

**ONTARIO POWER AUTHORITY
2008 REVENUE REQUIREMENT SUBMISSION
BEFORE THE ONTARIO ENERGY BOARD
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EB-2007-0791

ONTARIO ENERGY BOARD

IN THE MATTER OF sections 25.20 and 25.21 of the *Electricity Act, 1998*;

AND IN THE MATTER OF a Submission by the Ontario Power Authority to the Ontario Energy Board for the review of its proposed expenditure and revenue requirement for the year 2008.

**AMENDED
SUBMISSION FOR REVIEW**

1. On September 13, 2007 the Board of Directors of the Ontario Power Authority (the "OPA") approved the 2008 Business Plan for the OPA (the "Business Plan"). In the Business Plan the OPA set its operating budget at \$67.521 million. A number of adjustments result in a requested revenue requirement of \$51.868 million.
2. Pursuant to section 25.22 of the *Electricity Act, 1998* (the "Act"), by letter dated October 1, 2007 the OPA submitted its Business Plan to the Minister of Energy. Pursuant to section 25.22 (3) of the Act, if the Minister does not approve the proposed Business Plan and does not refer it back to the OPA for further consideration at least 70 days before the beginning of the fiscal year to which it relates, the Minister shall be deemed to have approved the OPA's proposed Business Plan for the fiscal year. Thus, the Minister has been deemed to have approved the OPA's Business Plan for 2008.
3. The OPA hereby submits to the Ontario Energy Board ("OEB") its proposed 2008 expenditure and revenue requirement for review and approval pursuant to subsection 25.21(1) of the Act.

4. The OPA proposes to charge a usage fee of \$0.346/MWh. The OPA is seeking interim approval of a usage fee effective January 1, 2008, if a final Board Order in this proceeding has not yet been issued by that date.
5. The OPA proposes to charge registration fees paid by proponents in certain competitive procurement processes. Specifically, the registration fees are \$10,000 per proposal for electricity supply and capacity procurement, and \$2,500 per proposal for demand response procurement. The forecast revenues associated with collection of these registration fees in 2008 is \$400,000.
6. Pursuant to subsection 25.21(2) of the Act, the OPA is seeking the following approvals from the OEB:
 - approval of the usage fee and the registration fees described above, or such further or other fees as the OEB may deem appropriate;
 - if necessary, interim approval of a usage fee, or such further or other interim order as the OEB may deem appropriate;
 - approval of a net revenue requirement of \$51.868 million, comprised of the proposed 2008 operating budget of \$67.521 million and a number of adjustments to the budget that result in a net amount of \$51.868 million;
 - approval of proposed 2008 capital expenditures of \$2.6 million;
 - approval of establishment of the 2008 Retailer Contract Settlement Deferral Account, of the 2008 Retailer Discount Settlement Deferral Account, and of the 2008 Forecast Variance Deferral Account, and approval or continuation of such further or other deferral accounts as the OEB may deem appropriate; and
 - all necessary orders and directions, pursuant to the *Ontario Energy Board Act, 1998* and the OEB's Rules of Practice and Procedure, as may be necessary in relation to this submission, and execution of the approvals requested in the Business Plan.

7. The OPA proposes the following title for this proceeding: Ontario Power Authority Fiscal 2008 Expenditure and Revenue Requirement Submission for Review ("2008 Revenue Requirement Submission" or "Submission").
8. The OPA proposes that the OEB review of the Submission proceed by way of a written hearing.
9. The OPA may amend its pre-filed evidence from time to time, prior to and during the course of the OEB proceeding. Furthermore, the OPA may seek to have additional meetings with Board Staff and intervenors in order to identify and address any further issues arising from this submission, with a view to an early settlement and disposition of this proceeding.
10. The OPA requests that a copy of all documents filed with the OEB by each party to this proceeding, be served on the OPA and the OPA's counsel in this proceeding as follows:

a)	<u>The Ontario Power Authority</u>	Ms. Miriam Heinz Regulatory Coordinator
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b) Aird & Berlis LLP

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DATED at Toronto, Ontario, this 11th day of February, 2008.

ONTARIO POWER AUTHORITY

A handwritten signature in black ink, appearing to read "Fred Cass", written over a horizontal line.

by its counsel in this proceeding
Fred Cass

**EVIDENCE REFERENCES FOR COMMITMENTS
BASED ON THE EB-2006-0233 SETTLEMENT PROPOSAL
DATED JANUARY 22, 2007**

Settlement Proposal dated January 22, 2007	
Issue 3. Strategic Objective #3 Supply Procurement and Contracting Operating Budget	Exhibit C-3-1
(1) the OPA will prepare a report on the procurement of generation in Ontario through competitive and non-competitive means and provide it in its 2008 Revenue Requirement Submission ("2008 RRS"). The report will include a list (counter-party and capacity in MWs, where this is available) of the generation contracts entered into by the OPA in 2007 to the date of the report that did not arise from a competitive procurement process.	
Issue 5. Strategic Objective #5 Building Organizational Capacity Operating Budget	Exhibit B-1-1, page 7 Exhibit B-2-1, page 16 Exhibit B-3-1, page 10 Exhibit B-4-1, page 7 Exhibit B-5-1, pages 6, 14, 17
(2) in its 2008 RRS, the OPA will report on its progress in fulfilling the action items that are identified in its 2007 Business Plan under each heading which reads "You will see that we have met this objective when";	
(3) in its 2008 RRS, the OPA will provide a report addressing how incentives for executives are linked to the achievement of corporate objectives;	Exhibit B-5-1, page 19
(4) in its 2008 RRS, the OPA will provide any incremental external consulting and legal costs incurred in 2007 for each new directive arising in 2007;	Exhibit B-5-1, page 7
(5) with respect to the OPA's practices in the procurement of professional and consulting services, the OPA will, subject to any confidentiality limitations, take the following actions:	
(ii) file, as part of the 2008 RRS, management's most recent report to the Audit Committee of the Board regarding all non-competitive procurements by the OPA;	Exhibit C-1-1
(iii) retain an independent consultant to review the OPA's Procurement Policy and related Signing Authorities and compare them with the procurement and authorization practices of other public entities (e.g., OEB, Ministry of Energy, etc.) and provide the results of this review and comparison in the 2008 RRS;	Exhibit C-2-1

**EVIDENCE REFERENCES FOR COMMITMENTS
BASED ON THE EB-2006-0233 SETTLEMENT PROPOSAL
DATED JANUARY 22, 2007**

(6) with respect to OPA's compensation practices, the OPA agrees to provide in its 2008 RRS the following: (i) any advice received from Hay (as a result of the report filed in this revenue requirement submission and the OPA's ongoing work with Hay) regarding: (a) the appropriate compensation element(s) to be used in benchmarking the OPA's staff compensation levels with comparables; (b) the appropriate percentile to be used in benchmarking the OPA's staff compensation levels with comparables; (ii) the OPA's position with respect to the Hay advice - if no advice has been received, the OPA will provide its position on the above issues; and (iii) any action plan arising from the OPA's position referred to above;	Exhibit B-5-1, pages 19 - 20
Issue 6. General <u>Complete Settlement</u> There is agreement to settle Issue 6, on the basis of the following: (1) ... The 2007 Forecast Variance Deferral Account ("2007 FVDA"), as proposed by the OPA, will be established and the remaining \$0.8 million of the estimated shortfall of \$1.6 million carried over from 2006 will be recorded in the 2007 FVDA, for disposition in the context of the OPA's 2008 RRS. As well, any difference between the estimated shortfall of \$1.6 million and the actual amount of the OPA's 2006 shortfall will be recorded in the 2007 FVDA for disposition in the 2008 RRS;	Exhibit D-3-3, page 1

1 OEB PROCEDURAL ORDERS / CORRESPONDENCE / NOTICES

2

3 This tab is reserved for filing the subject materials.



Laying the foundation for a sustainable electricity future

2006
ANNUAL REPORT



Corporate Profile

The Ontario Power Authority (OPA) was established under the *Electricity Restructuring Act, 2004* and began operations in January 2005. A not-for-profit corporation without share capital, the OPA is governed by an independent Board of Directors appointed by the Minister of Energy, and its activities and programs are directed by a Chief Executive Officer. It reports to the Ontario Legislative Assembly through the Minister of Energy and is licensed and regulated by the Ontario Energy Board.

The OPA's mandate is to ensure an adequate, long-term supply of electricity for Ontario – a critical factor in the province's continued growth and prosperity. In pursuit of this mandate, the OPA is committed to meeting the expectations of all its stakeholders by operating responsibly, prudently and professionally.

The four key areas of focus are: building a culture of conservation, ensuring development of needed generation capacity, power system planning, and supporting the continued evolution of the electricity sector. The OPA's core value is to serve the best interests of Ontario's electricity consumers.

This 2006 annual report is intended to highlight the significant progress made by the OPA for the benefit of all Ontarians. It includes the audited financial statements.

Additional information on the OPA, its mandate, objectives, programs, activities and plans can be found on the Web site: www.powerauthority.on.ca.

“The OPA's mandate is to ensure an adequate, long-term supply of electricity for Ontario – a critical factor in the province's continued growth and prosperity.”

2006 Highlights

Conservation

The OPA:

- launched 10 high-profile electricity conservation and demand management programs. These programs included the successful Every Kilowatt Counts program that reached 3.8 million households, a program to improve energy efficiency in social housing units, and a demand response program for industrial customers that contributed 182 megawatts to meeting the system peak electricity demand on one of the hottest days of the summer.
- established several important new partnerships to facilitate the development of an independent network of conservation delivery organizations. One such partnership was with the Building Owners and Managers Association (BOMA) to provide assistance with energy-efficient building retrofits to its members and others who operate large multi-tenant commercial buildings.
- successfully advocated for recently implemented energy-efficiency improvements in the Ontario Building Code.

- is now managing 38 electricity supply contracts covering more than 8,300 megawatts of generation. They include nuclear refurbishment, renewable and clean energy projects and combined heat and power facilities.
- launched the Standard Offer Program for Renewable Energy to facilitate development of smaller projects that use wind, water, solar or biomass energy to generate electricity and can be connected to the province's local electricity distribution systems. It is the first program of its kind in North America.

Power System Planning

- Solid progress was made towards completing an Integrated Power System Plan for Ontario, the first in more than 15 years. A preliminary version of the plan was issued in November, five months after receiving the required policy direction from the government. Throughout the process of preparing the plan, the OPA has consulted extensively with stakeholders.

Generation Development

The OPA:

- negotiated contracts for more than 1,500 megawatts of new clean energy supply.

Electricity Sector Development

- The OPA introduced long-term forward energy auctions – the first in Ontario – to help provide pricing stability to electricity users and suppliers.



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March 30, 2007

The Honourable Dwight Duncan
Minister of Energy
900 Bay Street, 4th Floor
Toronto, ON M7A 2E1

Dear Minister:

I am pleased to submit the Ontario Power Authority's 2006 Annual Report. The report provides an overview of the OPA's activities and accomplishments during the fiscal year ended December 31, 2006, and includes the audited financial statements.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "P. L. Jones", with a stylized flourish at the end.

Peter L. Jones
Chair

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Message from the Chair and the CEO



PETER L. JONES,
CHAIR



JAN CARR,
CHIEF EXECUTIVE OFFICER



Since the establishment of the OPA in late 2004, its directors, officers and staff have been guided by one overriding principle: to serve and further the interests of Ontario's electricity users. Electricity is vital to every facet of modern life – in the home, at work, on farms, in schools and hospitals, across every community and sector of the economy, every hour of every day. Supply disruptions can have severe impacts on both consumers and the economy.

The OPA's mandate is to ensure an adequate, reliable, long-term supply of electricity for Ontario. That means leading coordinated, cost-effective, sustainable conservation efforts across the province; planning electricity supply and transmission infrastructure for the province 20 years into the future; taking necessary steps to procure needed new supply where the market is not meeting the needs; and helping the electricity sector transition to a more competitive structure that will transfer financial risks to investors and away from consumers or taxpayers and encourage more operational efficiencies. It also requires open, extensive and responsive communication and consultation with all those who have a stake in our mandate, including the general public, consumers, generators, distributors, transmitters, non-governmental organizations, local communities and other interest groups.

In 2006, the OPA's first year of full operation, we made solid progress — executing and expanding on plans formulated in 2005, implementing new programs and initiatives and continuing to lay the foundation for the electricity future Ontarians want, need and deserve.

The OPA was extremely active on the conservation front, remaining focused on developing programs for immediate implementation to meet Ontario's short-term electricity conservation targets while also building a base for longer-

term, sustainable conservation and the creation of a culture of conservation. During 2006, 10 new conservation and demand management programs were launched, and the development of another nine programs began. As the Chief Energy Conservation Officer noted in his 2006 annual report, a new era of electricity conservation has begun in the province.

“In 2006, the OPA's first year of full operation, we made solid progress — executing and expanding on plans formulated in 2005, implementing new programs and initiatives and continuing to lay the foundation for the electricity future Ontarians want, need and deserve.”

As one indicator, following the introduction of the OPA's Every Kilowatt Counts program, which provided energy-saving tips and money-saving coupons to every household in the province, research showed that the number of Ontarians who were aware of conservation initiatives rose from 64 to 77 percent.

Completion of the Integrated Power System Plan for Ontario is a high priority. In June 2006, the Minister of Energy responded to the OPA's *Supply Mix Advice Report*, submitted in late 2005. The Minister accepted the OPA's recommendations while increasing the target for conservation and demand management efforts and limiting the maximum contribution of nuclear power to historical levels.

Following the Minister's response, an extensive communication and stakeholder consultation process was undertaken, including advertising in a broad cross-section of community newspapers for the public to get involved, the creation of a special Web site, publication of eight discussion papers, open teleconferences and Web conferences, workshops and consideration of written

submissions. In November, just five months after the policy direction was received, a preliminary plan was completed and released for further stakeholder consultation. The final version will be submitted to the Ontario Energy Board in 2007. After a full regulatory review, we expect that in 2008 Ontario will have an approved power system plan that will set out the programs and facilities that will be needed over the next five years, the preliminary work needed for the subsequent five years and the direction for 10 years after that.

In line with the commitment to procure needed new electricity supply capacity, in 2006 the OPA negotiated new contracts for more than 1,500 megawatts of clean energy supply in areas of the province facing increasing supply constraints, while also continuing to manage supply contracts negotiated by the government before the OPA was created. In total, the OPA is managing 38 contracts covering more than 8,300 megawatts of generation – equivalent to about a quarter of Ontario's existing generating capacity.

Another major accomplishment during 2006 was the launch of Ontario's Standard Offer Program for Renewable Energy. The first such program in North America, it is intended to foster and support small (10 megawatts or less) electricity generating projects that use renewable energy sources such as wind, water, solar or biomass, by providing a standard pricing regime over a 20-year term and reducing the administrative burden for developers. The program was launched in November and has generated a substantial response from prospective project developers. The first 22 contracts were awarded in late February 2007.

Also in 2006, the OPA facilitated the introduction of forward energy auctions for the first time in Ontario. This initiative was aimed at establishing a futures market for electricity – similar to those that exist for other energy commodities, such as natural gas. One of the main purposes of a futures market is to provide greater certainty to both consumers and suppliers regarding future prices and revenue streams.

Looking ahead in 2007, the OPA will remain focused on addressing Ontario's electricity supply and demand challenges by pursuing five key strategic objectives, which can be found on page 11 of this report.

We will continue to design and implement conservation and demand management programs for residential, commercial, institutional, industrial and agricultural consumers; engage local distribution companies, municipalities, industry associations and others to develop and deliver new programs; and create a standardized process for



measuring, verifying and evaluating program results. We will also continue to foster the development of an independent conservation services industry needed to deliver sustainable conservation and demand management, and build conservation awareness across all sectors towards the longer-term goal of fostering a culture of conservation.

In this respect, the OPA has been assigned the responsibility for the funding of conservation and demand management programs for about 90 electricity distribution utilities in Ontario. We will also launch an overarching brand that will become the friendly, authoritative and trusted voice on the wise use of electricity. Both of these measures will bring greater coordination and strength to province-wide conservation efforts.

At the same time, these initiatives have resulted in a significant expansion of the OPA's responsibilities and the scope of its operations. Conservation and demand management operations alone will account for almost half of the OPA's operating budget for 2007.

In addition to completing and submitting the Integrated Power System Plan to the Ontario Energy Board and becoming involved in the regulatory process to follow, we are developing a coal emission mitigation analysis that will be submitted to the government. We will also continue to address the planning requirements of localized supply reliability concerns. These and other planning-related activities will take up less than one-quarter of the OPA's 2007 budget.

Other key initiatives in 2007 in pursuit of our strategic objectives will be to procure more conservation, demand



“We would particularly like to thank our stakeholders, including individual consumers, interest groups and industry members and associations, for their active participation in our consultation processes.”

management and generation for regions with supply constraints. Going forward, the OPA will endeavour to use competitive procurement processes whenever possible to lower the costs of new generation and protect the interests of consumers. We will also continue to implement the Standard Offer Program for Renewable Energy and develop a similar program for clean energy projects. Another priority will be to continue managing a growing number of contracts, while working to strengthen relationships with generators and contract holders. This area of our mandate will account for less than 20 percent of the 2007 budget.

The OPA will also continue its sector development work in 2007 in cooperation with the Independent Electricity System Operator and other industry participants and stakeholders. Less than 10 percent of our 2007 budget will go towards this part of our mandate. The emphasis will be on developing innovative strategies to reduce reliance on OPA procurement to meet electricity demand and thereby transfer financial risks from consumers to investors. As a step in this direction, the OPA and PowerStream have agreed to undertake a proof-of-concept project to evaluate the potential of load serving entities (LSEs) to provide rate stability and transparency for consumers, and as a means of facilitating the management of electricity pricing risks now borne by customers. The project will test how an LSE might operate in Ontario's

wholesale electricity market and whether customers would benefit from such a development.

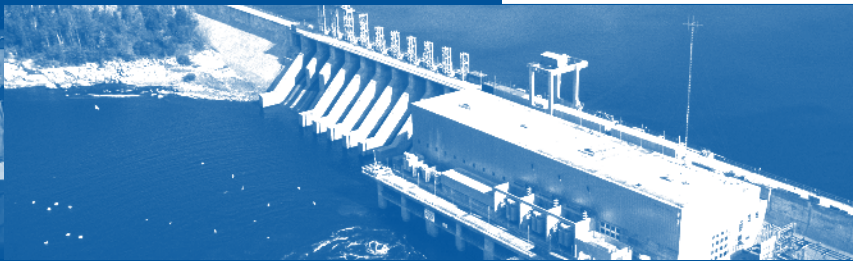
In summary, 2006 was a year of solid progress in tackling the complex and challenging task of laying a secure foundation for Ontario's electricity future for the long-term benefit of all Ontarians. As Chair and Chief Executive Officer of the OPA, we would like to acknowledge and thank all of our stakeholders, as well as the OPA Board of Directors, executives and staff, for their valuable contributions to the progress we have made together. We would particularly like to thank our stakeholders, including individual consumers, interest groups and industry members and associations, for their active participation in our consultation processes. Their ideas, advice, feedback and responses have helped to improve initiatives such as the Integrated Power System Plan, procurement processes and the Standard Offer Program for Renewable Energy. We look forward to their continued contributions and support as we move ahead towards a sustainable electricity future for Ontario.

PETER L. JONES, CHAIR

JAN CARR, CHIEF EXECUTIVE OFFICER



2006 in Review



A Commitment to Broad, Open Consultation

The OPA is committed to open and wide-ranging consultation with all those who have a stake or interest in its activities. In particular, in keeping with its core value of serving the best interests of Ontario's electricity consumers, the OPA strives to ensure that the concerns and views of electricity customers are heard and considered.

Consultations are based on the principles of relevance, inclusiveness, accessibility, transparency and fairness. The goal is to allow for the sharing and consideration of information, feedback and advice at an early stage. Consultations and communications also build a shared understanding of the issues and of the complexity, magnitude and urgency of the electricity challenges faced by the province today and in the future.

The OPA conducted extensive consultation and outreach activities throughout 2006 with more than 3,100 participants representing a wide range of organizations and interests. In addition, many communication channels were used by the OPA to build awareness of its purpose, activities and proposed plans and programs, including traditional print and electronic media, advertising, OPA publications and Web site postings, workshops, teleconferences and Web casts, speeches by OPA executives and face-to-face meetings with individual groups. In 2006 alone, almost 40 major speeches were made by OPA executives to audiences ranging from business leaders and government representatives to community, consumer and environmental organizations. The OPA also established the CEO's Conservation and Demand Management Advisory Council, which meets periodically with the CEO and members of the executive team to receive updates on the OPA's conservation activities and provide feedback. The council is comprised of representatives of the province's local distribution companies, conservation service providers, academia and environmental groups.

Additional initiatives were undertaken to ensure that customers' voices were heard. The OPA established the CEO's Customer Advisory Council, which meets quarterly with the CEO and members of the executive team to receive updates on the OPA's activities and provide valuable input. The council is comprised of representatives of the Consumers Council of Canada, the Ontario Federation of Agriculture, the Canadian Federation of Independent Business, Canadian Manufacturers and Exporters, the Association of Major Power Consumers in Ontario, the Canadian Chemical Producers' Association and the Building Owners and Managers Association. Customer, environmental and First Nations groups received funding from the OPA to enable their participation in consultations related to the Integrated Power System Plan. In addition, the OPA regularly consulted with customers and key delivery channel partners before finalizing the designs of its conservation and demand management programs.

This commitment to communication and consultation was evident in each of the OPA's major initiatives during 2006.

Conservation and Demand Management: Building a Conservation Culture

In June 2006, the Minister of Energy established the province's conservation and demand management target at 6,300 megawatts of savings in peak electricity use by 2025, with interim targets of 1,350 megawatts reduction in peak demand by 2007 and a further 1,350 megawatts by 2010.

Achieving these targets is the responsibility of all consumers in all sectors of the economy. The OPA's responsibility is to lead and coordinate this important effort.

Accordingly, the OPA is implementing a long-term conservation and demand management strategy that is focused on:

- procuring conservation and demand management resources to meet the 2007 and 2010 targets,

- enhancing capabilities across the conservation industry,
- and transforming the market to build a culture of conservation.

The OPA procures conservation and demand management resources through direct programs such as product rebates, building retrofits and appliance-recycling initiatives. Enhancing the capabilities of the conservation industry involves developing the skills and knowledge of the organizations that are designing and delivering conservation and demand management programs in the marketplace, as well as building the capability of consumers to manage their electricity use. This will be accomplished by influencing attitudes, improving knowledge, removing barriers and providing support for research and development in relation to products, technologies, program delivery options and customer needs.

“Enhancing the capabilities of the conservation industry involves developing the skills and knowledge of the organizations that are designing and delivering conservation and demand management programs in the marketplace, as well as building the capability of consumers to manage their electricity use.”

The market will be transformed as older, less energy-efficient equipment and appliances are replaced and the conservation industry develops greater depth and resilience. This will be achieved through structural changes in the market, such as improvements in relevant codes and standards and the introduction of price-based incentives. In the medium to long term, there will be less need for the OPA's involvement in conservation programs because a transformed marketplace will be securing more of the available conservation resource than it does today.

Encouraging progress was made during 2006, providing a strong foundation for further success in 2007 and beyond. Ten programs were launched in 2006, and the development of another nine began for launch in 2007. New residential programs included the Every Kilowatt Counts campaign, which delivered energy-saving tips and discount coupons for energy-efficient products to all households in Ontario; the Cool Savings Rebate program for replacing older, less





efficient air conditioners; a Hot Savings Rebate program for improving the efficiency of heating equipment; and a pilot program to retire inefficient refrigerators. Following are the results that were available in March 2007. Under the Every Kilowatt Counts program, 1.6 million coupons were redeemed by up to 24 percent of Ontario households. The program will result in total electricity savings of more than two million megawatt-hours over the eight-year lifetime of the products. The Cool Savings Rebate resulted in more than 35,000 rebate submissions for all three rebate offers. The Hot Savings Rebate led to almost 6,000 submissions for all three rebate offers. Under the Secondary Refrigerator Retirement program, an estimated 10,000 fridges were retired and decommissioned, representing electricity savings of 2.72 megawatts. Follow-up research has also indicated a strong increase in consumer awareness of conservation initiatives.

An industrial demand response program launched in June 2006 facilitated the voluntary reduction of major industrial loads during peak consumption periods in response to market pricing. On average, the program led to a shift of five percent of participants' peak load to off-peak periods. On August 1, 2006, the hottest day of the year, this program saved 182 megawatts of electricity at the time of record-high system demand.

Other conservation programs either launched or actively put into development during 2006 included programs aimed at the agricultural sector, municipalities, universities, schools and hospitals, and an Aboriginal conservation initiative.

The Conservation Fund established by the OPA continued to provide financial assistance for sector-specific pilot projects. The fund helps the OPA to forge valuable relationships with key organizations that can deliver conservation programs to the marketplace. It also builds the capability of businesses, institutions and residents to integrate conservation into day-to-day activities. It is an important tool to develop knowledge about products, technologies, delivery partners and customer preferences.

The fund had a budget of \$1.5 million for 2006, which will double to \$3 million in 2007. More than \$5 million has been leveraged from project partners and other funding partners. The projects funded to date cover industries and activities as diverse as mining, forestry, winemaking, restaurants and green grocers, high-rise condominiums, agriculture, health care and education. A list of funded projects can be found on the Conservation Bureau Web site: www.conservationbureau.on.ca.

The OPA was also active in building conservation awareness across Ontario. Specific initiatives included:

- a four-page advertising insert in community newspapers across the province, delivered to three million households,
- a documentary film on conservation that was aired on television in September,
- an intensive news media campaign, including “The Conservation Zone” columns distributed to community newspapers across the province,
- 26 Certificates of Recognition presented to individuals and organizations that have shown leadership in energy conservation and made long-term commitments to reduce energy consumption in Ontario,
- and attendance by the Chief Energy Conservation Officer at more than 100 events to spread conservation messages.

In November 2006, Ontario’s Chief Energy Conservation Officer presented the Minister of Energy with his second annual report, entitled *Ontario – a new era in electricity conservation*. It provides greater details on the OPA’s conservation programs and activities and the results achieved to the end of September 2006, as well as details on the conservation efforts of others in the province, and can be found on the OPA Web site.

Some changes occurred during 2006 that will make the overall conservation effort more effective in the long run. The Ontario Building Code was revised to put more emphasis on energy efficiency in construction. The Chief Energy Conservation Officer advocated aggressively for this in 2005 and early 2006. Another change was the government’s decision to centralize under the OPA the coordination and funding of many of the conservation and demand management activities of Ontario’s approximately 90 local electricity distribution companies. This is a significant expansion of the OPA’s role and will require a substantial increase in resources.

Going forward, the OPA will take the lead in managing and coordinating conservation efforts across the province to strengthen the many different programs and messages in the market today. Another important initiative is to establish consistent standards and methods of measuring, evaluating and verifying the results of conservation

programs. This will enable the OPA and other organizations that design and deliver conservation to establish baseline levels and targets for improvement, evaluate the effectiveness of education and communication initiatives and help motivate consumers to move toward a culture of conservation.

Planning for Reliable, Long-Term Electricity Supply

A cornerstone of the OPA’s mandate is the responsibility to develop an Integrated Power System Plan to meet Ontario’s long-term electricity needs. Such a plan has not been developed for the province for more than 15 years. The restructuring of Ontario’s electricity sector in the mid to late 1990s resulted in the elimination of the integrated power system planning function that had played a central role in the development and management of Ontario’s power system.

“Taking an integrated approach to planning means planning for both the demand and supply sides of the electricity system, considering transmission needs and taking into account the environmental, economic and social consequences of energy-related decisions.”

The OPA is charged with developing an Integrated Power System Plan that will involve a combination of conservation, supply and transmission components over a 20-year period. The plan will be reviewed and updated every three years to reflect changing conditions, new information and emerging technologies. It is subject to review and approval by the Ontario Energy Board. The regulatory review process will be transparent and will include a public hearing. The Ontario Energy Board’s role is to ensure that the plan complies with government policy and is economically prudent and cost effective.

Taking an integrated approach to planning means planning for both the demand and supply sides of the electricity system, considering transmission needs and taking into account the environmental, economic and social consequences of energy-related decisions. This approach also recognizes that modern electricity networks present



complex engineering challenges and that every change to the system, such as the addition of a new generator or transmission line, has to be evaluated for its impact on the reliability and security of the system as a whole.

The Integrated Power System Plan builds upon work done by the OPA during 2005 that culminated in the submission of the OPA's *Supply Mix Advice Report* to the Minister of Energy in December 2005. The report presented recommendations in three areas: conservation and demand management; renewable energy sources; and conventional supply sources for the remaining demand, including nuclear power, natural gas and hydroelectricity. It recommended significant and growing roles for conservation and demand management and renewable energy sources over the next 20 years and a diversified portfolio of power sources to ensure a reliable supply of electricity.

In June 2006, following extensive public consultation, the Minister responded to the *Supply Mix Advice Report*, generally adopting its recommendations with two major exceptions. Firstly, with a government commitment to improve codes and standards and a clarification of which activities are to be considered as conservation, the conservation target was increased to 6,300 megawatts by 2025. Secondly, the Minister required that nuclear generating capacity be limited to its historic maximum of 14,000 megawatts.

Following receipt of the government's policy direction, the OPA launched an extensive public communication and stakeholder engagement process to exchange information

“Long-term, reliable electricity supply for Ontario consumers depends on a number of factors, one of which is a greatly increased role for renewable resources, such as wind, water, biomass and solar power in the supply mix.”

and benefit from stakeholder input. Advertisements in newspapers across the province invited the public to get involved in the planning process and referred them to an information brochure on the OPA Web site and available in print upon request. The brochures were also distributed to every MPP constituency office in the province.

Between June and November 2006, the OPA issued seven discussion papers – on the scope and overview of the planning process, load forecasting, conservation and demand management, supply resources, transmission, environmental sustainability and the preliminary plan. An eighth discussion paper on procurement options was issued in early January 2007. The OPA also carried out numerous open briefing sessions via teleconference and Web cast, as well as workshops on each paper through the late summer, fall and early winter. Written submissions were also encouraged. These initiatives involved more than 2,200 participants and resulted in valuable input from a broad range of interested individuals and organizations – all of which is being considered in the preparation of the Integrated Power System Plan to be filed with the Ontario Energy Board in 2007.

The plan will set out the programs and facilities that will be needed for the next five years, the preliminary work



that will be needed for the subsequent five years and the direction for 10 years after that. It is expected that the Ontario Energy Board's review of the plan will take about a year, so that in 2008 Ontarians will have an approved Integrated Power System Plan that will serve as the road map to a secure and reliable supply of electricity for the foreseeable future.

Procuring New Conservation and Supply Resources Where Needed

To meet expected electricity demand over the next 20 years, Ontario needs to conserve and develop about 24,000 megawatts of new generating capacity, which is equivalent to more than 80 percent of the existing installed capacity. In pursuit of this challenging objective, the OPA is responsible for facilitating investment in new generation, conservation and demand management projects where that investment might not otherwise occur in the market.

Within this area of the OPA's mandate, the focus in 2006 was primarily on developing new generation projects for downtown Toronto and the western part of the Greater Toronto Area, as well as combined heat and power or cogeneration projects throughout Ontario in response to immediate and near-term needs.

The OPA negotiated a contract with the developer of the Portlands Energy Centre for a 538-megawatt natural gas-fired, combined-cycle generating facility in downtown Toronto. Contract negotiations were successfully completed in August 2006, and the facility is now under construction.

In November, the OPA and TransCanada Energy Limited executed a contract for the Halton Hills generating station – a 600-megawatt facility to be built along the Highway 401-407 industrial corridor in the town of Halton Hills. This contract resulted from a competitive procurement process to resolve a system reliability shortfall. The station will provide excellent value to electricity users in the area, as well as reliable long-term supply.

The OPA is now managing 38 contracts for 8,324 megawatts of new generation and eight contracts for 278.5 megawatts of demand management. These include contracts for a variety of projects procured prior to the formation of the OPA, such as the refurbishment of the Bruce Power nuclear facility near Kincardine. The contracts also cover 5,440 megawatts of natural gas generating capacity, including six combined heat and power projects with an aggregate capacity of 351 megawatts; renewable energy generating projects with a combined generating capacity of more than 1,300 megawatts; and a seventh combined heat and power project for 63 megawatts of generation fueled by by-products from industrial processes.

Following successful execution of a contract, the OPA begins the activities required to ensure that the facility is completed and brought online. These include enforcing timelines for deliverables from the project operators, tracking project milestones, performing due-diligence audits and ensuring compliance with contract terms.



“The OPA is now managing 38 contracts for 8,324 megawatts of new generation and eight contracts for 278.5 megawatts of demand management.”

Supporting Small-Scale Renewable Energy Generation

Long-term, reliable electricity supply for Ontario consumers depends on a number of factors, one of which is a greatly increased role for renewable resources such as wind, water, biomass and solar power in the supply mix. Renewable energy facilities connected to the electricity distribution system can not only improve the reliability of supply but also contribute to cleaner air and reduced emissions of greenhouse gases that contribute to climate change.

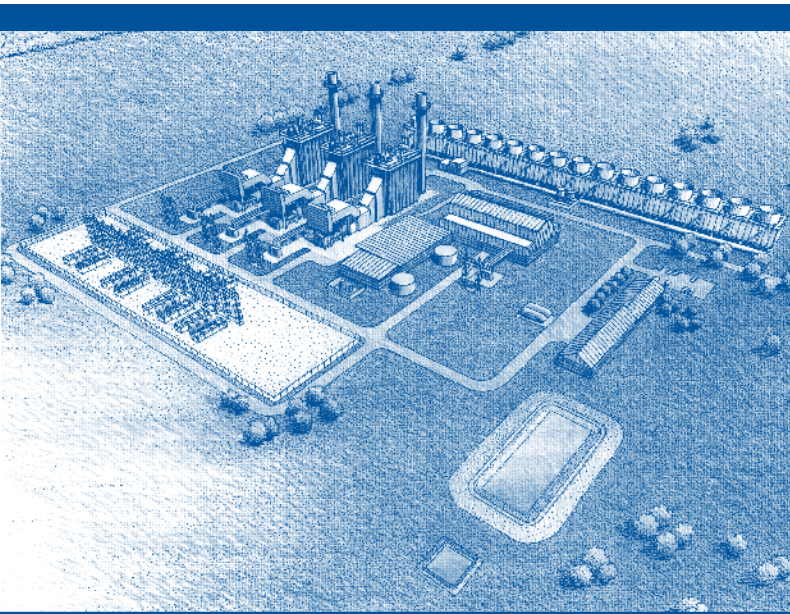
The government has set a target of having 2,700 megawatts of electricity generated by renewable sources by 2010. Procurement processes implemented by the OPA and by the government before the creation of the OPA have led to a number of large renewable energy project proposals that, if completed, will result in substantial progress toward the target. It is clear, however, that smaller renewable energy projects can also make a valuable contribution and should be encouraged and supported wherever it is practical and economic to do so.

Many potential smaller projects were prevented from proceeding by the complexity, costs and administrative burden of developing project proposals and meeting the requirements of the competitive procurement processes

and contracts that were designed for large projects. To remove these barriers, the Minister of Energy requested that the OPA and the Ontario Energy Board work together to design a standard offer program for small clean and renewable energy generation projects that would provide a standard pricing regime and simplified eligibility, contracting and other rules.

Following extensive research and consultation with stakeholders, the OPA and the Ontario Energy Board submitted a joint report to the Minister of Energy on March 17, 2006, with recommendations for a renewable energy standard offer program. On March 21, 2006, the OPA received the Minister's directive to implement the renewable energy standard offer program. A further extensive program of stakeholder consultation was undertaken before program rules and contract terms were determined.

The Standard Offer Program for Renewable Energy was launched on November 22, 2006, and is the first program of its kind in North America. Introduction of the program was accompanied by a wide-ranging information campaign involving the media, print and electronic communications, Web casts, teleconferences and a comprehensive Web site that includes information and advice for prospective generators and investors, as well as an online application. The first 22 contracts, representing more than 140 megawatts of generating capacity and some \$336 million in investment, were awarded in late February 2007.



It is expected that the program will lead to a significant aggregate contribution to Ontario's electricity supply security by small renewable energy projects.

The OPA and Ontario Energy Board were also asked to consider a clean energy standard offer program. The OPA is currently considering the pricing, eligibility and contract terms for this program and expects to deliver its recommendations to the Minister of Energy in the spring of 2007.

Creating a More Competitive Market

During 2006, the OPA also worked on measures to progress toward a market-driven electricity system. The goal is to reduce the need for the OPA to contract for new supply, thereby transferring financial risk from consumers to investors. These measures included the introduction, on a small-scale, phased-pilot basis, of forward energy auctions, the first to be offered in Ontario. Forward contracts allow industrial and other large consumers in the wholesale electricity market to lock in their long-term costs, fostering market liquidity and forward price discovery.

The OPA, with assistance from NGX (Natural Gas Exchange Inc.), facilitated two forward energy auctions during the year – in February and April – each involving electricity that was already being produced and sold into spot markets. The auctions were designed as wholesale market events, and eligible parties were those normally registered as participants in the markets administered by the Independent Electricity System Operator. As the OPA

sees the benefit of market-based investment, in December a third auction was conducted by NGX with the OPA acting only as an observer.

In total, the three auctions involved more than \$1 billion in electricity to be delivered over the next four years. As a result, both buyers and sellers have obtained pricing certainty for electricity that otherwise would have been bought and sold at continually varying prices. This initiative represented a significant step toward establishing an ongoing electricity futures market in Ontario.

In 2006, the OPA also began work with industry participants on a pilot project to test the concept of load serving entities, which are independent organizations that act as bulk purchasers of electricity and provide the benefit of locked-in prices to smaller customers. Ideally, Ontario will move over time to a system where competitive wholesale and retail markets will provide long-term price security and minimize risks for consumers. This will also provide residential, commercial and industrial customers with forward pricing information to facilitate planning and allow for greater benefits from conservation and demand management programs.

Also in 2006, the OPA established the Technology Development Fund to support the development and commercialization of technologies or applications that have the potential to improve electricity supply, conservation or demand management. Thirteen projects received a total of \$736,572 from the fund in 2006. This funding leveraged over \$8 million in partner contributions.

Looking Ahead – Strategies for 2007 and Beyond

The OPA's 2007 Business Plan is focused on addressing Ontario's electricity supply and demand management challenges by pursuing five key strategic objectives. The strategic objectives and the measures intended to achieve them are as follows:

Objective 1. Execute on prioritized conservation initiatives, build conservation and demand management capabilities across all sectors, and advance a sustained conservation culture.

To achieve this objective, the OPA will:

- create and deliver conservation and demand management initiatives using the best available market knowledge and a multitude of delivery channels;
- develop the needed infrastructure and market mechanisms through a broad range of industry and community organizations;

- advocate policy and regulatory changes to promote energy efficiency;
- establish a protocol for electricity program evaluation, measurement and verification;
- and champion the building of a conservation culture through targeted awareness, education and social marketing campaigns.

“In each of its four key areas of activity significant new initiatives were undertaken and completed, and a solid foundation was established for further progress in 2007 and beyond.”

Objective 2. Develop and deliver a comprehensive Integrated Power System Plan that addresses conservation, generation and transmission.

To achieve this objective, the OPA will:

- complete the Integrated Power System Plan, submit it to the Ontario Energy Board for approval and provide ongoing support for its implementation;
- identify solutions to address urgent reliability concerns and projects;
- and work in close coordination with the Ontario and municipal governments, as well as with organizations within the electricity sector, to advance public policy and sector policy related to power system planning and development.

Objective 3. Procure needed generation capacity in a timely way that also supports long-term sector development.

To achieve this objective, the OPA will:

- design procurements and procure solutions to address immediate reliability concern areas and allow sustainable sector development;
- strengthen relationships with generators and others under contract through operational effectiveness;
- financially settle contracts with generators and others while building and maintaining strong and cooperative working relationships with all parties;
- and reduce barriers to participation in the electricity market by small renewable generators and small clean energy generators.

Objective 4. Define sector development goals, facilitate the transfer of risk associated with generation investment from electricity customers to investors, and promote the development of new renewable, conservation and supply technologies.

To achieve this objective, the OPA will:

- identify clear steps in the sector development process and build needed partnerships and initiatives to progress toward competitive market development;
- initiate pilot testing of the load serving entities concept for review and potential development;
- provide a clearinghouse of renewable energy information;
- and support the commercialization of new technologies through the Technology Development Fund.

Objective 5. Continue building organizational capacity to meet the preceding four objectives.

The OPA is a relatively new organization, and its mandate was significantly expanded in 2006 – particularly with regard to its role in coordinating the delivery of conservation and demand management programs. Additional resources are required to meet the expanded mandate, including an approximate doubling of the total budget.

Fulfilling the Mandate

In 2006, the first year of full operation, the OPA made solid progress toward fulfilling its mandate of ensuring an adequate, long-term supply of electricity for Ontario while serving and protecting the interests of consumers and ratepayers. In each of its four key areas of activity – conservation, generation development, power system planning and electricity sector development – significant new initiatives were undertaken and completed, and a solid foundation was established for further progress in 2007 and beyond.

At the same time, it was also a year in which the volume and scope of OPA activities and responsibilities were significantly expanded from the levels envisaged at the time of its inception, most notably in the critically important area of creating a conservation culture in the province.

Going forward, the OPA will continue to meet both existing and new challenges in striving to ensure a secure electricity future for the people of Ontario.

Management's Discussion and Analysis

This discussion and analysis should be read in conjunction with the audited financial statements and accompanying notes for the year ended December 31, 2006.

2006 Financial Highlights

- Income before other income and expense amounted to \$1,833,000. After allowing for committed awards as described in note 12 to the financial statements (\$2,469,000), the expenses over revenues amounted to \$636,000.
- Total expenses inclusive of funds committed in 2006, amounted to \$32.5 million.
- Total revenue during 2006 was \$31.8 million.

