 2010
2009 Great Refrigerator Roundup	Chest Freezer - Standard Efficiency Unit Replacement - Running All Time (100% of time)	6	48%	959	\$73	OPA 2010
2009 Great Refrigerator Roundup	Chest Freezer - Energy Star Unit Replacement - Running All Time (100% of time)	28	48%	1,012	\$350	OPA 2010
2009 Great Refrigerator Roundup	Side by Side Fridge-Freezer - Not Replaced - Running Part Time (38% of the time)	1	46%	507	\$4	OPA 2010

Program	Energy Efficient Measure	Units	Free rider rate	Annual energy savings (kWh/a)	LRAM (2012\$)	Assumption Source
2009 Great Refrigerator Roundup	Side by Side Fridge-Freezer - Standard Efficiency Unit Replacement - Running Part Time (38% of the time)	0	46%	260	\$1	OPA 2010
2009 Great Refrigerator Roundup	Side by Side Fridge-Freezer - Energy Star Unit Replacement - Running Part Time (38% of the time)	1	46%	309	\$4	OPA 2010
2009 Great Refrigerator Roundup	Side by Side Fridge-Freezer - Not Replaced - Running All Time (100% of time)	4	46%	1,331	\$67	OPA 2010
2009 Great Refrigerator Roundup	Side by Side Fridge-Freezer - Standard Efficiency Unit Replacement - Running All Time (100% of time)	1	46%	682	\$13	OPA 2010
2009 Great Refrigerator Roundup	Side by Side Fridge-Freezer - Energy Star Unit Replacement - Running All Time (100% of time)	8	46%	812	\$79	OPA 2010
2009 Great Refrigerator Roundup	Single Door Fridge - Not Replaced - Running Part Time (38% of the time)	1	46%	418	\$8	OPA 2010
2009 Great Refrigerator Roundup	Single Door Fridge - Standard Efficiency Unit Replacement - Running Part Time (38% of the time)	1	46%	237	\$2	OPA 2010
2009 Great Refrigerator Roundup	Single Door Fridge - Energy Star Unit Replacement - Running Part Time (38% of the time)	3	46%	273	\$10	OPA 2010
2009 Great Refrigerator Roundup	Single Door Fridge - Not Replaced - Running All Time (100% of time)	10	46%	1,097	\$144	OPA 2010
2009 Great Refrigerator Roundup	Single Door Fridge - Standard Efficiency Unit Replacement - Running All Time (100% of time)	4	46%	623	\$30	OPA 2010
2009 Great Refrigerator Roundup	Single Door Fridge - Energy Star Unit Replacement - Running All Time (100% of time)	20	46%	718	\$183	OPA 2010
2009 Great Refrigerator Roundup	Top Freezer Fridge - Not Replaced - Running Part Time (38% of the time)	6	46%	470	\$39	OPA 2010
2009 Great Refrigerator Roundup	Top Freezer Fridge - Standard Efficiency Unit Replacement - Running Part Time (38% of the time)	2	46%	252	\$8	OPA 2010
2009 Great Refrigerator Roundup	Top Freezer Fridge - Energy Star Unit Replacement - Running Part Time (38% of the time)	12	46%	295	\$48	OPA 2010
2009 Great Refrigerator Roundup	Top Freezer Fridge - Not Replaced - Running All Time (100% of time)	46	46%	1,234	\$742	OPA 2010
2009 Great Refrigerator Roundup	Top Freezer Fridge - Standard Efficiency Unit Replacement - Running All Time (100% of time)	17	46%	661	\$147	OPA 2010

