

EB-2004-0487
Hydro Ottawa Ltd

2004 November 4



Mr. Howard Wetston, Board Chair
Mr. John Zych, Board Secretary
Ontario Energy Board
P.O. Box 2319, 26th Floor
2300 Yonge Street
Toronto ON M4P 1E4



By fax (416-440-7656) and courier

RE: Applications by Large Utilities for Approval of Conservation and Demand Management Plans



Dear Messrs. Wetston and Zych:



This letter introduces the Conservation and Demand Management (CDM) plans of six of the largest municipally owned Local Distribution Companies in the province. As a group these six utilities distribute electricity to over 1.5 million customers, 40% of the provincial total. In aggregate these plans propose investing over \$70 million in conservation and demand management, distribution system loss reduction and distributed energy programs. All of these initiatives support the government's clearly stated objective of creating a "conservation culture" in Ontario.



As the largest LDC's we plan to take a leadership role in delivering CDM. A key part of our strategy is to co-brand a number of our mass-market CDM initiatives. This will leverage our individual investments, provide for more consistent messaging in our promotional campaigns, and create exciting new program delivery opportunities. We have already established a steering committee to oversee our joint programs.

Please find enclosed six separate, but uniformly prepared applications for approval of CDM plans from Enersource Hydro Mississauga, Hamilton Hydro, Hydro Ottawa Limited, PowerStream Inc., Toronto Hydro-Electric System Limited, and Veridian Connections Inc.

Each of us appreciates the need to implement utility CDM programs as soon as possible. We are committed to working closely with the Board through its approval processes to expedite the implementation of the programs set out in the attached applications. We are confident that the applications conform to the requirements set out in the Board's RP-2004-0203 Procedural Order of October 5, 2004.

We trust that you will find the enclosed applications sufficient and satisfactory for the purpose. Please contact us individually or collectively as required to support your review of the applications.

Yours truly,



Gunars Ceksters
President and CEO
Enersource Corporation



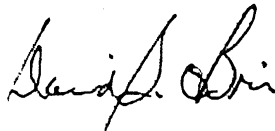
Art Leitch
President and CEO
Hamilton Utilities Corporation



Ron Stewart
President and CEO
Hydro Ottawa Limited



Brian Bentz
President and CEO
PowerStream Inc.



David S. O'Brien
President and CEO
Toronto Hydro Corporation



Michael Angemeer
President and CEO
Veridian Connections Inc.

Hydro Ottawa Limited

Conservation and Demand Management Plan

Ontario Energy Board File No. RP-2004-0203

November 4th, 2004

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Introduction

Ontario's Minister of Energy has authorized electricity distributors to apply to the Ontario Energy Board (Board) for 2005 rate implementation of their third installment of market adjusted revenue requirement (MARR), on the condition that an equivalent amount of incremental revenue be invested by those distributors in conservation and demand management activities. In a letter dated May 31, 2004 to electricity distributors, the Minister identified some of the activities that might be included in a distributor's Conservation and Demand Management Plan, including:

- Energy efficiency;
- Behavioural and operational changes, including the application of benchmarking or "SMART" control systems;
- Load management measures which facilitate interruptible and dispatchable loads, dual fuel applications, thermal storage, and demand response;
- Measures to encourage fuel switching which reduces the total system energy for a given end-use;
- Programs and initiatives targeted to low income and other hard to reach consumers; and
- Distributed energy options behind a customer's meter such as tri-generation, co-generation, ground source heat pumps, solar, wind, and biomass systems.

On October 5, 2004 the Board issued a procedural order (RP-2004-0203) setting out the process for how distributors may apply for approval of a Conservation and Demand Management Plan. It also set out the filing requirements for a distributor's plan. Distributors were given the option of applying for interim or final approval of their plan.

Hydro Ottawa Limited's (Hydro Ottawa's) Conservation and Demand Management (CDM) Plan has been developed within the context of the Minister of Energy's May 31, 2004 letter and the procedural order issued by the Board.

Hydro Ottawa hereby requests the Board's approval and final order authorizing its CDM plan as being appropriate and effective in discharging its CDM investment obligation, subject to issuance in due course of an order for distribution rates including the final tranche of the market adjusted revenue requirement (MARR).