Comparative Analysis to 2005

Readers are cautioned that direct comparison of 2006 financial results with the 2005 results is of limited value as the OPA commenced operations in early 2005 and, with the exception of the Chief Executive Officer, employment of staff did not begin until April 2005, and until July 2005, the OPA's five operating divisions did not have even core staff.

Funding of Operations

The legislation that created the OPA allows it to recover:

- (1) its operating costs, including any costs associated with financing. For 2006, operating costs were \$30.9 million, as reflected under fees in the statement of operations; and
- (2) payments and recoveries related to contracts entered into for new electricity supply, conservation and demand management amounted to \$313.5 million. This is reflected under the global adjustment section in the statement of operations.

The OPA's operating costs are subject to approval by the Ontario Energy Board (OEB). The recovery of contract costs and payments are recovered through a per kilowatt-hour (kWh) charge in the month that they occur. The charge is established by the Independent Electricity System Operator (IESO) as part of its market payments settlement process. Both the OEB-approved costs and the contract costs and payments are recovered by the IESO through its market operations and remitted by the IESO to the OPA.

Financing

The OPA's financing requirements are mainly short term and are primarily used to fund the Regulated Price Plan, Retailer Variance and Global Adjustment account balances. The aggregate of the account balance fluctuates monthly and can move to either a credit or debit position. The OPA currently has a \$975 million line of credit with the Province of Ontario, which was renewed for a three-year period from January 1, 2007 to December 31, 2010. As at December 31, 2006, the amount drawn under this line of credit was approximately \$140 million.

Regulated Price Plan (RPP)/Provincial Rebate Program

The OEB is responsible for setting prices in a Regulated Price Plan (RPP) for residential and other designated consumers that provides stable and predictable electricity pricing and ensures that the price consumers pay for electricity reflects projected payments to generators over the smoothing period.

The OPA is responsible for administering a RPP account (the Account) which captures any difference between the revenue collected from RPP customers for all their electricity use and the cost of purchasing that power from wholesale sources. The OPA reports the Account balance monthly to the OEB. The OEB will normally adjust the RPP prices every six months but may change them more frequently based on the actual or anticipated Account balance being excessive. Price changes are based on updated OEB forecasts and the Account balance.

The RPP prices are established inclusive of any anticipated rebate from Ontario Power Generation Inc. (OPG) for which RPP customers would be eligible. Therefore, the portion of any such rebate from OPG that relates to RPP customers is paid directly to the OPA and credited to the Account. The OPG rebate is any difference between the revenue limit for specific OPG generating facilities and the revenue OPG actually received in the IESO wholesale spot market for that generation. It is also referred to as the Ontario non-prescribed asset (ONPA) rebate. Effective April 2006, rebates are paid by OPG quarterly but previously were paid annually.

During the fiscal year 2006, the OPA received from OPG a rebate of \$354 million, which was credited to the Account. Generally mild weather conditions kept electricity prices below forecast levels, resulting in net payments into the Account by RPP customers of \$313 million. The year end balance in the Account stood at \$77 million due from RPP customers.

Global Adjustment and Settlement Account

The Global Adjustment and Settlement Account is administered by the IESO and records the monthly adjustment or movement between the market price (Hourly Ontario Energy Price or HOEP) and set prices paid to certain owners of generation. These owners are:

- OPG for its “designated assets” for which the government has prescribed the price of power sold. The designated assets are certain major hydroelectric plants and all nuclear plants.
- Non-utility generators (NUGs) are independently owned generators that were developed under contract to the former Ontario Hydro. On the dissolution of Ontario Hydro, the Ontario Electricity Financial Corporation assumed counterpart responsibility for these contracts.
- Suppliers of generation or load reduction for OPA supply, conservation and demand management contracts. These contracts are managed by the OPA and were established through public procurement processes. They are referred to by the IESO as “RFP contracts.” Under these contracts, the OPA provides generators with guaranteed revenue.

The IESO forwards a monthly invoice to the OPA that reflects the Global Adjustment movements that occurred for the previous month. The net balance on this invoice can be either positive or negative. On December 31, 2006, this resulted in approximately \$94 million included in accounts receivable on the statement of financial position.

OPA-Administered Contracts

In 2006, the OPA administered 18 contracts that were actively delivering generation and demand response resources to the electricity system. These contracts covered:

- Nuclear, clean energy supply and renewable energy source contracts at a cost of \$310.5 million.
- Demand response (DR) contracts at a cost of \$3.0 million.

Conservation and Technology Funds

Payments made from the Conservation Funds and Technology Development Fund are recorded as expenses in the period in which the recipients are determined to have met contracted performance. The OPA internally restricts the funds intended to be awarded and reduces the restricted amounts accordingly as they are expensed. The notes include information indicating to what degree the fund amounts have been awarded and expensed.

Ministry of Energy Account

Section 25.18 of the *Electricity Restructuring Act 2004*, requires that the OPA will pay to the Ministry of Energy (MOE) all costs the MOE incurs associated with the procurement of electricity. In 2005, the MOE incurred \$6.8 million of costs associated with electricity procurement, which the OPA recovered as part of its fees approved by the OEB. The recovery of these costs through fees is shown as a recovery in the “other (income) and expense” section of the statement of operations for fiscal 2006 as it was a recovery of a 2005 expense for which recovery was uncertain at the time of the preparation of the 2005 financial statements.

For 2006, the OEB approved the OPA's request to establish a deferral account to track MOE costs and the balance is shown under “other current assets”. In 2006, the MOE advised the OPA that it had incurred costs of \$1 million associated with the procurement of electricity.

Bid Deposits

In 2005, the OPA received bid deposits from numerous proponents tendering in various procurement processes for new electricity supply, conservation or demand management. Many of these deposits had maturity dates of one or two years. Deposits with a maturity date of one year or less are recorded under current liabilities, while those with a maturity date greater than one year are recorded under long-term liabilities.

In 2006, all deposits had a maturity date of one year or less and were all classified as current liabilities.



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AUDITORS' REPORT

To the Board of Directors

We have audited the statement of financial position of the Ontario Power Authority as at December 31, 2006, and the statements of operations, cash flows and changes in net assets for the year then ended. These financial statements are the responsibility of the Authority's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In our opinion, these financial statements present fairly, in all material respects, the financial position of the Authority as at December 31, 2006 and the results of its operations and its cash flows for the year then ended in accordance with Canadian generally accepted accounting principles.

A handwritten signature in black ink that reads 'KPMG LLP' with a long horizontal line underneath.

Chartered Accountants

Toronto, Canada

February 12, 2007

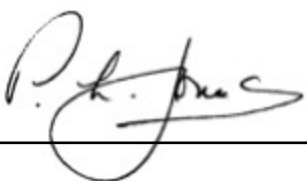
Statement of Financial Position

Year ended December 31, 2006, with comparative figures for 2005

	2006	2005
ASSETS		
Current Assets:		
Cash and cash equivalents	\$ 40,289,599	\$ 8,911,099
Accounts receivable, net	102,725,702	230,401
Other current assets (note 3)	2,260,090	1,871,974
Total Current Assets	\$ 145,275,391	\$ 11,013,474
Regulated Price Plan Variance (note 4)	\$ 77,341,339	\$ 744,280,862
Capital Assets (note 5)	3,515,970	3,394,765
TOTAL ASSETS	\$ 226,132,700	\$ 758,689,101
LIABILITIES		
Current Liabilities:		
Accounts payable and accrued liabilities	\$ 91,974,748	\$ 71,372,501
Contract deposits (note 18)	1,306,800	84,889
Deferred rent inducement, net (note 8)	1,195,080	1,331,013
Due to Ministry of Energy (note 14)	—	6,816,692
Operating loan (note 11)	33,788,770	7,008,002
Revolving loan - Regulated Price Plan (note 11)	106,533,010	603,785,956
Retailer Settlement Balance (note 6 and 11)	(11,483,164)	72,827,345
Total Current Liabilities	\$ 223,315,244	\$ 763,226,398
Long Term Liabilities (note 18)	\$ —	\$ 1,254,000
NET ASSETS		
Internally restricted for Conservation and Technology Funds (note 12)	\$ 2,468,675	\$ 1,021,250
Investment in capital assets	3,515,970	3,394,765
Unrestricted / accumulated operating surplus	(3,167,189)	(10,207,312)
Commitments (note 8)	\$ 2,817,456	\$ (5,791,297)
TOTAL LIABILITIES and NET ASSETS	\$ 226,132,700	\$ 758,689,101

See accompanying notes to financial statements.

On behalf of the Board:


Chair


CEO

Statement of Operations

Year ended December 31, 2006, with comparative figures for 2005

	2006	2005
REVENUES		
Fees	\$ 30,944,308	\$ 15,000,000
Registration	395,889	—
Interest income	475,627	125,014
	<u>\$ 31,815,824</u>	<u>\$ 15,125,014</u>
EXPENSES		
Staff and board costs	\$ 13,677,813	\$ 5,929,823
Professional and consulting fees	11,249,413	6,274,558
Conservation/Technology Development Fund expense (note 12)	1,052,575	78,750
General operating costs (note 7)	3,341,331	1,699,081
Amortization of capital assets	661,736	117,407
	<u>\$ 29,982,868</u>	<u>\$ 14,099,619</u>
Income before other interest, other income and expense and global adjustment:	\$ 1,832,956	\$ 1,025,395
OTHER (INCOME) AND EXPENSE		
Loss on disposal of capital assets	\$ 40,895	\$ —
Ministry of Energy - RFP costs / (recoveries) (note 14)	(6,816,692)	6,816,692
Interest earned on RPP balance	(16,771,487)	(5,969,074)
Interest paid on RPP loan	16,071,356	5,671,208
Interest paid on retailers loan	700,131	297,866
Total Other (Income) and Expense	\$ (6,775,797)	\$ 6,816,692
GLOBAL ADJUSTMENTS AND SETTLEMENTS (note 16)		
Non-utility generation contracts	\$ 400,150,050	\$ 136,485,048
Designated nuclear generation	150,059,205	(803,741,050)
Designated hydroelectric generation	(225,963,441)	(487,994,199)
Renewable electricity supply	(10,739,939)	—
Global adjustment / provincial benefit	(313,505,875)	1,155,250,201
Total Global Adjustments and Settlements	\$ —	\$ —
Excess of revenues over expenses (expenses over revenue)	\$ 8,608,753	\$ (5,791,297)

See accompanying notes to financial statements.

Statement of Cash Flows

Year ended December 31, 2006, with comparative figures for 2005

	2006	2005
Cash Flows from Operating Activities:		
Excess of revenues over expenses (expenses over revenues)	\$ 8,608,753	\$ (5,791,297)
Adjustments for:		
Loss on disposal of capital assets	40,895	—
Amortization of capital assets	661,736	117,407
Change in non-cash operating items (note 15)	(55,668,424)	78,948,030
	\$ (46,357,040)	\$ 73,274,140
Cash Flows from Financing and Investing Activities:		
(Recoveries)/advances from the Ontario Financing Authority	\$ (497,252,946)	\$ 603,785,956
(Recoveries)/advances from the Ministry of Energy	(6,816,692)	6,816,692
(Increase)/decrease in the RPP Variance Account	666,939,523	(744,280,862)
Increase/(decrease) in the Retailers Settlement Balance	(84,310,509)	72,827,345
Purchase of capital assets (gross)	(823,836)	(3,512,172)
	\$ 77,735,540	\$ (64,363,041)
Net Increase in cash and cash equivalents	\$ 31,378,500	\$ 8,911,099
Cash and cash equivalents, beginning of year	8,911,099	—
Cash and cash equivalents, end of year	\$ 40,289,599	\$ 8,911,099

See accompanying notes to financial statements.

Statement of Changes in Net Assets

Year ended December 31, 2006, with comparative figures for 2005

	Net Assets Invested in Capital Assets	Internally Restricted			Unrestricted	Accumulated Net Assets
		2005 Conservation Fund	2006 Conservation Fund	2006 Technology Fund		
Balance, beginning of the year	\$ 3,394,765	\$ 1,021,250	\$ —	\$ —	\$ (10,207,312)	\$ (5,791,297)
Excess of revenue over expenses	(661,736)	—	—	—	9,270,489	8,608,753
Establishment of 2006 Conservation Fund	—	—	1,500,000	—	(1,500,000)	—
Establishment of 2006 Technology Fund	—	—	—	1,000,000	(1,000,000)	—
2005 Conservation Fund expenditures	—	(751,347)	—	—	751,347	—
2006 Conservation Fund expenditures	—	—	(300,228)	—	300,228	—
2006 Technology Fund expenditures	—	—	—	(1,000)	1,000	—
Investment in capital assets (net)	782,941	—	—	—	(782,941)	—
Balance, end of year	\$ 3,515,970	\$ 269,903	\$ 1,199,772	\$ 999,000	\$ (3,167,189)	\$ 2,817,456

See accompanying notes to financial statements.

Notes to Financial Statements

Year ended December 31, 2006, with comparative figures for 2005

1 Nature of Operations

The Ontario Power Authority (the “OPA” or the “Authority”) was established as a non-share corporation, on December 9, 2004, by the *Electricity Restructuring Act, 2004* (the “Act”). In accordance with the Act, the OPA’s main objectives are:

1. to forecast electricity demand and the adequacy and reliability of electricity resources for Ontario for the medium and long term;
2. to conduct independent planning for electricity generation, demand management, conservation and transmission, and develop integrated power system plans for Ontario;
3. to engage in activities in support of the goal of ensuring adequate, reliable and secure electricity supply and resources in Ontario;
4. to engage in activities to facilitate the diversification of sources of electricity supply by promoting the use of cleaner energy sources and technologies, including alternative energy sources and renewable energy sources;
5. to establish system-wide goals for the amount of electricity to be produced from alternative energy sources and renewable energy sources;
6. to engage in activities that facilitate load management;
7. to engage in activities that promote electricity conservation and the efficient use of electricity;
8. to assist the Ontario Energy Board by facilitating stability in rates for certain types of customers;
9. to collect and provide to the public and the Ontario Energy Board information relating to medium- and long-term electricity needs of Ontario and the adequacy and reliability of the integrated power system to meet those needs.

The Authority’s ability to continue as a going concern is dependent upon its ability to obtain financing to support operations. The OPA’s creditworthiness is provided by:

1. The ability of the OPA to meet its obligations is provided for in legislation.
2. The OPA’s minimal counterparty risk, given that its principal counterparty is the IESO, a creation of the province and a strong counterparty.

Definitions:

OPA Ontario Power Authority	RFP Request for proposal
RPP Regulated Price Plan	OEB Ontario Energy Board
IESO Independent Electricity System Operator	OPG Ontario Power Generation
NUG Non utility generation	LDC Local distribution company
OFA Ontario Financing Authority	HOEP Hourly Ontario Energy Price

2 Summary of Significant Accounting Policies

Basis of accounting:

The financial statements are prepared in accordance with Canadian generally accepted accounting principles.

Revenue recognition:

Fees earned by the OPA are based upon OEB-approved rates for electrical energy withdrawn from the IESO-controlled grid by electricity consumers of Ontario. Such revenue is recognized in the period in which it is collected.

Cash and cash equivalents:

Cash and cash equivalents is comprised of bank deposit balances, term deposits and other short-term investments with original maturity dates of up to 120 days.

Capital assets:

Capital assets are recorded at cost. The capital cost of property and equipment is amortized on a straight-line basis over their estimated service lives, as follows:

Class of Asset	Estimated Service Life
Furniture and equipment	10 years
Leasehold improvements	length of lease
Computer hardware and software	2.5 years
Audio-visual equipment	10 years
Telephone system	5 years

Measurement uncertainty:

Uncertainty in determining the amount at which an item is recognized in the financial statements is known as measurement uncertainty. Such uncertainty exists when it is reasonably possible that there could be a material variance between the recognized amount and another reasonably possible amount, as there is whenever estimates are used. Measurements of uncertainty in these financial statements exist in the valuation of the power purchase contracts and the estimated defeasance date for the OPA's obligations. Estimates are based on the best information available at the time of preparation of the financial statements and are updated annually to reflect new information as it becomes available.

3 Other Current Assets

	2006	2005
Global adjustment recoverable	\$ 1,086,978	\$ 1,726,149
Government procurement costs	1,034,970	–
GST recoverable	–	131,187
Prepays	138,142	14,638
Total	\$ 2,260,090	\$ 1,871,974

The OPA applied for and received approval to establish a deferral account for the Government of Ontario procurement costs in its 2007 Revenue Requirement Submission to the OEB. The OPA will propose a settlement of these costs with its 2008 Revenue Requirement Submission. The costs paid in 2006 will be received with the settlement of the 2008 Revenue Requirement Submission. Refer to note 14 for information on the legislative authority related to the government procurement costs.

Year ended December 31, 2006, with comparative figures for 2005

4 The Regulated Price Plan (RPP) Variance Account

The RPP has been designed to provide stable electricity pricing so that consumers will not experience volatility from electricity spot market prices.

While prices for RPP consumers are set every six months by the OEB based upon a forecast of the cost of power over the next year, it is likely that there will be a difference between the actual and forecast cost of supplying electricity to all RPP consumers. The OPA tracks this variance in the RPP variance account.

To assure smooth prices are provided to residential, small commercial and other designated customers, while recovering the full cost of electricity, this difference will be blended into future prices.

The following outlines the composition of the variance account:

	2006	2005
Ontario Power Generation rebate contribution	\$ 7,215,194	\$ 361,224,170
Total RPP variance before interest	47,385,585	377,087,619
Interest earned	22,740,560	5,969,073
Total	\$ 77,341,339	\$ 744,280,862

In April 2006, the OPA received a payment of the OPG rebate for RPP customers of \$300,332,540 to apply against the outstanding RPP variance. The rebate is now calculated on a lagging three-month basis and paid quarterly by OPG. In 2006, the total OPG rebate related to RPP customers was \$354,008,976.

5 Capital Assets

	Cost	Accumulated Amortization	Net Book Value 2006	Net Book Value 2005
Furniture and equipment	\$ 1,414,585	\$ 140,464	\$ 1,274,121	\$ 1,163,254
Leasehold improvements	1,574,770	181,359	1,393,411	1,429,723
Computer hardware and software	1,022,608	412,036	610,572	624,248
Audio-visual equipment	142,215	17,339	124,876	132,407
Telephone system	125,545	12,555	112,990	45,133
	\$ 4,279,723	\$ 763,753	\$ 3,515,970	\$ 3,394,765

6 Retailer Settlement Balance

Legislation provisions ensure that electricity retailers will be made whole by the OPA for contracts with low-volume and designated consumers that were entered into before prices were frozen by legislation effective November 11, 2002. These provisions are achieved by the OPA and retailers settling any differences between the HOEP and the contract price for each contract. When HOEP is below the contract price, the OPA will make payments to the retailers. When HOEP is above the contract price, then the OPA receives a payment. Many of the retailer contracts that were in effect on November 11, 2002 had terms of three to five years. As a result, the number of contracts and associated volumes will decline as these contracts expire. It is expected that by November 2007, all of these contracts will have expired.

7 General Operating Costs

	2006	2005
General program costs	\$ 1,200,807	\$ 536,662
Information technology	159,152	101,175
Premises	1,274,575	551,474
Office and administration	706,797	494,483
Bank interest	–	15,287
Total	\$ 3,341,331	\$ 1,699,081

8 Commitments

The OPA entered into two long-term lease commitments for office space during the fiscal year 2006, which included various lease inducements. Deferred rent inducement represents the benefit of operating lease inducements that are being amortized on a straight-line basis over 10 years, the term of the lease. In addition to a rent-free period until May 2006 (valued at \$212,589) for the initial lease, the OPA received an additional rent-free period on a portion of the new space until May 15, 2007 (valued at \$28,728). The OPA initially obtained an allowance for leasehold improvements of \$1,359,332. As at December 31, 2006, the deferred rent inducement, net of amortization, was \$1,195,080.

In accordance with guidance provided by the Canadian Institute of Chartered Accountants, the OPA reports an average rental cost for premises over the term of the lease agreement and amortizes the benefit of the lease inducements over the same period. As at December 31, 2006, the accrued rent liability was \$240,046.

The minimum annual payments under the operating lease are approximately as follows:

Commitments	
2007	\$ 804,000
2008	903,000
2009	903,000
2010	920,000
2011	983,000
2012 and thereafter	3,729,000
Total	\$ 8,242,000

The lease commitments entered into in 2006 are set to expire consistent with the initial lease terms. All lease commitments are set to terminate on October 14, 2015.

Year ended December 31, 2006, with comparative figures for 2005

9 Related Party Transactions

The OPA considers the Government of the Province of Ontario, its Agencies and its Crown Corporations to be related parties. In the normal course of operations, the OPA has transactions with the following related parties:

- a) Hydro One
- b) Ontario Power Generation
- c) Independent Electricity System Operator
- d) Ontario Financing Authority
- e) Ministry of Energy

	2006		2005	
	Revenues	Expenses	Revenues	Expenses
Hydro One	\$ —	\$ —	\$ —	\$ —
Ontario Power Generation	—	30,795	—	—
Independent Electricity System Operator (fees, IPSP planning assistance)	37,761,000	439,000	15,000,000	—
Ontario Financing Authority (interest)	—	16,771,487	—	5,969,074
Ministry of Energy (RFP costs)	—	1,034,970	—	6,816,692
	<u>\$ 37,761,000</u>	<u>\$ 18,276,252</u>	<u>\$ 15,000,000</u>	<u>\$ 12,785,766</u>

The 2006 expense related to the Ministry of Energy RFP costs is classified in the balance sheet consistent with the OEB decision to allow the cost to be carried in a deferral account and settled at the same time as the retail contract settlement deferral accounts in the 2008 Revenue Requirement Submission to the OEB.

10 Pension Plan

The OPA makes contributions to Ontario Pension Board, a multi-employer plan, on behalf of all staff. The plan is a contributory defined benefit plan, which specifies the amount of the retirement benefit to be received by the employees based on the length of service and rates of pay.

Contribution rates by employers are made at a rate of approximately 8 percent of earnings. As a result, the OPA made contributions totalling \$666,839 during the year.

11 Revolving Line of Credit, Outstanding Promissory Notes

The OPA has available a revolving operating facility in the amount of \$975 million, provided to it by the Ontario Financing Authority.

	2006	2005
Operating loan	\$ 33,788,770	\$ 7,008,002
Revolving loan - Regulated Price Plan	106,533,010	603,785,956
Retailer settlement balance	(11,483,164)	72,827,345
Total outstanding	<u>\$ 140,321,780</u>	<u>\$ 683,621,303</u>
Average interest rate	4.01%	3.37%

All outstanding promissory notes are cleared monthly and replaced with new promissory notes.

12 Internally Restricted Funds

The Ontario Power Authority established the Conservation Fund to assist electricity conservation projects. To date, three funds have been set up as depicted in the table below. The 2005 Conservation Fund is fully awarded and payments will be made as the projects meet their milestones. As at December 31, 2006, \$1,331,770 in grants has been awarded for the 2006 Conservation Fund, and \$736,572 has been awarded for the Technology Development Fund.

Internally Restricted Funds	Restricted Fund	Expensed 2006	Expensed 2005	Balance Remaining	
				December 31 2006	December 31 2005
2005 Conservation Fund	\$ 1,100,000	\$ 751,347	\$ 78,750	\$ 269,903	\$ 1,021,250
2006 Conservation Fund	1,500,000	300,228	–	1,199,772	–
2006 Technology Development Fund	1,000,000	1,000	–	999,000	–
	\$ 3,600,000	\$ 1,052,575	\$ 78,750	\$ 2,468,675	\$ 1,021,250

13 Fair Value of Financial Assets and Financial Liabilities

The carrying amounts for cash, accounts receivable, accounts payable and accrued liabilities approximate their fair values because of the short-term maturity of these instruments.

The fair values of the Regulated Price Plan variance, operating loan, revolving loan - Regulated Price Plan and retailer settlement balance are not provided because it would not provide additional useful information as they would be offset and/or would not be practical to determine.

14 RFP Costs Transferred to the OPA

Under section 25.18 of the *Electricity Act, 1998*, the OPA is required to reimburse the Crown, or, if so directed by the Minister of Finance, an agency of the Crown for certain costs incurred by the Crown or an agency of the Crown after January 20, 2004, and before the Ontario Energy Board's first approval of the OPA's procurement process under subsection 25.31(4) of the *Electricity Act, 1998*. These costs include costs incurred related to the OPA, a contract to procure supply capacity or conservation and demand management, an initiative that was commenced by the Crown that the OPA has been required to assume under a Minister's directive or a matter within the objects of the OPA.

During 2006, the OPA received three invoices from the Ministry of Energy totalling \$1,034,970. For additional information, please refer to note 3.

15 Change in Non-Cash Operating Items

	2006	2005
(Increase)/decrease in accounts receivable	\$ (102,495,301)	\$ (230,401)
Increase in other current assets	(388,116)	(1,871,974)
Increase in accounts payable	20,602,247	71,372,501
Increase/(decrease) in deferred rent inducement	(135,933)	1,331,013
Increase in operating loan	26,780,768	7,008,002
Increase/(decrease) in contract deposits	(32,089)	1,338,889
	\$ (55,668,424)	\$ 78,948,030

Year ended December 31, 2006, with comparative figures for 2005

16 Global Adjustments and Settlements

Global adjustments and settlements are charges that flow through the OPA from the IESO monthly. These charges are set up so there will be no financial impact on the OPA.

NUG Contract Adjustment Balancing Amount:

Charge Type 193 – Ontario Electricity Financial Corporation's claim for the difference between market payments for NUGs and NUG contract costs.

Regulated Nuclear Generation Balancing Amount:

Charge Type 194 – the difference between the market payments for OPG's nuclear generation and the payments at the prescribed nuclear rate.

Regulated Hydroelectric Generation Balancing Amount:

Charge Type 195 – the difference between the market payments for OPG's base-load hydroelectric generation (up to 1,900 MW) and the payments at the prescribed hydroelectric rate.

The other charge type related to the Global Adjustment is Charge Type 1450, OPA Contract Adjustment Balancing Amount.

This is the OPA's claim for the difference between market payments for OPA-contracted generation and the OPA's contract costs.

Global Adjustment Balancing Amount:

Charge Type 196 – the total of all components of the Global Adjustment (Charge Types 193, 194, 195, 1450).

Renewable Electricity Supply:

In October 2006, the OPA became a Metered Market Participant (MMP) for the supply of renewable energy to Ontario. Renewable energy is defined by legislation as an energy source that is renewed by natural processes and includes wind, water, biomass, solar energy, geothermal or tidal force. Prior to the OPA assuming responsibility for the settlement of renewable energy generation, these contracts were managed by the Ontario Electricity Financial Corporation.

17 Comparative Figures

Certain comparative figures have been reclassified to conform with the basis of presentation adopted in the current year.

18 Contract Deposits

Deposit amounts received from Renewable Energy Supply (RES) contractors. The deposit amounts are larger during the construction phase and are reduced once the project commences commercial operations. The deposits are classified as current liabilities as the projects are expected to enter commercial operations in 2007.

Corporate Information

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Chief Executive Officer, Ontario Power Authority



Corporate Officers

Peter L. Jones, Chair

Jan Carr, Chief Executive Officer

Paul Bradley, Vice President, Electricity Resources

Peter Love, Chief Energy Conservation Officer

Mary Ellen Richardson, Vice President, Conservation Programs and External Relations

Amir Shalaby, Vice President, Power System Planning

Paul Shervill, Vice President, Program Operations and Sector Development

John Steen, Treasurer
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John Zych, Corporate Secretary

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Ontario – a new era in **electricity** conservation

2006 Results

**Supplement
to Annual Report 2006**

Chief Energy Conservation Officer
May 2007

2006 Results – Supplement to 2006 Annual Report

Chief Energy Conservation Officer 2006 Results – Supplement to 2006 Annual Report

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2006 Conservation Highlights

- Ontario's electricity consumers reduced peak demand by approximately **1,080 megawatts** to the end of 2006, including 350 megawatts of naturally occurring conservation.
- The five Ontario Power Authority-coordinated conservation programs delivered in 2006 resulted in annual savings of **378 million kilowatt-hours** and a reduction in the summer peak demand of approximately **110 megawatts**.
- Ontario's local distribution companies reported achieving substantial electricity savings, including approximately **140 megawatts** of peak-demand reduction and lifetime savings of **3.5 billion kilowatt-hours**.
- The Chief Energy Conservation Officer and the Ontario Power Authority made more than **360 million media impressions** related to conservation in 2006.
- **Twenty-eight** individuals and organizations were recognized in 2006 with Certificates of Recognition for taking a leadership role in building a long-term commitment to electricity conservation.
- Amendments to the Ontario Building Code, announced in June 2006, increased energy-efficiency requirements and will save Ontario an estimated **550 megawatts** of electricity over the next eight years.
- The Ozone Depleting Substances regulation, passed in 2006, will phase out remaining uses of chlorofluorocarbons in large refrigeration and air conditioning equipment and chillers, which could save between **50 and 175 megawatts** of electricity.
- To the end of 2006, the Ontario Power Authority's Conservation Fund had provided **\$2.5 million in funding** for 37 action-oriented, sector-specific electricity conservation pilot projects.
- The Technology Development Fund supported 13 projects in 2006 with a total of more than **\$736,000 in funding** to promote the development and commercialization of technologies or applications that could help to reduce electricity consumption or demand.

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A Message from the Chief Energy Conservation Officer

A new era of conservation has begun in Ontario. As Chief Energy Conservation Officer, one of my main duties is to report on the progress being made toward meeting Ontario's conservation goals. I do this in an annual report issued each November. However, to ensure that timely and detailed information is available on the province's conservation effort, I have decided to supplement the annual report with a spring summary of the previous year's programs, activities and results. This will provide transparency and accountability regarding the conservation effort and, I hope, stimulate further conservation action.

The need for conservation action is greater now than ever before. Not only will conservation help Ontario build a reliable, cost-effective and sustainable electricity system, but it will also improve our environment, including mitigating the effects of climate change. If we use less energy, including electricity, then we can reduce the amount of fossil fuels we use and, therefore, reduce greenhouse gas emissions. In fact, leading experts point to energy conservation as one of the key actions we can take to address climate change. They also point to energy-efficiency codes and standards as one the key policy tools to drive conservation.

I am very happy to report that Ontario's electricity consumers have reduced peak demand by approximately 1,080 megawatts to the end of 2006, including 350 megawatts of naturally occurring conservation. These results have been achieved by consumers, local distribution companies, the Ontario Power Authority, channel partners, nongovernmental organizations and governments working together. And there is more to be done.

It is up to each one of us to take conservation action where we live, play, work and learn, and to call on our friends and neighbours to do the same. It is also up to each of us to support our governments in putting in place a regulatory and fiscal framework to stimulate enduring conservation. Together we are building a culture of conservation in Ontario.



Peter Love
Chief Energy Conservation Officer
May 2007

2006 Results – Supplement to 2006 Annual Report

1. Introduction – Conservation Progress in 2006

The Government of Ontario has called for the creation of a culture of conservation in the province and set a target of reducing peak electricity demand by 6,300 megawatts by 2025. In the 2006 Annual Report, the Chief Energy Conservation Officer identified the beginning of a new era of conservation in Ontario and detailed the progress being made toward achieving these goals. It was, however, a mid-year snapshot, as full-year results were not yet available.

This report, a supplement to the 2006 Annual Report, summarizes the results of the 2006 conservation and demand management (conservation) programs and activities of the Chief Energy Conservation Officer,¹ the Ontario Power Authority² and local distribution companies. The report also includes a “bottom-up” analysis of progress by all major players toward meeting the province’s peak-demand reduction target and provides further evidence of a new era of conservation in Ontario.

Releasing conservation results in a timely manner provides transparency in the conservation activities being funded by ratepayers. This supplement also fulfills the Chief Energy Conservation Officer’s duty to report to the government and the citizens of the province on Ontario’s progress toward meeting its conservation goals.

Summary of Results

The province has achieved approximately 1,080 megawatts of peak-demand savings, based on a “bottom-up” analysis of reported program results. The Ontario Power Authority’s actions have directly and indirectly resulted in approximately 110 megawatts of peak-demand savings in 2006. In addition, the conservation programs of local distribution companies resulted in approximately 140 megawatts of demand reduction.

Building a culture of conservation will require permanent change in how Ontarians view and use electricity, which will result from increased awareness and knowledge, as well as changes to regulations, standards and codes. To help facilitate this change, in 2006 the Chief Energy Conservation Officer sought to raise awareness and stimulate action by demonstrating leadership through public speaking engagements, awareness programs, media presence and by recognizing success. In addition, he was active in promoting regulatory change, including supporting changes to the building code, passage of the Ozone Depleting Substance regulation and improvement of energy-efficiency standards.

To achieve electricity savings, the Ontario Power Authority designed and delivered five conservation programs in 2006: Every Kilowatt Counts, Cool Savings Rebate, Hot

¹ The position of the Chief Energy Conservation Officer was created by 2004 amendments to the *Electricity Act, 1998*. The office and the Conservation Bureau are to provide leadership for the planning and coordination of conservation in Ontario. The Conservation Bureau is a division of the Ontario Power Authority.

² The mandate of the Ontario Power Authority, also established through the 2004 amendments to the Act, is to ensure an adequate, long-term supply of electricity for Ontario. This objective is critical to the province’s continued growth and prosperity, and conservation will play a major role.

2006 Results – Supplement to 2006 Annual Report

Savings Rebate, the Secondary Refrigerator Retirement Pilot program and Demand Response 1. The primary goal of these programs was to reduce the electricity demand in the summer months when air conditioning and related loads result in excessive strain on the electricity grid.

The Ontario Power Authority also administered the Conservation and Technology Development Funds to inform the development of future conservation programs and to identify innovative programs and technologies that could help to transform the electricity market. In addition, the Ontario Power Authority's renewable energy and clean energy Standard Offer programs will also contribute to conservation success.

The Way Forward

The results of 2006 conservation programs and activities demonstrate that Ontario has begun a new era in electricity conservation. A number of lessons were also learned in 2006, including the need to:

- expand and strengthen evaluation, measurement and verification efforts;
- focus efforts to increase the market share of energy-efficient equipment and buildings;
- and continue to work with partners (e.g., manufacturers, retailers, non-governmental organizations and governments) to strengthen the delivery and practice of conservation.

2006 Results – Supplement to 2006 Annual Report

2. Conservation Leadership

Public Leadership and Awareness

In 2006, Ontario's Chief Energy Conservation Officer maintained a strong province-wide presence to raise awareness about conservation and stimulate Ontarians to take action. The key messages delivered in 2006 were that conservation:

- is a cost-effective way to meet our energy needs;
- is crucial to the future of our environment;
- is essential for both province-wide and local economic prosperity;
- requires that all sectors participate and demonstrate leadership.

The Chief Energy Conservation Officer crossed the province throughout the year, speaking to Ontarians from all walks of life. Meeting with representatives from industry, business, Aboriginal communities, the low-income sector, and with primary, secondary and university students, the Chief Energy Conservation Officer called on all Ontarians to conserve where they lived, worked, learned and played. With more than 100 speaking engagements to spread conservation messages, audiences were addressed in Thunder Bay, Kenora, Sudbury, North Bay, Sarnia and Windsor, among others.

The Chief Energy Conservation Officer also recognized 28 individuals and organizations with a Certificate of Recognition for taking a leadership role in building a long-term commitment to electricity conservation. Certificates were presented in 14 cities and towns across the province, including London, Hamilton, Kingston and Ottawa.

For more information on the Chief Energy Conservation Officer's appearances in 2006 or the Certificate of Recognition nomination process, please visit www.conservationbureau.on.ca.

The Ontario Power Authority and the Chief Energy Conservation Officer used the media to build conservation awareness across Ontario. Specific initiatives included:

- a four-page advertising insert in community newspapers that was delivered to three million households;
- a documentary film on conservation that was aired on television in September;
- an intensive news media campaign, including "The Conservation Zone" columns distributed to community newspapers across the province.

These efforts, together with radio advertising and interviews, television appearances, contributions to newspaper articles and involvement with numerous panel discussions, resulted in more than 360 million media impressions for the Chief Energy Conservation Officer and the Ontario Power Authority related to conservation in 2006.³

To further stimulate the creation of a culture of conservation in Ontario, the Chief Energy Conservation Officer and the Ontario Power Authority delivered or supported a

³ Media impressions tracked by Environmental Communication Options

2006 Results – Supplement to 2006 Annual Report

number of programs specifically aimed at raising awareness of conservation issues and simple actions consumers can take to reduce electricity use. Examples of 2006 awareness campaigns include:

- The Ontario Power Authority's It's Up 2 You program, which targeted both businesses and residents with the message to turn up air conditioners by two degrees and promote more casual, cooler business attire. The program was supported by the Toronto Board of Trade and the Building Owners and Managers Association of the Greater Toronto Area.
- Doors Closed Ontario, a program by the Conservation Council of Ontario, which raised awareness of the tremendous amount of electricity used for air conditioning when store doors are left open and encouraged shop owners to close their doors when air conditioners are running.
- The Sustainable Condo project by EcoSmart, a traveling full-size display suite that combines smart, innovative design with state-of-the-art green building technologies, materials and products.

Promoting Legal and Policy Opportunities

Regulatory tools, such as codes and standards, are among the most cost-effective ways of achieving sustainable and reliable electricity savings. In the Ontario Power Authority's Integrated Power System Plan,⁴ these tools are fundamental to achieving the government's electricity savings targets in the medium to long term. They are also vital to creating a culture of conservation. Promoting these tools will continue to be a major area of focus for the Chief Energy Conservation Officer.

In 2006, the Chief Energy Conservation Officer participated in the process to improve the energy-efficiency requirements of the Ontario Building Code, promoted the passage of the Ozone Depleting Substances regulation and became involved in the energy-efficiency standard-setting process for equipment.

In 2006, regulatory change resulted in tangible savings:

- In 2007, the typical new home will be 21 percent more efficient than one built under the old code, and by 2012 all new homes will be 35 percent more efficient and meet or exceed EnerGuide 80.⁵ The code's increased energy-efficiency requirements will save Ontario an estimated 550 megawatts of electricity over the next eight years.
- Minimum mandatory standards for air conditioning units were improved, which is estimated to result in between eight and 20 megawatts of savings in 2006 alone.
- The Ozone Depleting Substances regulation is expected to reduce electricity demand by between 50 and 175 megawatts.⁶

⁴ The Integrated Power System Plan will be a comprehensive plan for Ontario's electricity system for the next 20 years. It will identify the conservation, generation and transmission investments that are needed in the next three to five years, indicate the preparatory work required for the subsequent five years, and chart broad directions for the development of the system in the balance of the planning period.

⁵ www.mah.gov.on.ca/Page681.aspx

⁶ Marbek Resource Consultants, "CFC Chiller Replacement Potential Report and Addendum," February 2006

3. 2006 Conservation Performance in Ontario

Progress Toward Ontario's Peak-Demand Targets

Ontario achieved a peak-demand reduction of approximately 1,080 megawatts by the end of 2006, toward the target of 1,350 megawatts by 2007 set by the Ontario government.

In the 2006 Chief Energy Conservation Officer Annual Report, a formulaic “top-down” analysis was used to arrive at an estimate of peak-demand reduction by year-end 2006.⁷ The methodology used economic growth estimates and trends in energy use to project the expected increase in Ontario's electricity demand. The results of this analysis were then compared to the actual weather-adjusted peak demand supplied by the Independent Electricity System Operator.

In the absence of actual 2006 conservation program results, the top-down analysis was accepted as an appropriate means to provide the demand reduction estimate. However, with specific conservation program results now available, a better methodology has been used to assess current progress with a “bottom-up” analysis of the results of these initiatives.

The bottom-up analysis integrates both reported and verified program results in assessing peak-demand savings. Reported savings provide estimates of program impacts based on tracked results (e.g., the number of coupons redeemed) that have been reported to the Ontario Power Authority by the program delivery agents. Reported results are based on pre-determined assumptions outlined in the Ontario Energy Board's *Total Resource Cost Guide*. Verified results have been measured by independent third parties who review the realized impacts of a conservation initiative and provide an assessment of program results. Once results have been reported or verified, they are added together to establish the projected electricity savings attributable to conservation initiatives delivered in Ontario.

Although encouraged by the results of the bottom-up analysis, the Ontario Power Authority recognizes the need to continually examine program results and further develop the evaluation strategies used to assess program impacts. Comprehensive evaluation protocols continue to be developed for future use and will increase the level of confidence in results and improve program effectiveness.

The bottom-up analysis included in this report considers the results of programs delivered by several organizations and institutions, all of which contributed to demand reductions in 2006. These organizations include the Ontario Power Authority, local distribution companies, the federal and provincial governments, energy management companies, Enwave, the Independent Electricity System Operator and natural gas

⁷ Appendix 2, “Description of the peak-savings analysis method,” is available in the appendices to the 2006 Chief Energy Conservation Officer's Annual Report on the Conservation Bureau Web site: www.conservationbureau.on.ca.

2006 Results – Supplement to 2006 Annual Report

utilities. Demand response and generation projects facilitated through the Ontario Power Authority also contributed to peak-demand savings.

For analytical purposes, the Ontario Power Authority has divided conservation into six separate categories.