Program	Energy Efficient Measure	Units	Free rider rate	Annual energy savings (kWh/a)	LRAM (2012\$)	Assumption Source
2009 Great Refrigerator Roundup	Top Freezer Fridge - Energy Star Unit Replacement - Running All Time (100% of time)	90	46%	776	\$907	OPA 2010
2009 Great Refrigerator Roundup	Upright Freezer - Not Replaced - Running Part Time (26% of the time)	0	48%	365	\$1	OPA 2010
2009 Great Refrigerator Roundup	Upright Freezer - Standard Efficiency Unit Replacement - Running Part Time (26% of the time)	0	48%	180	\$0	OPA 2010
2009 Great Refrigerator Roundup	Upright Freezer - Energy Star Unit Replacement - Running Part Time (26% of the time)	0	48%	189	\$1	OPA 2010
2009 Great Refrigerator Roundup	Upright Freezer - Not Replaced - Running All Time (100% of time)	3	48%	1,416	\$48	OPA 2010
2009 Great Refrigerator Roundup	Upright Freezer - Standard Efficiency Unit Replacement - Running All Time (100% of time)	1	48%	697	\$7	OPA 2010
2009 Great Refrigerator Roundup	Upright Freezer - Energy Star Unit Replacement - Running All Time (100% of time)	3	48%	736	\$32	OPA 2010
2009 Great Refrigerator Roundup	Dehumidifier - Not Replaced - Running All Time (100% of time)	2	64%	960	\$16	OPA 2010
2009 Great Refrigerator Roundup	Dehumidifier - Standard Efficiency Unit Replacement - Running All Time (100% of time)	1	64%	540	\$5	OPA 2010
2009 Great Refrigerator Roundup	Dehumidifier - Energy Star Unit Replacement - Running All Time (100% of time)	3	64%	463	\$12	OPA 2010
2009 Great Refrigerator Roundup	Window Air Conditioner - Not Replaced - Running All Time (100% of time)	3	64%	371	\$8	OPA 2010
2009 Great Refrigerator Roundup	Window Air Conditioner - Standard Efficiency Unit Replacement - Running All Time (100% of time)	0	64%	118	\$0	OPA 2010
2009 Great Refrigerator Roundup	Window Air Conditioner - Energy Star Unit Replacement - Running All Time (100% of time)	2	64%	141	\$1	OPA 2010
2009 Cool Savings Rebate Program	Energy Star® 14.5 SEER (Tier 1) Central Air Conditioner (CAC)	34	42%	113	\$54	OPA 2010
2009 Cool Savings Rebate Program	Energy Star® 14.5 SEER (Tier 1) Central Air Conditioner (CAC) with change in behaviour	5	42%	317	\$24	OPA 2010
2009 Cool Savings Rebate Program	Energy Star® 15.0 SEER (Tier 2) Central Air Conditioner (CAC)	91	42%	177	\$222	OPA 2010

Program	Energy Efficient Measure	Units	Free rider rate	Annual energy savings (kWh/a)	LRAM (2012\$)	Assumption Source
2009 Cool Savings Rebate Program	Energy Star® 15.0 SEER (Tier 2) Central Air Conditioner (CAC) with change in behaviour	14	42%	366	\$72	OPA 2010
2009 Cool Savings Rebate Program	Furnace with Electronically Commutated Motor (ECM), Home constructed before 1980, AHRI Matched CAC & Furnace, Continuous Fan, No change	8	60%	2,773	\$204	OPA 2010
2009 Cool Savings Rebate Program	Furnace with Electronically Commutated Motor (ECM), Home constructed before 1980, AHRI Matched CAC & Furnace, Non-continuous Fan, No change	32	60%	324	\$98	OPA 2010
2009 Cool Savings Rebate Program	Furnace with Electronically Commutated Motor (ECM), Home constructed before 1980, AHRI Matched CAC & Furnace, Continuous Fan, Change from non-continuous	3	60%	91	\$2	OPA 2010
2009 Cool Savings Rebate Program	Furnace with Electronically Commutated Motor (ECM), Home constructed before 1980, Unmatched CAC & Furnace, Continuous Fan, No change	14	60%	2,823	\$366	OPA 2010
2009 Cool Savings Rebate Program	Furnace with Electronically Commutated Motor (ECM), Home constructed before 1980, Unmatched CAC & Furnace, Non-continuous Fan, No change	56	60%	373	\$199	OPA 2010
2009 Cool Savings Rebate Program	Furnace with Electronically Commutated Motor (ECM), Home constructed before 1980, Unmatched CAC & Furnace, Continuous Fan, Change from non-continuous	4	60%	140	\$6	OPA 2010
2009 Cool Savings Rebate Program	Furnace with Electronically Commutated Motor (ECM), Home constructed before 1980, Heating only, Continuous Fan, No change	2	60%	1,535	\$33	OPA 2010
2009 Cool Savings Rebate Program	Furnace with Electronically Commutated Motor (ECM), Home constructed before 1980, Heating only, Non-continuous Fan, No change	9	60%	324	\$28	OPA 2010
2009 Cool Savings Rebate Program	Furnace with Electronically Commutated Motor (ECM), Home constructed before 1980, Heating only, Continuous Fan, Change from non-continuous	1	60%	192	\$1	OPA 2010
2009 Cool Savings Rebate Program	Furnace with Electronically Commutated Motor (ECM), Home constructed after 1980, AHRI Matched CAC & Furnace, Continuous Fan, No change	9	60%	2,867	\$247	OPA 2010