Plan Budget and Assumptions

Hydro Ottawa's third MARR installment is approximately \$9.3 million, exclusive of any payments in lieu of taxes.

Through a letter accompanying its Preliminary Guidelines for Electricity Distributor Conservation and Demand Management Activities, the Board has authorized that distributor conservation and demand management spending may occur until September 30, 2007.

Hydro Ottawa's Conservation and Demand Management Plan is therefore based on investing approximately \$9.3 million in a combination of capital and operating expenses during the period from January 1, 2004 to September 30, 2007.

The implementation of this plan will require re-deployment of some existing personnel. Costs associated with the use of existing resources to implement this plan have been allocated to the individual programs and are provided for in the annual budget figures.

While the current plan is well balanced, it is recognized that the industry and regulatory framework is dynamic. Hydro Ottawa will continue to assess and update its plan as new opportunities are presented. If necessary, Hydro Ottawa will re-allocate funds between programs to respond to customer demand levels. However, Hydro Ottawa will make best efforts to achieve the target levels of capital and operating expenditures by year.

Objectives

The Province of Ontario is facing serious challenges in meeting its future electricity needs. Energy conservation and demand management has been identified as one of the most viable and cost-effective means of meeting the province's energy needs in the short term.

The Minister of Energy has called for the creation of a 'Conservation Culture' in the province, and has established two important objectives for the electricity sector and electricity consumers. First, he has targeted a reduction in Ontario's demand for electricity by 5% by 2007. Second, he has committed to the installation of 800,000 SMART electricity meters by 2007, and the full deployment of SMART meters for all electricity consumers by 2010.

The objective of this plan is to contribute to the emergence of a conservation culture in Ontario and, more specifically, to support the Minister's commitments to peak demand reduction and SMART meter installations.

Strategy

In developing this plan, the following criteria were used to guide the selection of component programs:

- i. Allocation of Benefits – The overall plan should distribute benefits broadly to Hydro Ottawa's customers.
- ii. Certainty of Achieving Targeted Benefits – Preference was given to investments that offer more predictable results.
- iii. Leveraging Partnerships – Partnerships will be sought to deliver 'behind the meter' programs that will benefit from greater scale for cost-effective implementation.

Programs

Conservation and Demand Management (CDM)

Residential and Small Commercial (< 50 kW)

Co-branded Mass Market Program

Description

This flagship co-branded mass-market program (e.g. *powerWISE™*) is a multifaceted approach to fostering the conservation culture in Ontario. Through development of a significant cooperative effort amongst six of the largest municipal LDC's, this program will become synonymous with specific initiatives such as Compact Fluorescent Lighting (CFL) change out programs, LED Christmas Lights, Energy Star, Multi-Choice, energy audits, heater blanket wraps, school based education and a host of other programs aimed at providing customers with the tools and education needed to reduce their energy usage. Access to online services such as energy consumption calculators, an energy expert, and personalized energy audit services are contemplated as components of this program.

Target users

Mass-market including residential and small commercial

Benefits

Increased awareness, improved product supply, culture shift, and significant demand and energy reductions.

Budget

<u>\$k</u>	<u>2004/2005</u>	<u>2006</u>	<u>2007</u>	<u>Totals</u>
Operating Expense	250	\$332	\$352	\$935
Capital Expenditures				
Totals	\$250	\$332	\$352	\$935

SMART Meter Pilot

Description

A pilot program for residential SMART meters will be deployed to enable the assessment of metering, communications, settlement, load control and other technologies that may be used to accommodate the universal application of SMART meters in the future. Further, sub-metering opportunities for the purposes of customer information in bulk-metered situations (i.e. condominiums) may be considered.

This initiative will commence upon the release of a formal definition of a SMART meter by the Board.

Target users

Residential and small commercial customers

Benefits

This program supports the Minister of Energy's commitment to the installation of 800,000 SMART meters across Ontario by 2007. It will provide Hydro Ottawa with the experience and knowledge needed to efficiently expand the use of SMART meters over the next several years.