- **Conservation behaviour** – Conservation occurs when customers change their behaviour to reduce the amount of electricity consumed over time using technology already in place (e.g., by manually raising the temperature of their air conditioner by a few degrees).
- **Energy efficiency** – Energy efficiency occurs when customers reduce their electricity consumption but retain at least the same level of end-use service. Energy efficiency is the gain from investing in better appliances, equipment and buildings (e.g., replacing household electric appliances such as a refrigerator or air conditioner with higher efficiency models).
- **Demand management** - Demand management occurs when customers reduce their electricity demand during peak-use hours (peak clipping) or shift some of their demand to off-peak hours (load shifting). Demand management can occur in a number of ways. For example, when residential customers shift the use of their dishwasher and laundry appliances to off-peak hours, when certain industrial customers contractually agree to shut down an assembly line in response to an automatic signal, and when customers allow the temperature on their thermostat to be increased in the summer by a previously installed device are all examples of demand management.
- **Fuel switching** – Fuel switching occurs when customers elect to use other energy sources in place of electricity (e.g., replacing an electric water heater with a solar thermal model).
- **Self generation/cogeneration** – Self generation/cogeneration occurs when customers elect to install either a generator or a combined heat and power facility to meet all or a portion of their electricity consumption needs (e.g., the installation of solar panels). In addition, renewable energy projects less than 500 kilowatts and clean energy projects, including combined heat and power, less than 10 megawatts are also considered conservation, as defined by the Ministry of Energy.
- **Natural conservation** – Projected changes in end-use efficiency in the absence of new and incremental market interventions are defined as natural conservation.⁸

The table below summarizes the results of 2006 conservation initiatives by category.

⁸ M.K. Jaccard and Associates, Inc., “Modelling and Scenario Documentation, Draft Report,” September 2006

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Table 3.1: Electricity Savings by Category to Year-end 2006

Category	Aggregate Peak-Demand Reductions in Megawatts
Conservation Behaviour	100
Energy Efficiency	289
Demand Management	315
Fuel Switching	--
Self Generation/ Combined Heat and Power	27
Natural Conservation	350
Total	1,081

The tables below summarize the contributions of the various agencies and organizations that contributed to peak-demand savings in the various categories.

Table 3.2: Energy Efficiency Electricity Savings by Contributor to Year-end 2006

Energy Efficiency Contributor	Contribution to Peak-Demand Reduction in Megawatts
Ontario Power Authority Conservation Programs (2006)	18
Local Distribution Companies' Conservation Programs (2005 & 2006)	145
Provincial and Federal Government Initiatives (i.e., Ontario Realty Corp; Federal Houses in Order)	68
Energy Management Companies	40
Natural Gas Utilities - Demand-side Management Programs	8
EnerGuide for Houses	10
Total	289

Sources for Tables 3.1 and 3.2: Ontario Realty Corporation, Marbek Resource Consultants, Ontario Power Authority, local distribution companies' 2005 and 2006 annual reports, natural gas utilities' demand-side management evaluation reports, Natural Resources Canada, M.K. Jaccard and Associates

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Table 3.3: Demand Management Electricity Savings by Contributor to Year-end 2006

Demand Management Contributor	Contribution to Peak-Demand Reduction in Megawatts
Ontario Power Authority Demand Response 1	164
Loblaw Properties Demand Response	10
York Region Demand Response	3
Local Distribution Companies' Demand Response (2005)	4
Independent Electricity System Operator Transitional Demand Response and Dispatchable Loads	134
Total	315

Sources: Ontario Power Authority, IndEco, PricewaterhouseCoopers, Independent Electricity System Operator

Table 3.4: Self Generation/Cogeneration Electricity Savings by Contributor to Year-end 2006

Self Generation/Cogeneration Contributor	Contribution to Peak-Demand Reduction in Megawatts
Local Distribution Companies' Distributed Generation (2005)	1
Enwave - Deep Lake Water Cooling	26
Total	27

Sources: Ontario Power Authority, Enwave, IndEco

Results Achieved from Ontario Power Authority Conservation Programs

The Ontario Power Authority's approach to conservation includes procuring electricity savings through incentive and information programs, building capability in the market, raising consumer awareness, and promoting changes to the building code and equipment standards, as well as other regulatory and pricing regimes. A mix of these efforts will be needed to reach Ontario's conservation goals. To ensure that this approach is achieving real results, the Ontario Power Authority is committed to putting in place a robust system of evaluation.

Last year, 2006, was the first full year the Ontario Power Authority facilitated the design and delivery of province-wide conservation programs. The goals of these programs were to:

- reduce overall and peak electricity demand;
- increase awareness of the importance of and opportunities for improving consumer energy efficiency;
- and lay a foundation for the development of a culture of conservation.

The Ontario Power Authority developed and coordinated five core conservation and demand management programs in 2006:

Mass Markets:

1. Every Kilowatt Counts (spring and fall)
2. Cool Savings Rebate
3. Hot Savings Rebate
4. Secondary Refrigerator Retirement (pilot)

Business Markets:

1. Demand Response 1

Mass market initiatives targeted residential consumers and focused on achieving electricity savings. However, the programs also aimed to build the capability of channel partners to sell conservation and to increase the market share of high-efficiency products in the marketplace.

The Demand Response 1 program for business markets encouraged participants to reduce their electricity consumption during peak-demand periods to improve system reliability.

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Successful program implementation relied heavily on developing meaningful partnerships. In delivering these programs, the Ontario Power Authority worked with:

- local distribution companies
- retail partners
- industry associations
- manufacturers.

These relationships resulted in effectively designed province-wide programs, significant retail presence and an adequate supply of program measures to meet demand.

The table below summarizes the overall impacts of the Ontario Power Authority-coordinated conservation programs in 2006.

Table 3.5: Results of 2006 Ontario Power Authority-Coordinated Conservation Programs

		Mass Markets Actuals	Business Markets Actuals	Total Portfolio Results
A	Total Annual kWh Savings (000's)	377,681	-	377,681
B	Total Lifecycle kWh Savings (000's)	2,451,967	-	2,451,967
C	Total Summer Peak MW Savings	17.91	93	110.91
D	Total Winter Peak MW Savings	82.62	93	175.62
E	Total Program Expenditures (\$000's)	\$30,896	\$3,277	\$34,173
F=(E/A)	Cost/kWh Savings (1 st Year)	\$0.08	-	\$0.09
G=(E/C)	Cost/MW Saved (Summer) (\$000's)	\$1,725	\$35	\$308
H	Total Participants	3,978,781	-	3,978,781
I	Program TRC Benefits (\$000's)	\$149,760	-	\$149,760
J	TRC Costs (\$000's)	\$32,909	-	\$32,909
K=(I/J)	TRC Ratio	4.55	-	4.55

kWh = kilowatt-hours; MW = megawatts; Participant = actual measure or unit delivered or installed; TRC = total resource cost, a cost-benefit test that measures net cost, including that of participants and utilities, with benefits as avoided costs of generation.

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Mass Markets Program Analysis



Every Kilowatt Counts

The Every Kilowatt Counts program worked to cultivate a culture of conservation with Ontario's residential consumers and to motivate consumer behaviour. It did this by providing educational material on the efficient use of electricity and by providing coupons redeemable for instant rebates on energy-efficient products within major retail chains and independent stores.

The Every Kilowatt Counts program was delivered through two campaigns in 2006, spring (May–August) and fall (October–November). The table below summarizes the reported results of the Every Kilowatt Counts program in 2006.

Table 3.6: Results of 2006 Every Kilowatt Counts Program

		Spring	Fall	Total Reported Results
A	Total Annual kWh Savings (000's)	136,261	221,722	357,983
B	Total Lifecycle kWh Savings (000's)	713,605	1,517,887	2,231,492
C	Total Summer Peak MW Savings	0.9	3.3	4.2
D	Total Winter Peak MW Savings	27	53.1	80.1
E	Total Program Expenditures (\$000's)	\$8,480	\$10,440	\$18,920
F=(E/A)	Cost/kWh Savings (1 st Year)	\$0.06	\$0.05	\$0.05
G=(E/C)	Cost/MW Saved (Summer) (\$000's)	\$9,422	\$3,163	\$4,504
H	Total Participants	1,404,529	2,529,066	3,933,595
I	Program TRC Benefits (\$000's)	\$43,206	\$92,254	\$135,460
J	TRC Costs (\$000's)	\$9,684	\$11,518	\$21,202
K=(I/J)	TRC Ratio	4.46	8.01	6.39

kWh = kilowatt-hours; MW = megawatts; Participant = actual measure or unit delivered or installed; TRC = total resource cost, a cost-benefit test that measures net cost, including that of participants and utilities, with benefits as avoided costs of generation.

The specific measures for which coupons were offered and their associated redemption rates for the two campaigns are summarized in the table below:

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Table 3.7: Coupon Redemptions by Measure for 2006 Every Kilowatt Counts Program

Spring			Fall		
Measure*	Incentive	Redemptions	Measure*	Incentive	Redemptions
▪ ENERGY STAR® CFLs	\$5 (2 pack)	483,132	▪ ENERGY STAR® CFLs	\$3 (any pack)	539,203
▪ Electric timers	\$5	37,518	▪ Seasonal LEDs (strings of 50 plus)	\$5	477,612
▪ Programmable thermostats	\$15	16,320	▪ Programmable thermostats	\$15	50,536
▪ ENERGY STAR® ceiling fans	\$25	12,415	▪ Dimmers	\$3	24,895
			▪ Indoor motion sensors	\$7	8,933
			▪ Programmable baseboard thermostats	\$15	7,501

These measures were selected based on their demonstrated electricity savings potential, relative ease of installation, availability and application to all households and cost-effectiveness. CFLs = compact fluorescent light bulbs, LEDs = light-emitting diode lights

More than 2,100 home improvement, department, big-box, grocery and drugstore retail locations participated in the spring campaign, and more than 3,000 retail sites participated in the fall campaign. Coupons were included as part of a direct-mail package that was delivered to 4.58 million Ontario households in 80 local distribution companies' territories during both campaigns. Coupons were also made available at participating retail locations for instant redemption.

The Every Kilowatt Counts initiative contained a capability-building component, as consumers were educated on simple-to-do, low- or no-cost energy-savings opportunities through the direct-mail package (available in 14 languages for the spring campaign and 17 languages for the fall), radio spots, print ads and billboards. Messages incorporated into the package included recommendations to increase the temperature of air conditioners by two degrees, ensure blinds are closed and shades are drawn in the warmer months and unplug appliances when not in use.

To establish a baseline to assess the impact and effectiveness of these capability-building, educational elements, Oraclepoll Research conducted a public opinion survey to assess Ontarians' conservation awareness and practices, both before and after the program was delivered. This baseline study included a survey of 1,500 randomly selected Ontarians for both the spring and fall campaigns. Post-program research conducted by Oraclepoll indicates that the direct-mail package was the preferred means of educating consumers.

The table below presents the high-level results of Oraclepoll's research for selected criteria of the spring 2006 Every Kilowatt Counts campaign.

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Table 3.8: Oraclepoll Research Results for Spring 2006 Every Kilowatt Counts Campaign

<u>Incentive-Based Results</u>	April (Pre) % Yes	June (Post) % Yes	Variance
Do you have a programmable thermostat installed?	39	49	↑ 10%
Do you always/often install CFLs when changing light bulbs?	52	58	↑ 6%
Do you have a ceiling fan installed?	61	63	↑ 2%
<u>Capability-Building Results</u>	April (Pre) % Yes	June (Post) % Yes	Variance
Do you always/often turn up the temperature on your air conditioner's thermostat?	44	50	↑ 6%
Do you close your blinds in warmer months?	62	70	↑ 8%
Do you unplug appliances when they are not in use?	31	37	↑ 6%
Do you look for ENERGY STAR® labelling when purchasing?	66	70	↑ 4%
Do you always/often turn off lights when leaving a room?	79	80	↑ 1%

The fall survey found similar results, which indicates that the Every Kilowatt Counts program was effective in encouraging action on efficiency measures and in motivating conservation-related behaviour.

Full program reports with a comprehensive overview of these initiatives have been completed by The MEARIE Group (spring) and Energyshop.com (fall). The reports will be available on the Ontario Power Authority Web site shortly: www.powerauthority.on.ca

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The Cool Savings Rebate Program

To limit the impacts of residential air conditioning on peak demand, the Cool Savings Rebate program encouraged homeowners who were looking to replace an existing central air conditioner to purchase an ENERGY STAR®-qualified model. As well, without regular maintenance, an existing central air conditioner loses approximately five percent of its original efficiency for each year of operation. To ensure systems run optimally, the program provided an incentive to homeowners with central air conditioning to have their system serviced or maintained prior to the cooling season. Incentives were also provided for programmable thermostats, which enable homeowners to appropriately regulate their air conditioning use.

The table below summarizes the reported results of the Cool Savings Rebate program in 2006.

Table 3.9: Results of 2006 Cool Savings Rebate Program

		Reported Results
A	Total Annual kWh Savings (000's)	10,417
B	Total Lifecycle kWh Savings (000's)	131,086
C	Total Summer Peak MW Savings	10.67
D	Total Winter Peak MW Savings	0
E	Total Program Expenditures (\$000's)	\$10,217
F=(E/A)	Cost/kWh Savings (1 st Year)	\$0.98
G=(E/C)	Cost/MW Saved (Summer) (\$000's)	\$958
H	Total Participants	35,174
I	Program Benefits (\$000's)	\$9,545
J	TRC Cost (\$000's)	\$9,271
K=(I/J)	TRC Ratio	1.03

kWh = kilowatt-hours; MW = megawatts; Participant = actual measure or unit delivered or installed; TRC = total resource cost, a cost-benefit test that measures net cost, including that of participants and utilities, with benefits as avoided costs of generation.

Designed by the Ontario Power Authority in conjunction with the Heating, Refrigeration and Air Conditioning Institute of Canada, the program targeted the more than two million households in Ontario that have central air conditioning. The program was delivered from April to October 2006 (June 30 was the cut-off date for the system tune-up incentive to encourage participation before the cooling season began).

The specific measures included in the program and their associated participation rates are shown in the table below:

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Table 3.10: Participants by Measure for 2006 Cool Savings Rebate Program

Measure	Incentive	Participants
▪ Air conditioner tune-up	\$50	9,816
▪ ENERGY STAR® air conditioner installations	\$500	14,393
▪ Programmable thermostats	\$75 (up to)	10,965

A secondary objective of the initiative was to build capability and conservation awareness within the heating, ventilation and air conditioning contractor community. The program also provided training to the contractors on how to effectively market and correctly install measures included in the program, enabling contractors to become effective delivery agents of the program. These objectives were aided by an online orientation and training tool and a standardized tune-up checklist to be used by all participating contractors.

As with the Every Kilowatt Counts program, Oraclepoll completed a pre- and post-program survey to assess the extent to which the program had an impact on consumer behaviour. Following the program's implementation, an additional six percent of respondents indicated that they annually maintain or service their air conditioning units.

The Heating, Refrigeration and Air Conditioning Institute undertook a complete review of the 2006 Cool Savings Rebate Program, which will be available on the Ontario Power Authority Web site shortly: www.powerauthority.on.ca.

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The Hot Savings Rebate Program

The Hot Savings Rebate program was developed as an extension to the Cool Savings initiative and focused on reducing the residential electricity demand associated with space heating and cooling. As with the Cool Savings program, incentives were provided to homeowners to replace their existing air conditioning system with ENERGY STAR®-qualified models and to install a programmable thermostat. For the heating season, the Hot Savings Rebate program also provided an incentive to consumers who replaced their existing furnace with a high-efficiency model equipped with an electronically commutated motor. This furnace rebate targeted the 2.5 million homes in Ontario with a low- or mid-efficiency natural gas furnace.

The table below summarizes the reported results of the 2006 Hot Savings Rebate program.

Table 3.11: Results for 2006 Hot Savings Rebate Program

		Reported Results
A	Total Annual kWh Savings (000's)	3,686
B	Total Lifecycle kWh Savings (000's)	55,818
C	Total Summer Peak MW Savings	1.77
D	Total Winter Peak MW Savings	1.18
E	Total Program Expenditures (\$000's)	\$1,107
F=(E/A)	Cost/kWh Savings (1 st Year)	\$0.30
G=(E/C)	Cost/MW Saved (Summer) (\$000's)	\$625
H	Total Participants	4,777
I	Program Benefits (\$000's)	\$2,572
J	TRC Costs	\$1,225
K=(I/J)	TRC Ratio	2.10

kWh = kilowatt-hours; MW = megawatts; Participant = actual measure or unit delivered or installed; TRC = total resource cost, a cost-benefit test that measures net cost, including that of participants and utilities, with benefits as avoided costs of generation.

The program encompassed the entire heating season and was delivered from October 2006 to March 2007. Because of the timing of the program, results are yet to be finalized, as tracking reports are still being collected and tabulated. Table 3.11 above represents results up to December 31, 2006. Following the full tabulation of results, a post-program survey will be conducted to further measure the success of the initiative.

Program cost-effectiveness, as shown in row K of Table 3.11, will continue to improve as the upfront costs associated with program design are further spread over additional program benefits generated in the latter months of program delivery.

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The specific measures included in the program and their associated participation rates for the first three months of the program's delivery are shown in the table below.

Table 3.12: Participants by Measure for 2006 Hot Savings Rebate Program

Measure	Incentive	Participants
▪ Programmable thermostats	\$75 (up to)	1,685
▪ ENERGY STAR® air conditioner installations	\$500	630
▪ Replacement furnace -- high-efficiency models equipped with an electronically commutated motor	\$100 (up to)	2,462

As with the Cool Savings program, a secondary function of the initiative was to build capability and conservation awareness within the heating, ventilation and air conditioning contractor community, as well as provide the necessary training to develop skills to effectively market and install the included measures.

For more information on the Hot Savings Rebate program, please visit www.conservationbureau.on.ca.

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Secondary Refrigerator Retirement Pilot

The Secondary Refrigerator Retirement Pilot program was offered to six select regions in Ontario from July to September 2006. The program targeted the removal of non-essential, energy-inefficient refrigerators from residential customers. To qualify, refrigerators must have been a minimum of five years old, larger than 10 cubic feet and in working condition. The lessons learned will be used to further develop the program in future years.

The table below summarizes the reported results of the 2006 Secondary Refrigerator Retirement Pilot program.

Table 3.13: Results for 2006 Secondary Refrigerator Retirement Pilot Program

		Reported Results
A	Total Annual kWh Savings (000's)	5,595
B	Total Lifecycle kWh Savings (000's)	33,571
C	Total Summer Peak MW Savings	1.27
D	Total Winter Peak MW Savings	1.34
E	Total Program Expenditures (\$000's)	\$652
F=(E/A)	Cost/kWh Savings (1 st Year)	\$0.12
G=(E/C)	Cost/MW Saved (Summer) (\$000's)	\$513
H	Total Participants	5,235
I	Program TRC Benefits (\$000's)	\$2,092
J	TRC Costs (\$000's)	\$1,211
K=(I/J)	TRC Ratio	1.72

kWh = kilowatt-hours; MW = megawatts; Participant = actual measure or unit delivered or installed; TRC = total resource cost, a cost-benefit test that measures net cost, including that of participants and utilities, with benefits as avoided costs of generation.

The pilot incorporated various promotional and marketing techniques as well as incentive levels. Following the program's completion, scenarios were evaluated by identifying customer response and overall program participation on the various offerings. The evaluation of the pilot program concluded with an analysis of lessons learned and a proposed business case on the most cost-effective, province-wide program roll-out in future years to remove the estimated 1.15 million energy-inefficient secondary refrigerators remaining in Ontario homes.

To participate, interested parties called the 1-800 number or accessed the self-service Web site to schedule a pick-up appointment. At the agreed-to time, a contractor would remove the eligible fridge, render it unusable and deliver it to the decommissioning facility. Throughout the process, strict audit controls were enacted to prevent working

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refrigerators or their component parts to be sold following pick-up. These audit controls also helped to authenticate participation results. The contractor who removed the refrigerator from the participant's home and the decommissioning agent who officially retired the refrigerator were both responsible for tracking results.

Although not considered a part of the pilot, six local distribution companies within the Niagara-Erie region requested the Ontario Power Authority's support to maximize the operational and cost efficiencies of their own refrigerator retirement programs. As these local distribution companies had fixed budgets, the Ontario Power Authority committed to support budget overruns where program participation exceeded targets. These programs resulted in 1,406 refrigerators being retired, with annual kilowatt-hour savings of 1.5 million and total lifecycle kilowatt-hour savings of more than nine million.

Energyshop.com undertook a complete review of the 2006 Cool Savings Rebate Program, which will be available on the Ontario Power Authority Web site shortly: www.powerauthority.on.ca.

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Business Markets

Demand Response 1



In June 2005, the Ontario Minister of Energy directed the Ontario Power Authority to procure 250 megawatts of demand response.

Following extensive consultation with industry and subject experts, the Demand Response 1 program was established in June 2006. The first in a suite of three demand response market offerings, this program allows eligible participants to receive a financial incentive for reducing their electricity consumption during peak-demand periods when a high wholesale electricity price exists or when system reliability is jeopardized. The full suite of demand response programs will be ready for market by spring 2007.

The table below summarizes the verified results of the Demand Response 1 program in 2006.

Table 3.14: Verified Results of 2006 Demand Response 1 Program

		Verified Results Aug - Dec 2006 ⁹
A	Total Nameplate Capacity (MW)	266
B	Total Curtailment Opportunities	97
C	Average Demand Response (MW)	93
D	Peak MW 2006 Curtailment	182
E	Total Curtailment Payments	\$3,277,000
F=(E/C)	Cost per MW	\$35,237

MW = megawatts

Each month, the Ontario Power Authority posts the strike price, representing the minimum amount that a participant can offer to curtail electricity demand for that month. If unfavourable to a participant, they may submit a revised strike price signifying the exact amount of demand they are willing to curtail in that month. It is at the discretion of the Ontario Power Authority to either accept or decline the proposed strike price, which cannot be below the Ontario Power Authority's determined floor. If declined, the participant will not receive any incentive for curtailment activity during that month.

Curtailment opportunities arise when the Independent Electricity System Operator's three-hour-ahead dispatch price matches or exceeds the Ontario Power Authority-approved strike price of the participant. At this time, participants interested in curtailment must submit a notice to the Ontario Power Authority informing of their intent to partake.

⁹ The Demand Response 1 program ran for only five months in 2006. A 12-month program would double the available opportunities for curtailment and, thus, the average cost per megawatt curtailed would also approximately double.

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As a voluntary program, participants are not required to engage in demand reductions at every opportunity. It is at the discretion of the participant as to when and for how long they will curtail demand. However, when the participant does curtail demand, they are eligible to receive an incentive for their effort.

To receive this incentive, participants must have demand curtailment verified by a measurement and verification consultant, who is responsible for verifying the amount reduced and the amount owing to the participant for curtailment delivered.

Future demand response programs will be contractual, rather than voluntary. Contractual demand response will eliminate uncertainty around deliverable curtailment and enable more effective management of the electricity system.

PricewaterhouseCoopers is undertaking a process review of the Demand Response 1 program, which will be posted to the Ontario Power Authority Web site when available: www.powerauthority.on.ca.

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Results Achieved from Local Distribution Companies' Conservation Programs

In 2006, Ontario's local distribution companies reported substantial overall electricity savings for both consumption and demand, achieved through a large number of diverse and innovative conservation programs. These programs delivered conservation and efficiency improvements to both customers and to the local distribution companies themselves. Lifetime savings of 3.5 billion kilowatt-hours is reported, with first-year savings at 520 million kilowatt-hours and peak-demand reduction of approximately 140 megawatts.¹⁰

Local distribution company conservation programs covered all sectors – residential, commercial, industrial and institutional – as well as important sub-sectors, including low-income and social housing communities. Additionally, programs targeted efficiency improvements to both the distribution system and local distribution company holdings.

Ontario local distribution companies reported results on more than 580 programs for 2006. Some of these programs consisted of multiple initiatives and could easily have been characterized as multiple programs under an umbrella name.

The most common programs delivered by local distribution companies in 2006 were coupon or financial incentive programs, and information and outreach programs. Other commonly reported programs include workshops and seminars, giveaway or exchange programs, distribution system improvements and smart metering pilots or research. Twenty-one programs were focused on social housing, and 17 on low-income customers.

These results are based on data reported to the Ontario Energy Board in the local distribution companies' 2006 conservation annual reports. The data are from 67 reports, which represent the efforts of 72 local distribution companies. Thirteen annual reports were not available at the time this analysis was completed but represent a small share (four percent) of conservation delivery agents.

The data in these reports reflects information as reported by individual electricity distributors. The reliability of this information depends on the distributor's interpretation of information requirements as stipulated by their individual Ontario Energy Board decisions. The data has not been validated.

¹⁰ IndEco, "2006 LDC CDM program results," May 2007, available on the Conservation Bureau Web site: www.conservationbureau.on.ca.

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The table below presents program results by four program categories:

- energy-focused – primarily conservation
- demand-focused – demand management, demand response, distributed generation and load displacement
- local distribution company-focused – power factor corrections (these may be based on actions at customer sites and line loss reductions)
- other – including program administration, research and smart meters.

Table 3.15: 2006 Conservation Results of Local Distribution Companies by Program Type

	Energy Focused Reported Results	Demand Focused Reported Results	Distribution System Focused Reported Results	Other Reported Results	Total Reported Results
Total Annual kWh Savings (000's)	498,472	5,550	17,206	0	521,228
Total Lifecycle kWh Savings (000's)	3,219,905	86,831	230,282	0	3,537,019
Total Summer Peak MW Savings ¹¹	87	49	5	0	141
Total Winter Peak MW Savings	55	8	0.2	0	64
Total Program Expenditures (\$000's)	\$35,032	\$21,321	\$13,819	\$1,831	\$72,002
Levelized Cost/kWh Savings	\$0.011	\$0.246	\$0.060	0	\$0.020
Cost/MW Saved (Summer) (\$000's)	\$402	\$433	\$2,908	0.00	\$510
Net TRC Benefits (\$000's)	\$150,587	\$46,029	-\$5,467	-\$1,828	\$189,321
TRC Ratio	3.27	3.24	0.64	0.00	2.82

kWh = kilowatt-hours; MW = megawatts; TRC = total resource cost, a cost-benefit test that measures net cost, including that of participants and utilities, with benefits as avoided costs of generation.

¹¹ IndEco has conservatively estimated the peak-demand savings for Toronto Hydro's Summer Challenge program at 47 megawatts; Toronto Hydro reported only megawatt-hour results. This brings total summer peak-demand reductions delivered by local distribution companies to 141 megawatts, which is different from the results of other analyses for local distribution company demand-reduction impacts in 2006.

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4. Other 2006 Conservation Activities

The following initiatives began in 2006 and are expected to yield electricity savings results in 2007.

Small Renewable Energy Projects



The Ontario Power Authority launched the Renewable Energy Standard Offer Program in November 2006. The intent of the program is to help Ontario meet its renewable energy supply targets by providing a standard pricing regime and simplified eligibility, contracting and other rules for small renewable energy electricity generating projects. Projects that are less than 500 kilowatts are considered conservation initiatives.

Since its inception, the program has received an exceptional response. As of April 2007, the Ontario Power Authority had executed 65 contracts, totalling 330 megawatts of electricity from solar, wind, waterpower and bio-energy sources. Of that number, 22 contracts for less than 500 kilowatts each will contribute a total of 153 kilowatts toward the conservation targets.

Combined Heat and Power Conservation Projects

Combined heat and power technology produces both electricity and thermal energy (such as steam and hot water) from a single fuel, most commonly natural gas, at a plant located at or near the end-point of use.



Combined heat and power technologies are efficient because of the ability to recover valuable waste heat produced by electricity generators. Capturing this energy allows it to be used to supply additional loads (such as space, water or process heating) within a facility and offsets the need to power these required processes separately.

Moreover, as combined heat and power plants are located in close proximity to the point of use, they have lower line and distribution losses than those associated with traditional generating equipment.

In 2006, the Ontario Power Authority executed seven combined heat and power contracts throughout Ontario, representing 414 megawatts of generating capacity. Two of the contracts, outlined below, are considered to be conservation projects as they are less than five megawatts in capacity.

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Durham College District Energy Project (2.3 megawatts)

The Durham College District Energy Project is a natural gas-fired, 2.4 megawatt combined heat and power facility that will be located at Durham College in Oshawa. In addition to behind-the-meter electricity production, hot water will be provided to Durham College for space heating and hot water supply. The combined heat and power site will be located immediately adjacent to the existing Durham College high-voltage substation. The plant will consist of a single natural gas-fired, reciprocating engine-generator set that emits low nitrogen oxides. A single heat recovery heat exchanger is also included to capture thermal energy from engine exhaust. Noise abatement measures inside the plant will ensure sound levels are kept within established limits.

Warden Energy Centre (5 megawatts)

The Warden Energy Centre is a natural gas-fired, five megawatt combined heat and power facility that will be integrated into the existing district energy system operated by Markham District Energy. In addition to electricity production, the thermal energy recovered from the facility will be used to heat and cool the Markham downtown core, known as the Markham Centre, consisting of commercial, residential and institutional buildings. The key components of the facility include two low-emission, reciprocating engine, natural gas generators. A heat exchanger ensures delivery of heat from the water heat loop to the high-temperature heat loop within the facility. Heat from the exhaust gas is also recovered and combined with the heat recovered from the jacket water for delivery to the district energy system.

The Ontario Power Authority is currently developing a Clean Energy Standard Offer Program, which is expected to be launched in June 2007.

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Conservation Fund



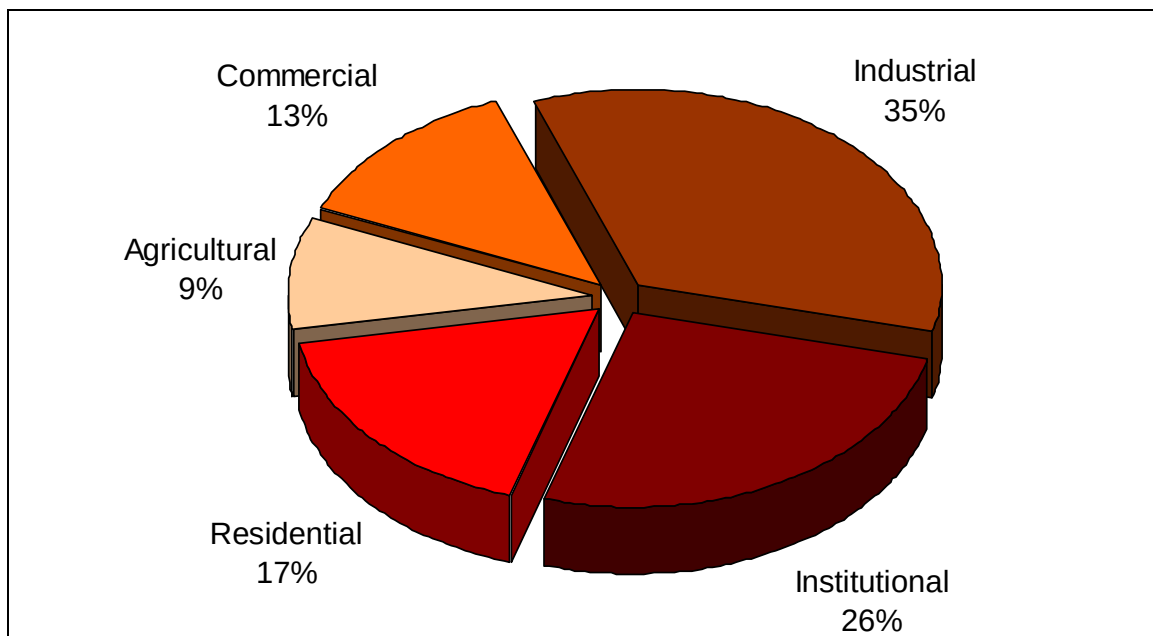
Successful and sustainable conservation is founded on solid research. In 2005, the Conservation Fund was established to provide funding for action-oriented, sector-specific electricity conservation pilot projects. Its goals are to:

- build marketplace capability for the design, delivery, marketing and uptake of conservation programs;
- test new or unique conservation program elements;
- and use the results from pilot projects to help inform the development of future conservation programs.

In 2006, the Conservation Fund committed \$1.3 million toward a broad range of sector-specific projects in mining, forestry, agriculture, small business, schools, hospitals and religious consumer segments. Strategic partnerships were also leveraged through the Fund, resulting in an additional \$2.6 million in total support being made available for the development of these future conservation opportunities.

From the inception of the Fund in 2005 to the end of 2006, the Ontario Power Authority provided \$2.5 million in funding for 37 projects. The breakdown of sector-specific funding is indicated in Figure 4.1 below.

Figure 4.1 – Conservation Fund Allocations to Year-end 2006



For 2007, the Conservation Fund budget is \$3 million. To date, about \$1.5 million of 2007 funding has been awarded to seven projects.

The Ontario Power Authority works closely with Fund recipients to develop and monitor the projects. The lessons that are learned help inform the development of future

2006 Results – Supplement to 2006 Annual Report

Ontario Power Authority conservation programs. Examples of two Conservation Fund pilot projects that have helped develop conservation programs are outlined below.

Chill Out: Appliance Exchange Program

London Hydro launched a comprehensive appliance exchange program with a target of close to 3,500 refrigerators, freezers and air conditioners. Participants received cash incentives to turn over their inefficient appliances in exchange for energy-efficient models. This program included a primary refrigerator exchange program (homeowners and multi-residential buildings); a secondary refrigerator bounty program (homeowners); freezer disposal (homeowners) and a room air conditioner bounty program.

The lessons learned from this pilot informed the design of the 2007 Great Refrigerator Roundup program.

First Nations Conservation Project: Chippewas of Georgina Island

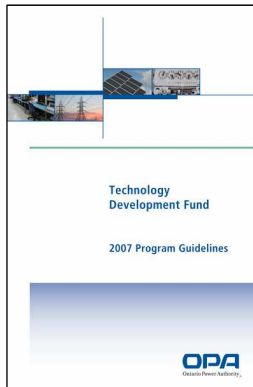
Windfall EcoWorks managed a conservation project targeting the residents of the Chippewas of Georgina Island First Nation reserve, located two kilometres off the southeastern shore of Lake Simcoe. A five-percent electricity demand reduction was achieved by performing home energy audits and a community load analysis, installing appropriate energy-saving measures and creating education opportunities at the community and household level.

Based on the findings of this project, an Ontario Power Authority program has been developed for Aboriginal communities in Ontario to be delivered in 2007, making conservation programs accessible to yet another segment of Ontario's residents.

The first annual review of the Conservation Fund is available on the Ontario Power Authority Web site, along with comprehensive detail on the pilot projects funded to date: www.powerauthority.on.ca.

2006 Results – Supplement to 2006 Annual Report

Technology Development Fund



In 2006, the Ontario Power Authority established the Technology Development Fund to provide funding for projects that promote the development and commercialization of technologies or applications that have the potential to improve electricity supply, conservation or demand management.

The ongoing development of new technologies that can help reduce electricity consumption or demand or provide additional cleaner and/or renewable supply options is a key element of a sustainable, reliable electricity system.

However, since the restructuring of Ontario's electricity market, there has been limited research and development activity in the sector. Policy uncertainty has severely curtailed capital investment, and, as a result, technology progress is limited at a time when Ontario is embarking on unprecedented system planning and reinvestment. The Fund was developed to address this gap.

Applications for financial support from the Fund are made exclusively through one of the Fund's two managing institutions - the Ontario Centres of Excellence for projects involving partnerships with academia and CEA Technologies Inc. for projects not involving partnerships with academia.

The roles of these managing institutions are to:

1. attract promising projects consistent with Ontario Power Authority guidelines;
2. bring these projects to the attention of Ontario Power Authority staff to ensure a fit with the organization's objectives;
3. manage the application process, including working with the applicant to develop a proposal;
4. assemble completed application packages for presentation to the Grant Award Committee;
5. manage the reporting, invoicing and progress of all approved projects.

The Technology Development Fund provides support to these institutions and they, in turn, pool these funds with those of other financial backers to maximize the leverage of these contributions. Ontario Power Authority funding in 2006 leveraged additional support from other sponsors at a rate of approximately \$10 to \$1.

In 2006, \$736,572 in funding was approved for 13 projects. This funding leveraged more than \$8 million in partner support. For 2007, the Fund has a budget of \$1 million.

The Ontario Power Authority provides guidance to both CEA Technologies Inc. and the Ontario Centres of Excellence regarding funding priorities based on current research commissioned by the Ontario Power Authority for its Integrated Power System Plan or by third parties.

An example of a project funded in 2006 is outlined below.

2006 Results – Supplement to 2006 Annual Report

Developing a Non-Polluting Air Conditioner

Carleton University's engineering department received \$99,000 from the Technology Development Fund to investigate and develop heat-driven refrigeration technology for use in home air conditioning, refrigeration and heat pump systems. The total value of the project is \$570,000.

The four-stage project, scheduled for completion by March 2008, will produce a prototype based on a double mechanism sorptive refrigeration system. The system involves a solid-liquid-vapour heating process that uses significantly less electricity to lower cooling temperature than is possible in current refrigeration systems, which rely on a vapour recompression cycle.

Unlike most current refrigeration systems, this technology requires no ozone-depleting refrigerants and reduces electricity consumption.

Because this system can work in a moving environment, it has potential applications in the automotive, fishery and aerospace industries.

Developing and commercializing new, energy-efficient ways to keep cool would help reduce Ontario's peak demand and increase system reliability, especially on hot summer days when Ontario's electricity demand is at its highest.

For further information on the Technology Development Fund, please visit the Ontario Power Authority Web site: www.powerauthority.on.ca.



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EB-2007-0791
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Taking Action

Annual
Report **2007**

Ontario's Chief Energy Conservation Officer



**Conservation
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RECOMMENDED ACTIONS

1. The Ministry of Energy should develop a comprehensive and cohesive energy conservation policy for all government departments that aligns the province's electricity policies with other related policies. All government departments should be required to consider this policy in their decision-making processes, and prescribed government ministries should be required to include a commitment to energy conservation in their Statement of Environmental Values.
2. The government should reconfigure the role of the Chief Energy Conservation Officer to include advocacy for conservation of other important forms of energy used in Ontario, including natural gas and transportation fuels.
3. The Ministry of Municipal Affairs and Housing should prepare a plan for the orderly consideration of energy efficiency in all renovations and retrofits.
4. The Ministry of Energy should raise the minimum energy performance standards for the six consumer products currently exempt from provincial retail sales tax (refrigerators, freezers, dishwashers, clothes washers, dehumidifiers and air conditioners) to the highest levels in North America.
5. The government should evaluate options to assist households defined as low-income to deal with economic burdens associated with upgrading to energy-efficient products affected by new codes and standards.
6. The Ministry of Energy should issue regulations under the *Energy Conservation Leadership Act* requiring public agencies to prepare annual energy conservation plans with a high priority on implementing energy conservation measures in their daily operations and capital projects.
7. The Ministry of Energy should issue regulations under the *Energy Conservation Leadership Act* to designate combined heat and power projects, clotheslines and solar collectors so that they may be used where there are restrictions, such as municipal zoning by-laws, that would otherwise prevent or impede their use.
8. The Ministry of Energy and the Ministry of Municipal Affairs and Housing should collaborate with the federal government and other provinces to introduce voluntary labelling of the energy performance of all new and resale buildings coincident with the current Ontario Building Code review cycle, with the intent of issuing a regulation to require labels for all new and resale buildings.
9. Ontario's municipalities should appoint Municipal Energy Conservation Officers to engage communities at the local level in creating a culture of conservation throughout the province.
10. All government procurement policies and contracts should include current ENERGY STAR® requirements for energy efficiency where available.
11. The government should ensure that future changes to the way electricity bills are presented to consumers provide enough information and transparency to enable them to make better decisions about electricity use.
12. The government should work with the appropriate players in the electricity sector to coordinate research and develop educational programs and tools needed to enable customers to learn about and benefit from the use of technologies such as smart meters.

See Chapter 6 for findings and explanations for the recommended actions.

November 1, 2007

Minister of Energy
900 Bay Street, 4th Floor
Toronto, ON M7A 2E1

John Beck
Chair, Board of Directors
Ontario Power Authority
120 Adelaide Street West, Ste. 1600
Toronto, ON M5H 1T1

Dear Minister and Board members:

In accordance with the requirements under *The Electricity Act, 1998*, amended in 2004, I am pleased to present the 2007 annual report of the Chief Energy Conservation Officer.

As required under the Act, this report includes:

- a review of the Ontario government's progress in meeting its conservation and demand management targets (chapter 3)
- steps taken to implement the current year's proposals and information on the results achieved (chapter 4)
- the Ontario Power Authority's proposals for the following year for initiatives to (chapter 5):
 - ♦ promote electricity conservation and load management
 - ♦ procure reductions in demand and promote demand management
 - ♦ facilitate the provision of services relating to conservation and load management
- findings and recommendations on government policy and legislation that result in a barrier to the implementation of electricity conservation measures (chapter 6).

The report also includes information on the conservation programs of other market players in the public and private sectors (chapter 3) and a summary of the government's actions taken in response to the recommendations made in last year's annual report (chapter 7). The many actions being taken in support of Ontario's culture of conservation are described throughout the report.

Sincerely,



Peter Love
Chief Energy Conservation Officer

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Appendices

(available on the Conservation Bureau website, www.conservationbureau.on.ca)

1. Ontario Power Authority 2007 Conservation Program Descriptions
2. Market Transformation Tools and Initiatives
3. Technology Development Fund Project Descriptions
4. Ontario Power Authority 2008 Conservation Program Descriptions
5. Federal and Ontario Energy Efficiency Acts
6. 2007 Stakeholder Consultations on Conservation Barriers

A MESSAGE FROM THE CHIEF ENERGY CONSERVATION OFFICER

Think. Believe. Act.

This year, people in Ontario who are dedicated to the cause of electricity conservation have reason to be proud. For the first time ever, our province has an Integrated Power System Plan that recognizes the critical role of conservation in the future of Ontario's electricity system. The plan includes a target of 6,300 megawatts of electricity conservation by 2025, which is the equivalent of powering five homes with the amount of electricity currently used to power four. I am excited that Ontario is positioned to be at the forefront of electricity leadership — both in terms of supply and demand management.