Program	Energy Efficient Measure	Units	Free rider rate	Annual energy savings (kWh/a)	LRAM (2012\$)	Assumption Source
2009 Cool Savings Rebate Program	Furnace with Electronically Commutated Motor (ECM), Home constructed after 1980, AHRI Matched CAC & Furnace, Non-continuous Fan, No change	37	60%	207	\$73	OPA 2010
2009 Cool Savings Rebate Program	Furnace with Electronically Commutated Motor (ECM), Home constructed after 1980, AHRI Matched CAC & Furnace, Continuous Fan, Change from non-continuous	3	60%	(49)	(\$1)	OPA 2010
2009 Cool Savings Rebate Program	Furnace with Electronically Commutated Motor (ECM), Home constructed after 1980, Unmatched CAC & Furnace, Continuous Fan, No change	16	60%	2,927	\$445	OPA 2010
2009 Cool Savings Rebate Program	Furnace with Electronically Commutated Motor (ECM), Home constructed after 1980, Unmatched CAC & Furnace, Non-continuous Fan, No change	65	60%	267	\$167	OPA 2010
2009 Cool Savings Rebate Program	Furnace with Electronically Commutated Motor (ECM), Home constructed after 1980, Unmatched CAC & Furnace, Continuous Fan, Change from non-continuous	5	60%	11	\$1	OPA 2010
2009 Cool Savings Rebate Program	Furnace with Electronically Commutated Motor (ECM), Home constructed after 1980, Heating only, Continuous Fan, No change	3	60%	1,570	\$39	OPA 2010
2009 Cool Savings Rebate Program	Furnace with Electronically Commutated Motor (ECM), Home constructed after 1980, Heating only, Non-continuous Fan, No change	11	60%	207	\$21	OPA 2010
2009 Cool Savings Rebate Program	Furnace with Electronically Commutated Motor (ECM), Home constructed after 1980, Heating only, Continuous Fan, Change from non-continuous	1	60%	76	\$1	OPA 2010
2009 Cool Savings Rebate Program	Programmable Thermostat - Central Air Conditioning (CAC) & Gas heating	72	61%	30	\$20	OPA 2010
2009 Cool Savings Rebate Program	Programmable Thermostat - Energy Star® Central Air Conditioning (CAC) & Gas Heating	96	61%	26	\$23	OPA 2010
2009 Cool Savings Rebate Program	Programmable Thermostat - Gas Heating only	21	61%	9	\$2	OPA 2010
2009 Cool Savings Rebate Program	Participant Spillover - Lighting	10	0%	40	\$10	OPA 2010