In conjunction with appropriate rate structures, the program will also provide customers participating in the pilot programs with an incentive to conserve or shift energy use.

Budget

<u>\$k</u>	<u>2004/2005</u>	<u>2006</u>	<u>2007</u>	<u>Totals</u>
Operating Expense	\$19	\$25	\$26	\$70
Capital Expenditures	\$75	\$100	\$106	\$281
Totals	\$94	\$125	\$132	\$351

Design Advisory Program

Description

This initiative helps to create an integrated approach to the design process for new buildings, and involves architects, engineers, building owners and design advisors.

Target users

Developers and designers who deal with residential and small commercial customers

Benefits

This program results in cost effective improvements to the energy efficiency of a building without adversely affecting other performance requirements stipulated by the owner. More specifically, the Advisor can develop an energy performance model to demonstrate achievable energy savings and provide a breakdown of energy end uses. Through the installation of energy efficient equipment during construction, the customer benefits by avoiding stranded costs incurred with equipment upgrades.

Budget

<u>\$k</u>	<u>2004/2005</u>	<u>2006</u>	<u>2007</u>	<u>Totals</u>
Operating Expense	\$17	\$22	\$23	\$62
Capital Expenditures	\$4	\$6	\$6	\$16
Totals	\$21	\$28	\$29	\$78

Residential Load Control Initiative

Description

Load control uses a real time communications link to enable or disable customer loads at the discretion of the utility. These controls are usually engaged during system peak periods or when required to relieve pressure on the system grid and may include such "dispatchable" loads as electric hot water tanks, pool pumps, lighting, air conditioners, etc.

Target users

Direct load control applies to all market segments. Though the control systems and technologies may vary by market segment, the methodology remains the same.

Benefits

Load control allows customers to respond quickly to external price signals. This also provides a mechanism for utilities to relieve pressure on constrained areas within the distribution grid and also reduces the need to bring on large peaking generators.

Budget

<u>\$k</u>	<u>2004/2005</u>	<u>2006</u>	<u>2007</u>	<u>Totals</u>
Operating Expense	\$4	\$6	\$6	\$16
Capital Expenditures	\$17	\$22	\$23	\$62
Totals	\$21	\$28	\$29	\$78

Energy Audit Support and Incentives

Description

Through visits to customers homes or by working through existing service providers, Hydro Ottawa will provide conservation information and make specific recommendations for energy savings in such areas as major appliances, lighting, air leakage, hot water, heating and cooling. Incentives may also be provided. Services could be further tailored for specific subsidized housing applications.

Target users

Residential and small commercial customers

Benefits

The consumer receives a clear, concise and prioritized report identifying opportunities for energy savings as well as the associated costs and payback period (as applicable).

Budget

<u>\$k</u>	<u>2004/2005</u>	<u>2006</u>	<u>2007</u>	<u>Totals</u>
Operating Expense	\$17	\$22	\$23	\$62
Capital Expenditures	\$4	\$6	\$6	\$16
Totals	\$21	\$28	\$29	\$78

Refrigerator Buy-Back Program

Description

A program to facilitate the return of old inefficient refrigerators will be evaluated. So called "beer fridges" in the basement of many homes use significant amounts of electricity.

Target users

Residential customers

Benefits

A reduction in both demand and consumption due to the removal of inefficient appliances

Budget

<u>\$k</u>	<u>2004/2005</u>	<u>2006</u>	<u>2007</u>	<u>Totals</u>
Operating Expense	\$29	\$39	\$41	\$109
Capital Expenditures	\$7	\$10	\$10	\$27
Totals	\$37	\$48	\$51	\$136

"Electric Avenue" – A Community Pilot

Description

A pilot neighbourhood of selected homes and/or small businesses may be chosen to become a "showcase" community to demonstrate the overall effectiveness of SMART energy conservation initiatives including energy audits, retrofits, load control devices and SMART Meters, etc.