Since the creation of the office of the Chief Energy Conservation Officer three years ago, Ontarians have begun to embrace the need to conserve electricity. There are many signs that a change in the mindsets of

consumers is underway. Eighty percent of Ontario households indicate that they have installed at least one compact fluorescent light (CFL) bulb in their homes, meaning that four out of every five homes have taken at least some action toward electricity conservation. In 2004, only one out of five homes was taking advantage of this energy-saving technology. Positive indicators such as these have convinced me that Ontario has made a great start toward building a conservation culture, but it is time to move beyond the CFL bulb.

The consistent efforts of the Ontario Power Authority, delivery partners and independent organizations have introduced Ontario electricity consumers to an array of products, services and information that support conservation. In May 2007, I reported that conservation activities had reduced the province's peak electricity demand by 1,080 megawatts. Again, this is a great start, but we are still a very long way from 6,300 megawatts. I have made 12 recommendations for action in this report that identify barriers to and opportunities for conservation that will help move Ontario closer to a culture of conservation.

The Ontario Power Authority is pursuing a three-pronged strategy to create a culture of conservation and achieve this ambitious 6,300 megawatt goal — 1) building capability for conservation, 2) acquiring resources necessary to encourage action, and 3) eventually transforming the market so that conservation simply becomes the norm.

Taking Action

This means that in every decision we make — whether to buy, build or move — we consider the use of electricity. To this end, I have begun to elaborate on what a “culture of conservation” means — to think about, believe in and act on electricity conservation when we make decisions.

Unlike the water we use, electricity is invisible. I am asking Ontarians to use less of and take action on something that they can’t see or feel. This hidden nature of electricity makes it so important to celebrate conservation success and to recognize leaders in conservation. We want to understand what motivates them to act, so we can encourage others to act as well.

The good news is that most Ontarians have begun to think about electricity conservation. To foster and maintain a culture of conservation, the people of Ontario must believe that responsible and efficient use of electricity is critical, and finally, they must be convinced to act on this belief.

Today, a combination of public education and incentives are motivating people to embrace the cause of conservation. The Ontario Power Authority is also investing in the training, technology and methods to measure results that will build our capability to deliver and verify effective conservation. Tomorrow, conservation should be as natural as recycling.

Until conservation is engrained in our daily lives, we must take action. For most of us, thinking, believing and acting with the province’s electricity conservation goals in mind will take some effort. It will force us to be aware of things that we didn’t consider before. In my 2005 annual report, entitled “Our Conservation Challenge,” I challenged everyone in Ontario to reduce his or her electricity consumption and adopt a culture of conservation. In my 2006 report, entitled “A New Era in Electricity Conservation,” I summarized the progress that had been made to date. The focus of this report is on “Taking Action,” because, as much as Ontarians have accomplished, we have so much more to do together.

The signs of an emerging culture of conservation are all around us. It is up to all of us, as individuals, employees, businesses and communities, to move our homes, workplaces and community institutions into this culture. We *all* can be leaders in conservation.



Peter Love

Chief Energy Conservation Officer

November 2007

CHAPTER 1

INTRODUCTION

Ontario's conservation goals are among the most ambitious in North America. In the long term, these goals include creating a culture of conservation and reducing peak demand by 6,300 megawatts by 2025. This is almost equal to the supply capacity of Ontario's current coal-fired generation plants, which will be replaced by the end of 2014. Short-term conservation goals include the reduction of Ontario's peak demand by 1,350 megawatts by the end of 2007 as well as a 10 percent reduction in the electricity consumption of Ontario government buildings.

The commitment and actions of all electricity consumers are critical to achieving the province's goals for conservation. To help reach these goals, the Chief Energy Conservation Officer issued a challenge to all Ontarians in 2005 to reduce their electricity consumption by 10 percent. Ontarians are being urged to **THINK** about electricity, **BELIEVE** they can make a difference and **ACT** with the province's conservation goals in mind when they use electricity at home, work or play.

THINK.

Electricity users must **THINK** about electricity as a limited resource. Electricity is a valuable form of energy because of the countless services it provides. It was once abundant and cheap. However, demand has increased because of population and economic growth. This means increased costs and environmental implications when electricity is generated, transmitted and used.

BELIEVE.

When consumers are aware of the need to conserve electricity, they must **BELIEVE** in the benefits of using less – that they should

be, and can be, using less electricity. It is in everyone's best interests to reduce the need to generate electricity.

ACT.

The Chief Energy Conservation Officer is convinced that, once Ontarians believe in the need to conserve electricity, they will be moved to **ACT**. Many individuals, businesses and industries in Ontario have already invested in energy efficiency, changed when and how they use electricity, switched to other fuels and started to generate their own electricity. Everyone has the capacity to be a leader in electricity conservation.

THE 2007 ANNUAL REPORT

The Chief Energy Conservation Officer issues a report every year on conservation progress in Ontario. This is the third such annual report. It provides details on existing and upcoming conservation programs and activities, but the timing of this report means that an update on the current year's results is not yet available.

As a result, a supplementary report will be issued in the spring of 2008 that will report on the 2007 conservation results. This approach ensures timely reporting on measured results, as well as transparency and accountability for Ontario's conservation actions.

This report includes an update on progress toward the government's short-term conservation targets, as well as the Chief Energy Conservation Officer's challenge. It also describes the Ontario Power Authority's 2007 conservation programs and plans for the years 2008 to 2010, and the conservation activities of other market players. The report concludes with findings on government policy and legislation that have been identified as barriers to conservation and makes recommendations for overcoming them.

STRATEGIC APPROACH TO BUILDING A CONSERVATION MARKET

A functioning market for conservation products and services is beginning to develop in Ontario. In the early stages, intervention in the market can deal with shortcomings such as investment risk, consumer preferences or lack of supply chains and expertise. To ensure that Ontario's conservation targets are met cost-effectively and in a sustainable manner, the Ontario Power Authority has adopted a long-term, strategic approach to conservation that involves a mix of efforts:

- **Capability building** involves developing the skills and knowledge of market players needed to deliver effective conservation programs, as well as training and educating all consumers about the opportunities, needs and ways to conserve.

CONSUMPTION AND DEMAND

Conservation programs can affect both electricity consumption and demand.

Consumption is the amount of electricity used over time and is expressed in kilowatt-hours. **Demand** is the total amount of electricity needed by the system at a given point in time and is expressed in megawatts. It is also referred to as **load**. Ontario's electricity future depends on both overall consumption and demand being properly managed.

ONTARIO POWER AUTHORITY MISSION

To contribute to the development of a reliable and sustainable electricity system for the benefit of Ontario customers. In so doing, we encourage and facilitate conservation and electricity supply from diverse resources.

CONSERVATION STRATEGIC OBJECTIVE

To contribute to the achievement of Ontario's conservation resource targets, and to foster a culture of conservation using a market-based approach.

- **Resource acquisition** refers to procuring peak demand and/or energy savings through tools such as payments to customers for demand management or shifting load, and customer incentives for energy-efficient products and buildings.
- **Market transformation** is a longer-term objective that refers to achieving a substantial and sustainable increase in the market share of energy-efficient technologies, buildings and production processes. Market transformation will have been achieved when a desired conservation practice or product dominates the market. Tools to bring about market transformation include policies, legal instruments and codes and standards that increase the energy efficiency of buildings, appliances and equipment. It also refers to behavioural changes that result from a culture of conservation.

All three strategies will be used in the short term, although the Ontario Power Authority anticipates that resource acquisition programs will make the most significant contribution to meeting the short-term targets. In the medium to long term, conservation goals are expected to be met through investment in capability building and market transformation, with a reduced need for resource acquisition programs.

THE INTEGRATED POWER SYSTEM PLAN — ONTARIO'S ELECTRICITY ACTION PLAN

The Integrated Power System Plan is a roadmap for achieving Ontario's electricity system goals. The plan was filed with the province's energy regulator, the Ontario Energy Board, in August 2007 and is expected to be approved in 2008.

An action plan with a 20-year outlook, it will be updated every three years, providing an opportunity to adapt to new knowledge, opportunities, challenges or emerging technologies. The plan outlines how the long-term conservation targets will be achieved by increasing activities in four main categories of consumer **ACTION**:

- reducing peak demand
- increasing energy efficiency
- fuel switching
- installing customer-based generation.

Reducing peak demand is encouraged through demand management and other programs aimed at influencing conservation behaviour, collectively referred to as demand management/conservation behaviour.

Demand management refers to reducing electricity demand during peak hours or shifting electricity use to off-peak hours. It occurs when residential consumers shift use of their dishwashers and laundry appliances to later at night or when

industrial consumers voluntarily agree to shut down equipment or scale back processes in response to a request or automatic signal.

Conservation behaviour includes voluntary actions to reduce electricity consumption. Raising the thermostat set point temperature a little higher in the summer to reduce air conditioner use, or turning off lights, computers and entertainment systems when not needed are examples of conservation behaviour.

Energy efficiency includes actions that reduce electricity consumption while retaining the same or similar level of service. It occurs when consumers replace household electric appliances and air conditioners with models that use less electricity or when industries change processes or upgrade equipment.

Fuel switching occurs when consumers choose energy sources more appropriate than electricity. Examples are replacing electric baseboard heaters with a natural gas furnace or using solar hot water heaters to supplement electric heat.

Customer-based generation is the installation of small-scale electricity or combined heat and power facilities near customers' load to meet all or a portion of their electricity needs. Small-scale renewable energy projects (500 kilowatts and less) and combined heat and power projects (10 megawatts and less) are included in meeting Ontario's conservation targets. Electricity generated under the province's net metering program is also included.¹

ONTARIO'S LONG-TERM CONSERVATION TARGETS TO 2025

The Integrated Power System Plan describes how the medium- and long-term provincial energy conservation targets will be achieved according to the four types of consumer action. The plan includes detailed conservation programs up to 2010. It is less specific for the 2010 to 2025 period, as the plan's three-year cycle will allow for flexibility on individual programs to adapt to new knowledge and experience. The plan's proposed \$60 billion budget allocates \$10.2 billion to conservation, more than \$500 million per year.

In addition to the 2007 target to reduce peak demand by 1,350 megawatts, the Ontario government has set mid- and long-term conservation targets. These include another peak demand reduction of 1,350 megawatts by 2010 and a further reduction of 3,600 megawatts by 2025, for a total peak demand reduction of 6,300 megawatts. Table 1.1 summarizes how these targets will be achieved. Detailed information is available in the Ontario Power Authority's Integrated Power System Plan.²

Table 1.1 – Proposed Peak Demand Savings from Conservation Activities from 2010 to 2025

Proposed Peak Demand Savings (megawatts)	2010	2015	2010	2025
Demand management/conservation behaviour	566	769	925	1,004
Energy efficiency	623	1,938	2,694	3,189
Fuel switching	70	156	215	268
Customer-based generation	148	188	377	544
Total Proposed Peak Demand Savings	1,410	3,050	4,210	5,000

Source: Ontario Power Authority

Note: Totals have been rounded to the nearest 10 megawatts.

CHAPTER 2

CONSERVATION LEADERSHIP

The Chief Energy Conservation Officer provides public leadership on electricity conservation in Ontario. To encourage and motivate Ontarians to **THINK, BELIEVE** and **ACT** in ways that promote a culture of conservation, the Chief Energy Conservation Officer engages in many activities that raise awareness, educate, foster local leadership and publicly recognize those who are already taking action to conserve electricity.

There is no single way to change the behaviour of individuals, businesses and industries. However, there is increasing awareness that traditional top-down information and incentive programs are not sufficient. A variety of tools is needed to identify and remove barriers to conservation as well as to stimulate action. Raising awareness is a first step in this process. This is particularly important since electricity use and conservation are by nature “invisible” — and we tend to overlook things we cannot see or feel.

THE CHIEF ENERGY CONSERVATION OFFICER'S LEADERSHIP ACTIVITIES

Throughout 2007, the Chief Energy Conservation Officer met with community leaders across Ontario to promote a culture of conservation. Meetings involved representatives from industry, business, First Nations communities, the low-income sector and students at all levels. Awareness-raising activities included public speaking engagements, presenting Certificates of Recognition³ to leaders actively engaged in conservation, as well as attending conservation program launch events and co-hosting a radio program.

During the first eight months of 2007, the Chief Energy Conservation Officer presented 36 Certificates of Recognition and made 144 public appearances. Table 2.1 summarizes the number of certificates presented and public appearances made from 2005 to August 31, 2007.

More information on the Chief Energy Conservation Officer's public appearances and Certificates of Recognition, including the nomination process, is available on the Conservation Bureau's website at www.conservationbureau.on.ca.

Media appearances and marketing campaigns help raise awareness with a wide spectrum of Ontarians and encourage conservation action that can have long-lasting impacts. The Chief Energy Conservation Officer uses a variety of media outlets to promote the long-term goal of building a culture of conservation. Specific media initiatives include:

- “Think, Believe, Act,” a short video that highlights the challenges and opportunities for electricity conservation in Ontario and demonstrates the importance of taking conservation action now.

- “Save the Kilowatt,” a summer radio campaign that delivered a series of four messages about conservation actions consumers can take when electricity demand peaks on hot summer days.
- “Power Lines,” a monthly radio show on CFRB 1010, in which the Chief Energy Conservation Officer and co-host Christina Cherneskey discussed energy conservation issues and actions with a variety of guests, including well-known environmentalist Dr. David Suzuki.

These efforts, together with other radio and television appearances and advertising, contributions to newspapers and participation in panel discussions, resulted in approximately 49 million earned media impressions and 289 million paid media impressions in the first six months of 2007 for the Chief Energy Conservation Officer and the Ontario Power Authority’s conservation programs.⁴ The total number of impressions in 2006 was approximately 360 million.

CONSERVATION AWARENESS AMONG ONTARIO CONSUMERS

In 2007, the Ontario Power Authority commissioned province-wide market research among adults to understand consumer behaviour and attitudes toward electricity conservation. The research revealed that Ontarians are starting to recognize the importance of electricity conservation and are showing concern about the province’s ability to meet long-term electricity demand. At the same time, many consumers still do not sense enough urgency to change their own behaviour significantly. Many have taken small steps to conserve electricity, such as turning off the lights or power to electronic devices when leaving a room. About eight in 10 Ontarians say they have replaced an incandescent light bulb with a more efficient compact fluorescent bulb.⁵

Table 2.1 – Certificates of Recognition and Public Appearances from 2005 to 2007

Activity	2005	2006	January to August 31, 2007
Certificates of Recognition	81	28	36
Public appearances	100	152	144

Source: Conservation Bureau

LEADERS IN ACTION FORUM

In June 2007, the Ontario Power Authority sponsored the Leaders in Action Forum to bring business and other community leaders together to gain a shared understanding of the conservation challenge and the best ways to meet it. The forum encouraged Ontario businesses to show leadership in their own companies by making the bottom-line benefits of conservation a business priority. The link between corporate success and being a conservation leader was highlighted, as was how to unlock the tremendous conservation potential in Ontario's businesses.

Participants explored the ways municipalities in the Greater Toronto Area are tackling the energy challenge and learned how Ontario's business leaders are factoring conservation into their planning. In addition, legal, academic and logistical perspectives on conservation as it relates to business were discussed, as were insights and best practices on policy changes, measurement and return-on-investment issues.



At this forum, the Chief Energy Conservation Officer advised that a new award program is being developed to profile business leaders who implement electricity conservation successfully as part of their organization's business model. This province-wide program will recognize those with industry-leading energy-efficiency practices in all sectors. Details will be posted on the www.powerauthority.on.ca website when they are available.

ONTARIO'S ELECTRICITY SYSTEM AND CLIMATE CHANGE

There are obvious benefits to the environment from reducing the amount of electricity we use; one benefit is reduced greenhouse gas emissions that contribute to climate change. In Canada, 82 percent of man-made greenhouse gas emissions come from the production and use of energy. Of that total, 13 percent come from the production of electricity in Ontario. The Ontario Power Authority expects power plant emissions to drop from 25 megatonnes in 2006⁶ to seven megatonnes in 2014 when the last of the coal-fired plants is retired.⁷ The other critical tool for meeting the reduction targets is increased renewable electricity generation. The targets announced in June 2007 in the government's climate change plan are to reduce greenhouse gas emissions in absolute terms to six percent below 1990 levels by 2014, to 15 percent below 1990 levels by 2020, and to 80 percent below 1990 levels by 2050.

Market research helps the Ontario Power Authority gain a better understanding of what motivates consumers to practice electricity conservation. Research has shown that about one-third of the Ontario public is strictly budget-driven, another third is comfort-oriented and about a quarter is motivated to act based on concern for environmental issues. A small percentage of the public, about 12 percent, remain uninterested in electricity conservation and do not believe that individual actions can make a collective difference.⁸

A similar study was conducted among teens to understand how their behaviour and attitudes differed from those of adults. The primary motivation for reducing electricity use among young people was a desire to fight climate change and contribute to a better future.⁹

THE CHIEF ENERGY CONSERVATION OFFICER'S PROPOSED LEADERSHIP ACTIVITIES IN 2008

The Chief Energy Conservation Officer will continue to play a key role in fostering public awareness of the issues facing the electricity sector and emphasizing what consumers can do to conserve in 2008. **THINK, BELIEVE, ACT** will remain the overarching theme for the coming year. In support of this, the Chief Energy Conservation Officer will continue to champion conservation efforts across Ontario.

CHAPTER 3

CONSERVATION PERFORMANCE IN ONTARIO

Ontario has made significant progress in reducing energy consumption and peak electricity demand. The Chief Energy Conservation Officer issued a challenge in his 2005 annual report for Ontarians to reduce their overall consumption of electricity by 10 percent. The Ontario government set several targets related to reducing peak demand, reducing energy use in their own facilities and installing smart meters. These targets are to:

- reduce peak electricity demand by 1,350 megawatts by 2007
- reduce electricity consumption by the Ontario government in its own facilities by 10 percent
- install 800,000 smart meters in Ontario homes and small businesses by 2007.

This chapter reports on progress being made toward these targets and provides an update on the conservation programs of market players, including local distribution companies and others. Clearly, Ontarians are beginning to take **ACTION**.

PROGRESS TOWARD MEETING THE 10 PERCENT CHALLENGE TO REDUCE ELECTRICITY CONSUMPTION

In 2005, the Chief Energy Conservation Officer challenged the people of Ontario to reduce their energy consumption by 10 percent. In 2006, the weather-adjusted per capita consumption had decreased by 2.5 percent. The results for the first six months of 2007 show that further progress has been made toward achieving the 10 percent target.

Table 3.1 compares the actual and weather-adjusted electricity consumption data for the first six months of 2005 to the same time period in 2007. Since 2005, Ontario reduced its total electricity consumption by 3.3 percent after adjusting for weather. Ontarians reduced their

per capita electricity consumption by 5.2 percent, which shows improvement over last year's results. These results reflect activity to June 2007, so efforts made during the remainder of the year are likely to increase this number even further.

PROGRESS TOWARD MEETING THE 2007 PROVINCIAL DEMAND REDUCTION TARGET

The 2007 target for peak demand reduction was initially cast as a five percent reduction compared to the Independent Electricity System Operator's weather-adjusted demand forecast made in 2003.¹⁰ The Chief Energy Conservation Officer interpreted this in 2005 as 1,350 megawatts. Since the target was set, the method used to weather-normalize demand forecasts has changed. However, the 2007 target has been reaffirmed as a 1,350 megawatt reduction in peak demand.¹¹ In May 2007, the Chief Energy Conservation Officer reported that 1,080 megawatts of peak demand reduction had been achieved, based on a bottom-up analysis of two years of conservation programs and activities.

WEATHER NORMALIZATION

Forecasters use weather normalization or correction techniques to remove the impacts of variations in Ontario's weather patterns (either extremely warm or extremely cold summers) from observed peak load data. This is required because weather variations can cause the peak demand to swing up or down by up to 10 percent relative to the average weather peak demand for any particular day. Normalization enables analysts to compare a series of actual peak readings over a number of years on an "apples-to-apples" basis and use this data to determine how accurate their underlying forecast of demand was over a five- to 10-year period.¹²

The actual Ontario system peak in 2007 was 25,737 megawatts (24,820 megawatts weather-adjusted), on June 26, 2007. This peak is 1,268 megawatts lower than the highest peak demand in 2006 and represents a decrease of almost five percent.

Attributing electricity demand reductions in 2007 solely to the impact of conservation is not possible using a top-down approach. Peak electricity demand is influenced by several factors such as weather, economic activity and the coincidence between the two. A supplement to this report, expected in May 2008, will provide an analysis to confirm whether Ontario has met the 1,350 megawatt target for peak demand reduction.

Based on conservation activities so far this year, the Chief Energy Conservation Officer is confident that Ontario will meet the 2007 target.

PROGRESS TOWARD MEETING THE GOVERNMENT FACILITIES TARGET

The provincial government has reported that it has exceeded the target it established to reduce the electricity consumption in its own facilities by 10 percent by 2007. A 12 percent reduction has been reported, as shown in Table 3.2. This represents savings of more than 72 gigawatt-hours from the baseline years.

Numerous types of energy-saving projects contributed to the reduction in energy use, including lighting, air conditioning and other building retrofits; behavioural changes by government employees; and the commissioning

Table 3.1 – Ontario Electricity Consumption for January to June 2005 and 2007

	Actual Energy Consumption (gigawatt hours)	Actual Energy Consumption (kilowatt hours/capita)	Weather-adjusted Energy Consumption (gigawatt hours)	Weather-adjusted Energy Consumption (kilowatt hours/capita)
2005	79,096	6,298	78,364	6,240
2007	76,218	5,952	75,744	5,915
% Decrease	3.6	5.5	3.3	5.2

Source: Independent Electricity System Operator and Ontario Demographic Quarterly

Table 3.2 – Provincial Government Facilities' Performance Summary

	2002-2003 Baseline (gigawatt hours)	2006-2007 Consumption (gigawatt hours)	Reduction Achieved (gigawatt hours)	Percent Reduction (%)
Ontario Realty Corporation-operated	361.3	323.2	38.1	10.5
Ministry-operated	241.7	207.5	34.2	14.2
Total	603	530.7	72.3	12

Source: Electricity Reduction Summary to March 31, 2007, from Erwin Massiah, Ontario Realty Corporation

Note: 2002-2003 base data received in 2007 are different from those received in 2006.

of deep lake water cooling for government buildings, where water is taken from Lake Ontario to cool office buildings instead of traditional air conditioning.

During 2007, continuous improvement of the tracking database of government facilities, transfers of buildings out of government use, as well as better estimates of the consumption in several ministry-operated buildings, resulted in

an adjustment to the 2002/2003 baseline from last year's estimate of 644 gigawatt-hours to 603 gigawatt-hours.

PROGRESS TOWARD MEETING THE 800,000 SMART METER TARGET

The government set targets for the installation of 800,000 smart electricity meters on homes and small businesses by the end of 2007 and throughout Ontario by December 31, 2010.

The Independent Electricity System Operator is preparing to manage centralized meter data and act as a smart meter data repository. This will provide a common infrastructure for receiving and storing meter reading data from all smart meters in Ontario.

Local distribution companies are responsible for installing, reading and maintaining the smart meters. Thirteen local distribution companies have already exceeded the 2007 installation target of 800,000 meters and are on track to install more than one million smart meters in Ontario by the end of 2007. Table 3.3 shows the number of smart

meters that each of these companies had installed as of September 2007, as well as their targets for new installations for the remainder of the year.

CONSERVATION PROGRAMS OF OTHER MARKET PLAYERS

The Ontario Power Authority is delivering many conservation programs in 2007 in all sectors, which are described in Chapter 4.

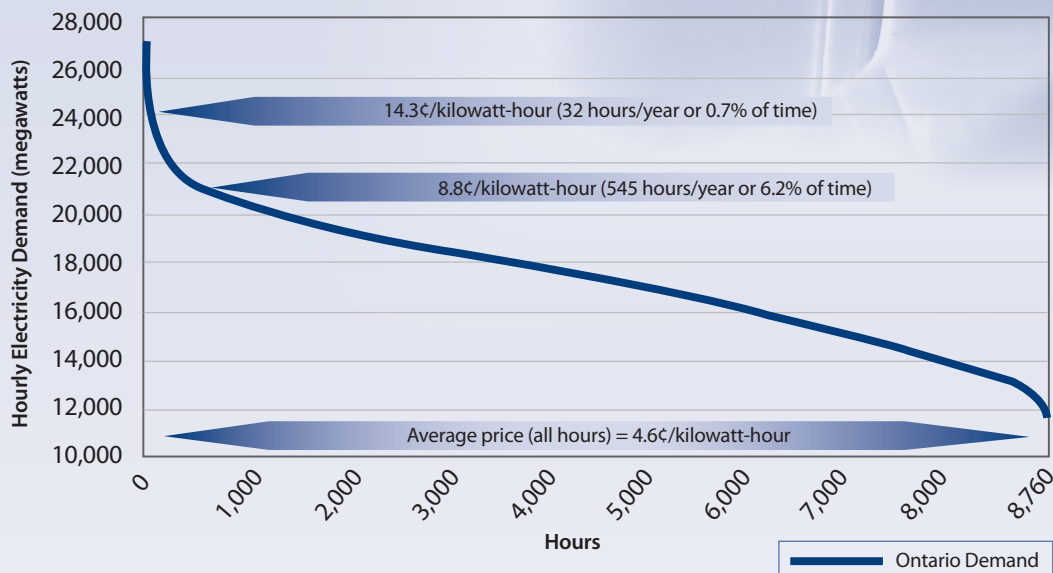
Many market players in addition to the Ontario Power Authority are delivering programs to inspire all Ontarians to take **ACTION** to achieve the province's conservation goals. These players

Table 3.3 – Residential Installed Interval Smart Meters as of September 2007

Local Distribution Company	Installed Meters	2007 "Phase 1" Target
Toronto Hydro	300,000	360,000
Hydro One/Brampton Hydro	170,000	240,000
Hydro Ottawa	145,947	120,000
PowerStream	54,708	80,000
Enersource	43,550	60,000
Chatham-Kent/Middlesex Hydro	30,600	32,081
Newmarket/Tay Hydro	23,254	23,575
Horizon	16,904	50,000
Veridian	16,611	40,000
Milton Hydro	6,000	14,341
TOTAL	807,574	1,019,997

Source: Ministry of Energy

LOAD DURATION CURVE (2006 DATA)



Source: Independent Electricity System Operator

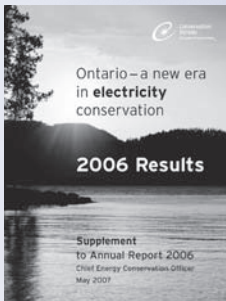
Traditional electricity meters only measure the total amount of electricity used over the entire billing period. Interval or “smart” meters measure **when** electricity is used in addition to how much is used. This is critical for consumers to understand their electricity consumption because at certain times the cost of electricity is extremely high.

This graph is called a load duration curve. It displays the demand placed on Ontario’s electricity system for every hour of the year. For example, the curve indicates that system demand was more than 21,000 megawatts for about 550 hours of 2006, or 6.2 percent of the year. The price of electricity rises dramatically at these peak times. The average

cost of electricity in 2006 was 4.6 cents per kilowatt-hour, but for 32 peak hours, the cost of producing electricity was more than three times the average.

With time-of-use pricing, the price of electricity will vary based on **when** it is used. Smart meters will enable Ontarians to take advantage of time-of-use prices and shift their electricity use to off-peak times. This will decrease strain on the system during peak times and reduce the need for expensive peaking plants and electricity imports. Time-of-use rates effective Nov. 1, 2007, set by the Ontario Energy Board are 8.7 cents per kilowatt-hour for peak times, 7.0 cents per kilowatt-hour for mid-peak, and 3.0 cents per kilowatt-hour for off-peak times.¹³

ONTARIO CONSERVES IN 2006



In May 2007, the Chief Energy Conservation Officer issued a supplement to his 2006 Annual Report that summarized the results of the

2006 conservation programs and activities of the Ontario Power Authority and local distribution companies. The supplement included a "bottom-up" analysis of progress by all major players toward meeting the province's peak-demand reduction target and provided further evidence of a new era of conservation in Ontario. Electricity consumers reduced peak demand by approximately 1,080 megawatts to the end of 2006, including 350 megawatts of naturally occurring conservation. The supplement is available on the Conservation Bureau website at www.conservationbureau.on.ca.

include the provincial and federal governments, local electricity distribution companies, community groups and natural gas utilities.

♦ PROVINCIAL GOVERNMENT PROGRAMS

Governments play a fundamental role in the advancement of energy efficiency and electricity conservation. Although the Ontario Power Authority is the lead agency mandated by the Ontario government to coordinate energy efficiency and peak load reduction, the provincial government also implements a number of in-house programs and some external programs independently. The in-house programs are designed to achieve the provincial government's internal 10 percent consumption reduction target and were successful in achieving a 12 percent reduction between fiscal year 2002-2003 and fiscal year 2006-2007 (see pages 13-14).

The following Ontario government programs operated in 2007:

Provincial Government Internal Initiatives:

- Building Retrofits and Upgrades: Ontario Realty Corporation Buildings and Ministry Buildings
- Ontario Realty Corporation Special Initiative: Deep Lake Water Cooling
- Ontario Realty Corporation Special Initiative: Jail and Youth Detention Centres
- Ontario Realty Corporation Special Initiative: Cogeneration Sites
- Ontario Realty Corporation Special Initiatives: Retro-commissioning/Continuous Commissioning

Provincial Government External Initiatives:

In addition to in-house programs, the provincial government provides rebates to encourage homeowners to purchase more energy-efficient appliances through the retail sales tax rebate for ENERGY STAR® products. Rebates are also available to homeowners who retrofit their homes to become more energy efficient through the Ontario Home Energy Retrofit Program. Other initiatives encourage Ontarians to switch to non-electric sources of energy and increase the efficiency of refrigerants. Below is list of the additional existing programs and those under development in 2007:

- Retail Sales Tax Rebate
- Solar Incentives
- Purchasing Green Power
- Financing for Residential Renewable Energy
- Power House zero-interest loan
- Ontario's Refrigerants Regulation¹⁴

Further information about provincial and federal government programs can be found on the government websites as well as in a report entitled *Overview and Analysis of Ontario Provincial and Federal Electricity Conservation and Efficiency Initiatives* by Marbek Resource Consultants Ltd., available on the Conservation Bureau's website, www.conservationbureau.on.ca.

♦ FEDERAL GOVERNMENT PROGRAMS

At the federal level, Natural Resources Canada is the lead agency in delivering energy-efficiency programs. In addition to setting overall energy policy, the department spends approximately \$180 million per year on energy-efficiency programs of various types.¹⁵ Programs span all sectors, including residential, commercial and industrial, and use a variety of incentives and educational elements to drive efficiencies and conservation throughout the country. Beginning in 2007, Natural Resources Canada's Office of Energy Efficiency programs were re-branded and now fall under the ecoENERGY Efficiency Initiative portfolio of programs. The Office of Energy Efficiency delivers many conservation programs in Ontario.

The following federal energy-efficiency programs operated in 2007:

- Commercial Building Incentive Program
- Industrial Building Incentive Program
- Canadian Industry Program for Energy Conservation
- R-2000 Standard Program
- EnerGuide for New Homes Program
- EnerGuide for Existing Homes
- ENERGY STAR Label Program
- Federation of Canadian Municipalities Green Municipal Fund

Ontario keeps power demand in check

Businesses scaled back electricity usage in response to request for conservation, energy operator says

The Globe and Mail, August 3, 2007



On the hottest day of the year, the province was able to avoid breaking

records for power demand by responding to a request to conserve electricity from the agency that monitors the province's power system. The peak power use was 25,584 megawatts, short of the projected peak of 26,302 megawatts.

"We are seeing an increasing response from business and residents to the need to conserve and cut back during times when the power system is strained. The response to our August 2 appeal to curb or shift electricity use to off-peak hours during that extremely hot day contributed to our ability to maintain the overall reliability of the system."

— Paul Murphy, president and chief executive officer, Independent Electricity System Operator

♦ LOCAL ELECTRICITY DISTRIBUTION COMPANY CONSERVATION EFFORTS

Local electricity distribution companies are key players in promoting electricity conservation. They participate in two important ways: through the design and delivery of their own conservation programs approved by the Ontario Energy Board and through the delivery of programs designed by the Ontario Power Authority. A description of the local electricity distribution company conservation programs funded by the Ontario Power Authority is provided in Chapter 4.

The conservation programs delivered by local distribution companies include demand response initiatives, lighting retrofits, hot water tune-ups and water heater load control programs. The following are key results of some of the conservation programs delivered in the first six months of 2007 by local distribution companies serving close to 80 percent of Ontarians:¹⁶

- **25,500,000** kilowatt-hours saved annually based on conservation measures taken
- **228,012** compact fluorescent light bulbs distributed
- **26,321** electricity load control devices installed on residential appliances
- **13,191** inefficient air conditioners and appliances disposed of responsibly
- **7,250** electric hot water heaters wrapped or tuned up.

Additional Conservation Programs

The Ontario Energy Board approved local distribution company conservation expenditures of approximately \$160 million, referred to as third tranche¹⁷ expenditures, for the period from 2005 to the end of September 2007. These programs are in addition to the conservation programs that are delivered by the local distribution companies for the Ontario Power Authority.

The Board also approved approximately \$3 million in incremental third tranche conservation funds to eight local distribution companies for the 2006 rate year ending April 2007. The funds were to be spent on programs covering residential, commercial and institutional sectors and include residential and commercial lighting rebates, coupon programs, hot water tune-ups and water heater load control programs.

In March 2007, the Board provided a process for local distribution companies to apply for additional funding to continue existing third tranche programs until the end of April 2008. The total incremental local distribution company funding currently approved through 2006 and 2007 electricity rates is more than \$3 million. These additional expenditures on conservation assist local distribution companies in actively supporting the cultural shift to conserve electricity.

♦ ENERGY MANAGEMENT COMPANIES

Energy management companies deliver energy conservation projects in commercial, institutional and industrial operations. Based on data received from leading Ontario energy management company respondents to a survey by the Ontario Power Authority in 2006, more than \$200 million in energy conservation measures was expended in 2005 and 2006, and peak demand reductions are estimated at more than 20 megawatts in each of those years.¹⁸

♦ CONSERVATION OUTREACH AND EDUCATION PROJECTS

The responsibility for promoting conservation is not limited to the government or the Ontario Power Authority. The role of other participants must be recognized, and different delivery channels for conservation, including non-profit organizations and universities, must be supported. Programs have included the Cool Shops Program managed by the Clean Air Foundation, and EcoSchools, coordinated by York University's Faculty of Environmental Studies. Another community-based program, Reduce the Juice, is a youth-led conservation campaign that raised community awareness of the importance of using electricity wisely. Organizations such as Project Porchlight and the Conservation Council of Ontario have introduced many people, businesses and associations to new products and services that have reduced the province's overall demand. These initiatives focus on particular target groups for their electricity conservation programs.

♦ NATURAL GAS DISTRIBUTORS

Ontario's two largest natural gas distributors, Enbridge Gas Distribution and Union Gas, run electricity conservation programs (referred to as demand-side management) for all sectors. Programs range from incentives for energy-saving systems to delivery and installation of energy-efficient products. Both companies have been designing and delivering conservation programs for more than a decade. While their conservation programs are targeted at reducing natural gas consumption, some also result in electricity savings.

Table 3.4 shows the expected electricity savings for both utilities in 2007. The Enbridge Gas Distribution values are based on the company's demand-side management plan as approved by the Ontario Energy Board. The values for Union Gas represent actual results the company has achieved as of June 2007, combined with estimated results for the balance of the year.

**Table 3.4 – Union Gas and Enbridge Demand-side Management
2007 Expected Net Electricity Savings**

Program Type	Electricity Savings (gigawatt-hours)	
	Enbridge Gas Distribution	Union Gas
Residential programs	2.2	1.3
Commercial programs	10.4	1.7
Industrial programs	4.6	2.0
Total	17.2	4.9

Note: Figures may not add up to totals due to rounding.

CHAPTER 4

THE ONTARIO POWER AUTHORITY'S 2007 CONSERVATION PROGRAMS AND ACTIVITIES

The Ontario Power Authority is championing Ontario's emerging conservation market. The priority has been to develop the infrastructure and mechanisms necessary to build a culture of conservation. Besides designing and delivering conservation programs, marketing and research, the Ontario Power Authority actively engages key energy-sector organizations and forms partnerships to move toward Ontario's conservation goals. Activities in 2007 also include supporting other market players, such as local electricity distribution companies and various industry partners, in establishing cost-effective conservation programs.

There are a number of conservation program delivery channels in Ontario, including all levels of government, local distribution companies, private companies, non-profit organizations as well as the Ontario Power Authority. This chapter describes the Ontario Power Authority's 18 conservation programs in the market and an additional three in development, which are targeted at all sectors. It also describes other activities that are designed to bring about longer-term goals such as building a culture of conservation. The programs are intended to drive Ontarians to **ACT** on opportunities for conservation.

The Ontario Power Authority delivered programs in 2007 to achieve both short- and long-term electricity savings. These include:

1. mass market programs targeted at residential and small commercial customers
2. business market programs targeted at larger commercial, multi-unit residential, agricultural, industrial, low-income and social housing customers

3. demand response programs designed to shift load away from peak times
4. customer-based generation projects to offset load and deliver renewable and clean energy to the grid.

Activities related to conservation awareness, innovation and marketing in 2007 were undertaken in the following areas:

- codes and standards
- innovation and pilot program funding
- research and marketing
- evaluation, measurement and verification.

The results of the programs, including energy and demand savings, will be included in a supplement to the 2007 annual report expected in May 2008. The tables in this chapter provide summary information on each program. More detailed program information can be found in Appendix 1, available on the Conservation Bureau website, www.conservationbureau.on.ca.

ONTARIO POWER AUTHORITY AND LOCAL DISTRIBUTION COMPANIES WORK TOGETHER ON CONSERVATION

Seventy-seven out of 86 local distribution companies participated in summer conservation programs designed by the Ontario Power Authority. Ninety-nine percent of electricity customers in the province had access to at least one program. To promote the launch of the programs, several local distribution companies undertook promotional campaigns to build awareness in their communities of the benefits of Summer Savings, **peaksaver™** and the Great

Refrigerator Roundup. These launch events highlighted the electricity and financial savings, as well as the environmental benefits, associated with program participation. The Ontario Power Authority and the Chief Energy Conservation Officer were involved in many of these events, helping to build awareness of the programs.

The following table summarizes local distribution company participation in these mass market programs.

Program	Objective	Number of Participating Local Distribution Companies	Percent Coverage of Ontario Residential Customers*
The Great Refrigerator Roundup	Recycle two percent of refrigerators	75	99
Summer Savings	Raise awareness with residential customers	70	97
peaksaver™	Reduce residential peak summer demand	52	92

* Coverage is estimated as some areas may not have electricity service.

TM of Toronto Hydro Corporation. Used under license.

MASS MARKET PROGRAMS

Mass market programs are targeted at residential and small commercial customers who use fewer than 50 kilowatts of electricity. These programs are typically delivered or advertised through mass

media and large retail channels. In some cases, mass market programs are administered by third parties such as local distribution companies.

A summary of mass market programs in 2007 is provided in Table 4.1.

Table 4.1 – 2007 Mass Market Programs

Sector	Program	Description
Residential — existing buildings	The Great Refrigerator Roundup (local distribution company standard program)	Participants can have inefficient, operable refrigerators or freezers removed free of charge. The appliances are permanently decommissioned and disposed of in an environmentally sound manner. Scheduled to run from July to December 2007.
	Every Kilowatt Counts	An education and awareness-building program that offers financial incentives for the purchase of energy-saving products. Households across Ontario are mailed program brochures twice yearly, and coupons are redeemable at participating retailers across the province.
	Cool Savings Rebate	Program offers rebates for households that install a programmable thermostat or replace an existing central air conditioner and/or furnace fans with more energy-efficient systems.
Residential — demand response	peaksaver (local distribution company standard program)	Program to reduce the load from central air conditioning units and/or hot water heaters of residential and small commercial customers. Participants receive a one-time \$25 incentive. Load control devices are installed free of charge and can be controlled automatically by electricity aggregators during demand response events.
Residential — conservation	Summer Savings (local distribution company standard program)	Provides customers with a 10 percent credit on their fall 2007 electricity bill if they achieved a 10 percent reduction during the summer season. In operation from July 1 to August 31, 2007.
First Nations communities	Energy Efficiency and Conservation Measures	Participants are provided energy conservation kits, and youth are educated about the importance of electricity conservation. Audits and retrofit projects will assess the feasibility of a provincial retrofit program for First Nations communities.

BUSINESS MARKET PROGRAMS

Business market programs target commercial, industrial, institutional and agricultural customers. These businesses are large enough to be communicated with directly or through industry associations, such as the Building Owners and Managers Association. The programs are branded under the Ontario Power Authority's Every Kilowatt Counts for Business logo.

A summary of business market programs in 2007 is provided in Table 4.2. Low-income, social housing and demand response programs also were delivered under the Ontario Power Authority's business markets segment in 2007.

♦ LOW-INCOME AND SOCIAL HOUSING INITIATIVES

Low-income and social housing conservation initiatives are deployed across the province. Some of these programs also are available to First Nations. Key objectives are to:

1. capture potential energy savings in Ontario's social housing through lighting and appliance upgrades and building improvements
2. educate consumers about energy conservation
3. support program partners in the delivery of effective energy-management strategies as a means of improving the quality of housing in the low-income sector.