Program	Energy Efficient Measure	Units	Free rider rate	Annual energy savings (kWh/a)	LRAM (2012\$)	Assumption Source
2009 Cool Savings Rebate Program	Participant Spillover - Cooling or Heating	4	0%	100	\$7	OPA 2010
2009 Cool Savings Rebate Program	Participant Spillover - Water heating	5	0%	141	\$17	OPA 2010
2009 Cool Savings Rebate Program	Participant Spillover - Appliances	7	0%	76	\$12	OPA 2010
2009 Cool Savings Rebate Program	Participant Spillover - Insulation of other weatherization	10	0%	75	\$18	OPA 2010
2009 Cool Savings Rebate Program	Participant Spillover - Windows	8	0%	100	\$19	OPA 2010
2009 Cool Savings Rebate Program	Participant Spillover - Roof products	4	0%	50	\$5	OPA 2010
2009 Cool Savings Rebate Program	Participant Spillover - Other products	4	0%	50	\$5	OPA 2010
2009 Every Kilowatt Counts - PSE	Energy Star Qualified Compact Fluorescent - Spring Campaign - Participant Rebated	380	31%	23	\$145	OPA 2010
2009 Every Kilowatt Counts - PSE	ENERGY STAR Decorative CFLs - Spring Campaign - Participant Rebated	900	23%	26	\$431	OPA 2010
2009 Every Kilowatt Counts - PSE	ENERGY STAR Fixtures - Spring Campaign - Participant Rebated	73	47%	116	\$108	OPA 2010
2009 Every Kilowatt Counts - PSE	ENERGY STAR Ceiling Fans - Spring Campaign - Participant Rebated	32	24%	71	\$41	OPA 2010
2009 Every Kilowatt Counts - PSE	Heavy Duty Pool and Spa Timers - Spring Campaign - Participant Rebated	12	24%	454	\$98	OPA 2010
2009 Every Kilowatt Counts - PSE	Clotheslines - Spring Campaign - Participant Rebated	30	45%	77	\$31	OPA 2010
2009 Every Kilowatt Counts - PSE	Pipe Wrap - Spring Campaign - Participant Rebated	25	22%	8	\$4	OPA 2010
2009 Every Kilowatt Counts - PSE	Water Blanket - Spring Campaign - Participant Rebated	3	20%	52	\$3	OPA 2010
2009 Every Kilowatt Counts - PSE	Energy Star Qualified Window Air Conditioner - Spring Campaign - Participant Promoted	31	33%	96	\$48	OPA 2010

Program	Energy Efficient Measure	Units	Free rider rate	Annual energy savings (kWh/a)	LRAM (2012\$)	Assumption Source
2009 Every Kilowatt Counts - PSE	Energy Star Qualified Dehumidifiers - Spring Campaign - Participant Promoted	30	32%	284	\$138	OPA 2010
2009 Every Kilowatt Counts - PSE	Programmable Thermostat - Spring Campaign - Participant Promoted	73	55%	138	\$109	OPA 2010
2009 Every Kilowatt Counts - PSE	Solar Power Products - Spring Campaign - Participant Promoted	190	40%	5	\$13	OPA 2010
2009 Every Kilowatt Counts - PSE	Control Products - Spring Campaign - Participant Promoted	94	47%	72	\$87	OPA 2010
2009 Every Kilowatt Counts - PSE	Installed CFLs - Spring Campaign - Participant Spillover	35	87%	101	\$11	OPA 2010
2009 Every Kilowatt Counts - PSE	Installed a new energy efficient appliance - Refrigerator - Spring Campaign - Participant Spillover	25	86%	65	\$6	OPA 2010
2009 Every Kilowatt Counts - PSE	Installed a new energy efficient appliance - Clothes washing machine - Spring Campaign - Participant Spillover	15	88%	122	\$5	OPA 2010
2009 Every Kilowatt Counts - PSE	Added ceiling/attic/wall/basement insulation - Spring Campaign - Participant Spillover	15	88%	394	\$17	OPA 2010
2009 Every Kilowatt Counts - PSE	Installed Programmable Thermostat - Spring Campaign - Participant Spillover	15	87%	308	\$14	OPA 2010
2009 Every Kilowatt Counts - PSE	Energy Star Qualified Compact Fluorescent - Spring Campaign - Non-Participant Rebated	289	65%	22	\$54	OPA 2010
2009 Every Kilowatt Counts - PSE	ENERGY STAR Decorative CFLs - Spring Campaign - Non-Participant Rebated	144	60%	26	\$36	OPA 2010
2009 Every Kilowatt Counts - PSE	ENERGY STAR Fixtures - Spring Campaign - Non-Participant Rebated	135	59%	68	\$89	OPA 2010
2009 Every Kilowatt Counts - PSE	ENERGY STAR Ceiling Fans - Spring Campaign - Non-Participant Rebated	40	86%	71	\$9	OPA 2010
2009 Every Kilowatt Counts - PSE	Heavy Duty Pool and Spa Timers - Spring Campaign - Non-Participant Rebated	25	86%	454	\$37	OPA 2010
2009 Every Kilowatt Counts - PSE	Clotheslines - Spring Campaign - Non-Participant Rebated	92	86%	77	\$23	OPA 2010
2009 Every Kilowatt Counts - PSE	Pipe Wrap - Spring Campaign - Non-Participant Rebated	212	86%	8	\$6	OPA 2010