Target users

Residential and small commercial customers, either in a new or existing community

Benefits

Potential high visibility project that could demonstrate the before and after impact of serious energy conservation and load control initiatives

Budget

<u>\$k</u>	<u>2004/2005</u>	<u>2006</u>	<u>2007</u>	<u>Totals</u>
Operating Expense	\$29	\$39	\$41	\$109
Capital Expenditures	\$7	\$10	\$10	\$27
Totals	\$37	\$48	\$51	\$136

Social Housing Program

Description

A province wide centralized energy management service for the social housing sector may be developed in collaboration with the Provincial Government, utilities (e.g. Enbridge, Union Gas) and others.

A pilot program may be conducted to determine feasibility with an expectation that a full-scale provincial program would follow.

Target users

Local social housing corporations, non-profit homes and co-op housing

Benefits

Synergies may be created through the combined initiatives of the various agencies.

Budget

<u>\$k</u>	<u>2004/2005</u>	<u>2006</u>	<u>2007</u>	<u>Totals</u>
Operating Expense	\$33	\$44	\$47	\$125
Capital Expenditures	\$8	\$11	\$12	\$31
Totals	42\$	\$55	\$59	\$156

Commercial, Industrial and Institutional (> 50 kW)

SMART Meter Program

Description

Hydro Ottawa will make an investment to further the use of SMART or interval meters by commercial industrial and institutional customers.

This program will commence upon the release of a formal definition of a SMART meter by the Board.

Target users

Commercial, Industrial and Institutional customers

Benefits

This program supports the Minister of Energy's commitment to the installation of 800,000 SMART meters across Ontario by 2007. These meters are seen as an important means of establishing a 'conservation culture' in Ontario. In conjunction with appropriate rate structures, they will encourage customers to conserve or shift energy use.

Budget

<u>\$k</u>	<u>2004/2005</u>	<u>2006</u>	<u>2007</u>	<u>Totals</u>
Operating Expense	\$52	\$69	\$73	\$195
Capital Expenditures	\$209	\$277	\$294	\$779
Totals	\$261	\$346	\$367	\$974

LED Retrofits for Traffic Lights

Description

This initiative involves replacing traffic signals at intersections to light-emitting diode (LED) technology, which is now fairly common in many U.S. municipalities.

Target users

Municipalities

Benefits

This program results in significant energy savings since the LED technology uses approximately 80% less electricity. Other benefits include reduced maintenance (LED's last longer) and improved visibility.

Budget

<u>\$k</u>	<u>2004/2005</u>	<u>2006</u>	<u>2007</u>	<u>Totals</u>
Operating Expense	\$60	\$79	\$84	\$223
Capital Expenditures	\$15	\$20	\$21	\$56
Totals	\$75	\$99	\$105	\$278

Leveraging Energy Conservation and/or Load Management Programs

Description

Existing energy conservation and/or load management programs such as NRCan's Energy Innovators Initiative, Enbridge initiatives etc. will be promoted and incentives may be provided to advance market uptake of these programs and implementation of the recommendations. The LDC's are well positioned to introduce such programs to their customer base. Work will be conducted with the existing program providers to maximize leverage opportunities. Promotion will potentially include face-to-face meetings, conferences and seminars.

Target users

Large consumers over 50 kW including schools, large commercial facilities, institutional facilities, industrial, and municipal facilities

Benefits

Customer awareness and additional incentives will help advance market uptake of audit services, feasibility studies and retrofit opportunities already established within the government program framework.

Budget

<u>\$k</u>	<u>2004/2005</u>	<u>2006</u>	<u>2007</u>	<u>Totals</u>
Operating Expense	\$27	\$36	\$38	\$100
Capital Expenditures	\$107	\$142	\$151	\$401
Totals	\$134	\$178	\$189	\$501

Commercial Industrial & Institutional (CI&I) Load Control Initiative

Description

Load control uses a real time communications link to enable or disable customer loads at the discretion of the utility. These controls are usually engaged during system peak periods or when required to relieve pressure on the system grid.

Target Users

Larger commercial, industrial and institutional customers

Benefit

Demand control provides lower costs and increased stability for customers and utilities.