Table 4.2 – 2007 Business Market Programs

Sector	Program	Description
Commercial — existing buildings	Electricity Retrofit Incentive Program	Offers incentives for retrofits to eligible customers of local electricity distribution utilities. Runs from August to the end of December 2007.
Agricultural	Electricity Conservation on Ontario Farms	Program to increase participation of farmers in existing conservation opportunities, such as the Electricity Retrofit Incentive Program and the Ontario Power Authority's Standard Offer Program.
Large commercial	Building Owners and Managers Association — Conservation and Demand Management	Program provides eligible participants in Toronto with funds to defray the capital costs of demand-reducing and energy-saving initiatives in their buildings.
Various	City of Toronto – Better Buildings Partnership and Better Buildings New Construction Program	The Better Buildings Partnership implements energy-efficiency and building renewal retrofits in industrial, commercial, institutional and multi-residential buildings. The Better Buildings New Construction Program offers design assistance and financial incentives to increase the energy efficiency of new commercial, industrial, institutional or multi-unit residential buildings.
	Toronto Hydro Programs	Portfolio of programs available to commercial, office, retail, private institutions, hotel and multi-use properties under 25,000 square feet, as well as residential and industrial properties (refer to www.torontohydro.com).

Table 4.3 – 2007 Low-income and Social Housing Programs

Program	Description
Affordable Housing Energy Efficiency	Phase I will offer affordable housing providers up to \$850 per unit to offset the cost of purchasing ENERGY STAR-qualified products and an education and awareness program for affordable housing stakeholders.
Energy Efficiency Assistance Program for Houses	Pilot program to support low-income homeowners and tenants with the tools they need to make more effective energy decisions. The pilot stage will be targeted at single, semi-detached and row houses.
Social Housing	The Social Housing Services Corporation manages aspects of this program as part of the corporation's Green Light Initiative, a province-wide initiative to help the social housing community reduce its energy use (refer to www.shscorp.ca).

Table 4.4 – 2007 Demand Response Programs

Program	Description
Demand Response 1	Voluntary peak shedding targeting only the highest-valued peak hours.
Demand Response 2	Contractual peak load-shifting for large customers targeting load savings during 1,000 hours of intermediate peak load days.
Demand Response 3	Higher-reliability contractual peak load-shedding targeting the 100 to 200 highest-value peak hours.

A summary of low-income and social housing initiatives in 2007 is provided in Table 4.3.

♦ DEMAND RESPONSE PROGRAMS

The Ontario Power Authority offers a suite of demand response programs that encourage either the shifting or shedding of electricity loads at peak times. Demand Response 1 was offered in 2006, and Demand Response 2 and 3 are currently being developed. The programs are market-based and designed for participation by organizations that

can curtail load in response to economic signals or specific requests, primarily using existing equipment and processes.

The programs are voluntary and can be based on load interruption, load shifting or behind-the-meter generation (excluding diesel, coal, bio-fuel and bio-diesel).

A summary of demand response programs in 2007 is provided in Table 4.4.

DEMAND RESPONSE IN ACTION

Tembec, a Canadian integrated forest products company, was the first applicant to the Ontario Power Authority's demand response program in late June 2006. The program pays large electricity consumers for reducing power use during periods of high electricity demand. A rigorous set of criteria must be met before companies enrolled in the program can "bid into" the market. Terry Skiffington (second from right), vice-president and general manager for Tembec's Kapuskasing operations, received a Certificate of Recognition from Chief Energy Conservation Officer Peter Love (far right) for Tembec's support in helping to build and foster a culture of conservation.



Photo courtesy of Kapuskasing Northern Times

Kapuskasing Mayor Alan Spacek (far left) attended the event and praised Tembec's efforts. Attendees Jamie Lim (second from left), president and chief executive officer of the Ontario Forest Industries Association, and Barbara Mossop (not shown), the association's manager of environment and energy, were commended for their organization's efforts to advance energy conservation in a series of projects and benchmarking exercises with their member companies.

Table 4.5 – Renewable Energy Standard Offer Program Payment Regime

Project Type	Base Rate (cents/kilowatt-hour)	Peak Performance Incentive Payment (cents/kilowatt-hour)
Solar photovoltaic	42.0	0
Other renewable projects	11.0	3.52

Source: Renewable Energy Standard Offer Program, Program Rules, Version 2.0, November 22, 2006, available on the Ontario Power Authority's website, www.powerauthority.on.ca.

CUSTOMER-BASED GENERATION

The Ontario Power Authority has developed a program to provide standard offer contracts for customer-based renewable and clean energy projects. The Renewable Energy Standard Offer Program, launched in November 2006, is the first of its kind in North America. The program rules for the Clean Energy Standard Offer Program are expected to be finalized in late 2007.

♦ RENEWABLE ENERGY STANDARD OFFER PROGRAM

This program provides a standardized pricing regime and simplified eligibility, contracting and other rules for small renewable energy electricity generation projects. Qualifying projects must use a renewable fuel source and cannot be more than 10 megawatts. Contracts are for a 20-year period. Renewable projects less than or equal to 500 kilowatts are counted toward Ontario's conservation targets.

Projects eligible for this program generate electricity from wind, solar photovoltaic, thermal electric solar, renewable biomass or waterpower. The standard offer provides a fixed price to gen-

erators per unit of energy produced and a higher price for projects demonstrating that they can operate reliably during peak hours. The payment regime is summarized in Table 4.5.

Since its inception, the program has received an exceptional response. As of August 31, 2007, the Ontario Power Authority had executed 140 contracts, 67 of which are less than 500 kilowatts in capacity.

♦ CLEAN ENERGY STANDARD OFFER PROGRAM

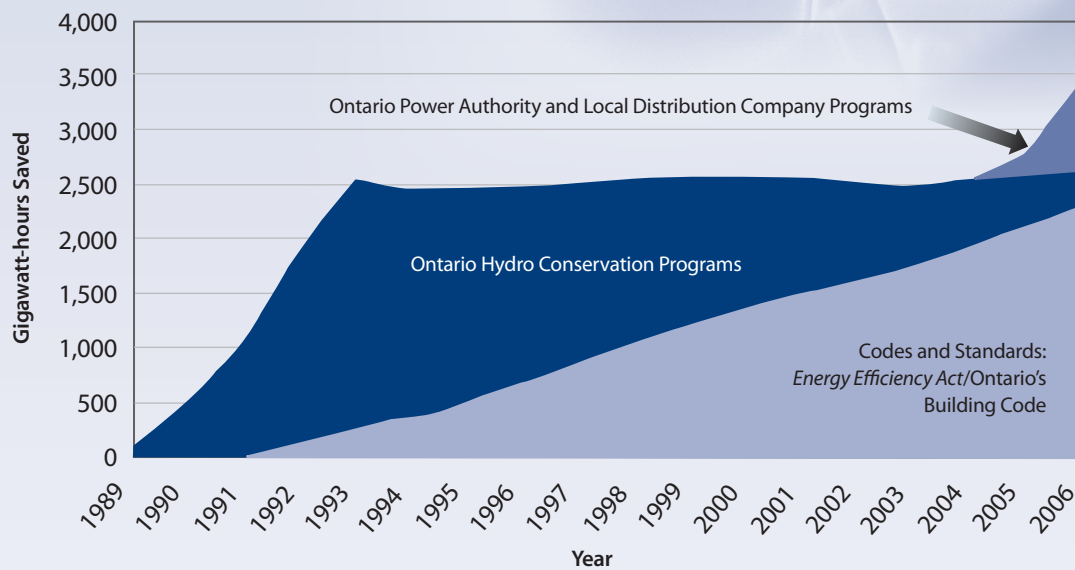
The Clean Energy Standard Offer Program under development is intended to support small clean energy (e.g., natural gas, waste heat) generation projects. The program is expected to result in approximately 140 megawatts of generation capacity by the end of 2010, all of which is considered as conservation. The program is planned to launch by the end of 2007.

OTHER CONSERVATION ACTIVITIES

♦ CODES AND STANDARDS

There has been considerable focus in 2007 on minimum energy performance standards. These standards establish the minimum acceptable level

HISTORY OF CONSERVATION SUCCESS IN ONTARIO



Source: Ontario Power Authority, 2007²¹

In the mid-1980s, the former Ontario Hydro embarked on an ambitious conservation strategy (referred to at the time as demand-side management). These programs continued until the early 1990s, when Ontario went into a recession and demand for electricity decreased. As shown, electricity savings from Ontario Hydro's conservation programs continued long after these programs were cancelled.

Since the early 1990s, codes and standards resulting from the passage of regulations under the *Energy Efficiency Act* and, to a

lesser degree, changes to Ontario's Building Code, have also resulted in electricity savings.

In 2005 and 2006, electricity savings from new conservation programs run by the Ontario Power Authority and local distribution companies were evident. This, however, is just the tip of the iceberg for electricity conservation in Ontario. An estimated 3,500 gigawatt-hours of electricity were saved in 2006, and the Integrated Power System Plan calls for more than 25,600 gigawatt-hours of electricity savings by the year 2025.

of efficiency for specific equipment or processes. The key legislative tools for minimum energy performance standards affecting Ontario are the Ontario *Energy Efficiency Act*,¹⁹ the federal *Energy Efficiency Act* and Ontario's Building Code. Changes made to these tools since January 1, 2005, are each estimated to have achieved approximately 10 gigawatt-hours per year, with a related three megawatts of annual demand reduction.²⁰ This is in addition to the impacts from codes and standards in place prior to 2005.

Ontario's Building Code is among the leading codes in North America for its minimum energy-efficiency standards. In 2006, the Ontario Power Authority participated in the process to amend the building code to include energy efficiency in building design and construction.²² In 2007, attention was turned to equipment standards to drive energy-efficiency savings.

The Ontario Power Authority is engaged in four areas of activity relating to codes and standards: process and institutional development; research, planning and evaluation; standards development; and promotion of new standards. It also participated in a variety of groups, including the Consortium for Energy Efficiency, the Demand Side Management Working Group, its Subcommittee on Building and Housing Energy Labelling, the Energy Efficiency Working Group, the Strategic Lighting Initiative Committee and the Standby Power Advisory Committee. Details on the work of these groups and other related initiatives are provided in Appendix 2.

CONSERVE THE LIGHT GATHERING LAUNCHES CONSERVATION PROGRAM FOR FIRST NATIONS

In May, First Nations delegates from across Ontario came together in Thunder Bay for a two-day Mana-cha-toon Wash-ti-ni-gun (Conserve the

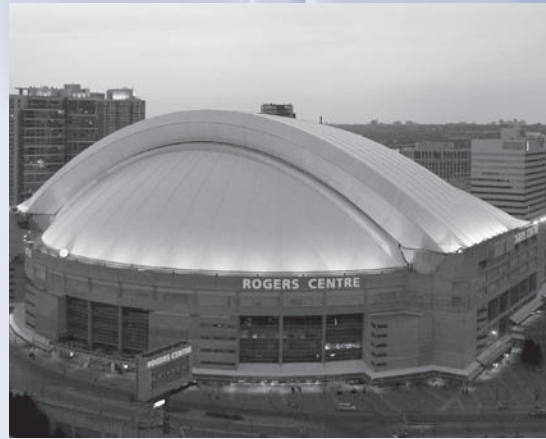


Light) Gathering. The gathering was both a platform for education about electricity conservation for First Nations and the launch of a province-wide electricity conservation program for First Nations communities. The program includes the distribution of about 23,000 energy conservation kits, which contain easy-to-install compact florescent light bulbs, faucet aerators and other devices that will result in immediate reductions in energy use. Comprehensive audits and retrofit pilots will also be undertaken in three communities to help assess the feasibility of a provincial retrofit program for First Nations communities. Charles Fox, program manager, shown above, addresses the gathering.

ROGERS CENTRE HITS HOME RUN ON ELECTRICITY CONSERVATION

The Toronto Blue Jays encouraged their fans to save electricity on July 22, 2007, designated as Electricity Conservation Awareness Day at Rogers Centre in Toronto. The Ontario Power Authority partnered with Rogers Centre and the Toronto Blue Jays to raise awareness and motivate fans to participate in the Ontario Power Authority's summer conservation programs: the Every Kilowatt Counts coupon campaign, **peaksaver**, Summer Savings and the Great Refrigerator Roundup.

Rogers Centre is leading by example by installing energy-efficient measures that will result in about 1.5 megawatts of demand reduction. Paul Godfrey, Blue Jays and



Rogers Centre president and chief executive officer, says he's "much happier spending more of his budget on hitters rather than on wasted electricity." Peter Love, Chief Energy Conservation Officer, and Jan Carr, chief executive officer of the Ontario Power Authority, presented a Certificate of Recognition to Paul Godfrey for his leadership in implementing energy-efficient measures at Rogers Centre. Shown above is Rogers Centre, which contains a large infrastructure of energy-efficient lighting.

The Ontario Power Authority worked closely with the British Columbia Ministry of Energy and Natural Resources Canada to create and launch the Forum for Energy Efficiency Leadership, to promote coordination and collaboration among governments and utilities on longer-term regulatory planning. It has also been a leader in both the forum and the Demand Side Management Working Group to encourage collaboration among those involved in standards work. The goal is to improve and streamline the research, planning and evaluation necessary to support regulatory programs.

The Ontario Power Authority, British Columbia Hydro, Manitoba Hydro and Hydro-Québec have agreed to work with Natural Resources Canada to fund and support standards development at the Canadian Standards Association for several products. These processes are planned to be initiated or completed during the fiscal year 2007. Natural Resources Canada and the Canadian Standards Association have identified 34 new and existing projects requiring funding assistance. The Ontario Power Authority specifically funded a number of products, including large and small motors, lights and light fixtures, portable air conditioners, digital television adapters, external power supply and battery chargers, and appliances that use standby power. As vice-chair of the Canadian Standards Association's Strategic Steering Committee on Performance, Energy Efficiency and Renewables, the Ontario Power Authority is working to streamline the standards development planning process.

Also in 2007, the Ontario Power Authority began the process of promoting improved standards for residential appliances to support the provincial sales tax rebate and its own appliance retirement program. Research closely coordinated with utilities, regulators and others, including the Canadian Appliance Manufacturers Association, was undertaken to identify and justify improved standards in the residential sector.

♦ INNOVATION AND PILOT PROGRAM FUNDING

The Ontario Power Authority has developed two programs that promote innovative technologies and approaches to electricity supply and demand across Ontario. The Conservation Fund supports the development of promising conservation pilot programs. The Technology Development Fund supports emerging conservation or generation technologies.

Conservation Fund

The Ontario Power Authority established the Conservation Fund in 2005 to provide funding for sector-specific electricity conservation pilot projects. The goals of the fund are to:

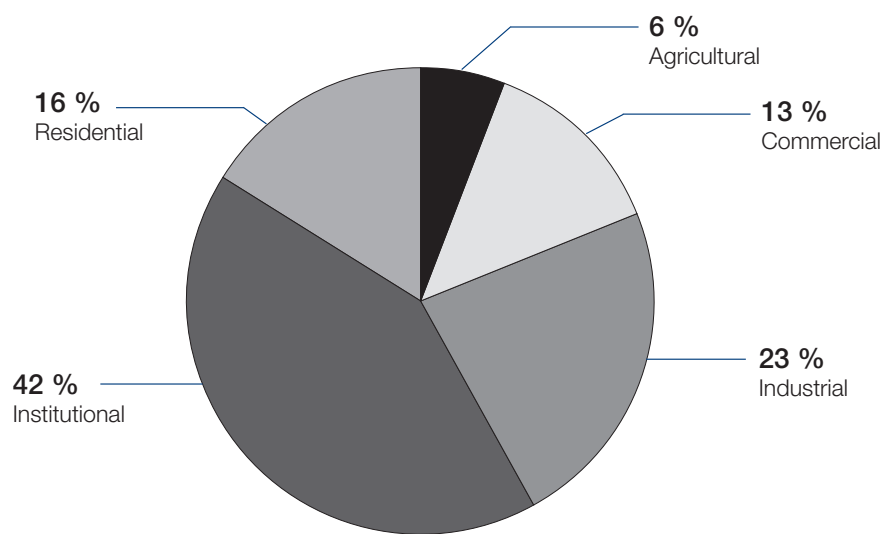
- build capacity for the design, delivery, marketing and uptake of conservation programs
- test new or unique conservation program elements
- use the results from pilots to inform the development of future conservation programs.

ROUNDING UP INEFFICIENT REFRIGERATORS

Local distribution companies partnered with the Ontario Power Authority this summer to deliver several conservation programs, including the Great Refrigerator Roundup, a program to retire old, inefficient second fridges that can waste up to \$150 a year in electricity. Customers can book an appointment online or by phone, and the fridge is picked up free of charge — even hauled out of the basement. The refrigerator is then disposed of in an environmentally responsible manner. Reusable material such as metal and plastic is recycled, chemicals are contained and destroyed in accordance with all government standards and regulations, and all that's left for landfill will just about fit inside a cowboy hat. The program has been extremely successful — as of the end of September, more than 20,000 appliances had been collected and removed from the electricity grid.



Canadian Football League celebrities helped launch the program with Horizon Utilities in Hamilton. Shown above (left to right) are current Hamilton Tiger Cat player George Hudson, former CFL great Angelo Mosca, Chief Energy Conservation Officer Peter Love, Horizon Utilities Chief Executive Officer Max Cananzi and CFL legend Ron Lancaster.

Figure 4.1 – Conservation Fund Allocations from 2005 to June 30, 2007

The Conservation Fund's budget for 2007 is \$3 million. There are three rounds of funding in 2007, two of which have been completed. In the first round, the fund committed \$1.5 million of its budget for seven projects. In the second round, five additional projects were recommended for total funding of just under \$1 million. The seven first-round projects are summarized below. Detailed project descriptions can be found on the Conservation Bureau website. The breakdown of total sector-specific funding since 2005 is shown in Figure 4.1.

- An energy-efficiency education program for trade contractors serving the small- and medium-enterprise sector to provide training and education for trade contractors
- The Ontario Forest Industry Association 2007 Energy Management Program to provide site energy audits, a roving energy manager, help desk services and the appointment of a part-time Energy Conservation Officer
- An energy management and engagement program for University Health Network hospitals, to increase awareness of electricity conservation and reduce overall consumption
- A direct install small business pilot project for small retail operations in four York Region business areas that will receive conservation upgrades, assessment and retrofit services
- ENERGY STAR for New Homes to improve the energy efficiency of new low-rise homes
- A residential pilot project to deliver energy-efficiency education to key commercial agents through market-driven incentives
- Greening Sacred Spaces – Phase II focusing on energy audits and retrofits in faith communities.

Since the fund started in 2005, the Ontario Power Authority has provided \$5 million in funding for 49 projects in a range of sectors, including mining, forestry, agriculture, small business, schools, hospitals and religious communities. In addition, for every dollar of funding provided, an additional two dollars has been leveraged through partner support.

The first annual review of the Conservation Fund is available on the Ontario Power Authority website, along with comprehensive details on the pilot projects funded to date.

Technology Development Fund

The Technology Development Fund promotes the development and commercialization of technologies or applications that have potential to improve electricity supply, conservation or demand management. Technology development is an essential part of market transformation.

Applications for financial support are made exclusively through one of the fund's two managing institutions, the Ontario Centres of Excellence for projects involving partnerships with academia, and CEA Technologies Inc. for other projects. These managing institutions leverage additional funding and intellectual expertise on the Ontario Power Authority's behalf, providing support to universities and businesses to develop trials or validate emerging products.

The fund has a 2007 budget of \$1 million. Funding to date in 2007 has resulted in the selection of four projects to receive just over \$250,000.

In addition, the fund has leveraged \$11 million in external contributions since it began, a ratio of more than 10 to one. The projects for 2007 are summarized below. Detailed project descriptions can be found in Appendix 3.

- Nanowire-based solar cells to enhance the efficiency of plastic solar cells
- New technology to reduce electrical energy consumption in mechanical pulping by 20 percent
- Variable-speed drive performance testing to establish the basis of a new standard for variable frequency drives
- Maestro demand response resource pilot project to develop a prototype for a set of controllers to reduce peak demand across a set of discretionary loads.

♦ RESEARCH AND MARKETING

The Ontario Power Authority conducts market research to inform the design and delivery of conservation programs and to measure the effectiveness of awareness-building activities. These efforts include polling, surveys, focus groups and marketing activities.

Province-wide polling has been conducted regularly since April 2007 to provide information on the awareness, opinions and participation in mass market conservation programs. The polls also provide insights on whether the programs are effective in establishing a culture of conservation. Results show that the conservation programs are successful in gaining attention and that people are

participating. About three in four Ontarians were aware of the spring 2007 Every Kilowatt Counts program, and as many as one in four households redeemed a program coupon.²³

The same research indicates that more than 80 percent of Ontarians are aware of the Ontario Power Authority's programs. These programs are believed to be effective at encouraging people to conserve electricity, and Ontarians say the Ontario Power Authority offers the kinds of programs that make sense for them and others in their households.²⁴

This and other market research have contributed to the development of conservation messaging and programs. Early in 2007, focus groups and surveys helped identify how effective brand positioning could persuade people to use electricity wisely and take actions to conserve. The results are being used in developing effective messages to promote programs under the Every Kilowatt Counts banner.

Focus groups held with contractors delivering the Cool Savings program revealed opportunities to improve program operations in 2007.²⁵ Other research tracked the impacts of an advertising campaign to increase participation in the Electricity Retrofit Incentive Program in the agricultural sector. Research results showed that the campaign was successful at making energy efficiency more relevant to farmers and also suggested strategies for future campaigns.²⁶ Similar market research initiatives will continue in 2008.

♦ EVALUATION, MEASUREMENT AND VERIFICATION

The Ontario Power Authority is developing processes to assess the overall effectiveness of its conservation programs, measure energy and demand savings impacts and determine overall cost-effectiveness. Evaluation, measurement and verification will be used to confirm that the province has met its conservation targets, enhance the quality of data for forecasting and verifying conservation potential, and inform new and existing program design and development.

- **Evaluation:** This refers to using measured and verified information, as well as insights gained through experience, to assess the value (primarily energy and demand savings) of conservation programs. Evaluation can be used to determine whether program modifications are needed or if funding increases or decreases are justified.
- **Measurement:** This refers to measuring pre- and post-conservation program conditions. Techniques include surveys and on-site measurement, which can confirm the assumptions used to estimate the baseline conditions affecting energy use.
- **Verification:** This refers to verifying that equipment installations or behaviour changes reported by program delivery agents have occurred and that the installed equipment or other program measures are working correctly.

CHAPTER 5

THE ONTARIO POWER AUTHORITY'S PROPOSED 2008 CONSERVATION PROGRAMS

The Ontario Power Authority is leading Ontario's efforts to achieve electricity conservation in 2008 and beyond. The key focus areas that correspond to the Ontario Power Authority's mandate are building a culture of conservation, planning the power system for the long term, ensuring development of needed generation resources and supporting the continued evolution of the electricity sector. All four of these focus areas depend on continued conservation success. One of the Ontario Power Authority's five strategic objectives in 2008 is to *"contribute to the achievement of Ontario's conservation resource targets and to fostering a culture of conservation using market-based approaches."*²⁷

To meet this strategic objective, the Ontario Power Authority plans to implement a portfolio of 27 conservation programs in 2008. Several programs will continue from previous years and others will be newly designed and delivered by the Ontario Power Authority and other delivery channels, such as local distribution companies. In addition, the conservation program portfolio for 2009 will be identified and resources procured. The Ontario Power Authority will develop a conservation service industry by outsourcing conservation services rather than directly providing programs to the extent feasible.

In 2008, the Ontario Power Authority will continue to promote legal and policy opportunities that support energy efficiency, report to the public on conservation results, and implement an evaluation, measurement and verification system to measure conservation program results. Through the Conservation and Technology Development Funds, the commercialization of new technologies consistent with the Ontario Power Authority's mandate will be supported.

Another key focus area will be developing public awareness. In addition to the activities of the Chief Energy Conservation Officer, the Ontario Power Authority will develop education programs for Ontario youth and promote brand awareness of "Every Kilowatt Counts," which will become the overarching brand used in programs to influence behaviour that leads to wiser use of electricity.

CONSERVATION RESOURCES PLANNED FOR 2008

Table 5.1 summarizes planned 2008 conservation resources by program and target. These programs are expected to provide approximately 1,230 megawatts of peak-demand reduction in the 2008 to 2010 period. Other sources, particularly smart meters in conjunction with time-of-use commodity prices, are expected to contribute an additional 176 megawatts. More details on the Ontario Power Authority's 2008 conservation programs can be found in Appendix 4.

Table 5.1 – 2008 Planned Conservation Resources

Program Type	Program	Estimated Peak Demand Reduction (megawatts)*	
		Target	Net Reduction**
Mass market	New Construction Program	45	32
	Existing Buildings Retrofit Programs	242	169
	Low Income and First Nations	16	11
	Demand Response Program	105	74
Commercial/institutional	New Construction Programs	55	39
	Existing Buildings Retrofit Programs	492	344
	Socially Assisted Housing Programs	29	20
Industrial	Industrial Programs	113	79
	Demand Response Programs	451	316
Customer-based generation	Standard Offer Programs***	211	148
Other programs	Smart Meters and Time-of-Use Pricing	176	176
TOTAL		1,940	1,410

Source: Ontario Power Authority

Notes: * Totals are rounded to the nearest 10 megawatts.

** Net reduction is listed less free riders. A free rider is defined as a program participant who would have installed a measure on his or her own initiative without the program. The free rider rate is assumed to be 30 percent of the total estimated program demand reduction and is not counted toward meeting conservation targets.

*** Clean energy standard offer projects equal to 10 megawatts or less and renewable energy standard offer projects equal to 500 kilowatts or less are considered as conservation.

MASS MARKET PROGRAMS

Mass market programs target small electricity consumers that are too numerous to be communicated with directly. The programs are advertised through mass media, local distribution companies

and/or large retail channels. For 2008, the Ontario Power Authority is considering ways to extend the delivery reach of mass market programs through the engagement of more community-based organizations.

Table 5.2 – Proposed Mass Market Programs for 2008

Sector	Program	Description
Residential	New Construction	Program to improve the energy efficiency of new single-family and townhouse homes.
Residential existing buildings retrofit	Local Distribution Company Custom Programs	Allows local distribution companies to submit program proposals based on their understanding of local market needs. Proposed programs must comply with specified design and performance criteria.
	Community Engagement	Will explore the use of community-based agencies and organizations as delivery channels to provide education and efficiency measures to mass market customers.
	New Appliance	Retail-based program aimed at improving the efficiency of electric appliances and supporting new appliance standards.
Low-income and First Nations	Single Family Low-Income Housing	Program will assist low-income households manage electricity use with free electric energy-efficiency and fuel-switching measures. It will work with social benefits agencies to identify participants.

Table 5.2 shows the mass market programs planned for 2008 that will deliver results in the 2008 to 2010 period. These programs are in addition to the 2007 programs described in Chapter 4 that are likely to continue in 2008, including Summer Savings, *peaksaver*, the Great Refrigerator Roundup, Every Kilowatt Counts, Cool Savings Rebate and energy-efficiency and conservation measures for First Nations communities.

COMMERCIAL/INSTITUTIONAL MARKET PROGRAMS

The Ontario Power Authority will expand the offerings to commercial and institutional markets in 2008. Table 5.3 summarizes the new commercial/institutional market programs that will

deliver results in the 2008 to 2010 period. The Electricity Retrofit Incentive and the Electricity Conservation on Ontario Farms programs, active in 2007, are expected to continue in 2008.

INDUSTRIAL MARKET PROGRAMS

The emphasis for the industrial market is not only on improving technology and industrial process efficiency — it is also on developing energy-management knowledge, expertise and acceptance at all levels of an organization, as well as on building expertise in the service and supply chains that serve the market. Industrial markets are the primary targets for demand response programs.

The Ontario Power Authority is considering adding a fourth demand response program in

Table 5.3 – Proposed Commercial/Institutional Market Programs for 2008

Sector	Program	Description
Commercial/ institutional	High Performance New Construction	Will assist the incorporation of conservation measures into the design, construction and operation of new buildings and major renovations. Buildings are intended to exceed the Model National Energy Code of Canada for Buildings ²⁸ with graduated incentive levels for higher performance.
Small commercial	Commercial Direct Install	A retrofit program that includes a pre-defined set of energy-efficiency measures focusing on more efficient lighting and heating, ventilation and air conditioning equipment.
Large commercial	Large Commercial Buildings	Promotes retrofits in large commercial, institutional and multi-family buildings in Toronto. Program includes the Building Owners and Managers Association Toronto Conservation and Demand Management program.
Multi-unit residential	Multi-Family Buildings	Program addresses building retrofits to improve energy efficiency and implement fuel switching in multi-family buildings, combined with educational initiatives for tenants and building operators.
Commercial — general	Fuel Switching	Program to acquire fuel-switching resources that contribute to peak demand reduction, primarily in the commercial sector.
Commercial — existing building	Building Recommissioning	Targeted at building operators to encourage thorough review of operating characteristics of large buildings, maintenance of optimal equipment use and setup, and properly calibrated equipment.
Institutional — general	Institutional Buildings	Program to address unique needs of institutional markets. It will build on the work done that has been funded in part by the Ontario Power Authority's Conservation Fund.

2008. It would be developed based on the experience gained and observed gaps from the first full year of operation of the existing demand response programs. Table 5.4 shows the new industrial market program planned for 2008.

CUSTOMER-BASED GENERATION

The Ontario Power Authority will continue to administer the Renewable Energy Standard Offer Program and Clean Energy Standard Offer Program, expected to be launched in late 2007.

OTHER CONSERVATION ACTIVITIES

The activities that support conservation described in Chapter 4 are planned to continue in 2008. These include developing codes and standards; innovation and pilot program funding; and evaluation, measurement and verification of conservation programs.

Table 5.4 – Proposed Industrial Market Programs for 2008

Sector	Program	Description
Industrial	Industrial Process and Technology	Programs to improve energy efficiency in the industrial sector, by providing evaluation and optimization to encourage increased efficiency for particular end-uses, such as driven loads, compressed air, lighting, and refrigeration and cooling.

In 2008, the Ontario Power Authority will again take a leadership role in promoting regulation of codes and standards to achieve its long-term goals. It will engage in activities to support increases to minimum energy performance requirements for specified products and buildings. Commercial and residential cooling is expected to be a key area of focus in 2008.

The Ontario Power Authority plans to implement a web-based evaluation, measurement and verification tracking system in 2008. It is making a significant investment in these efforts.

CHAPTER 6

FINDINGS AND RECOMMENDED ACTIONS

The Chief Energy Conservation Officer is required by 2004 amendments to *The Electricity Act, 1998*, to identify government policy or legislation that results in a barrier to developing or implementing electricity conservation measures. This chapter presents findings and recommended **ACTIONS** to government and others to help achieve Ontario's conservation goals. The recommendations are based on research, participation in forums and consultations with a wide range of stakeholders.

In the 2006 annual report, the Chief Energy Conservation Officer made 17 recommendations to which the Government of Ontario has responded. An update on government actions taken in response to the 2006 recommendations is provided in Chapter 7.

ONTARIO'S ENERGY CONSERVATION POLICY

Ontario has many electricity-related policies in place, but more needs to be done to ensure that energy conservation policy is applied in a cohesive manner by all government agencies. There would be significant benefits to a comprehensive and coordinated energy policy that lays out, in a single government document, policies and positions on the conservation of electricity and all other energy forms. To align future energy policy initiatives with existing ones, such as substituting other fuels for electricity, the Ontario government should develop a unified energy conservation policy that relates to a broader range of energy forms and sources. The rededication of the government's Conservation Action Team could assist in this process.

Furthermore, government ministries and agencies can impact energy use, through mechanisms such as procurement and internal policies. All ministries and agencies, therefore, should consider energy conservation as they develop policies and programs in their mandate areas. For example, the *Environmental Bill of Rights* requires 13 ministries to prepare a Statement of Environmental Values to ensure that the government takes the environment into account in its decision-making. By including a commitment to energy conservation in these statements, ministries would demonstrate leadership and dedication toward building a culture of energy conservation.

Recommended Action 1: The Ministry of Energy should develop a comprehensive and cohesive energy conservation policy for all government departments that aligns the province's electricity policies with other related policies. All government departments should be required to consider this policy in their decision-making processes, and prescribed government ministries should be required to include a commitment to energy conservation in their Statement of Environmental Values.

ROLE OF THE CHIEF ENERGY CONSERVATION OFFICER

To help build a culture of conservation in Ontario, the Chief Energy Conservation Officer is a leading public advocate for energy conservation. Electricity is inherently related to other forms of energy, and conservation opportunities exist for all of these. To be even more effective, the Chief Energy Conservation Officer's advocacy role could be expanded to address conservation issues relating to other forms of energy, particularly natural gas and possibly transportation fuels in the longer term.

Similar to the Chief Energy Conservation Officer's existing role for electricity, this reconfigured role could include working with energy management companies to promote conservation awareness and publicize successes for conservation of other energy forms, identifying barriers to further conservation and thereafter seeking to have them removed. As the Chief Energy Conservation Officer's role is currently funded by electricity ratepayer funds, alternative funding models would need to be explored to implement this change.

Recommended Action 2: The government should reconfigure the role of the Chief Energy Conservation Officer to include advocacy for conservation of other forms of energy used in Ontario, including natural gas and transportation fuels.

ONTARIO'S BUILDING CODE

Recent changes to Ontario's Building Code include provisions for energy efficiency in buildings. The 2006 Building Code also includes enabling provisions to promote the use of green technologies such as solar photovoltaic systems, gas-fired emergency generators, solar hot water systems, wastewater heat recovery systems and motion sensors for lighting.

These changes are a notable improvement; however, significant gains in energy efficiency could be achieved by applying standards to renovations and retrofits. Incentives and information programs in the private sector are leading to improvements in these areas, but further work needs to be done. The right tools must be available to industry practitioners so that all new and existing buildings subject to Ontario's Building Code maximize opportunities for conservation in the most cost-effective manner. The timing of the changes must allow for their consideration in advance of the Model National Energy Code of Canada for Buildings 2010 approval cycle. Ontario also needs to remain active in the federal process to update the Model National Energy Code of Canada for Buildings, particularly with respect to its commercial lighting provisions.

Recommended Action 3: The Ministry of Municipal Affairs and Housing should prepare a plan for the orderly consideration of energy efficiency in all renovations and retrofits.

MINIMUM ENERGY PERFORMANCE STANDARDS

Codes and standards and other legal and policy tools are among the most effective ways to achieve the province's conservation goals. Working closely with the Ontario Power Authority and regulators across Canada to identify opportunities for coordinated approaches, the Ontario government should identify priorities to 2025 and develop action plans to support the continuous improvement of minimum energy performance standards for buildings and equipment.

To date, 13 regulatory amendments to Ontario's *Energy Efficiency Act* have established minimum efficiency levels for more than 50 product categories that consume 80 percent of the energy used in the residential sector and 50 percent used in the commercial/institutional sectors. The Ministry of Energy estimates that these regulations cover 95 percent of the energy consumption also covered by California's regulations, thus making Ontario a leader in this area. Further information on the federal and provincial *Energy Efficiency Acts* is provided in Appendix 5.

Ontario needs to continue to work with other leading jurisdictions in North America on minimum energy performance standards. Two key objectives in using the *Energy Efficiency Act* to date have been to eliminate energy-inefficient products from the marketplace and promote the development of more energy-efficient products in the future. The focus has been on removing

the poorest-performing products; however, the approach going forward should be to set standards that increase the minimum energy-efficiency performance for all products. To achieve this shift in a cost-effective and timely manner, the Ontario government should coordinate its development of standards with jurisdictions such as British Columbia, California and others that are active in this area.

Ontario's Building Code was updated in 2006 to include the established EnerGuide 80 standard as the minimum energy efficiency for new buildings by 2012. Just as an established standard for buildings in Ontario was used to drive the energy efficiency of new homes to the highest levels in North America, Ontario could take a similar approach to increase the energy efficiency of major home appliances.

Recommended Action 4: The Ministry of Energy should raise the minimum energy performance standards for the six consumer products currently exempt from provincial retail sales tax (refrigerators, freezers, dishwashers, clothes washers, dehumidifiers and air conditioners) to the highest levels in North America.

Low-income households may face greater or disproportionate economic burdens in upgrading to energy-efficient products as a result of new codes and standards, such that the additional upfront costs can be a barrier to conservation action. Options to overcome this hurdle should be considered, including a provincial sales tax rebate

on all affected products as a means of providing ongoing support. This could be a time-limited rebate to allow the market to adjust to the change. For example, a provincial sales tax rebate could be given on all products affected by updated codes and standards for one year after the new standards take effect.

Recommended Action 5: The government should evaluate options to assist households defined as low-income to deal with economic burdens associated with upgrading to energy-efficient products affected by new codes and standards.

ENERGY CONSERVATION LEADERSHIP IN PUBLIC AGENCIES

The activities and leadership of public sector agencies are important in creating a culture of conservation. In addition to the provincial government itself, the public sector includes 490 municipalities and local service boards, more than 210 hospitals and long-term care facilities, 104 school boards and 46 colleges and universities. The public sector is diverse not only in how it uses energy but also in its capacity to take action. As with other sectors, conservation is one of a number of competing priorities for scarce resources.

As a starting point, public agencies need to include energy conservation in their planning and decision-making processes. They also need to be informed of how they use electricity, how much they are using and how they can change their behaviour to conserve. Energy conservation plans can be

an important means of achieving conservation targets. In the public domain, these plans can be used for benchmarking, a valuable management technique that could be used in the broader public sector more effectively. To ensure that the plans are created and implemented in a meaningful manner, the differing sizes, resources and locations of the agencies will need to be taken into consideration.

The *Energy Conservation Leadership Act, 2006*, is a powerful tool for achieving energy conservation, as it empowers the provincial government to promote energy conservation in the province's public agencies. Regulations pursuant to this Act should be developed and supported to further the province's energy conservation goals. Subsection 4(1) of this Act authorizes the use of regulations to require public agencies to prepare energy conservation plans on an annual or other specified basis. The government has held consultations with a number of representatives in this sector, but no proposals for draft regulations have been posted to date. The rollout of the regulations should be sensitive to the state of readiness and capacity to take action within the sector.

Recommended Action 6: The Ministry of Energy should issue regulations requiring public agencies to prepare annual energy conservation plans with a high priority on implementing energy conservation measures in their daily operations and capital projects.

MUNICIPAL ZONING BY-LAWS AND PERMITTING REQUIREMENTS

In several cases, municipal zoning bylaws and permitting requirements act as unintended barriers to conservation. For example, some current municipal restrictions prohibit combined heat and power energy projects, clotheslines or solar collectors. These restrictions are out of step with current conservation practices and should be updated to recognize the importance of energy conservation.

Combined heat and power energy projects historically have involved heat sources and large industrial sites. Recent advances in small-scale combined heat and power and renewable energy technologies enable smaller heat sources or heating loads to be candidates for combined heat and power systems. As a result, there is an increasing opportunity for these systems to be located in non-industrial areas and generate electricity closer to loads, such as in office towers, apartment buildings, shopping centers and residential district heating systems.

Electric clothes dryers are the third highest energy-consuming appliance in the home. They are not ENERGY STAR-rated since all units use more or less the same amount of electricity. Using clotheslines to dry clothes is a sound conservation practice. For this reason, the continued existence of local covenants restricting outdoor clotheslines has led to a number of efforts to permit their use, including a “right to dry” movement spearheaded in 2006 by the Mayor of Aurora and others.

Similar to combined heat and power projects, solar thermal or photovoltaic collectors historically have been considered industrial developments. In some cases, their application is limited under residential zoning.

To assist in removing unintended barriers and to promote opportunities for energy conservation, subsection 3(2) of the *Energy Conservation Leadership Act* authorizes designated goods, services and technologies to be used despite legal restrictions that would otherwise prevent their use.

Recommended Action 7: The Ministry of Energy should issue regulations under the *Energy Conservation Leadership Act* to designate combined heat and power projects, clotheslines and solar collectors so that they may be used where there are restrictions, such as municipal zoning by-laws, that would otherwise prevent or impede their use.

BUILDING LABELLING

There is considerable interest in the use of labelling as a benchmarking and regulatory tool to identify energy-efficient design and retrofit efforts in commercial and institutional buildings. In 2006, a multi-stakeholder subcommittee²⁹ was formed under the auspices of a federal/provincial/territorial committee reporting to the Council of Energy Ministers. Its role was to assess existing energy labelling programs from other jurisdictions and explore the potential for introducing a voluntary building label in Canada. The label would identify

and display energy performance, such as consumption, energy intensity or some closely related parameters for commercial, institutional, multi-unit residential and government buildings.

Several building energy labelling pilot projects are being developed across the country to test assumptions and administrative processes for implementing building labels. In conjunction with these pilots, work is underway with stakeholders to determine the kinds of information that could reside in a database of labelled buildings in Canada. Subsection 2(1) of the *Energy Conservation Leadership Act* permits the government, by regulation, to require anyone selling, leasing or otherwise transferring an interest in real or personal property to provide energy-related information. The regulation could be written to mandate an energy consumption label.

Recommended Action 8: The Ministry of Energy and the Ministry of Municipal Affairs and Housing should collaborate with the federal government and other provinces to introduce voluntary labelling of the energy performance of all new and resale buildings coincident with the current Ontario Building Code review cycle, with the intent of issuing a regulation to require labels for all new and resale buildings.

MUNICIPAL ENERGY CONSERVATION LEADERSHIP

The involvement of local governments, businesses and consumers is important in raising conservation awareness and creating a culture of conservation. At the annual conference of the Association of Municipalities of Ontario in August 2007, the Chief Energy Conservation Officer called on the province's municipalities to appoint Municipal Energy Conservation Officers to help build a conservation culture.

A strong local presence will be pivotal in engaging communities and individuals in Ontario's conservation efforts. Several municipalities already have similar full-time positions, including the cities of Hamilton, Markham and Toronto and the Region of Peel. Other municipalities have individuals who devote time to advocate for energy conservation. Institutionalizing a defined role for energy conservation at the municipal level could play an integral role in achieving the province's conservation goals. The Ministry of Municipal Affairs and Housing could support the municipalities with this new role.