Program	Energy Efficient Measure	Units	Free rider rate	Annual energy savings (kWh/a)	LRAM (2012\$)	Assumption Source
2009 Every Kilowatt Counts - PSE	Water Blanket - Spring Campaign - Non-Participant Rebated	31	86%	52	\$5	OPA 2010
2009 Every Kilowatt Counts - PSE	Energy Star Qualified Window Air Conditioner - Spring Campaign - Non-Participant Promoted	52	57%	96	\$52	OPA 2010
2009 Every Kilowatt Counts - PSE	Energy Star Qualified Dehumidifiers - Spring Campaign - Non-Participant Promoted	62	56%	284	\$187	OPA 2010
2009 Every Kilowatt Counts - PSE	Programmable Thermostat - Spring Campaign - Non-Participant Promoted	98	71%	138	\$95	OPA 2010
2009 Every Kilowatt Counts - PSE	Solar Power Products - Spring Campaign - Non-Participant Promoted	634	61%	5	\$29	OPA 2010
2009 Every Kilowatt Counts - PSE	Control Products - Spring Campaign - Non-Participant Promoted	218	66%	72	\$131	OPA 2010
2009 Every Kilowatt Counts - PSE	Energy Star Qualified Compact Fluorescent - Autumn Campaign - Participant Rebated	1,718	31%	25	\$731	OPA 2010
2009 Every Kilowatt Counts - PSE	ENERGY STAR Specialty CFLs - Autumn Campaign - Participant Rebated	695	29%	21	\$248	OPA 2010
2009 Every Kilowatt Counts - PSE	ENERGY STAR Fixtures - Autumn Campaign - Participant Rebated	83	30%	119	\$166	OPA 2010
2009 Every Kilowatt Counts - PSE	Weatherstripping - adhesive foam or V-strip - Autumn Campaign - Participant Rebated	77	43%	15	\$16	OPA 2010
2009 Every Kilowatt Counts - PSE	Weatherstripping - door frame kits - Autumn Campaign - Participant Rebated	50	47%	17	\$11	OPA 2010
2009 Every Kilowatt Counts - PSE	Programmable Thermostat - Autumn Campaign - Participant Rebated	33	33%	32	\$17	OPA 2010
2009 Every Kilowatt Counts - PSE	Pipe Wrap - Autumn Campaign - Participant Rebated	29	55%	7	\$2	OPA 2010
2009 Every Kilowatt Counts - PSE	Water Blanket - Autumn Campaign - Participant Rebated	6	37%	56	\$5	OPA 2010
2009 Every Kilowatt Counts - PSE	Lighting/Appliance Controls - Autumn Campaign - Participant Rebated	58	28%	21	\$22	OPA 2010
2009 Every Kilowatt Counts - PSE	Energy Star Qualified Holiday LED Lights - Autumn Campaign - Participant Promoted	205	41%	14	\$40	OPA 2010