Budget

<u>\$k</u>	<u>2004/2005</u>	<u>2006</u>	<u>2007</u>	<u>Totals</u>
Operating Expense	\$179	\$237	\$252	\$668
Capital Expenditures	\$45	\$59	\$63	\$167
Totals	\$224	\$297	\$315	\$835

On-the-Bill Financing

Description

On-the-Bill financing will start with a pilot offering that will be developed to help remove a significant energy conservation purchase barrier. This will allow customers to finance their conservation investment off their balance sheet via an "expense budget" on their hydro bill instead of having to contend for scarce capital dollars. Financing arrangements will be made with third party investment organizations and the payment amounts will be presented on the customer's hydro bill.

Target Users

Larger commercial, industrial and institutional customers

Benefit

It is anticipated that this program will remove a significant energy conservation investment-purchasing barrier.

Budget

<u>\$k</u>	<u>2004/2005</u>	<u>2006</u>	<u>2007</u>	<u>Totals</u>
Operating Expense	\$12	\$16	\$17	\$45
Capital Expenditures	\$3	\$4	\$4	\$11
Totals	\$15	\$20	\$21	\$56

Design Advisory Program

Description

This initiative helps to create an integrated approach to the design process for new buildings, and involves architects, engineers, building owners and design advisors.

Target users

Commercial, Industrial and Institutional customers

Benefits

This program results in cost effective improvements to the energy efficiency of a building without adversely affecting other performance requirements stipulated by the owner. An energy performance model can be created to demonstrate achievable energy savings and can provide a breakdown of energy use. Through the installation of energy efficient equipment during construction, the customer benefits by avoiding the stranded costs incurred with equipment upgrades after the fact.

Budget

<u>\$k</u>	<u>2004/2005</u>	<u>2006</u>	<u>2007</u>	<u>Totals</u>
Operating Expense	\$30	\$40	\$42	\$111
Capital Expenditures	\$7	\$10	\$10	\$28
Totals	\$37	\$49	\$52	\$139

Distribution Loss Reduction

Distribution Loss Reduction

Description

The Distribution Loss Reduction Program is a broad network based initiative to drive greater efficiencies within the distribution grid. This program will identify opportunities for system enhancements. Next steps will be to complete the engineering analysis and feasibility studies. Projects will be prioritized, selected and implemented based on the most attractive investment to results ratio. Items to be addressed may include, but are not limited to:

Power Factor Correction - Under the Power Factor Correction initiative, a power factor assessment will be completed which will identify locations for the installation of power factor correction capacitor banks. The results and available funding will determine which projects proceed.

Voltage Conversion - Voltage upgrades can save up to 90% of the losses associated with a feeder as higher voltages and lower current results in lower losses. This study will ascertain the locations and value of voltage conversions. This program could also involve changing out all the meters on a particular feeder to SMART Meters so that the exact losses can be determined.

Power System Load Balancing - This program is designed to ascertain where load shifting can occur within the grid to improve system efficiency including the location of optimized "open points". It is estimated that approximately 5% - 10% of system losses could be saved.

Voltage Profile Management - Changing voltage profiles at the distribution station level can result in a peak reduction at the controllable distribution stations. This is in addition to the IMO's voltage reduction program and will not interfere with the effectiveness of that program.

Line Loss Reductions - Replacement of conductors such as #6 AWG copper with #2 AWG aluminum can reduce line losses. An evaluation of where such opportunities exist may be undertaken. The results and available funding will determine which projects proceed.

Transformer and Other Losses - Using infrared scans of transformers this program will help to identify additional electricity losses including overloaded equipment. "Hot" transformers will be investigated further to determine operational improvement opportunities.

Target users

The results of this program will positively impact all of Hydro Ottawa's customers.

Benefits

Reduced electricity distribution system delivery losses will reduce system demand, relieve network capacity to accommodate growth, and reduce the requirement for new generating capacity in the Province. Costs associated with distribution system delivery losses are recovered through electricity distribution charges. Reductions in these costs will therefore benefit all customers.

Budget

<u>\$k</u>	<u>2004/2005</u>	<u>2006</u>	<u>2007</u>	<u>Totals</u>
Operating Expense	\$169	\$224	\$238	\$631
Capital Expenditures	\$676	\$897	\$951	\$2,524
Totals	\$845	\$1,121	\$1,189	\$3,155

Distributed Energy

Load Displacement

Description

Distributed generation behind the customer's meter provides an excellent opportunity to displace load from the local distribution system's grid in a very effective manner. Load displacement technology, such as combined heat and power systems, provides increased efficiency of power and thermal systems. Combined with an existing or new district heating distribution system this technology contributes to the development of sustainable energy networks within Ontario's communities.