Recommended Action 9: Ontario's municipalities should appoint Municipal Energy Conservation Officers to engage communities at the local level in creating a culture of conservation throughout the province.

Taking Action

GOVERNMENT PROCUREMENT

The Government of Ontario has policies on how goods and services are procured. Due to the size of its operations, government procurement policies can have a significant impact on supply chains for energy-efficient products and services. By purchasing more energy-efficient devices and equipment, government ministries can achieve a significant reduction in electricity use while supporting market transformation in the longer term. For example, all office equipment purchased or leased should be required to meet current ENERGY STAR requirements.

Recommended Action 10: All government procurement policies and contracts should include current ENERGY STAR requirements for energy efficiency where available.

ELECTRICITY CHARGES AND BILLING

During recent consultations with large business customers, pricing information and transparency were identified as main barriers to conservation actions.³⁰ A summary of these consultations is provided in Appendix 6. By providing appropriate information to help electricity users conserve electricity and shift their time of use, electricity bills can be an important tool in developing a culture of conservation.³¹ Examples of data that could be included are the relation between time-of-use and peak system demand, and comparisons to previous billing periods. Some utilities already provide this material to their non-residential customers.

The Ontario Energy Board is currently involved in processes to address pricing mechanisms and fairness issues that might result from these mechanisms.

Recommended Action 11: The government should ensure that future changes to the way electricity bills are presented to consumers provide enough information and transparency to enable them to make better decisions about electricity use.

Ontario has surpassed its target of installing 800,000 smart meters by December 31, 2007. To maximize the effectiveness of these technologies, the focus needs to shift to providing education and tools to help consumers better understand their energy consumption. Research will be essential to identify the tools people need to evaluate their consumption habits and make decisions about their patterns of electricity use. The process will require leadership and innovation to ensure that the best possible approach is taken. The government will need to determine the most appropriate agency to fulfill this important role.

Recommended Action 12: The government should work with the appropriate players in the electricity sector to coordinate research and develop educational programs and tools needed to enable customers to learn about and benefit from the use of technologies such as smart meters.

CHAPTER 7

2006 RECOMMENDATIONS OF THE CHIEF ENERGY CONSERVATION OFFICER

This chapter includes recommendations of the Chief Energy Conservation Officer made in 2006 and a summary of the government's actions taken in response to the recommendations.

Recommendation 1: All new government building construction should use the 2012 Ontario Building Code requirements as a minimum. New and green technologies should also be explored.

On June 1, 2007, the Minister of the Environment announced that Leadership in Energy and Environmental Design (LEED) will be the design standard for all new government-owned construction.

Recommendation 2: Government procurement contracts must specify high energy efficiency as a minimum requirement.

The Ontario Realty Corporation has strengthened its standard lease form to reflect the government's conservation priorities. Specifically, Schedule "K," entitled Conservation of Energy and Water, has been added to the lease. It states that landlords agree, wherever possible, to adhere to certain procedures relating to lighting, heating and cooling, and water. The government reports that landlords have been receptive to the lease changes. The new schedule is being used, where feasible, in all new lease negotiations with private-sector landlords and in renewals of existing leases.

This recommendation has been made again in 2007. Recommended Action 10 of this report calls for further action in this area.

Recommendation 3: The government should continue to actively seek stakeholder advice on conservation targets through stakeholder groups as appropriate and other mechanisms.

Broad-based stakeholder consultations on targets were the basis for the 6,300 megawatt target. The Ontario Power Authority, as required by legislation, used a public process to develop the plans for meeting these targets. Ontario has also been an active participant in a federal, provincial and territorial process involving extensive consultation to create a conservation action plan for the Council of Energy Ministers. In addition, the Energy Efficiency Working Group, the National Roundtable on the Economy and the Environment, and the Council of the Federation's Energy Strategy provide consultation opportunities for the provincial government.

Recommendation 4: The Conservation Action Team should act on its expanded role and leverage other cross-ministerial forums to provide consistency and coordination of conservation policy and action across the government.

Taking Action

The Conservation Action Team met monthly in 2004 and delivered its report to the Minister of Energy in January 2005. It reconvened in mid-2006 and held meetings in May and June. Following the appointment of a new parliamentary assistant in late 2006, the team reconvened in the spring of 2007. Recommended Action 1 of this report calls for a rededication of the Conservation Action Team.

Recommendation 5: The government should publish its energy and conservation policy in one summary document.

Although the government uses several methods to communicate policy, including speeches, press releases, publications, legislation and regulation, the conservation strategy is explained in detail on the Ministry of Energy website.³² The government's submission to the Canadian Energy Efficiency Alliance in 2006, also on its website, is a compilation of achievements and future directions in conservation. Recommended Action 1 of this report calls for further action in this area.

Recommendation 6: Ontario should continue to match California's standards and work with California and other leading jurisdictions on the introduction of new standards in the future.

Ontario has already harmonized its current standards in Ontario's *Energy Efficiency Act* with American organizations such as the Department of Energy and the California Energy Commission. These organizations and other industry associations also participate on Canadian Standards

Association committees to ensure that new standards are harmonized to the extent possible. In 2007, the Chief Energy Conservation Officer recommends that Ontario pursue standards that are the highest in North America (see Recommended Action 4 of this report).

Recommendation 7: Ontario should work with other jurisdictions to adopt a one-watt standard for load losses associated with standby losses.

The Canadian Standards Association is currently working on television set-top boxes and power supply standards. These standards are expected to be completed during the last quarter of 2007 and will harmonize with the United States Department of Energy standards.

Recommendation 8: Ontario should incorporate the A440.2-04 window performance standard for replacement windows into the Ontario *Energy Efficiency Act*.

This standard is currently being reviewed and is expected to be ready for approval in 2008. Adequate lead time is required to allow small manufacturers to have their products verified.

Recommendations 9 and 10: Develop a market transformation strategy to ensure achievement of the Part 2 and Part 9 target by 2011.

The government, through the Ministry of Municipal Affairs and Housing, is working to ensure that the requirements of Ontario's Building Code for 2007 are met. It will continue its efforts to achieve compliance with future modifications to the code.

Recommendation 11: Put in place a process to ensure ongoing facilitation of green technologies.

Green technologies are supported through various mechanisms such as tax exemptions for residential renewable installations, rebates for various green technologies as recommended in energy audits and a commitment to 100,000 solar roofs. In addition, the Ontario government is providing a grant to the World Green Building Council to support its activities in its new worldwide headquarters in Toronto.

Recommendation 12: Begin discussion on how to ensure that energy efficiency is considered in renovations.

Ontario's Building Code has specific provisions for renovations that require major renovations to adhere to latest code standards. Recommended Action 3 of this report calls for further action in this area.

Recommendation 13: Begin to develop a vision for Ontario's Building Code beyond 2011.

Through activities such as supporting the ENERGY STAR standard for new homes, rebates for green technologies undertaken as part of energy audits, tax exemptions for renewable installations and other market transformation activities, the government is promoting advanced building technologies and techniques that can be used as the basis for future code revisions.

Recommendation 14: Develop meaningful regulations under the *Energy Conservation Leadership Act, 2006*, to address barriers to conservation and to promote leadership by the broader public sector in energy conservation.

The government actively consults with many in the municipalities, universities, schools and hospitals sector and has been working with government building owners and experts to develop a better understanding of what would be needed in a regulation to require this sector to post energy conservation plans. Recommended Actions 6, 7 and 8 of this report call for further action in this area.

Recommendation 15: Review land use policies to establish density requirements in existing and future developments.

Recommendation 16: Consideration should be given for site design and the implementation of energy efficiency and renewable energy in land use policies.

No comments were received from the Ontario government in response to recommendations 15 and 16.

Recommendation 17: Ensure that electricity savings are considered in the implementation of the 2005 Greenbelt Protection Plan.

Urban design is an important factor determining overall energy use. The Ontario government's creation of a greenbelt offers new incentives for greater building and community density with reduced energy use.

REFERENCES AND NOTES

CHAPTER 1

- ¹ The net metering program allows eligible generators to send electricity generated from renewable sources to the electrical grid for a credit toward their energy costs. The utility subtracts the value of electricity supplied to the grid from the value of what is used from the grid. The generator is then billed for the “net” difference between these two amounts. For more information, see www.energy.gov.on.ca/index.cfm?fuseaction=renewable.netmetering.
- ² See the Ontario Power Authority website at www.powerauthority.on.ca for documents relating to the Integrated Power System Plan.

CHAPTER 2

- ³ A certificate recognizes the leadership role taken by individuals and organizations that have made long-term commitments to conserve electricity in Ontario. A list of 2007 recipients is located at www.conservationbureau.on.ca/Page.asp?PageID=122&ContentID=1709.
- ⁴ Conservation Bureau, 2007.
- ⁵ For more information about this research, see *Consumer Usage and Attitude Market Research, Ontario Consumer Market Research, on Attitudes and Behaviour Toward Electricity Conservation, 2007 Baseline Study*, April 2, 2007, Environics Research Group, available at www.powerauthority.on.ca in the Conservation/OPA Market Research section.

- ⁶ For Canada’s greenhouse gas emissions, see *National Inventory Report, 1990 – 2004, Greenhouse Gases Sources and Sinks in Canada* at www.ec.gc.ca/pdb/ghg/inventory_report/2004_report/ta9_7_e.cfm.

For Ontario’s electricity system greenhouse gas emissions, see *Sustainable Development 2006 Report*, Ontario Power Generation, at www.opg.com.

- ⁷ Integrated Power System Plan, Exhibit G-3-1, Consideration of Safety, Environmental Protection and Environmental Sustainability.
- ⁸ The report, entitled *Introducing Ontario Power Authority’s Consumer Segments 2007*, is available on the Ontario Power Authority website in the Conservation/OPA Market Research section.
- ⁹ *Teen Attitudes Towards, and Awareness of, Electricity Conservation in Ontario: Study Highlights*, Draft of the Final Report to the Ontario Power Authority, June 20, 2007, Prof. Jennifer Lynes & Jennifer Robinson, Faculty of Environmental Studies, University of Waterloo, available on the Ontario Power Authority website in the Conservation/OPA Market Research section.

CHAPTER 3

- ¹⁰ Variations in weather patterns have considerable impact on observed peak load data. For example, an extremely hot summer can cause an increase in peak demand of up to 10 percent as air conditioning and other loads are increased to compensate.

- ¹¹ The 1,350 megawatt target for 2007 peak demand reduction was confirmed in the June 2006 directive for the preparation of the Integrated Power System Plan from the Minister of Energy to the Ontario Power Authority.
- ¹² Weather-normalized peak readings are calculated by comparing the actual weather conditions observed on the peak day in any one year with the “normal” weather conditions for that season over a 10-year period and then adjusting the observed peak for the key day up or down. If the conditions on the peak day were 10 percent hotter than the normal weather, then the peak value is lowered by 10 percent. Forecasters use a combination of temperature and humidity readings, and wind and cloud-cover data to perform the actual correction in a statistical model operated by the Independent Electricity System Operator.
- ¹³ www.oeb.gov.on.ca/html/en/consumers/energyoptions/fs_timeofuse.htm
- ¹⁴ Ontario’s Refrigerants Regulation (O. Reg. 180/07) requires the conversion from or replacement of existing chlorofluorocarbon-based chillers to a non-ozone-depleting substance alternative. The updating and possible downsizing of existing chillers could lead to energy savings from 51 to 175 megawatts under a number of scenarios evaluated by Marbek Resource Consultants Ltd. See *CFC Chiller Replacement Potential*, February 2006, available at www.conservationbureau.on.ca.
- ¹⁵ Natural Resources Canada
- ¹⁶ The figures are based on information provided to the Conservation Bureau by Hydro One, the Coalition of Large Distributors, Cornerstone Hydro Electric Concepts and the Niagara Erie Power Association and represent only a portion of the existing conservation programs.
- ¹⁷ A summary of third tranche conservation and demand management activities can be found on the Ontario Energy Board’s website in the Conservation and Demand Management section at www.oeb.gov.on.ca/html/en/industryrelations/ongoingprojects_cdm_thirdtranche.htm.
- ¹⁸ “Ontario — a new era in electricity conservation,” Annual Report 2006, Chief Energy Conservation Officer, Nov. 1, 2006.

CHAPTER 4

- ¹⁹ Ontario’s *Energy Efficiency Act*, administered by the Ministry of Energy, enables the government through regulation to set minimum energy performance standards for products and equipment used in the residential, commercial and industrial sectors. Retailers may only sell or lease new products past a compliance date if they have been verified to meet specific minimum energy-efficiency levels.

Amendments to regulations under the Act are made periodically and reference minimum energy performance standards that are developed by a variety of standards-setting organizations, such as the Canadian Standards Association.

- ²⁰ *Canada Gazette Part II*, Vol. 140, No. 23, November 15, 2006, SOR/DORS/2006/271, Regulatory Impact Assessment Statement, pp. 1817 ff, at canadagazette.gc.ca/partII/2006/20061115/pdf/g2-14023.pdf.
- ²¹ The energy savings displayed in the graph are intended for illustrative purposes only. Ontario Power Authority and local distribution company program contributions are estimated from the supplement to the 2006 annual report of the Chief Energy Conservation Officer. Ontario Hydro historical information is derived from *1993 Net Load Impact of Energy Management Programs*, May 1994. Energy savings are estimated by converting the reported demand reductions using a uniform load factor of 0.3. Savings from load shifting are not included in the graph. Savings from energy-efficiency initiatives are assumed to decline to zero after 15 years. Savings from codes and standards include estimates of energy savings from Ontario's *Energy Efficiency Act* and Building Code. Savings from energy-efficiency standards are derived from Ministry of Energy data. Savings from the Building Code are derived from the energy-efficiency provisions included in amendments to the code made in the 1990s.
- ²² In addition to enhanced energy-efficiency standards, Ontario's Building Code contains provisions promoting the use of green technologies such as solar photovoltaic systems, gas-fired emergency generators that can contribute to the power grid, active solar hot water systems, wastewater heat recovery systems and motion sensors for lighting. The code also clarifies that wind turbines are subject to its requirements.
- ²³ Qualitative and quantitative market research conducted by Ipsos Camelford Graham for the Ontario Power Authority in February 2007.
- ²⁴ These results are based on Harris/Decima Polling Results available at www.powerauthority.on.ca, in the Conservation/OPA Market Research section.
- ²⁵ Focus groups conducted by Harris/Decima in March 2007 for the Ontario Power Authority.
- ²⁶ Telephone surveys conducted by Paul D. Allen & Associates in January 2007 for the Ontario Power Authority prior to the campaign and again in June 2007 following the campaign.

CHAPTER 5

- ²⁷ Ontario Power Authority's 2008 Business Plan, submitted to the Minister of Energy on October 1, 2007.
- ²⁸ In Canada, building regulation is the responsibility of provincial and territorial governments. The Model National Energy Code of Canada for Buildings sets out cost-effective minimum requirements for energy efficiency in new buildings. Last updated in 1997, it is in the form of a model code to permit adoption by the appropriate authority. To date, no province or territory has adopted the code, but a few, including Ontario, have referenced the code in their building codes and enforce its requirements. For more information, see www.nationalcodes.ca/mnecb/index_e.shtml.

CHAPTER 6

²⁹ The Demand Side Management Working Group Subcommittee on Building and Housing Energy Labelling.

³⁰ The Ontario Power Authority consulted with interval meter customers in July 2007, giving them the opportunity to discuss their views on barriers to energy efficiency. The report from the session, *Stakeholder Session on Energy Efficiency Barriers*, Energy@Work, August 2007, is available on the Conservation Bureau website.

³¹ In the *Modeling and Scenario Documentation*, Draft Report prepared by M.K. Jaccard and Associates Inc. for the Ontario Power Authority dated September 6, 2006, 45 percent of savings by 2025 are attributed to pricing tools. See www.powerauthority.on.ca/storage/30/2536_B-1-1_Att_1_Jaccard_Report.pdf.

CHAPTER 7

³² See www.energy.gov.on.ca/index.cfm?fuseaction=conservation.targets.

ENVIRONMENTAL SAVINGS

This report is printed on Enviro 100 stock, which is 100 percent post consumer, and was printed using waterless print technology. By using these materials and printing processes, the Conservation Bureau has derived the following savings:



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Taking Action

ABOUT THE ONTARIO POWER AUTHORITY

The Ontario Power Authority was established pursuant to 2004 amendments to the *The Electricity Act, 1998*, and began operations in January 2005. It is a not-for-profit corporation without share capital and is governed by an independent Board of Directors, with its activities and programs directed by a Chief Executive Officer. It reports to the Ontario Legislative Assembly through the Minister of Energy and is licensed and regulated by the Ontario Energy Board.

The Ontario Power Authority contributes to the development of a reliable and sustainable electricity system. In doing so, it encourages and facilitates conservation and adequate electricity supply from diverse resources.

More information is available at www.powerauthority.on.ca.

ABOUT THE CHIEF ENERGY CONSERVATION OFFICER

The position of the Chief Energy Conservation Officer was created by *The Electricity Restructuring Act, 2004*, to provide leadership for the planning and coordination of conservation in Ontario. The focus of the office is on promoting a culture of conservation through building awareness; advocating for improvements in regulations, codes and standards to promote energy efficiency; and reporting on conservation progress. The Chief Energy Conservation Officer heads the Conservation Bureau, which is a division of the Ontario Power Authority.

More information is available at www.conservationbureau.on.ca.

Ontario Power Authority

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Ontario Conservation at a Glance

- The Chief Energy Conservation Officer has identified barriers to conservation and made 12 recommendations for action to achieve Ontario's conservation goals. Eleven recommended actions are directed to the provincial government, and one calls for municipal governments across the province to appoint Municipal Energy Conservation Officers.
- Over the last 20 years, electricity savings from changes to Ontario's Building Code and appliance standards have grown to about two-thirds of the total electricity savings and these savings are expected to increase over time.
- The Ontario Power Authority has 18 conservation programs in the market, delivered by a range of partners, with an additional three in development, and expects to have 27 programs in 2008.
- The Chief Energy Conservation Officer expects that Ontario will meet the peak demand reduction target of 1,350 megawatts by 2007.
- Electricity consumption in the Ontario government's own facilities has been reduced by 12 percent, surpassing the goal of a 10 percent reduction.
- More than 800,000 smart meters have been installed on Ontario homes and small businesses.
- Ontario consumers have reduced their electricity consumption by about 5.2 percent per capita, weather-adjusted, during the period January to June 2007, compared to 2005.
- On August 2, 2007, the hottest day of the year, the peak demand was 25,584 megawatts, when the expected peak was 26,302 megawatts.
- The highest peak demand in 2007 was 25,737 megawatts (24,820 megawatts weather-adjusted), on June 26, 2007. This peak is 1,268 megawatts lower than the highest peak demand in 2006 and represents a decrease of almost five percent.

For the environmental savings from the printing of this report, see page 56.



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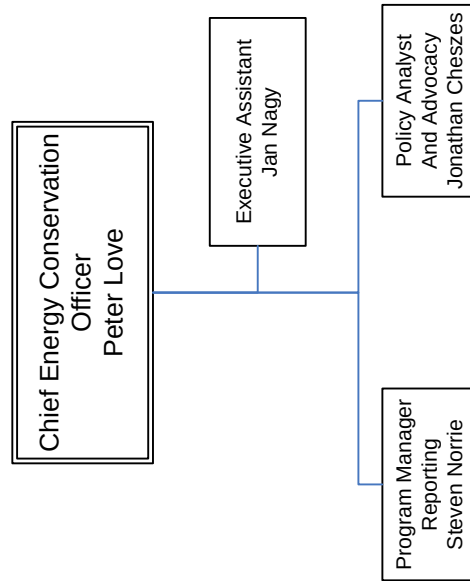


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Ontario Power Authority

Chief Energy Conservation Officer

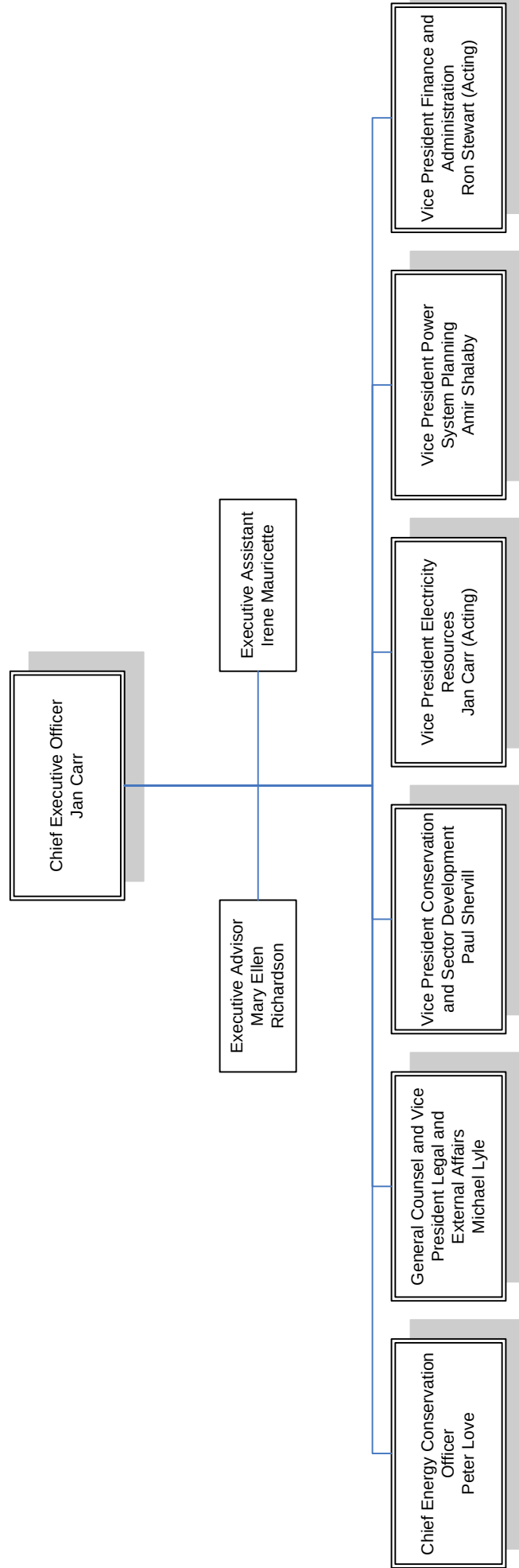
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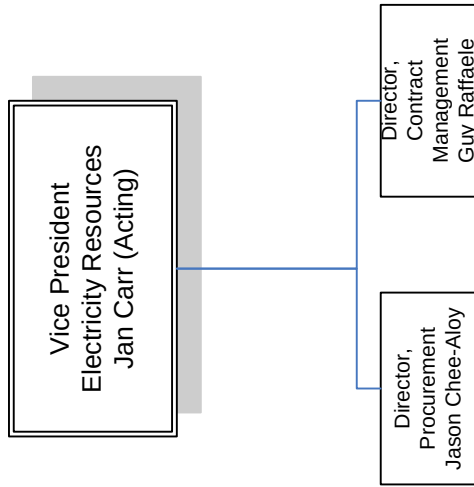
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September 1, 2007

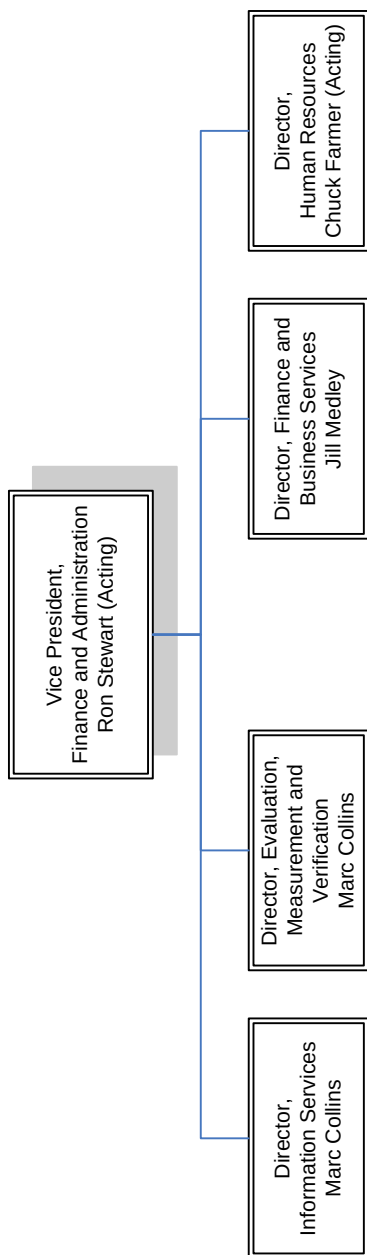


Ontario Power Authority

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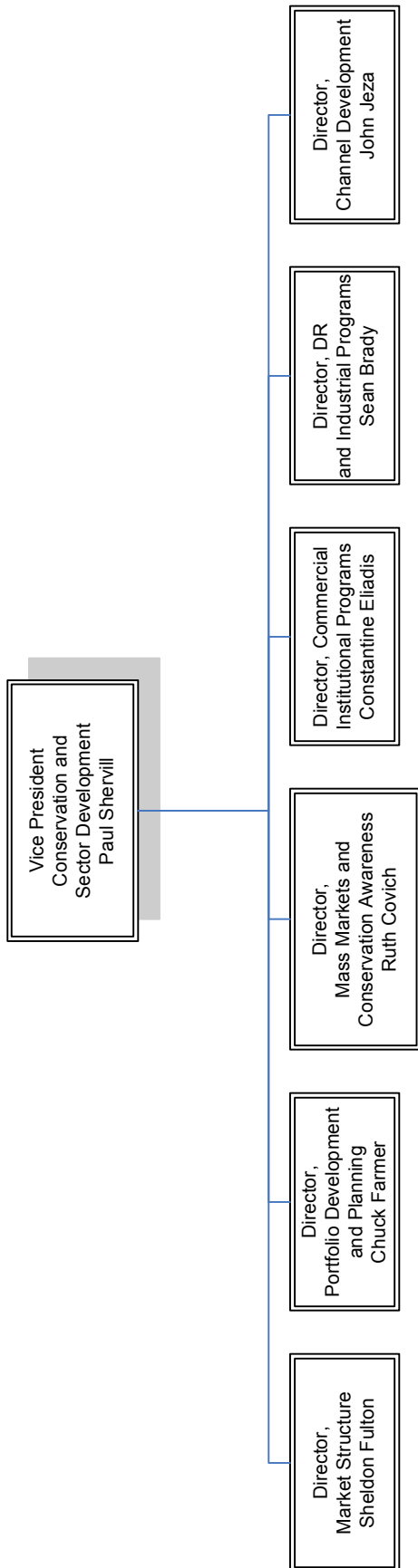
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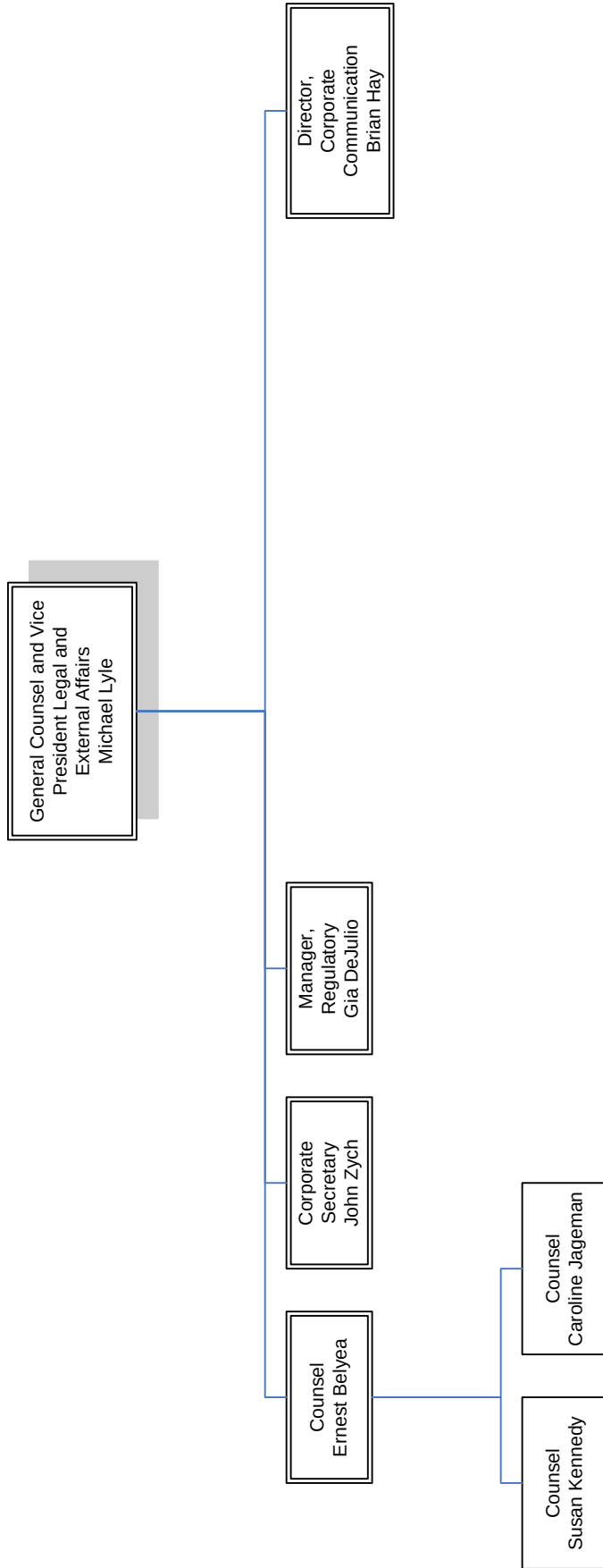
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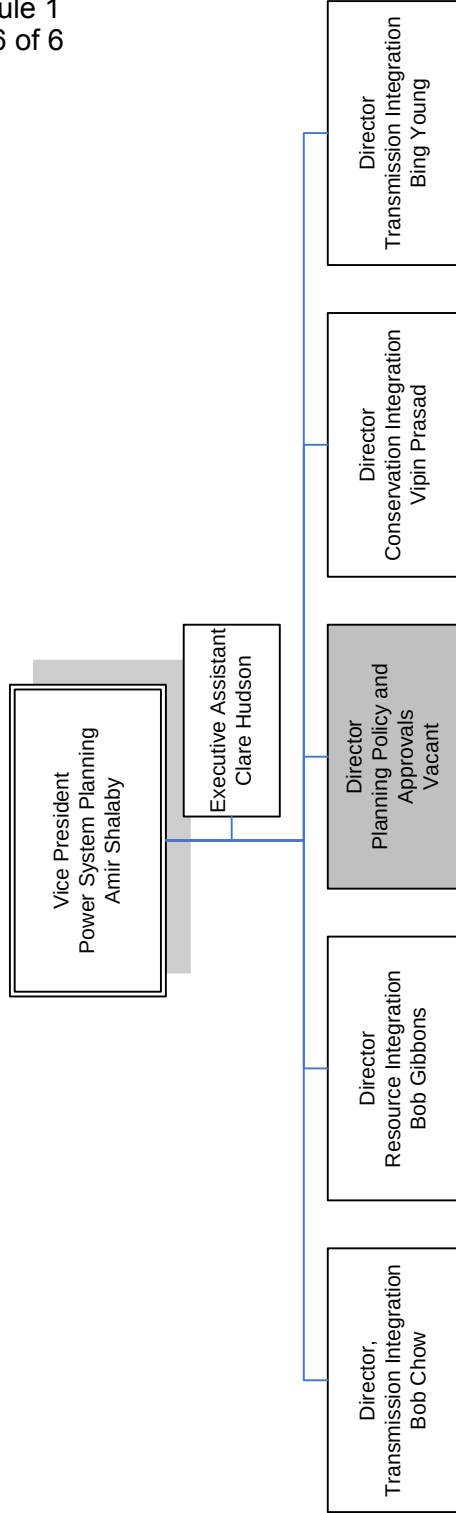


Ontario Power Authority

Power System Planning

October 1, 2007

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	List of Minister's Directives to OPA		See Exhibit A-8-2 Page:
1	March 24, 2005	<u>2,500 MW RFP</u> - execution and delivery of CES contracts and a DR contract in accordance with the terms of the 2 500 MW RFP.	1
2	June 15, 2005	<u>"Early Movers"</u> - Negotiate and Conclude Contracts with Certain Generation Facilities.	3
3	June 15, 2005	<u>Procurement Processes</u> - Immediate Launch of Procurement Processes to address needs in Downtown Toronto and Western Greater Toronto Area, and to develop additional Demand Management, Demand Response, and High Efficiency Combined Heat and Power Supply.	5
4	October 6, 2005	<u>CDM Initiatives (Residents of Low-Income and Social Housing)</u> - to reduce overall electricity energy consumption and demand for low-income and social housing.	9
5	October 14, 2005	<u>Contracts for the Refurbishment of Bruce A at the Bruce Nuclear Facility Generating Station</u> - Deliver to counterparties on October 17, 2005, the Bruce Power Refurbishment Agreement and the Refinancing Agreement.	11
6	October 20, 2005	<u>CDM Initiatives (Appliance Change-Out and Efficient Lighting Initiatives)</u> - to reduce overall electricity consumption and demand by residential, commercial, and industrial customers.	13
7	October 20, 2005	<u>GTA West Supply Initiative</u> – Goreway Station Project – immediately execute an Implementation Agreement with project proponent re costs that must be incurred if in service is summer of 2007; negotiate contract by December 31, 2005.	15
8	November 7, 2005	<u>RES I RFP</u> - MOE directing the OPA to assume, by November 10, 2005 responsibility for all contracts previously the responsibility of the OEFC (Buyer) as agent of the Crown, that were from its June 24, 2004 RFP to procure 300 MW of new electricity supply.	19
9	November 16, 2005	<u>RES II RFP</u> - Contracts relating to the RFP for 1,000 MW of Renewable Energy Supply Projects with a Contract Capacity of between 20 MW and 200 MW, inclusive, issued by the MOE on June 17, 2005, as amended (the "RES II" RFP). The OPA is directed to enter into contracts with the nine suppliers who were selected pursuant to the RES II RFP and listed in the directive.	21
10	December 14, 2005	<u>"Early Movers"</u> - Negotiate and Conclude Contracts with Certain Generation Facilities – replaces June 15, 2005 directive "Early Movers".	23
11	February 9, 2006	<u>Procurement Processes</u> - Addendum #1 to Procurement Processes Directive of June 15, 2005 (to be consolidated as part of the original directive).	25
12	February 10, 2006	<u>Toronto Reliability Supply and Conservation Initiative</u> – with respect to 2,500 MW RFP and priority zones 1) Leaside Sector by summer 2008; PEC contract by May 2006; OPA to seek 300 MW of DSM or DR in Toronto by 2010.	27
13	March 10, 2006	<u>Conservation and DSM Initiatives Commercial Buildings and MUSH Sector</u> – Directing OPA to assume responsibility for this expanded initiative and implement by fall of 2007 reducing demand in commercial buildings and MUSH sector by 150 MW.	31
14	March 10, 2006	<u>Conservation and DSM Initiatives (Residential Sector)</u> – Directing OPA to assume responsibility for this initiative and implement by fall of 2007 reducing demand in residential sector by 150 MW.	33

15	March 21, 2006	<u>Standard Offer Program</u> – directing OPA to have the Program in place by the fall of 2006, and as a consequence enter into contracts with small renewable generators to implement the Program.	35
16	June 13, 2006	<u>Integrated Power System Plan</u> – OPA to create IPSP to meet DR from conservation by 6,300 MW by 2025. Plan should reduce projected peak demand by 1,350 MW by 2010, and by another 3,600 MW by 2025. The reductions of 1,350 MW and 3,600 MW are to be in addition to the 1,350 MW reduction set by the government as a target for 2007.	37
17	July 13, 2006	<u>Coordination and Funding of LDC activities to deliver CDM Programs</u> – immediately organize the delivery and funding of CDM programs through LDCs in Ontario. Funding limited to \$400 million over three consecutive years.	39
18	June 14, 2007	<u>Clean Energy and Waterpower in Northern Ontario Standard Offer</u> – to expand the SOP initiative in the areas of clean energy supply and small, transmission-connected waterpower projects in northern Ontario; and to have these parts of the SOP in place by the fall of 2007. It is expected that the OPA will enter into contracts with small generators to implement these parts of the SOP.	43
19	August 27, 2007	<u>Procurement of up to 2,000 MW of Renewable Energy Supply</u> – to consult with First Nations and Métis people early in the planning for the 2,000 MW of additional new renewable generation to come into service by 2015. OPA to develop guidelines and processes to ensure that this consultation takes place. To commence consultation on the design of the first procurement for approximately 500 MW of new REW by the end of 2007. The expectation is that OPA will enter into contracts as necessary to implement the initiative.	45
18	December 20, 2007	<u>Hydroelectric Energy Supply Agreements with Ontario Power Generation Inc.</u> – Letter from the Ministry to further the renewable energy capacity in Ontario by 2025 by directing the OPA to assume the responsibility of negotiating with OPG a number of contracts respecting hydroelectric projects located at the following OPG hydroelectric station sites: 1. LAC Seul; 2. Upper Mattagami; 3. Healey Falls; 4. Lower Mattagami; and 5. Hound Chute.	Exhibit A-8-3 Page 1
19	January 31, 2008	<u>Procuring Approximately 350 MW of New Gas-Fired Electricity Generation for Northern York Region</u> – The letter from the Minister directs the OPA to develop local area generation to address supply inadequacy issues in the Northern York Region. The OPA is therefore directed to competitively procure a simple (single)-cycle gas-fired electricity generation facility with a rated generation capacity of approximately 350 MW and not more than 400 MW. The facility is expected to be in-service by no later than December 31, 2001 and should be in the vicinity of the 230 kV transmission lines supplying the Armitage and Holland transformer stations.	Exhibit A-8-3 Page 5
List of Minister's Requests and Consent Letters to OPA			
1	March 1, 2005	<u>York Region</u> – request to help identify and assess possible solutions to address local reliability issues.	47
2	May 2, 2005	<u>Supply Mix</u> - commencement of long-term planning exercise and request for recommendation on supply mix. Minister requesting a report by December 1, 2005 to include amongst other things, conservation targets for 2015, 2020 and 2025; recommendations re adds of new renewable energy capacity by 2015, 2020 and 2025.	49
3	August 18, 2005	<u>Standard Offer Program</u> - Develop in co-operation with the OEB the terms and conditions for a standard offer program for small generators embedded in the distribution system that use clean or renewable resources.	51

4	March 27, 2006	<u>Standard Offer Program</u> – OPA to investigate economic and technical issues with connecting small waterpower projects to transmission systems in northern Ontario and provide recommendations to Minister.	53
5	August 28, 2007	<u>Contracts for the Refurbishment of Bruce A at the Bruce Nuclear Generating Station</u> – Letter from the Ministry consenting to the OPA entering into the First Amending Agreement and to materially amend the Refurbishment Implementation Agreement, and to amend the STAR Agreement. The letter indicated that the OPA provided a Fairness Opinion from CIBC World Markets regarding the First Amending Agreement and that the OPA briefed MOE staff and OFA staff on the details of the proposed amendments; and also that significant legal, financial and technical due diligence was taken with the proposed amendments to both the Refurbishment Implementation Agreement and STAR Agreement.	55

Exhibit A

DIRECTION

Ontario Power Authority
Attention: Mr. Jan Carr, Chief Executive Officer

Re: Request for Proposals for 2,500 MW of New Clean Generation and Demand-Side Projects issued September 13, 2004, as amended (the "2,500 MW RFP")

I write in connection with my authority as the Minister of Energy in order to exercise the statutory power of ministerial direction which I have in respect of the Ontario Power Authority (the "OPA") under section 25.32 of the *Electricity Act, 1998* (the "Act").

Unless otherwise defined herein, capitalized terms have the meanings given to them in the 2,500 MW RFP.

Pursuant to subsection 25.32(7) of the Act, I hereby authorize and direct the OPA to execute and deliver definitive CES Contracts and a DR Contract (the "Definitive Agreements") in accordance with the terms of the 2,500 MW RFP with the Proponents in respect of the Proposals listed below:

	Proposal	Contract Type	Location	Contract Capacity (MW)	Nameplate Capacity (MW)	NRR (\$/MW-month)

Further, pursuant to my authority under section 25.32 of the Act, the OPA is also hereby authorized and directed to execute and deliver such ancillary documents, deeds and instruments in connection with, pertaining to, or arising out of, the Definitive Agreements and the undertaking by the Ministry of Energy on behalf of the Buyer in respect of the federal government's proposed regulations covering greenhouse gas emissions, a copy of which undertaking is attached as Schedule A.

This Direction shall be effective and binding as of the date hereof.

Dated: March 24, 2005


Dwight Duncan
Minister of Energy

JUL 18 2005

Minister of Energy

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Ministre de l'Énergie

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Téléc.: 416-327-6754



June 15, 2005

Ontario Power Authority
606-175 Bloor Street East
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Toronto, Ontario
M4W 3R8

Attention: Mr. Jan Carr, Chief Executive Officer

Re: Negotiating and Concluding Contracts with Certain Generation Facilities

I write in connection with my authority as the Minister of Energy in order to exercise the statutory power of ministerial direction which I have in respect of the Ontario Power Authority (the "OPA") under section 25.32 of the *Electricity Act, 1998* (the "Act").

Pursuant to subsections 25.32 (4) and (7) of the Act, and with the objective of displacing coal-fired generation, I hereby authorize and direct the OPA to negotiate and, subject to achieving the objective of displacing coal-fired generation and subject to approval by the Ontario Energy Board, execute and deliver definitive contracts for the projects listed below. Eligible projects as listed below include those which: entered into service subsequent to passage of the *Electricity Act, 1998*; have no existing contract with a government body for any part of their generation; are not eligible for consideration under the Renewables Request for Proposals; and, apart from timing, otherwise would have been eligible for consideration under the Clean Energy Supply Request for Proposals.