Program	Energy Efficient Measure	Units	Free rider rate	Annual energy savings (kWh/a)	LRAM (2012\$)	Assumption Source
2009 Every Kilowatt Counts - PSE	Dimmer Switches - Autumn Campaign - Participant Promoted	86	50%	24	\$24	OPA 2010
2009 Every Kilowatt Counts - PSE	Solar Powered Products - Autumn Campaign - Participant Promoted	167	48%	6	\$12	OPA 2010
2009 Every Kilowatt Counts - PSE	Installed a new energy efficient appliance – Refrigerator - Autumn Campaign - Participant Spillover	35	75%	65	\$13	OPA 2010
2009 Every Kilowatt Counts - PSE	Added ceiling/attic/wall/basement insulation - Autumn Campaign - Participant Spillover	28	78%	394	\$58	OPA 2010
2009 Every Kilowatt Counts - PSE	Replaced my old furnace with a high efficiency furnace - Autumn Campaign - Participant Spillover	25	80%	352	\$41	OPA 2010
2009 Every Kilowatt Counts - PSE	Installed a new energy efficient appliance - Clothes washing machine - Autumn Campaign - Participant Spillover	23	81%	142	\$15	OPA 2010
2009 Every Kilowatt Counts - PSE	Energy Star Qualified Compact Fluorescent - Autumn Campaign - Non-Participant Rebated	1,565	86%	24	\$122	OPA 2010
2009 Every Kilowatt Counts - PSE	ENERGY STAR Specialty CFLs - Autumn Campaign - Non-Participant Rebated	497	85%	30	\$54	OPA 2010
2009 Every Kilowatt Counts - PSE	ENERGY STAR Fixtures - Autumn Campaign - Non-Participant Rebated	139	76%	36	\$29	OPA 2010
2009 Every Kilowatt Counts - PSE	Weatherstripping - adhesive foam or V-strip - Autumn Campaign - Non-Participant Rebated	540	93%	15	\$14	OPA 2010
2009 Every Kilowatt Counts - PSE	Weatherstripping - door frame kits - Autumn Campaign - Non-Participant Rebated	411	94%	17	\$11	OPA 2010
2009 Every Kilowatt Counts - PSE	Programmable Thermostat - Autumn Campaign - Non-Participant Rebated	81	83%	83	\$28	OPA 2010
2009 Every Kilowatt Counts - PSE	Pipe Wrap - Autumn Campaign - Non-Participant Rebated	382	89%	6	\$6	OPA 2010
2009 Every Kilowatt Counts - PSE	Water Blanket - Autumn Campaign - Non-Participant Rebated	48	78%	40	\$10	OPA 2010
2009 Every Kilowatt Counts - PSE	Lighting/Appliance Controls - Autumn Campaign - Non-Participant Rebated	408	90%	42	\$42	OPA 2010
2009 Every Kilowatt Counts - PSE	Energy Star Qualified Holiday LED Lights - Autumn Campaign - Non-Participant Promoted	668	65%	14	\$77	OPA 2010

Program	Energy Efficient Measure	Units	Free rider rate	Annual energy savings (kWh/a)	LRAM (2012\$)	Assumption Source
2009 Every Kilowatt Counts - PSE	Dimmer Switches - Autumn Campaign - Non-Participant Promoted	210	73%	24	\$32	OPA 2010
2009 Every Kilowatt Counts - PSE	Solar Powered Products - Autumn Campaign - Non-Participant Promoted	338	58%	5	\$16	OPA 2010
2009 Every Kilowatt Counts - PSE	Working Room Air Conditioner Retirement - Rewards for Recycling Campaign - Incented	16	62%	32	\$5	OPA 2010
2009 Every Kilowatt Counts - PSE	Working Room Dehumidifier Retirement - Rewards for Recycling Campaign - Incented	15	53%	300	\$50	OPA 2010
2009 Every Kilowatt Counts - PSE	Working Halogen Torchiere Retirement - Rewards for Recycling Campaign - Incented	5	49%	58	\$4	OPA 2010
2009 Every Kilowatt Counts - PSE	Recycled Second Refrigerator - Rewards for Recycling Campaign - Spillover	3	64%	1,238	\$37	OPA 2010
2009 Every Kilowatt Counts - PSE	Recycled Additional Room Air Conditioner - Rewards for Recycling Campaign - Spillover	3	64%	30	\$1	OPA 2010
2009 Every Kilowatt Counts - PSE	Recycled Central Air Conditioner - Rewards for Recycling Campaign - Spillover	3	64%	72	\$2	OPA 2010
2009 Every Kilowatt Counts - PSE	Recycled Additional Room Dehumidifier - Rewards for Recycling Campaign - Spillover	3	64%	309	\$8	OPA 2010
2009 Every Kilowatt Counts - PSE	Installed Energy Star® Windows - Rewards for Recycling Campaign - Spillover	5	82%	1,530	\$32	OPA 2010
2009 Every Kilowatt Counts - PSE	Installed Energy Star® CFL Bulbs - Rewards for Recycling Campaign - Spillover	16	82%	45	\$3	OPA 2010
2009 peaksaver	Residential Air Conditioner - Switch	65	10%	6	\$71	OPA 2010
2009 peaksaver	Residential Air Conditioner - Thermostat	132	10%	6	\$144	OPA 2010
2009 peaksaver	Commercial Air Conditioner - Switch	1	10%	6	\$2	OPA 2010
2009 peaksaver	Commercial Air Conditioner - Thermostat	5	10%	6	\$8	OPA 2010
2009 ERIP	Custom measures	1	17%	1,422,890	\$10,628	OPA 2010
2009 High Performance New Construction	Custom measures	1	30%	35,903	\$442	OPA 2010