Other technologies such as micro-turbines, wind, biomass fuels and solar provide additional options to meet the customer's needs. This initiative will facilitate the development and implementation of these opportunities. Financial incentives will be considered based on the project's viability.

Development of educational and technology programs in conjunction with local colleges and universities may be considered. Small pilots or demonstration projects to promote alternative and renewable energy sources may also be considered.

Target users

Commercial, industrial, and residential, schools, colleges and universities

Benefits

Benefits include additional capacity within the grid. Cleaner technologies result in reductions in Green House Gas (GHG) emissions. Other benefits include improved system reliability, reduced harmonics, back-up power possibilities, education and skills development.

Budget

<u>\$k</u>	<u>2004/2005</u>	<u>2006</u>	<u>2007</u>	<u>Totals</u>
Operating Expense	\$30	\$40	\$42	\$111
Capital Expenditures	\$119	\$158	\$168	\$445
Totals	\$149	\$198	\$210	\$557

Stand-by Generators

Description

This program may provide for the use of customers' existing stand-by generators when required and/or economical. Environmentally friendly generators will be the primary focus of this initiative however all generators may be considered if needed during an emergency.

Target Users

Commercial and industrial customers with sufficiently sized stand-by generators

Benefits

Reduction of customer and system peak demand and energy costs

Budget

<u>\$k</u>	<u>2004/2005</u>	<u>2006</u>	<u>2007</u>	<u>Totals</u>
Operating Expense	\$20	\$26	\$28	\$74
Capital Expenditures	\$80	\$106	\$112	\$297
Totals	\$99	\$132	\$140	\$371

Overall Program Support

Description

Several program supporting initiatives may be considered such as; an annual Key Account Conference, Home Show participation, an energy conservation website, customer newsletters, staff training and media support activities etc. may be considered.

Outreach support to smaller utilities is an additional area that may be explored.

Target Users

All customer classes

Benefits

Supports existing programs and drives energy conservation awareness that will facilitate the culture change in Ontario.

Budget

<u>\$k</u>	<u>2004/2005</u>	<u>2006</u>	<u>2007</u>	<u>Totals</u>
Operating Expense	\$99	\$132	\$140	\$371
Capital Expenditures	\$25	\$33	\$35	\$93
Totals	\$124	\$165	\$175	\$464

Conclusion

Hydro Ottawa believes that the plan set out in this document is a prudent and effective approach in helping to achieve the Province's energy conservation and demand management goals. This plan addresses many of the potential initiatives outlined in the Minister's letter and represents a responsible first step in Hydro Ottawa's implementation of CDM programs.

Hydro Ottawa looks forward to the Board's approval of this plan and the implementation of these initiatives. Hydro Ottawa requests that in the Board's decision granting approval of Hydro Ottawa's CDM Plan, the Board confirm that the approved plan will discharge Hydro Ottawa's obligation to invest an amount equivalent to its third tranche MARR, subject to *ex post* review by the Board only with respect to planned versus actual CDM spending.

Contact Information

David J. McKendry
Director Marketing and Sales
Hydro Ottawa
3025 Albion Rd. N.
Ottawa, Ontario, K1G 3S4
Telephone: (613) 738-5499 ext 353
Facsimile: (613) 738-6427
Email: davidmckendry@hydroottawa.com

Program Budget and Timeline Summary

The following spreadsheet provides an overall summary of funding and timelines for the suite of Hydro Ottawa's Conservation and Demand Management Programs.