Specifically, the OPA shall engage in negotiations and enter into contracts with the owners or operators of the following facilities or, where applicable, the parties that own or control the electrical output of such facilities, with the objective of displacing coal-fired generation, possibly in combination with other initiatives to be undertaken by the parties, at a reasonable cost to Ontario customers. As a measure of reasonableness, reference should be had to the economic value associated with the Clean Energy Supply contracts, entered into by the OPA in accordance with the direction issued to the OPA on March 24, 2005. Any payments relating to generation under the contracts specific to the generation facilities set out below would cease within the timeframe under which Ontario's coal-fired generation is effectively removed from service, and in any case should not extend beyond five (5) years.

.../cont'd

-2-

In pursuing these contract negotiations, the OPA may seek to negotiate other matters with the parties that would provide benefits to Ontario electricity customers or the electricity system.

It is expected that these contract negotiations should be concluded by December 15, 2005.

	Project	Generation Type	Location	Nameplate Capacity (MW)
1	Brighton Beach Power Station	CCGT	Windsor	580
2	Sarnia Co-generation project (Imperial Oil)	Cogen	Sarnia,	95
3	Sudbury District Energy, Hospital Cogeneration Project	Cogen	Sudbury	6.8
4	Sudbury District Energy, District Energy Plant	Cogen	Sudbury	5.0
5	Trent Valley Cogeneration Plant	Cogen	Trenton	8.3
6	Sarnia Regional Cogeneration Plant (TransAlta)	Cogen	Sarnia	575
7	Robert Dunford Generating Station	Hydro	Wawa	45

I further direct you to put any negotiated contract before the Ontario Energy Board for its review before taking on any binding commitments under such a contract. The negotiated contracts will be subject to approval by the Ontario Energy Board based on a review of the reasonableness of the contracts in accordance with this Directive.

Sincerely,



Dwight Duncan
Minister of Energy

JUN 23 2005

Minister of Energy

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June 15, 2005

Mr. Jan Carr
Chief Executive Officer
Ontario Power Authority
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Toronto, Ontario
M4W 3R8

**Re: Immediate Launch of Procurement Processes to address needs in
Downtown Toronto, Western Greater Toronto Area, and to develop
additional Demand Management, Demand Response and High Efficiency
Combined Heat and Power Supply**

I write in connection with my authority as the Minister of Energy in order to exercise the statutory power of ministerial direction which I have in respect of the Ontario Power Authority (the "OPA") under section 25.32 of the *Electricity Act, 1998* (the "Act").

On January 20, 2004, I announced that the Ministry of Energy would be instituting a procurement process to secure approximately 2500 MW of electricity capacity from Clean Energy Sources, Demand Management and Demand Response. The process was designed to deliver significant amounts of clean generation, highly efficient combined heat and power projects including industrial cogeneration and district energy, demand management and demand response initiatives as well as meeting critical local and regional reliability challenges.

The Request for Proposals document that was released by the Ministry of Energy on June 25, 2004 specifically referenced two priority zones in the Province which were identified by the Independent Market Operator (now Independent Electricity System Operator (IESO)) as requiring significant generation, demand management and demand response initiatives in order to address critical local and regional supply, reliability and voltage support needs. These priority zones were downtown Toronto and the West Greater Toronto Area. The IESO has reconfirmed that local and regional supply issues in these areas are critical.

.../cont'd

-2-

The Interim Request for Proposals for Clean Energy Sources process has been completed. Six contracts for 2235 MW, including 10 MW of demand response have been signed. The Interim Request for Proposals has met some of the goals of the procurement process launched in January 2004. However, some critical requirements remain to be met. These are for additional generation, demand management and demand response initiatives in the identified priority zones and the need to develop more high efficiency combined heat and power projects.

Pursuant to section 25.32 of the Act, and with the objective of ensuring adequacy of electricity supply through the completion of the procurement process launched by the Ministry of Energy in January 2004, I hereby authorize and direct the OPA to commence several procurement processes, execute and deliver definitive contracts for the selected projects to address the following:

- Up to 1000 MW of generation in the Greater Toronto Area West of Toronto – comprised of the Hydro One 115kV and 230kV network and connected distribution systems of Toronto Hydro, Oakville Hydro, Enersource Hydro Mississauga Inc, PowerStream and Hydro One Brampton.
- 250 MW or more of demand side management and/or demand response initiatives across the province with particular focus in the Cities of Toronto, Mississauga, Brampton, and Oakville.
- Up to 1000 MW of high efficiency combined heat and power projects across Ontario including industrial co-generation projects and district energy projects. Preference should be given, through a separate procurement process, for projects fueled by renewable energy sources.

A separate Directive to the Ontario Power Authority will be issued to address the requirements for up to 600 MW of generation in Downtown Toronto. The procurement timelines will be the same for both Directives.

.../cont'd

-3-

It is expected that these procurement processes should be launched as soon as possible and in no case later than the fall of 2005 with subsequent contracting for some of the projects to be concluded by early 2006.

Sincerely,

A handwritten signature in black ink, appearing to be "Dwight Duncan", written over a horizontal line.

Dwight Duncan
Minister

Minister of Energy

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**DIRECTION**

To: Ontario Power Authority

Attention: Mr. Jan Carr, Chief Executive Officer

Re: Conservation and Demand-Side Management Initiatives (Residents of Low-Income and Social Housing)

I write in connection with my authority as the Minister of Energy in order to exercise the statutory power of ministerial direction which I have in respect of the Ontario Power Authority (the "OPA") under subsection 25.32 (4) of the *Electricity Act, 1998* (the "Act"), in order to direct the OPA to assume responsibility for the Ministry of Energy's (the "Ministry") initiatives relating to energy conservation and demand-side-management ("CDM") in regards to residents of low-income and social housing.

The Ministry has, for the past two years, been pursuing a set of conservation initiatives that specifically address the needs of residents of low-income and social housing. These initiatives have included the funding, through the Ministry's Conservation Partnerships Program, of four conservation programs targeted for residents of low-income and social housing, as set out below:

- The "*Social Housing Energy Management Pilot Program*" ("SHEMPP"), a pilot program currently operating to provide a comprehensive energy management strategy designed for social housing service providers;
- The "*Low Income Conservation Education Program*", a tenant-to-tenant education and outreach program being piloted in certain social housing residential complexes across Ontario;
- The "*Conserving Homes*" Program, which was initially designed to be an energy conservation program for low-income households and which is currently being piloted by a local distribution company (or "LDC"); and,
- "*Low-Income Demand-Side Management ("DSM") Strategies for LDCs*", a set of studies prepared for LDCs which are intended to assist them in formulating strategies to address the conservation needs of low-income customers.

Recently, the Ministry has created its own new low-income CDM initiative, by approving an expansion of the Ministry's role in SHEMA to include conservation and DSM strategies for residents of low-income households, adding this facet to SHEMA's existing mandate of addressing the consumption of residents of social housing. This new initiative (the "Ministry's Low-Income CDM Initiative") is the basis for this direction to the OPA.

Therefore, pursuant to the authority granted to me under subsection 25.32(4) of the Act, I hereby direct the OPA to assume, effective as of the date of this letter of direction, responsibility for the Ministry's Low-Income CDM Initiative, and to further pursue this initiative which is designed to address the consumption of residents in low-income and social housing, such CDM initiative having been previously pursued by the Crown.

More particularly, it is expected that the OPA will commence implementation by no later than the summer of 2006, through such procurement contracts and activities as the OPA determines to be advisable, a program based on the Ministry's Low-Income CDM initiative, that will reduce overall electrical energy consumption and demand by residents of low-income and social housing by up to 100 Megawatts ("MW"). It is also expected that the Program will result in longer-term reductions in electricity peak demand, particularly by reducing the use of inefficient appliances by such residents. It is further expected that the Program will include a comprehensive package of energy efficiency measures that are designed to address these goals.

This Direction shall be effective and binding as of the date hereof.

Dated: October 6, 2005



Dwight Duncan
Minister of Energy

DIRECTION

To: Ontario Power Authority
Attention: Mr. Jan Carr, Chief Executive Officer

**Re: Contracts for the Refurbishment of Bruce A at the Bruce Nuclear Facility
Generating Station**

I write in connection with my authority as the Minister of Energy in order to exercise the statutory power of ministerial direction that I have in respect of the Ontario Power Authority (the "OPA") under subsections 25.32 (4) and (7) of the *Electricity Act, 1998* (the "Act").

As contemplated under subsection 25.32 (4) of the Act, the Ministry of Energy instituted an historic initiative to procure electricity capacity at the Bruce nuclear power generation facilities and thereby increase the long-term supply of electricity generating capacity within the Province of Ontario. This initiative is designed to facilitate, at the Bruce nuclear power generation facilities, the refurbishment and restart of Units 1 and 2, the refurbishment of Unit 3 and the replacement of the steam generators at Unit 4. Pursuant to subsection 25.32 (4) of the Act, I hereby direct the OPA to assume, as of the date the Refurbishment Agreement (as defined below) is executed, the responsibility for exercising all powers and performing all duties of the Ministry of Energy under the capacity initiative referred to above.

Pursuant to subsection 25.32 (7) of the Act, as a result of the capacity initiative referred to above, I hereby direct the OPA to execute and deliver to the relevant counterparties on October 17, 2005 the following contracts:

1. the Bruce Power Refurbishment Implementation Agreement (the "Refurbishment Agreement") between Bruce Power A L.P., Bruce Power L.P. and the Ontario Power Authority, in the form which is enclosed with this Direction; and
2. the Bruce Power Sharing In Transfers and Refinancings Agreement (the "Refinancing Agreement") between Bruce Power A L.P., Ontario Municipal Employees Retirement Board, TransCanada Corporation and the Ontario Power Authority, in the form which is enclosed with this Direction.

In addition, pursuant to subsection 25.32 (7) of the Act, as a result of the initiative referred to above, I hereby direct the OPA to execute and deliver to the Ministry of Energy the contract between the OPA and the Ministry of Energy, which is enclosed with this Direction.

Further, pursuant to my authority under section 25.32 of the Act, the OPA is hereby directed to execute and deliver such ancillary documents, deeds and instruments required in connection with, pertaining to, or arising out of, the execution of the above-noted Refurbishment Agreement or Refinancing Agreement.

This Direction shall be effective and binding as of the date hereof.

Dated: October 14, 2005


Donna Cansfield
Minister of Energy

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DIRECTION

To: Ontario Power Authority

Attention: Mr. Jan Carr, Chief Executive Officer

Re: Conservation and Demand-Side Management Initiatives (Appliance Change-Out and Efficient Lighting Initiatives)

I write in connection with my authority as the Minister of Energy in order to exercise the statutory power of ministerial direction which I have in respect of the Ontario Power Authority (the "OPA") under subsection 25.32 (4) of the *Electricity Act, 1998* (the "Act"), in order to direct the OPA to assume responsibility for the Ministry of Energy's (the "Ministry") initiatives relating to energy conservation and demand-side-management ("CDM") in regards to an appliance change-out initiative and an efficient lighting initiative.

The Ministry has, for the past two years, been pursuing an appliance change-out program that would encourage electricity customers to take energy-inefficient appliances out of service. Preliminary program proposals were prepared in 2004. Since that time, the Ministry has continued to actively engage with local distribution companies and other entities in discussions to allow for an appliance change-out program to be launched.

As well, the Ministry has, for the past two years, been engaged in various conservation outreach and education initiatives through its Conservation Partnerships program. In addition, the Ministry has funded a number of studies and workshops related to efficient lighting including the funding of the "Lighting Reference Guide" and a workshop on efficient lighting technologies, "Light Right: An Energy Efficient Lighting Exhibit".

Recently, the Ministry has created its own new appliance change-out CDM initiative and efficient lighting CDM initiative, based upon its ongoing work over the past two years. These new initiatives (the "Ministry's Appliance Change-Out Initiative" and the "Ministry's Efficient Lighting Initiative") are the basis for this direction to the OPA.

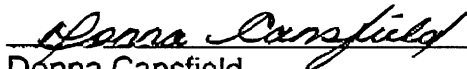
Therefore, pursuant to the authority granted to me under subsection 25.32(4) of the Act, I hereby direct the OPA to assume, effective as of the date of this letter of direction, responsibility for the Ministry's Appliance Change-Out Initiative and the Ministry's Efficient Lighting Initiative, in the expectation that the OPA will further pursue these initiatives which are designed to address the removal of inefficient appliances and encourage the adoption of efficient lighting technologies and efficient lighting design, such CDM initiatives having been previously pursued by the Crown.

More particularly, it is expected that the OPA will commence implementation by no later than the summer of 2006, through such procurement contracts and activities as the OPA determines to be advisable, programs expanding upon the Ministry's Appliance Change-Out Initiative and the Ministry's Efficient Lighting Initiative, that will, respectively, encourage residential and commercial electricity customers to take energy-inefficient appliances out of service and will encourage the adoption of efficient lighting technologies and efficient lighting design, primarily in the residential and small commercial sectors.

It is also expected that both of these programs together will reduce overall electrical energy consumption and demand by residential, commercial, and industrial customers by up to 100 Megawatts ("MW"). It is further expected that the Efficient Lighting Initiative will include a comprehensive outreach and education component that will be designed to address the inculcation of a culture of conservation amongst all electricity users.

This Direction shall be effective and binding as of the date hereof.

Dated: October 20, 2005


Donna Cansfield
Minister of Energy

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**DIRECTION**

To: Ontario Power Authority

Attention: Mr. Jan Carr, Chief Executive Officer

Re: Greater Toronto Area (GTA) West Supply Initiative

I write in connection with my authority as the Minister of Energy in order to exercise the statutory power of ministerial direction that I have in respect of the Ontario Power Authority (the "OPA") under section 25.32 of the *Electricity Act, 1998* (the "Act").

On January 20, 2004, former Minister Dwight Duncan announced that the Ministry of Energy would be instituting a procurement process to secure approximately 2,500 MW of electricity capacity from Clean Energy Sources, Demand Management and Demand Response (the "Clean Energy Supply RFP"). The process was designed to deliver significant amounts of clean generation, highly efficient combined heat and power projects including industrial cogeneration and district energy, demand management and demand response initiatives as well as meeting critical local and regional reliability challenges.

The Clean Energy Supply Request for Proposal (RFP) document that was released by the Ministry of Energy on June 25, 2004 specifically referenced two priority zones in the Province which were identified by the Independent Electricity Market Operator (now the Independent Electricity System Operator (the "IESO")) as requiring significant generation, demand management and demand response initiatives in order to address critical local and regional supply, reliability and voltage support needs. One of these priority zones was the Western Greater Toronto Area comprised of the Hydro One 115 kV and 230kV network and connected distribution systems of Toronto Hydro, Oakville Hydro, Enersource Hydro Mississauga Inc., Powerstream and Hydro One Brampton.

The awarding of Clean Energy Supply contracts arising from this Request for Proposals process did not meet the entire need for new generation in the Western Greater Toronto Area. Therefore, by letter dated June 15, 2005, former Minister Duncan directed the OPA to take steps to complete the procurement process commenced in January 2004 by, among other things, commencing a procurement process and executing and delivering contracts to procure up to 1,000MW of new generation in the Western Greater Toronto Area.

By letter dated October 7, 2005, you have alerted former Minister Duncan to the increasing urgency for new supply by the summer of 2007 in the western Greater Toronto Area as highlighted by the IESO in its letter dated August 22, 2005 to Paul Bradley, Vice-President, Generation Development of the OPA. The letter from the IESO states in part that there is a need for at least 600 MW of new supply located on the 230 kV system near Claireville TS by no later than the summer of 2007. You have recommended that this urgent matter be addressed by the immediate commencement of negotiations with the proponent(s) whose project(s) is the next in the stack of bids from the Clean Energy Supply RFP process that meets the timing and locational requirements identified by the IESO in its letter to Paul Bradley referred to above.

In response to the recommendations from the OPA, I have asked Ministry staff to identify the project that would best meet the timing and locational requirements set out by the IESO and that would be the most price competitive based on the Clean Energy Supply Request for Proposals and to initiate fresh negotiations towards developing the project (the "Crown Initiative"). Ministry staff, having identified the project as the Goreway Station project, have begun this initiative.

Pursuant to my authority under subsection 25.32(4) of the Act, I direct the OPA to immediately continue negotiations related to the Goreway project in the above-noted Crown Initiative, with a view to:

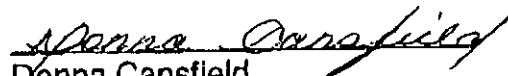
- (a) immediately executing an Implementation Agreement which would, among other things, provide that the OPA indemnify the project proponent pending the completion of a final contract with respect to certain costs that the project proponent must incur if an in service date of the summer of 2007 is to be met;
- (b) concluding and executing a definitive contract with the project proponent by December 31st, 2005, which will address the critical system reliability needs described above.

It is expected that the OPA will review the technical information provided to it by the project proponent, in order to ensure that the Goreway project is in a sound position to meet all of the locational and timing requirements identified by the IESO in its above-noted correspondence to the OPA

In negotiating this contract, it is anticipated that the OPA will have regard to the original bid submitted under the Clean Energy Supply RFP to assess the appropriate economic value of the contract, taking into account adjustments that may be appropriate in light of changes in circumstances from the time the bid was submitted. It is further expected that the contract provide for an in service date for a substantial portion of the project of no later than the summer of 2007.

This Direction shall be effective and binding as of the date hereof.

Dated: October 20, 2005


Donna Cansfield
Minister of Energy

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Ontario

c.c. A. Shalaby
c.c. P. Bradley
c.c. P. Sherwill
c.c. M. Lyle

DIRECTION

Ontario Power Authority
Attention: Mr. Jan Carr, Chief Executive Officer

Re: Contracts Relating to the Request for Proposals for 300 Megawatts of Renewable Energy Supply Projects (the "RES 1 RFP") issued on June 24, 2004, as amended.

I write in connection with my authority as the Minister of Energy in order to exercise the statutory power of ministerial direction, which I have in respect of the Ontario Power Authority (the "OPA") under section 25.32 of the *Electricity Act, 1998* (the "Act").

On June 24, 2004, the Ministry of Energy issued a request for proposals for the procurement of 300 Megawatts of new electricity supply derived from renewable energy sources (the "RES 1 RFP"). This RES 1 RFP resulted in the execution, by the Ontario Electricity Financial Corporation (the "OEFC"), as an agent of the Crown, of the ten (10) contracts (the "Agreements") listed in the table below for projects which derive electricity from renewable energy sources including wind, hydro-electric, landfill and digester gas.

Pursuant to subsection 25.32(4) of the Act, I hereby direct the OPA to assume, by no later than November 10th, 2005, responsibility for exercising all powers and performing all duties of the Crown, including powers and duties to be exercised and performed through the OEFC, as an agent of the Crown, (as Buyer), in respect of the Agreements listed below:

RES 1 CONTRACTS

Item	Supplier	Date of Execution	Project	Location
1.	Superior Wind Energy Inc. (assigned to Superior Wind Prince Power Inc.)	November 24, 2004	Prince Phase I Wind Energy Project	District of Algoma, Township of Prince, Ontario.
2.	Erie Shores Wind Limited Partnership	November 24, 2004	Erie Shores Wind Farm	North Shore of Lake Erie in Norfolk and Elgin Counties, Ontario.
3.	Canadian Hydro Developers, Inc.	November 24, 2004	Melancthon - Grey Wind Project	Southern Portion of Melancthon Township, Ontario.
4.	Superior Wind Energy Inc. (assigned to Superior Wind Blue Highlands Power Inc)	November 24, 2004	Blue Highlands Phase I Wind Energy Project	Town of Blue Mountains, Grey County, Ontario.
5.	EPCOR Power Development Corporation	November 24, 2004	Kingsbridge Wind Power Project	Ashfield-Colborne-Wawanosh Township, Huron County, Ontario.
6.	Energy Ottawa Inc. (assigned to 2079051 Ontario Inc.)	November 24, 2004	Trail Road Landfill Gas Generating Station	Trail Waste Facility Landfill Site, 4775 Trail Road, Ottawa, Ontario

7.	1615151 Ontario Inc. (name changed to Ecotricity Guelph Inc.)	November 24, 2004	Eastview Landfill Gas Energy Plant	Eastview Landfill Site, Guelph, Ontario
8.	Hamilton Hydro Services Inc. (assigned to Hamilton Hydro Energy Inc.)	December 23, 2004	Hamilton (Digester Gas) Cogeneration Project	Woodward Avenue Wastewater Treatment Plant, Hamilton, Ontario
9.	Umbata Falls, Limited Partnership	November 24, 2004	Umbata Falls Hydroelectric Project	Umbata Falls, White River, approximately 30 kilometres southeast of Marathon, Ontario
10.	Glen Miller Power, Limited Partnership	November 24, 2004	Glen Miller Hydroelectric Project	On the Trent River, at Lock # 3, Trenton, Ontario

Further, pursuant to my authority under section 25.32 of the Act, the OPA is also hereby authorized and directed to execute and deliver such agreements or ancillary documents, deeds and instruments in connection with, pertaining to, or arising out of, the assumption of the above-noted Agreements or to effect the assumption by the OPA of the above-noted Agreements.

This Direction shall be effective and binding as of the date hereof.

Dated: November 7th, 2005


Donna Canfield
Minister of Energy

DIRECTION

Ontario Power Authority
Attention: Mr. Jan Carr, Chief Executive Officer

Re: Contracts Relating to the Request for Proposals for Up To 1,000 Megawatts of Renewable Energy Supply Projects with a Contract Capacity of between 20 MW and 200 MW, inclusive issued on June 17, 2005, as amended (the "RES II RFP")

I write in connection with my authority as the Minister of Energy in order to exercise the statutory power of ministerial direction, which I have in respect of the Ontario Power Authority (the "OPA") under section 25.32 of the *Electricity Act, 1998* (the "Act").

On June 17, 2005, the Ministry of Energy issued a request for proposals, as amended, for the procurement of up to 1,000 Megawatts of new electricity supply derived from renewable energy sources (the "RES II RFP"). Nine (9) proponents have been selected pursuant to this RES II RFP.

Pursuant to subsection 25.32(7) of the Act, I hereby direct the OPA to enter into contracts contemplated by the RES II RFP (the "RES II Contracts") with each of the suppliers set out in the following table:

RES II CONTRACTS

Item	Supplier	Project	Location
1.	Yellow Falls Limited Partnership	Island Falls Hydroelectric Project	Bradburn Township, near Smooth Rock Falls, Ontario
2.	Kruger Energy Port Alma Limited Partnership	Kruger Energy Port Alma	Municipality of Chatham Kent, near Port Alma, Ontario
3.	Enbridge Ontario Wind Power LP or Leader Wind Corp.	Leader Wind Power Project – A 100.65MW	Bruce County, Municipality of Kincardine & Town of Saugeen Shores, Town of Underwood, Ontario
4.	Enbridge Ontario Wind Power LP or Leader Wind Corp.	Leader Wind Power Project – B 99 MW	Bruce County, Municipality of Kincardine & Town of Saugeen Shores, Town of Underwood, Ontario
5.	Brascan Power Wind – Prince II, L.P.	Prince II Wind Power Project	Townships of Dennis, Pennefather, Korah and Aweres, near Algoma, Ontario
6.	EPCOR Power Development (Ontario) Limited Partnership	Kingsbridge II Wind Power Project	Ashfield Ward, Ashfield Colborne Wawanosh Township, Huron County, Ontario
7.	Suncor Energy Products Inc. and EHN Windpower Canada Inc.	Ripley Wind Power Project	Township of Huron-Kinloss near Ripley, Ontario
8.	Canadian Hydro Developers, Inc.	Melancthon II Wind Project	Melancthon and Amaranth Townships, near Shelburne, Ont.
9.	Canadian Renewable Energy Corporation	Wolfe Island Wind Project	Township of Frontenac Islands, near Kingston, Ontario

Further, pursuant to my authority under section 25.32 of the Act, the OPA is also hereby authorized and directed to execute and deliver such agreements or ancillary documents, deeds and instruments in connection with, pertaining to, or arising out of, the entering into of the above-noted contracts. This Direction shall be effective and binding as of the date hereof.

Dated: November 16th, 2005


Donna Cansfield
Minister of Energy

Minister of Energy

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December 14, 2005

Ontario Power Authority
1600-120 Adelaide Street West
Toronto, Ontario
M5H 1T1

Attention: Mr. Jan Carr, Chief Executive Officer

RE: Negotiating and Concluding Contracts with Certain Generation Facilities

I write in connection with my authority as the Minister of Energy in order to exercise the statutory power of ministerial direction which I have in respect of the Ontario Power Authority (the OPA) under section 25.32 of the *Electricity Act, 1998* (the Act). This direction supercedes and replaces the June 15, 2005 direction of the same title and is being given for the purpose of clarifying the intent of that direction.

Pursuant to subsections 25.32 (4) and (7) of the Act, and with the objective of displacing coal-fired generation, I hereby authorize and direct the OPA to negotiate and, subject to achieving the objective of displacing coal-fired generation, execute and deliver definitive contracts for the projects listed below. Eligible projects as listed below include those which: entered into service subsequent to passage of the *Electricity Act, 1998*; have no existing contract with a government body for any part of their generation; are not eligible for consideration under the Renewables Request for Proposals; and apart from timing, otherwise would have been eligible for consideration under the Clean Energy Supply Request for Proposals.

Specifically, the OPA shall engage in negotiations and enter into contracts with the owners or operators of the following facilities or, where applicable, the parties that own or control the electrical output of such facilities, with the objective of displacing coal-fired generation, possibly in combination with other initiatives to be undertaken by the parties, at a reasonable cost to Ontario customers. A contract that uses as its default dispatch and payment mechanism the Clean Energy Supply contracts entered into by the OPA in accordance with the direction issued to the OPA on March 24, 2005 and provides a capacity payment equal to the average capacity payment value of those contracts shall be considered to be a contract that meets the test of being at a reasonable cost to Ontario consumers.

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-2-

A contract that allows the OPA when it chooses to direct the dispatch of the generation facility shall be considered to be a contract that meets the objective of displacing coal-fired generation. Any payments relating to generation under the contracts specific to the generation facilities set out below would cease within the timeframe under which Ontario's coal-fired generation is effectively removed from service, and in any case should not extend beyond five (5) years.

In pursuing these contract negotiations, the OPA may seek to negotiate other matters with the parties that would provide benefits to Ontario electricity customers or the electricity system.

The negotiations shall be substantially concluded by December 15, 2005. This date is unchanged from the original direction, which this direction supersedes and replaces.

	Project	Generation Type	Location	Nameplate Capacity (MW)
1	Brighton Beach Power Station	CCGT	Windsor	580
2	Sarnia Co-Generation project (Imperial Oil)	Cogen	Sarnia	95
3	Sudbury District Energy, Hospital Cogeneration Project	Cogen	Sudbury	6.8
4	Sudbury District Energy, District Energy Plan	Cogen	Sudbury	5.0
5	Trent Valley Cogeneration Plant	Cogen	Trenton	8.3
6	Sarnia Regional Cogeneration Plan (TransAlta)	Cogen	Sarnia	575
7	Robert Dunford Generating Station	Hydro	Wawa	45

Sincerely,



Donna Cansfield
Minister of Energy

Minister of Energy

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FEB - 9 2006

Mr. Jan Carr
Chief Executive Officer
Ontario Power Authority
1600-120 Adelaide Street West
Toronto, Ontario
M5H 1T1

Dear Mr. Carr:

Re: Addendum #1 to Procurement Processes Directive of June 15, 2005

I write in connection with my authority as the Minister of Energy in order to exercise the statutory power of ministerial direction that I have in respect of the Ontario Power Authority (the "OPA") under section 25.32 of the *Electricity Act, 1998* (the "Act").

On June 15, 2005, the Minister of Energy, my predecessor, the Honourable Dwight Duncan, issued a directive to the OPA entitled "Re: Immediate Launch of Procurement Processes to address needs in Downtown Toronto, Western Greater Toronto Area, and to develop additional Demand Management, Demand Response and High Efficiency Combined Heat and Power Supply" (the "original June 15th directive").

This is an addendum to the original June 15th directive. This addendum is to be read with and considered part of the original June 15th directive and collectively they are henceforth to be considered to be a single directive (the "consolidated June 15th directive").

The purpose of this addendum is to clarify the intent of certain words used in giving direction, as follows:

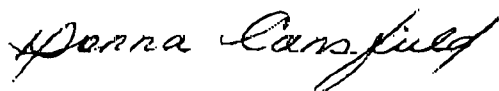
- 1) On page 2 of the original June 15th directive, in the second bullet point, the words "or more" in the clause "250 MW or more" are to be interpreted as "up to 500 MW."
- 2) In the consolidated June 15th directive, the words "up to," when used in each category for procurement, are to be interpreted so as not to exclude a project being considered for selection (the "subject project") merely because the number of megawatts to be achieved by the subject project would exceed the difference

.../cont'd

of megawatts to be achieved by the subject project would exceed the difference between the total, cumulative number of megawatts of the other, selected projects and the stated limit for the procurement (the "margin"), provided that the following conditions are met:

- a) The total number of megawatts of the selected projects of higher ranking in the evaluation in that category is cumulatively less than the limit;
 - b) The subject project is ranked immediately following the last selected project in that category; and
 - c) The total number of megawatts for all selected projects, including the subject project, do not exceed the limit by more than 25%.
- 3) In the consolidated June 15th directive, the words "subject project" are be interpreted to include each project where two or more projects are tied in ranking.

Sincerely,



Donna Cansfield
Minister

Minister of Energy

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February 10, 2005

Jan Carr
Chief Executive Officer
Ontario Power Authority
Suite 1600
120 Adelaide Street West
Toronto, Ontario
M5H 1T1

Dear Dr. Carr:

Re: Toronto Reliability Supply and Conservation Initiative

I write in connection with my authority as the Minister of Energy in order to exercise the statutory power of ministerial direction that I have in respect of the Ontario Power Authority (the "OPA") under section 25.32 of the *Electricity Act, 1998* (the "Act").

On January 20, 2004, the former Minister of Energy, the Honourable Dwight Duncan, announced that the Ministry of Energy would be instituting a procurement process to secure approximately 2,500 MW of electricity capacity from Clean Energy Sources, Demand Management and Demand Response. On June 25, 2004, the Ministry of Energy released the 2,500 MW Request for Proposals document. The Request for Proposals document specifically referenced two priority zones in the province which were identified by the Independent Electricity Market Operator (now the Independent Electricity System Operator (the "IESO")) as having critical local and regional supply, reliability and voltage support needs. One of these identified priority zones was downtown Toronto. – Leaside Sector. The results of the Request for Proposals process did not, however, meet the need for new supply or demand response and conservation in this sector.

New Supply

In its 18-month Outlook report of December 22, 2005 and in its Electricity Reliability Report of February 2, 2006, the IESO emphasized the necessity for a decision to be made early in 2006 to address the need for new supply for downtown Toronto. More specifically, the IESO has informed the Ministry that, despite increased demand

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response and conservation efforts in the Toronto area, at least 250 MW of new supply is required in the downtown Toronto sector by the Summer of 2008, and at least a further 250 MW by 2010. In a joint letter to the Minister of Energy, dated January 11, 2006, Hydro One, Toronto Hydro Corporation and the OPA, joined with the IESO to re-iterate the need for this new supply with the connection point to be at the Hearn Switching Station.

Members of Ministry of Energy staff have reviewed the results of the Request for Proposals process and identified proponents with projects for supply in the downtown Toronto – Leaside Sector. Since late 2005, Ministry of Energy staff members have had discussions and solicited information from proponents regarding available options for new supply in the downtown Toronto – Leaside Sector. One of those proponents, the Portlands Energy Centre (“PEC”) project, located adjacent to the retired Hearn plant, has submitted a proposal on January 27, 2006, and engaged in detailed discussions with Ministry staff for the purpose of determining mutually satisfactory terms and conditions under which the proposal could be accepted. It is the opinion of the Ministry that this proposal is the most advanced option, and the one most likely to meet the 2008 supply requirement.

Specifically, the PEC project is a proposed combined cycle natural gas-fired, co-generation-capable power plant that has a nameplate capacity of approximately 550 MW. PEC has developed a plan to achieve completion of the proposed facility in two stages: the delivery of a simple cycle operation with a capacity of 330 MW in June 2008, followed by the delivery of the combined cycle operation in early 2009. The Environmental Assessment for the combined cycle operation has been completed. None of the other potential options has started the environmental approvals process for its respective proposed project. Unlike other potential projects, the proposed PEC project was developed in accordance with the requirements of Request for Proposals and is advanced with respect to project design and costing.

Therefore, in light of the reliability requirement for new supply for the downtown Toronto – Leaside Sector by the summer of 2008, under subsection 25.32(4) of the Act, I hereby direct the OPA to proceed with the next stages of negotiations with PEC, based on the process proposed by PEC and the OPA on February 9, 2006, for the purpose of executing and delivering a definitive contract with PEC by May 2006. As part of these negotiations, it is expected that the OPA may need to provide PEC with certain interim financial guarantees or recoverable assistance to allow PEC to proceed with preparatory work on the project during the course of the negotiations, but before the contract is executed, with the purpose of expediting the project so that PEC will be able to generate electricity supply in time to meet the above critical timetable identified by the IESO. It is understood that, in the event that PEC and the OPA are unable to execute and deliver a definitive contract, the OPA may seek to recover its costs, if any, relating to the interim financial guarantees or assistance by using its statutory authority for cost recovery.

Conservation

In addition to the above supply initiative, the Ministry has, for the past two years, been engaged in various conservation outreach and education initiatives through its Conservation Partnerships program. Through this program, the Ministry has funded a number of initiatives specifically focused on the Toronto area with the intent of reducing electricity demand. These initiatives included:

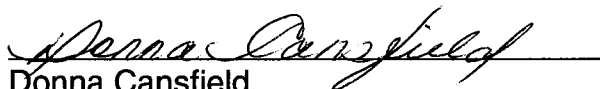
- 20/20 – The Way to Clean Air, a program to provide residents with tools to build an energy conservation program at home.
- Diversity Outreach Initiative, a conservation outreach program targeting non-English speaking communities in the GTA.
- TRCA Greening Health Care – Development of energy performance benchmarks for the Greening Health Care program of the Toronto and Region Conservation Authority.
- EcoSchools – An innovative conservation outreach initiative targeted at Toronto area schools with a focus on operational improvements and teaching materials.

The IESO, in its February 2, 2006 Electricity Reliability Report and in the January 11, 2006 joint letter with Hydro One, Toronto Hydro Corporation and the OPA, to the Ministry of Energy, indicated that, in addition to generation, alternative and supplemental activities, including conservation and demand management initiatives, should be part of the solution to address Toronto's needs. In response, the Ministry began the process of expanding its Toronto-focused conservation initiatives begun under the Conservation Partnerships program. The expansion seeks up to 300 MW of demand side management and/or demand response initiatives in the Toronto area by 2010. The subject matter of this expansion is the basis for this direction to the OPA.

Therefore, pursuant to the authority granted me under subsection 25.32(4) of the Act, I hereby direct the OPA to assume, effective as of the date of this letter of direction, responsibility for seeking up to 300 MW of demand side management and/or demand response initiatives in the Toronto area by 2010. In recognition of Toronto Hydro's existing and planned conservation initiatives funded through to September 2007, it is expected that the OPA will work co-operatively with Toronto Hydro and the community in the Toronto area in order to avoid duplication of initiatives prior to that date.

This Directive shall be effective and binding as of the date hereof.

Dated: February 10, 2006


Donna Cansfield,
Minister of Energy

Minister of Energy

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March 10, 2006

Mr. Jan Carr
Chief Executive Officer
Ontario Power Authority
1600-120 Adelaide Street West
Toronto, Ontario
M5H 1T1

Dear Mr. Carr:

Re: Conservation and Demand-Side Management Initiatives Commercial Buildings and MUSH Sector)

I write in connection with my authority as the Minister of Energy in order to exercise the statutory power of ministerial direction which I have in respect of the Ontario Power Authority (the "OPA") under subsection 25.32 (4) of the *Electricity Act, 1998* (the "Act"), in order to direct the OPA to assume responsibility for the Government's initiatives relating to energy conservation and demand-side-management ("CDM") in regards to the MUSH sector - comprising municipalities, universities, schools, and hospitals.

The Ministry of Energy has, for the past two years, been pursuing a set of conservation initiatives that specifically focus on commercial buildings and the MUSH sector. These initiatives have included the funding, through the Ministry's Conservation Partnerships Program, of various conservation initiatives targeted for commercial buildings and the MUSH sector, as set out below:

- "Turning Contractors into Energy Efficiency Promoters", an outreach program developed to train commercial building contractors so that they may help inform their clients on energy efficient solutions;
- "Cool Shops", a small to medium commercial business outreach program designed to increase energy efficiency and awareness on conservation issues;
- "Green Health Care", a program which encourages and promotes energy efficiency and environmental responsibility in the health care field;

... /cont'd

- “*Schools for the Future*”, a two day conference with school board decision makers from across Ontario to discuss conservation programming in schools and innovative capital financing for energy efficiency retrofit projects;
- “*Ontario Colleges Efficiency Project*”, the development of an energy audit, retrofit and financing strategy for Ontario colleges;
- “*Energy Efficient Schools*”, the development of energy performance baselines for 20 York Region schools for the purpose of demonstrating energy performance and savings through better school design.

Recently, the Ministry began the process of expanding its commercial buildings and MUSH conservation initiatives under the Conservation Partnerships program. The expansion (“Conservation Partnerships – CB/MUSH”) seeks up to 150 MW through a variety of demand side management and/or demand response initiatives.

Therefore, pursuant to the authority granted me under subsection 25.32(4) of the Act, I hereby direct the OPA to assume, effective as of the date of this letter of direction, responsibility for this expanded initiative. More particularly, it is expected that the OPA would commence implementation by no later than the fall of 2007, through such procurement contracts and activities as the OPA determines to be advisable, a program based on the Government’s CDM initiatives, that would reduce overall electrical energy consumption and demand in commercial buildings and the MUSH sector by up to 150 Megawatts (“MW”). In addition, it is expected that this expanded initiative would build upon any CDM initiatives being undertaken through the Toronto Reliability Supply and Conservation Directive, issued February 10, 2006.

This Direction shall be effective and binding as of the date hereof.

Sincerely,



Donna Cansfield
Minister

Minister of Energy

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March 10, 2006

Mr. Jan Carr
Chief Executive Officer
Ontario Power Authority
1600-120 Adelaide Street West
Toronto, Ontario
M5H 1T1

Dear Mr. Carr:

Re: Conservation and Demand-Side Management Initiatives (Residential Sector)

I write in connection with my authority as the Minister of Energy in order to exercise the statutory power of ministerial direction which I have in respect of the Ontario Power Authority (the "OPA") under subsection 25.32 (4) of the *Electricity Act, 1998* (the "Act"), in order to direct the OPA to assume responsibility for the Government's initiatives relating to energy conservation and demand-side-management ("CDM") in regards to the residential sector.

The Ministry of Energy has, for the past two years, been pursuing a set of conservation initiatives that specifically focus on the residential sector. These initiatives have included the funding, through the Ministry's Conservation Partnerships Program, of three conservation initiatives targeted for the residential sector, as set out below:

- "*Energy Star for New Homes*", the development of a labelling program for new homes which would identify and help market new homes that are energy efficient;
- "*Training Seminars for Energy Star for New Homes*", a seminar for builders to become knowledgeable and aware of the Energy Star for New Homes label;
- The "*Net Zero Energy Forum*", a forum to bring together major stakeholders to discuss and chart next steps in the development of advanced home design concepts.

.../cont'd

Recently, the Ministry began the process of expanding its residential-focused conservation initiatives under the Conservation Partnerships program. The expansion ("Conservation Partnerships – Residential") seeks up to 150 MW of demand side management and/or demand response initiatives and would be based on two key initiatives:

- (i) a program to achieve energy efficiency improvements on existing electrically heated houses;
- (ii) a program to carry out energy efficiency improvements to residential properties and the equipment or appliances in such properties, including but not limited to energy audits, air conditioning tune-ups, and the provision and installation of programmable thermostats and low-flow showerheads, with one element of this program being an education and incentive program.

Therefore, pursuant to the authority granted me under subsection 25.32(4) of the Act, I hereby direct the OPA to assume, effective as of the date of this letter of direction, responsibility for these two initiatives. More particularly, it is expected that the OPA would commence implementation by no later than the fall of 2007, through such procurement contracts and activities as the OPA determines to be advisable, a program based on the Government's CDM initiatives, that would reduce overall electrical energy consumption and demand in the residential sector by up to 150 Megawatts ("MW").

This Direction shall be effective and binding as of the date hereof.

Sincerely,



Donna Cansfield
Minister

Minister of Energy

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March 21, 2006

Mr. Jan Carr
Chief Executive Officer
Ontario Power Authority
1600-120 Adelaide Street West
Toronto, Ontario
M5H 1T1

Dear Mr. Carr:

Re: Standard Offer Program

I write in connection with my authority as Minister of Energy in order to exercise the statutory power of ministerial direction that I have in respect of the Ontario Power Authority (the "OPA") under section 25.32 of the *Electricity Act, 1998* (the "Act").

On December 10, 2004, the Ministry of Energy commenced an initiative relating to a Standard Offer Program for small generators by entering into a contract with the Ontario Sustainable Energy Association ("OSEA") to report on how to overcome the barriers to participating in Ontario's electricity supply sector for small renewable generators, including the consideration of a standard offer program for small generators.

In addition, I am aware that the OPA's stakeholder consultation process related to generation procurement that was carried out in the summer of 2005 also identified a Standard Offer Program as a mechanism to address procurement barriers for proponents of smaller projects.