Program	Energy Efficient Measure	Units	Free rider rate	Annual energy savings (kWh/a)	LRAM (2012\$)	Assumption Source
2009 Power Savings Blitz	Custom measures	1	5%	1,263,855	\$21,117	OPA 2010
2010 Cool Savings Rebate	All measures	1	30%	147,904	\$4,506	OPA 2011c
2010 Every Kilowatt Counts - PSE	All measures	1	30%	95,206	\$2,900	OPA 2011c
2010 Great Refrigerator Roundup	All measures	1	30%	230,353	\$7,018	OPA 2011c
2010 peaksaver	All measures	160	9%	2	\$12	OPA 2011c
2010 ERIP	All projects	1	30%	20,617	\$296	OPA 2011c
2010 High Performance New Construction	Custom	1	30%	145,999	\$2,701	OPA 2011c
2010 Multifamily Energy Efficiency Rebates	Custom	0	26%	75,155	\$367	OPA 2011c
2010 Power Savings Blitz	All projects	1	30%	462,309	\$10,304	OPA 2011c
2010 peaksaver	All measures	4	9%	7	\$1	OPA 2011c
Total LRAM					\$135,137	

Table 8 –LRAM contributions and carrying charges.

Funding	Program	Year	LRAM	Carrying charges	Total
OPA	Cool Savings Rebate	2010	\$4,426	80	\$4,506
		2006	\$774	9	\$784
		2007	\$2,470	30	\$2,500
		2008	\$1,775	22	\$1,797
		2009	\$2,409	30	\$2,439
	ERIP	2007	\$1,055	15	\$1,070
		2008	\$216	3	\$219
		2009	\$10,500	129	\$10,628
		2010	\$291	5	\$296
	Every Kilowatt Counts - PSE	2008	\$9,430	118	\$9,547
		2009	\$4,018	49	\$4,068
		2010	\$2,849	51	\$2,900
	Great Refrigerator Roundup	2007	\$1,781	22	\$1,803
		2008	\$4,064	50	\$4,113
		2009	\$3,300	40	\$3,340
		2010	\$6,893	124	\$7,018
	High Performance New Construction	2008	\$14	0	\$14
		2009	\$437	5	\$442
		2010	\$2,654	48	\$2,701
	Multifamily Energy Efficiency Rebates	2010	\$360	7	\$367
	peaksaver	2008	\$248	3	\$251
		2007	\$3	0	\$3
		2009	\$222	3	\$225
2010		\$13	0	\$13	
Power Savings Blitz	2009	\$20,862	256	\$21,117	
	2010	\$10,121	183	\$10,304	
Secondary Fridge Retirement Pilot	2006	\$370	5	\$375	
Social Housing - Pilot	2007	\$980	12	\$992	
Summer Sweepstakes	2008	\$3,554	44	\$3,597	
Third Tranche	CFL Education and Giveaway	2006	\$931	8	\$939
		2007	\$8,111	72	\$8,183
		2008	\$3,041	27	\$3,069
	Energy Audits for Major Customers	2005	\$312	3	\$315
		2006	\$3,518	31	\$3,549
	Energy Star Appliance Rebate Program	2007	\$34	0	\$35
		2008	\$641	6	\$646
	Energy Star Window Program	2005	\$114	1	\$115
Every Kilowatt Counts	2006	\$3,815	47	\$3,862	
	2007	\$10,654	131	\$10,785	

Funding	Program	Year	LRAM	Carrying charges	Total
	LED Light Exchange	2006	\$224	4	\$228
		2007	\$673	7	\$680
	Lighten Your Electricity Bill	2005	\$2,815	25	\$2,840
	Norfolk Power Facility Lighting Program	2007	\$699	6	\$705
	Res Customer Program - Education	2007	\$51	0	\$51
		2008	\$51	0	\$51
	Water Heater Replacement Program	2005	\$909	8	\$917
		2007	\$731	7	\$738
Total			\$133,411	\$1,727	\$135,137

1. Carrying charges are calculated quarterly, at the measure (not program) level to capture different carrying charge interest rates by quarter, program ramp up, and measure life.



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IndEco Strategic Consulting Inc

77 Mowat Avenue Suite 412 Toronto ON M6K 3E3

1 888 INDECO1 416 532 4333 info@indeco.com www.indeco.com