		Annual Budget (\$ '000)			Total Budget (\$ '000)	
		2004-05	2006	2007		
CONSERVATION AND DEMAND MANAGEMENT						
Residential and Small Commercial (< 50 kW)						
- Co-branded Mass Market Program	OPEX	\$ 250	\$ 332	\$ 352	\$ 935	
	CAPEX	\$ -	\$ -	\$ -	\$ -	\$ 935
- SMART Meter Pilot	OPEX	\$ 19	\$ 25	\$ 26	\$ 70	
	CAPEX	\$ 75	\$ 100	\$ 106	\$ 281	\$ 351
-Design Advisory Program	OPEX	\$ 17	\$ 22	\$ 23	\$ 62	
	CAPEX	\$ 4	\$ 6	\$ 6	\$ 16	\$ 78
- Residential Load Control Program	OPEX	\$ 4	\$ 6	\$ 6	\$ 16	
	CAPEX	\$ 17	\$ 22	\$ 23	\$ 62	\$ 78
- Energy Audit Program	OPEX	\$ 17	\$ 22	\$ 23	\$ 62	
	CAPEX	\$ 4	\$ 6	\$ 6	\$ 16	\$ 78
- Refrigerator Buy-back Program	OPEX	\$ 29	\$ 39	\$ 41	\$ 109	
	CAPEX	\$ 7	\$ 10	\$ 10	\$ 27	\$ 136
-"Electric Avenue" - A Community Program	OPEX	\$ 29	\$ 39	\$ 41	\$ 109	
	CAPEX	\$ 7	\$ 10	\$ 10	\$ 27	\$ 136
- Social Housing Program	OPEX	\$ 33	\$ 44	\$ 47	\$ 125	
	CAPEX	\$ 8	\$ 11	\$ 12	\$ 31	\$ 156
Commercial, Industrial & Institutional Market (> 50 kW)						
- SMART Meters	OPEX	\$ 52	\$ 69	\$ 73	\$ 195	
	CAPEX	\$ 209	\$ 277	\$ 294	\$ 779	\$ 974
-LED Retrofits for Traffic Lights	OPEX	\$ 60	\$ 79	\$ 84	\$ 223	
	CAPEX	\$ 15	\$ 20	\$ 21	\$ 56	\$ 278
-Leveraging Energy Conservation and Load Management Programs	OPEX	\$ 27	\$ 36	\$ 38	\$ 100	
	CAPEX	\$ 107	\$ 142	\$ 151	\$ 401	\$ 501
-CI&I Load Control Initiative	OPEX	\$ 179	\$ 237	\$ 252	\$ 668	
	CAPEX	\$ 45	\$ 59	\$ 63	\$ 167	\$ 835
-On-the-Bill Financing	OPEX	\$ 12	\$ 16	\$ 17	\$ 45	
	CAPEX	\$ 3	\$ 4	\$ 4	\$ 11	\$ 56
-Design Advisory Program	OPEX	\$ 30	\$ 40	\$ 42	\$ 111	
	CAPEX	\$ 7	\$ 10	\$ 10	\$ 28	\$ 139
Sub-Total, Conservation & Demand Management:		\$ 1,267	\$ 1,682	\$ 1,783	\$ 4,732	
DISTRIBUTION LOSS REDUCTION						
- Distribution Loss Reduction	OPEX	\$ 169	\$ 224	\$ 238	\$ 631	
	CAPEX	\$ 676	\$ 897	\$ 951	\$ 2,524	\$ 3,155
Sub-Total, Distribution Loss Reduction:		\$ 845	\$ 1,121	\$ 1,189	\$ 3,155	
DISTRIBUTED ENERGY						
-Load Displacement	OPEX	\$ 30	\$ 40	\$ 42	\$ 111	
	CAPEX	\$ 119	\$ 158	\$ 168	\$ 445	\$ 557
-Stand-by Generators	OPEX	\$ 20	\$ 26	\$ 28	\$ 74	
	CAPEX	\$ 80	\$ 106	\$ 112	\$ 297	\$ 371
Sub-Total, Distributed Energy:		\$ 248	\$ 330	\$ 350	\$ 928	
PROGRAM SUPPORT						
-Overall Program Support	OPEX	\$ 99	\$ 132	\$ 140	\$ 371	
	CAPEX	\$ 25	\$ 33	\$ 35	\$ 93	\$ 464
Sub-Total, Program Support:		\$ 124	\$ 165	\$ 175	\$ 464	
Total Budget, All Programs		\$ 2,485	\$ 3,297	\$ 3,497	\$ 9,279	