Following these developments, by letter dated August 18, 2005, the Minister of Energy continued to pursue the Standard Offer Program initiative by requesting that the OPA and the Ontario Energy Board (the "OEB") work together to address the barriers to small generators through a Standard Offer Program. The letter specifically referenced OSEA's report as providing useful background information to consider in developing a Standard Offer Program. The Program was to reflect the costs and benefits of renewable energy as well as the government's stated objectives with respect to renewable energy. The OEB, in accordance with its authority, focused on the

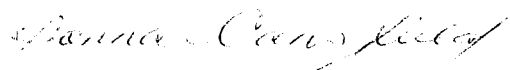
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necessary changes to codes and connection requirements, and on ensuring non-discriminatory access to the electricity system. The OPA, in accordance with its authority to procure electricity supply and capacity, investigated the appropriate price and eligibility requirements for projects to qualify for the Standard Offer Program.

As per my request, I received the report of the OPA and the OEB on a proposed Standard Offer Program. Pursuant to section 25.32 of the *Electricity Act, 1998*, and with the objective of ensuring electricity supply through the completion of the Standard Offer Program initiative, I hereby direct the OPA to assume, effective as of the date of this letter of direction, responsibility for exercising the powers and performing the duties of the Crown under the Standard Offer Program initiative with the objective of having the Program in place by the fall of 2006. It is expected that, as a consequence of this direction, the OPA will enter into such contracts with small renewable generators as are necessary to implement the Program.

This Directive shall be effective and binding as of the date hereof.

Sincerely,

A handwritten signature in cursive script, appearing to read "Donna Cansfield".

Donna Cansfield
Minister

Minister of Energy

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June 13, 2006

Dr. Jan Carr
Chief Executive Officer
Ontario Power Authority
1600-120 Adelaide Street West
Toronto, Ontario
M5H 1T1

Dear Dr. Carr:

Re: Integrated Power System Plan

As authorized by the Lieutenant Governor in Council under Section 25.30 of the *Electricity Act, 1998*, I am providing direction for the preparation of the Integrated Power System Plan.

The Government directs the OPA to create an Integrated Power System Plan to meet the following goals:

1. The goal for total peak demand reduction from conservation by 2025 is 6,300 MW. The plan should define programs and actions which aim to reduce projected peak demand by 1,350 MW by 2010, and by an additional 3,600 MW by 2025. The reductions of 1,350 MW and 3,600 MW are to be in addition to the 1,350 MW reduction set by the government as a target for achievement by 2007. The plan should assume conservation includes continued use by the government of vehicles such as energy efficiency standards under the *Energy Efficiency Act* and the Building Code, and should include load reduction from initiatives such as: geothermal heating and cooling; solar heating; fuel switching; small scale (10 MW or less) customer-based electricity generation, including small scale natural gas fired co-generation and tri-generation, and including generation encouraged by the recently finalized net metering regulation.
2. Increase Ontario's use of renewable energy such as hydroelectric, wind, solar, and biomass for electricity generation. The plan should assist the government in meeting its target for 2010 of increasing the installed capacity of new renewable

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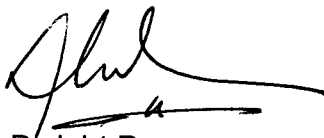
energy sources by 2,700 MW from the 2003 base, and increase the total capacity of renewable energy sources used in Ontario to 15,700 MW by 2025.

3. Plan for nuclear capacity to meet base-load electricity requirements but limit the installed in-service capacity of nuclear power over the life of the plan to 14,000 MW.
4. Maintain the ability to use natural gas capacity at peak times and pursue applications that allow high efficiency and high value use of the fuel.
5. Plan for coal-fired generation in Ontario to be replaced by cleaner sources in the earliest practical time frame that ensures adequate generating capacity and electricity system reliability in Ontario.

The OPA should work closely with the IESO to propose a schedule for the replacement of coal-fired generation, taking into account feasible in-service dates for replacement generation and necessary transmission infrastructure.

6. Strengthen the transmission system to:
 - Enable the achievement of the supply mix goals set out in this directive;
 - Facilitate the development and use of renewable energy resources such as wind power, hydroelectric power and biomass in parts of the province where the most significant development opportunities exist;
 - Promote system efficiency and congestion reduction and facilitate the integration of new supply, all in a manner consistent with the need to cost effectively maintain system reliability.
7. The plan should comply with Ontario Regulation 424/04 as revised from time to time.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Duncan', with a horizontal line underneath.

Dwight Duncan
Minister of Energy

JUL 13 2006**Minister of Energy**

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July 13, 2006

Dr. Jan Carr
Chief Executive Officer
Ontario Power Authority
1600-120 Adelaide Street West
Toronto, Ontario
M5H 1T1

Dear Dr. Carr:

Subject: Coordination and Funding of LDC activities to deliver Conservation and Demand-Side Management Programs

I write pursuant to the statutory power of Ministerial direction which I have in respect of the Ontario Power Authority (the OPA), under subsection 25.32 (4) of the *Electricity Act, 1998* (the Act), in order to direct the OPA to assume responsibility to coordinate and fund the delivery of electricity conservation and demand-side management (CDM) programs by local distribution companies (LDCs) in Ontario.

As Minister of Energy, I wrote to all LDCs on May 31, 2004 to encourage them to initiate CDM activity in their service territories. I also asked the Ontario Energy Board (OEB) to establish a process to fund those activities. LDCs submitted plans for about \$163M worth of CDM projects to be initiated in a three year period, not to exceed September 30, 2007 (Third Tranche funding).

Over the past six months, this ministry convened the Electricity Conservation Working Group to discuss issues regarding CDM delivery by LDCs once the Third Tranche funding has been exhausted or expired.

The Ministry of Energy subsequently undertook an initiative to establish a program from which LDCs could secure funds to continue delivering conservation and demand management programs after the expiry of the \$163 million pool of funds. Such a fund would have as its aims to:

.../cont'd

- Provide stable and secure funding to LDCs over a three year period; and,
- Improve coordination and accountability for LDC CDM programs by establishing clear funding guidelines and reporting requirements.

Therefore, pursuant to the authority granted to me under subsection 25.32(4) of the Act, I hereby direct the OPA to assume, as of the date of this letter, responsibility for organizing the delivery and funding of CDM programs through LDCs in Ontario in accordance with the following guidelines. I expect the OPA to carry out any necessary processes to acquire the increased resources required to meet this objective.

Principles

1. The objective of funding CDM programs is to assist the Government of Ontario in achieving its goals in electricity conservation and demand management.
2. LDCs have a legitimate and unique role in CDM delivery. They should be key conservation delivery agents, helping to grow the culture of conservation.
3. Funding to LDCs should be secure, stable and multi-year.
4. The Conservation Bureau will manage the overall CDM program design and the measurement and verification of results.
5. The relationship between the OPA and LDCs will be managed contractually.

Funding

1. The OPA will begin organizing the delivery and funding of CDM programs through LDCs immediately, with implementation of funding to occur in the earliest practical timeframe.
2. The funding will be limited to a total of \$400 million over three consecutive years.
3. Funds will be collected under the "Global Adjustment Mechanism" to the approved level. LDCs would contract to deliver programs funded by an OPA-administered LDC fund on a non-competitive basis in their territory.
4. These funds will not include provisions for smart meters.
5. The OPA should support the Ontario Energy Board in its continuing efforts to reduce barriers to CDM including decreases in revenues due to LDC's conservation programs.

Delivery and Oversight

It is expected that:

1. The OPA will, in consultation with LDCs and the Ministry, develop prudent guidelines to follow when contracting for CDM programs with LDCs.

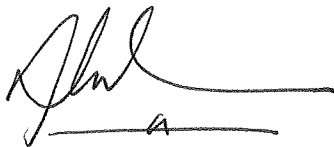
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2. The OPA will design a standard set of programs that LDCs can contract to deliver in their service territories, which may include consumer awareness and education programs, market capacity building, and market transformation programs.
3. LDCs may submit CDM proposals to the OPA and the OPA will accept, reject or modify those proposals.
4. OPA will ensure that all areas of the province have access to an appropriate set of CDM programs. To achieve this purpose, the OPA may directly or through a third party deliver CDM programs in those areas where LDCs do not enter into contracts with the OPA or where LDCs do not deliver all necessary CDM programs.
5. The OPA will ensure that an accountability framework is in place and review the activity and results against such framework. The OPA will report annually to the Minister with respect to this fund.

The above-described LDC fund does not preclude additional OPA activities with or without LDC participation. LDCs may participate in other OPA CDM programs.

This Direction shall be effective and binding as of the date of this letter.

Sincerely,

A handwritten signature in black ink, appearing to read 'Duncan', followed by a horizontal line.

Dwight Duncan
Minister

c: Howard Wetston, Chair, Ontario Energy Board

Minister of Energy

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JUN 15 2007



JUN 14 2007

Dr. Jan Carr
Chief Executive Officer
Ontario Power Authority
1600–120 Adelaide Street West
Toronto, Ontario
M5H 1T1

Dear Dr. Carr:

Re: Clean Energy and Waterpower in Northern Ontario Standard Offer

I write in connection with my authority as Minister of Energy in order to exercise the statutory power of ministerial direction that I have in respect of the Ontario Power Authority (OPA) under section 25.32 of the *Electricity Act, 1998*.

On August 18, 2005, I wrote to you and to Mr. Howard Wetston, QC, Chair of the Ontario Energy Board (OEB), requesting that the OPA and the OEB co-operate in developing the terms and conditions for a standard offer program for small clean and renewable generators embedded in the distribution system that use clean or renewable resources.

In her letter of March 21, 2006, then Minister of Energy, the Honourable Donna Cansfield, noted that, as per her request, she had received the report of the OPA and the OEB on a proposed Standard Offer Program for Renewable Energy Projects. Under the provisions of the *Electricity Act, 1998*, she directed the OPA to assume responsibility for exercising the powers and performing the duties of the Crown under the Standard Offer Program initiative with the objective of having the program in place by the fall of 2006. Her letter noted an expectation that the OPA will enter into such contracts with small renewable generators as are necessary to implement the program. The Renewable Energy Standard Offer Program was launched by the OPA on November 22, 2006.

.../cont'd

Minister Cansfield subsequently wrote to you on March 27, 2006, requesting that the OPA investigate the economic and technical issues involved with connecting small waterpower projects to transmission systems in northern Ontario, and where economically and technically feasible, report back with recommendations regarding a procurement approach for these projects.

I have now received your report on the clean energy supply component of the Standard Offer Program, as well as your recommendations on small, transmission-connected waterpower projects in northern Ontario.

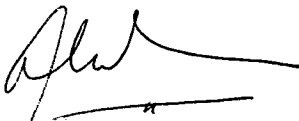
It is my view that it is appropriate to expand the Standard Offer Program initiative in the areas of clean energy supply and small, transmission-connected waterpower projects in northern Ontario. Pursuant to section 25.32 of the *Electricity Act, 1998*, and with the objective of ensuring electricity supply through the extension of the Standard Offer Program initiative, I hereby direct the OPA to assume, effective as of the date of this letter of direction, responsibility for exercising the powers and performing the duties of the Crown under the Standard Offer Program initiative in regard to:

- clean energy supply; and
- small, transmission-connected waterpower projects in northern Ontario.

The objective is to have these parts of the Standard Offer Program in place by the fall of 2007. It is expected that, as a consequence of this direction, the OPA will enter into such contracts with small generators as necessary to implement these parts of the Standard Offer Program.

This Directive shall be effective and binding as of the date hereof.

Sincerely,

A handwritten signature in black ink, appearing to read 'Duncan', with a horizontal line underneath.

Dwight Duncan
Minister

AUG 28 2007

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Minister of Energy

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AUG 27 2007

Dr. Jan Carr
Chief Executive Officer
Ontario Power Authority
1600-120 Adelaide Street West
Toronto, Ontario
M5H 1T1

Dear Dr. Carr:

Re: Procurement of up to 2,000 MW of Renewable Energy Supply

I write in connection with my authority as Minister of Energy in order to exercise the statutory power of ministerial direction that I have in respect of the Ontario Power Authority (the "OPA") under section 25.32 of the *Electricity Act, 1998* (the "Act").

As you are aware, the government has established a series of targets for the addition of new renewable energy supply, culminating with the goal of doubling Ontario's renewable energy capacity to 15,700 megawatts (MW) by 2025. These targets were relayed to the OPA in the Supply Mix Direction of June 2006.

In order to meet the government's renewable supply targets, the Ministry of Energy put in place an initiative to procure new renewable energy supply through competitive procurements that targeted medium- to large-sized renewable energy generation facilities, and a Standard Offer Program for small facilities that are 10 MW and under in size.

Through ministerial directions issued in November 2005, responsibility for administering contracts for over 1,300 MW of new renewable energy supply was assigned to the OPA. These contracts were the result of two completed Requests for Proposals, developed and administered by the Ministry of Energy during 2004 and 2005.

In addition, in a letter of March 21, 2006, then Minister of Energy, the Honourable Donna Cansfield, directed the OPA to assume responsibility for exercising the powers and performing the duties of the Crown under the Standard Offer Program.

I understand that the OPA has identified that there is potential for up to 2,000 MW of additional new renewable generation to come into service by 2015 from projects that are greater than 10 MW in size. In light of the required lead time for consultation with First Nation and Métis peoples, environmental and municipal approvals, and construction, the procurement of these resources needs to occur by 2011.

.../cont'd

Pursuant to section 25.32 of the *Electricity Act, 1998*, and with the objectives of ensuring electricity supply and mitigating the environmental impacts of electricity production, I hereby direct the OPA to assume, effective as of the date of this letter of direction, responsibility for exercising the powers and performing the duties of the Crown in regard to the acquisition of up to 2,000 MW of new renewable electricity supply from projects that are greater than 10 MW in size.

The OPA in establishing eligibility requirements may wish to refer to the three earlier procurements by Ontario for renewable energy, the first two of which were also assigned to the OPA in November, 2005. Although the third procurement was suspended, I am providing you with the procurement documents as I believe they provide useful and relevant information that the OPA may wish to consider in the development of the procurement documents.

In the course of the consultation process on the Integrated Power System Plan, the OPA heard from First Nation and Métis peoples their desire to be consulted in the planning of electricity projects.

It is my view that First Nation and Métis peoples should be consulted early in the planning and development stages for the new renewable energy projects under this 2,000 MW direction. As such, I direct that the OPA develop guidelines and processes to ensure that appropriate consultation with First Nation and Métis peoples takes place. The Crown will continue to assess the adequacy of the consultation, including whether there is accommodation, where appropriate, for impacts that the specific projects may have on Aboriginal or treaty rights.

I request that the OPA work towards commencing consultation on the design of the first procurement for approximately 500 MW of new renewable energy supply by the end of 2007.

It is expected that, as a consequence of this direction, the OPA will enter into such contracts with suppliers as necessary to implement the initiative.

This Directive shall be effective and binding as of the date hereof.

Sincerely,

A handwritten signature in black ink, appearing to read 'Dwight Duncan', with a stylized flourish at the end.

Dwight Duncan
Minister

Minister of Energy

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MAR - 1 2005

Mr. Jan Carr
Chief Executive Officer
Ontario Power Authority
606-175 Bloor Street East
North Tower
Toronto, Ontario
M4W 3R8

Dear Jan:

I understand you are aware of the Ontario Energy Board's (OEB) recent request to Hydro One for a report on plans for transmission reinforcements in critical areas of the province. This request was made in accordance with Hydro One's transmission licence issued by the OEB. I am writing in respect to one of those areas – York Region.

The most important element of Bill 100 was the creation of the Ontario Power Authority (OPA), with the ultimate responsibility for ensuring the long-term adequacy of electricity supply in Ontario. In addition to demand and supply forecasting, conservation and load management as well as procurement of electricity capacity or supply, as necessary, a key mechanism for the OPA's fulfillment of its adequacy responsibilities is intended to be the Integrated Power System Plan.

Going forward, the OPA will be responsible for assessing various conservation, generation and delivery alternatives to respond to supply and reliability issues, both locally and on a provincewide basis, and determining which are preferable in terms of cost efficiency, reliability, safety and sustainability.

There are communities in Ontario that potentially will be faced with local supply issues before the development of an Integrated Power System Plan. York Region is one such example and, as you know, Hydro One has proposed a transmission response to meet local needs.

.../cont'd

Consistent with the OPA's mandate and responsibilities, I am requesting that you help identify and assess possible solutions to address local reliability issues. These solution options should be broadly based and not confined solely to a consideration of transmission. I further request that you present your findings to the OEB so that they may consider them in their determination of the appropriate regulatory treatment of this issue. I believe your skills and expertise will be invaluable in this regard.

I very much appreciate your expedited attention to this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Dwight Duncan", with a stylized flourish at the end.

Dwight Duncan
Minister

Minister of Energy

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MAY - 2 2005

Mr. Jan Carr
Chief Executive Officer
Members of the Board
Ontario Power Authority
608-175 Bloor Street East
North Tower
Toronto, Ontario
M4W 3R8

Dear Mr. Carr and Members of the Board:

Re: Commencement of long-term planning exercise and request for recommendation on supply mix

It is my pleasure to request that the Ontario Power Authority (the OPA) begin the process of developing a proposed Integrated Power System Plan.

It has been many years since a comprehensive, long-term plan for electricity has been prepared for the Province of Ontario, as has been widely noted. The task you will be embarking on will be of historic importance, and will provide a crucial foundation for a clean, reliable, diverse and sustainable electricity supply for the province.

In order to ensure that the Integrated Power Supply Plan conforms closely to the values and wishes of the people of Ontario, section 25.30 (2) of the *Electricity Act, 1998*, allows the Minister, on behalf of the government and the people of the province, to issue directives relating to overall goals for the plan. These goals include:

- a) the production of electricity from particular combinations of energy sources and generation technologies;
- b) increases in generation capacity from alternative energy sources, renewable energy sources or other energy sources;
- c) the phasing-out of coal-fired generation facilities; and
- d) the development and implementation of conservation measures, programs and targets on a system-wide basis or in particular service areas.

.../cont'd

In order to provide assistance to the government in its deliberations prior to issuing such directives, I am requesting a report addressing these matters to be delivered to the government by December 1, 2005, based on the OPA's internal resources, the government's plan to replace coal-fired generation in Ontario, expert advice solicited from Ontario and abroad, and stakeholder input in a manner developed at the discretion of the OPA. The report should include:

- recommendations with respect to conservation targets for Ontario for 2015, 2020 and 2025, taking into account the target already set by the Government of Ontario for 2007;
- recommendations with respect to additions of new renewable energy capacity by 2015, 2020 and 2025, taking into account the targets already set by the Government of Ontario for 2007 and 2010; and
- recommendations with respect to the appropriate mix of electricity supply sources to satisfy the remaining expected demand in Ontario, after conservation and renewable sources have been taken into account, and with particular attention to baseload, intermediate and peak availability of energy.

Sincerely,

A handwritten signature in black ink, appearing to read 'Duncan', written over a horizontal line.

Dwight Duncan
Minister

Minister of Energy

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AUG 18 2005

Mr. Howard I. Wetston, QC
Chair, Ontario Energy Board
P.O. Box 2319
2300 Yonge Street, Suite 2600
Toronto, Ontario
M4P 1E3

Mr. Jan Carr
Chief Executive Officer
Ontario Power Authority
606-175 Bloor Street West
North Tower
Toronto, Ontario
M4W 3R8

Dear Mr. Wetston and Mr. Carr:

I am requesting that the Ontario Energy Board and the Ontario Power Authority cooperate in developing the terms and conditions for a standard offer program for small generators embedded in the distribution system that use clean or renewable resources.

While very successful, the Ministry of Energy's procurement processes for renewable energy sources, RES I, RES II and RES III, present a number of barriers that smaller generation proponents are unable to overcome:

- financial security requirements;
- complexity of the contracting process;
- the high cost of proposal development relative to larger project proponents; and,
- overall administrative burden of the competitive RFP process.

The Ministry of Energy commissioned the Ontario Sustainable Energy Association to report on how to overcome the barriers to participating in Ontario's electricity supply sector for small renewable generators. This report was recently made public and provides useful background information to consider in developing a Standard Offer Program. I also am aware that the Ontario Power Authority's recent stakeholder

.../cont'd

consultation process for generation procurement identified similar barriers for proponents of smaller projects.

Therefore, I request that the Ontario Energy Board and the Ontario Power Authority work together to address the barriers to small generators through a standard offer program. This program should reflect the costs and benefits of renewable energy as well as the government's stated objectives with respect to renewable energy. The Ontario Energy Board, in accordance with its authority over connection policies and delivery obligations of distributors, will focus on the necessary changes to codes and connection requirements, and on ensuring non-discriminatory access to the electricity system. The Ontario Power Authority, in accordance with its authority to procure electricity supply and capacity, will investigate the appropriate price and eligibility requirements for projects to qualify for the standard offer program.

Further, it is my expectation that the agencies in carrying out this work will build on the consultations undertaken by the Ontario Sustainable Energy Association and consult with relevant industry participants, including Ontario's farming community to gather the appropriate perspectives needed to successfully implement a standard offer program.

Please begin this work immediately and report to me by the end of 2005 on your findings, recommendations and proposed implementation plan.

Sincerely,

A handwritten signature in black ink, appearing to read 'Dwight Duncan', written over a horizontal line.

Dwight Duncan
Minister

APR 05 2006

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Minister of Energy

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March 27, 2006

Dr. Jan Carr
Chief Executive Officer
Ontario Power Authority
Suite 1600, 120 Adelaide Street West
Toronto ON M5H 1T1

Dear *Jan* Dr. Carr:

I would like to take this opportunity to express my sincere appreciation for the hard work performed by OPA staff in developing a Standard Offer approach for distribution-connected renewable energy projects under 10 MW in size.

As you are aware, some small-sized waterpower projects in Northern Ontario will be ineligible for the Standard Offer Program, as they are unable to connect to a local distribution system. These projects may also involve additional project requirements, such as the successful participation in Crown land site release processes and the negotiation of agreements with First Nation partners.

I am writing to request that the Ontario Power Authority investigate the economic and technical issues involved with connecting small waterpower projects to transmission systems in northern Ontario, and where economically and technically feasible, report back to me with recommendations regarding a procurement approach for these projects. This investigation should reflect the costs and benefits of renewable energy as well as the government's stated objectives with respect to renewable energy.

Please begin this work immediately and report back to me this Fall on your findings and proposed recommendations.

Sincerely,

A handwritten signature in cursive script, appearing to read "Donna".

Donna Cansfield
Minister of Energy

Minister of Energy

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AUG 28 2007

Dr. Jan Carr
Chief Executive Officer
Ontario Power Authority
1600–120 Adelaide Street West
Toronto, Ontario
M5H 1T1

Dear Dr. Carr:

Re: Contracts for the Refurbishment of Bruce A at the Bruce Nuclear Generating Station

As contemplated under subsection 25.32(4) of the *Electricity Act*, 1998 (the "Act"), the Ministry of Energy instituted an historic initiative to procure electricity capacity at the Bruce nuclear power generating facilities and thereby increase the long-term supply of electricity generating capacity within the Province of Ontario (the "Initiative").

In furtherance of the Initiative, the Minister of Energy, pursuant to authority granted under Section 25.32(7) of the Act, directed that the Ontario Power Authority (OPA) enter into, among other things, the Bruce Power Refurbishment Implementation Agreement dated as of October 17, 2005 between Bruce Power A L.P., Bruce Power L.P. and the OPA (the "Refurbishment Implementation Agreement"), a Bruce Power Sharing in Transfers and Refinancings Agreement dated as of October 17, 2005 between Bruce Power A L.P., TransCanada Corporation, Ontario Municipal Employees Retirement Board and the OPA (the "STAR Agreement"), and a letter agreement dated October 17, 2005 between the Ministry of Energy and the OPA (the "Letter Agreement") wherein the OPA agreed not to terminate, make any material amendments to, or make any material waiver or consent with respect to, the Refurbishment Implementation Agreement without the prior written consent of the Ministry of Energy.

The OPA has provided a letter (the "Request Letter") to the Ministry of Energy requesting the ministry's consent to materially amend the Refurbishment Implementation Agreement, and to amend the STAR Agreement to reflect the proposed amendments to the Refurbishment Implementation Agreement. The Request Letter sets out that the OPA, Bruce Power A L.P. and Bruce Power L.P. propose to enter into an amending agreement to the Refurbishment Implementation Agreement in the form attached to the Request Letter (the "First Amending Agreement") and an amending agreement to the STAR Agreement in the form attached to the Request Letter (the "STAR Amendment"). We understand that on April 24, 2007, the OPA Board of Directors considered the First Amending Agreement and the STAR Amendment. Subsequently, officers of the OPA were authorized to execute the

... /cont'd

First Amending Agreement and the STAR Amendment. Further, the OPA has provided us with a copy of a Fairness Opinion from CIBC World Markets in relation to the First Amending Agreement. The OPA has briefed Ministry of Energy staff and Ontario Financing Authority staff regarding the details of the proposed amendments and we understand from the OPA that significant legal, financial and technical due diligence was performed with respect to the proposed amendments to the Refurbishment Implementation Agreement and STAR Agreement.

In furtherance of the Initiative, and in accordance with the terms of the Letter Agreement, the Ministry of Energy hereby consents to the OPA entering into the First Amending Agreement, the amendment and restatement of the Refurbishment Implementation Agreement contemplated by section 4.1 of the First Amending Agreement, and the STAR Amendment.

Sincerely,

A handwritten signature in black ink, appearing to read 'Dwight Duncan', with a horizontal line underneath.

Dwight Duncan
Minister

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Filed: February 11, 2008
EB-2007-0791
Exhibit A
Tab 8
Schedule 3
Page 1 of 6



December 20, 2007

Dr. Jan Carr
Chief Executive Officer
Ontario Power Authority
1600-120 Adelaide Street West
Toronto ON M5H 1T1

Dear Dr. Carr:

Re: Hydroelectric Energy Supply Agreements With Ontario Power Generation Inc. ("OPG")

I write to you in connection with my authority as the Minister of Energy in order to exercise the statutory power of Ministerial direction that I have in respect of the Ontario Power Authority (the "**OPA**") under section 25.32 of the *Electricity Act, 1998* (the "**Act**").

As previously announced, the Province of Ontario has set a goal to increase renewable energy capacity in the province by 2025. In furtherance of this goal, OPG has been provided a mandate to "expand, develop or improve its hydro-electric generation capacity". OPG has been developing a number of hydroelectric projects (collectively, the "**Projects**") to be located at existing OPG hydroelectric station sites that include, without limitation:

1. Lac Seul: A 12.5 MW addition to OPG's existing Ear Falls G.S. (the "**Lac Seul Project**");
2. Upper Mattagami: An approximately 34.5 MW project involving the redevelopment of OPG's existing end of life Wawaitin G.S., Sandy Falls G.S., Lower Sturgeon G.S. ("**Upper Mattagami Project**");
3. Healey Falls: An approximately 6 MW addition to OPG's existing Healey Falls G.S. (the "**Healey Falls Project**");
4. Lower Mattagami: The expansion of OPG's existing Little Long G.S., Harmon G.S. and Kipling G.S., and the redevelopment of Smoky Falls G.S., for the addition of 450 MW (the "**Lower Mattagami Project**"); and

.../cont'd

5. Hound Chute: The redevelopment of a 4MW end-of-life station on the Montreal River at a new capacity of approximately 10 MW (the "**Hound Chute Project**").

Ministry of Energy officials have discussed the Projects with OPG. Based on the information provided by OPG, the Ministry has identified the Projects as having the potential to add new supply of clean, renewable power at an acceptable price to Ontario ratepayers, through financial energy supply agreements for each of the Projects ("the **Crown Initiative**").

Therefore, I hereby direct the OPA to assume the responsibility and duties of the Crown regarding the Crown Initiative, which shall entail the OPA continuing with:

1. negotiations with OPG in respect of a financial energy supply agreement regarding the hydroelectric generating stations owned and operated, or to be operated, by OPG, and commonly known as the Ear Falls Generating Station and the Lac Seul Generating Station (the "**Lac Seul Supply Agreement**"), based on the terms and conditions set out in the term sheet dated May 11, 2007 between OPG and the OPA and provided to the Ministry of Energy on May 24, 2007. The OPA will make reasonable efforts to complete the negotiations and execute the Lac Seul Supply Agreement by January 31, 2008; and
2. negotiations with OPG in respect of each of the remaining four Projects: Upper Mattagami Project, Healey Falls Project, Hound Chute Project and Lower Mattagami Project. Each financial energy supply agreement for these Projects should be consistent with the Lac Seul Supply Agreement with changes as are reasonably required to reflect the specific business terms or unique attributes of any of the applicable Projects. The OPA will make reasonable efforts to complete the negotiations and execute a financial energy supply agreement for the Upper Mattagami Project, Healey Falls Project, and Hound Chute Project by March 1, 2008; and for the Lower Mattagami Project by April 30, 2008.

Notwithstanding the above it is my expectation that these agreements are to be consistent with the principles as laid out in the term sheet dated May 11, 2007, and that financial terms will be commercially reasonable and economically beneficial to electricity customers in the circumstances.

With respect to the duty of the Crown to consult Aboriginal peoples where initiatives may affect their rights, the Ministry has reviewed the conduct by OPG of procedural aspects of the Crown's duty to consult for all of the projects covered in this Direction. For those projects where the consultative process with First Nations is ongoing, I direct the OPA, together with OPG, to work with the Ministry and to report back at regular intervals. Guidelines and processes developed by the OPA pursuant to the Direction

.../cont'd

dated August 27, 2007 should be applied, as appropriate, to the projects covered by this Direction. At the conclusion of each project's consultative process the Ministry or other representative of the Crown will consider the adequacy of the Aboriginal consultation including any necessary accommodation measures before the project can proceed. In addition, the terms of previous approvals relating to each project must be observed.

This Direction shall be effective as of today's date.

Sincerely,

A handwritten signature in black ink, appearing to read "Gerry Phillips". The signature is fluid and cursive, with the first name "Gerry" written in a larger, more prominent script than the last name "Phillips".

Gerry Phillips
Minister

Minister of Energy

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January 31, 2008

Dr. Jan Carr, Chief Executive Officer
Ontario Power Authority
1600—120 Adelaide Street West
Toronto ON M5H 1T1

Dear Dr. Carr:

Re: Procuring Approximately 350 MW of New Gas-Fired Electricity Generation for Northern York Region

I write in connection with my authority as the Minister of Energy in order to exercise the statutory power of ministerial direction which I have in respect of the Ontario Power Authority (the "OPA") under section 25.32 of the *Electricity Act, 1998* (the "Act").

Background

As noted in the proposed Integrated Power System Plan, submitted to the Ontario Energy Board (the "OEB") by the OPA in August of this year, there are significant challenges facing the ability of the current electricity system to meet increasing demand in the Northern York Region ("NYR") and to continue to support the economic growth of the area with existing supply. The load in NYR is forecast to grow at above 3 per cent per annum. This rate is significantly higher than the provincial average.

In order to assist the government in assessing the extent of this particular growing demand-supply challenge, the OPA was requested by the province in the summer of 2005 to examine potential solutions to address NYR's electricity supply situation. During this examination, the OPA consulted local communities and local distribution companies in the area.

The results and recommendations from the NYR study were outlined in a submission to the OEB on September 30, 2005. This study identified four conservation and new infrastructure components that would be required in order to augment the existing electricity supply to NYR:

1. The building of a new transformer station in the vicinity of Holland Junction;
2. The addition of capacitor banks at the existing Armitage station;
3. The implementation of a demand response program; and

.../cont'd

4. Development of local area generation.

Pursuant to an order of the OEB dated November 22, 2005 (EB-2005-3015) and the Minister's direction to the OPA on demand response dated June 15, 2005, the first three components are currently being implemented. Conservation is an important part of the NYR electricity solution, and the OPA has contracted for up to 30 megawatts (MW) of demand response in NYR. In addition, the residents and businesses of NYR are participating in a broad range of OPA-funded conservation programs delivered by their local distributors. The capacitor banks at the Armitage Station came into service in 2006 and the new Holland Junction transformer station is expected to come into service in 2009.

It is now necessary to proceed with the fourth element identified in the above-noted Board order: namely, the procurement of approximately 350 MW of new gas-fired electricity generation supply for NYR.

Direction

Therefore, pursuant to my statutory authority under subsection 25.32(4) of the *Electricity Act, 1998*, I hereby direct the OPA to assume responsibility for the Ministry's initiative aimed at addressing the generation needs of the NYR in a manner consistent with the above-noted order of the OEB.

Specifically, the OPA is directed to procure a simple (single)-cycle gas-fired electricity generation facility with a rated generation capacity of approximately 350 MW and not more than 400 MW. It is expected that the OPA will procure this generation plant through a competitive procurement process, and that the plant will have an in-service date of not later than December 31, 2011. It is further expected that due consideration be given to locating the generation facility in the vicinity of the 230 kilovolt transmission lines supplying the Armitage and Holland transformer stations, in order to assure an efficient connection platform for the new plant. In addition to relieving local supply inadequacy, it is also expected that the new facility be capable of contributing to the province's overall need for gas-fired peaking plant capacity in an efficient, cost-effective and environmentally sound manner.

Finally, in light of the lead time required to procure, site, permit and construct a new gas-fired generating station in the area, it is expected that the OPA would move expeditiously to commence the above-noted competitive procurement process in order to fulfil its responsibilities under this direction.

This direction shall be effective and binding as of the date hereof.

Sincerely,



Gerry Phillips
Minister



ONTARIO POWER AUTHORITY



2008 Business Plan

September 2007

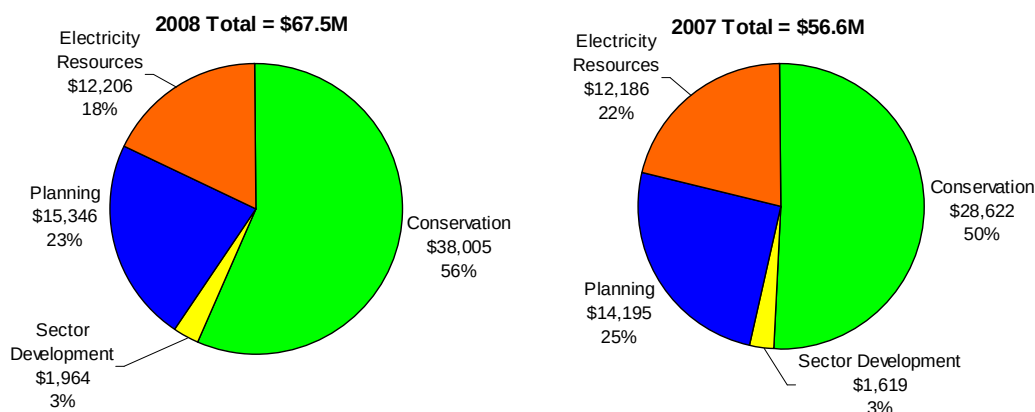
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September 2007

2008 Business Plan

Highlights of the 2008 Business Plan and Budget



All corporate costs that cannot be directly attributed to a specific strategic objective have been allocated based on headcount

In 2008, the Ontario Power Authority (OPA) will continue its efforts to ensure the long-term reliability and sustainability of the electricity system for the benefit of Ontario's consumers.

All of our resources will be focused on building a culture of conservation, ensuring development of needed generation resources, planning the power system for the long term, and supporting the continued evolution of the electricity sector. The most significant activities planned for 2008 are:

- stepping up our conservation-related activities toward meeting the 2010 target reduction of 1,350 megawatts in peak electricity demand. Twenty-nine conservation and demand management programs will be implemented (up from 19 programs in 2007), with expected savings of 410 megawatts in electricity demand by the end of the year.
- introducing and implementing a system to accurately evaluate, measure and verify conservation program data and results.
- supporting and participating in the regulatory review of the Integrated Power System Plan, which includes dedicating OPA resources for legal representation and as expert witnesses, and paying cost awards to some of the stakeholders participating in the proceedings.
- procuring new electricity supply for high priority areas of the province where there is a critical need to ensure reliability, particularly in the northern York region, the Greater Toronto Area and southern Ontario.
- procuring additional renewable energy resources toward meeting the province's target of an additional 2,000 megawatts in service by 2015.

- improving the Renewable Energy Standard Offer Program and the Clean Energy Standard Offer program as experience builds from their ongoing operation. Options for the long-term management and administration of the standard offer programs will also be explored with the participation of relevant stakeholders.
- taking steps to promote the development of a forward market for Ontario electricity products and working closely with the Independent Electricity System Operator in considering the development of a day-ahead market.
- developing options for evaluating environmental attributes associated with supply and conservation contracts.

The proposed 2008 budget is 19 percent higher than the 2007 budget.

Message from the Chief Executive Officer

Since the Ontario Power Authority (OPA) began operations in early 2005, solid, quantifiable progress has been made toward our mandate of ensuring Ontario's future. Many initiatives and programs have been launched, and their impact on the supply and use of electricity is becoming increasingly evident. With the input and participation of a broad network of electricity users, industry organizations and other stakeholders, these actions are helping to ensure a reliable, efficient and sustainable electricity system – the kind of system that Ontarians want, need and deserve. But there is much more still to be done.

The OPA continues to focus a significant portion of its resources on meeting the province's goal to reduce peak electricity demand by 6,300 megawatts (MW) by 2025, with interim targets of a 1,350 MW reduction in peak demand by the end of 2007 and a further 1,350 MW reduction by 2010. The Chief Energy Conservation Officer reported in May 2007 that Ontario is well on its way to meeting the 2007 target. However, we cannot underestimate the size of the challenge we still have before us. Accordingly, the OPA will expand its conservation programs and initiatives in 2008, with a focus on achieving the 2010 target. This is reflected in the 2008 budget with a 25 percent increase in planned conservation expenditures over the 2007 budget.

The submission of the Integrated Power System Plan (IPSP) to the Ontario Energy Board (OEB) in the third quarter of 2007 was the culmination of a wide-ranging process of study, consultation and planning during the last two years. This strategic document is the first attempt in more than 15 years to produce a comprehensive plan for the province's electricity system. It encompasses conservation, renewable and conventional generation resources, as well as enhancements to the province's transmission grid. When approved, the IPSP will be the basis for making immediate decisions in the short term, developing options for the medium term and preserving opportunities for the future.

The regulatory review and approval of the IPSP by the OEB is expected to extend through most of 2008. Support for the OPA's participation in the IPSP hearings and the anticipated intervenor cost awards also contribute to the budget increase in 2008.

Many of the gains that the OPA has made in the last two years relate to the improved reliability of the electricity system. Much has been done to address some of the most urgent supply issues, but additional areas of the province are facing growing supply constraints. To this end, the OPA will continue to procure needed generation resources in 2008. As these continue to grow in number and complexity, the costs associated with managing, administering and settling them are necessary increments to the budget.

The development of a robust electricity sector that will mitigate risk for electricity customers is also an important area of activity for the OPA. In 2008, we will continue to help create a forward price signal for electricity that encourages commercial investment in new supply and conservation programs. To build on the work begun in 2006 and 2007, we will examine forward markets for electricity products in other jurisdictions, as well as continue to monitor progress in the development of a forward market for Ontario electricity products. The OPA will be working closely with the Independent Electricity System Operator in its development of a day-ahead market by focusing on methods to present customer requirements as committed purchases of the supply being offered in the day-ahead market. As well, the OPA will develop options for evaluating environmental attributes associated with supply and conservation contracts.

As the OPA ramps up to deliver on its goals – driving conservation efforts, moving forward with the IPSP, improving supply reliability and facilitating sector development – the organization must grow to support the additional demand these initiatives will make on its services and resources. Consequently, the 2008 budget also reflects a proportionate increase in corporate and administrative costs.

The path for 2008 and beyond promises the people of Ontario a more reliable and sustainable electricity system that will support our province's economy and contribute to environmental protection for generations to come. The OPA is committed to helping deliver on that promise.

Jan Carr
Chief Executive Officer
September 2007

The Ontario Power Authority

The Ontario Power Authority (OPA) is responsible for ensuring a reliable, long-term supply of electricity for Ontario. Its four key areas of focus are: building a culture of conservation, planning the power system for the long term, ensuring development of needed generation resources, and supporting the continued evolution of the electricity sector.

The OPA was established by *The Electricity Restructuring Act, 2004* (amending *The Electricity Act, 1998* and the *Ontario Energy Board Act, 1998*). It is governed by an independent Board of Directors and reports to the Ontario Legislative Assembly through the Minister of Energy. The OPA is licensed and regulated by the Ontario Energy Board.

Vision

A sustainable, competitive and reliable electricity system for the benefit of Ontario consumers.

Mission

The Ontario Power Authority contributes to the development of a reliable and sustainable electricity system for the benefit of Ontario customers. In doing so, we plan for the long term and procure and coordinate conservation and electricity supply from diverse resources.

Guiding Principle

The Ontario Power Authority will balance the short-term and long-term needs of electricity users while developing a reliable and sustainable electricity system for their benefit.

Mandate

The Ontario Power Authority's mandate is determined by the provincial government, and is embodied in legislation and regulation.

2008 Strategic Objectives

The Ontario Power Authority's 2008 Business Plan is based on four key focus areas: integrated planning, conservation, electricity resources and sector development. These four key directions are addressed by the following five strategic objectives:

- 1] Plan for an adequate, reliable and sustainable system that integrates conservation, generation and transmission.
- 2] Contribute to the achievement of Ontario's conservation resource targets and to fostering a culture of conservation using market-based approaches.
- 3] Consistent with the Integrated Power System Plan (IPSP), ensure that the Province of Ontario has diverse electricity generation resources.
- 4] Define sector development goals and facilitate the efficient allocation of risk between customers and investors in conservation and generation.
- 5] Maintain and develop organizational capacity to achieve the strategic objectives.

Strategic Objective 1

Plan for an adequate, reliable and sustainable system that integrates conservation, generation and transmission.

Strategic Context

Obtaining the Ontario Energy Board's (OEB's) approval of the Integrated Power System Plan (IPSP) is a major goal for 2008. The IPSP is the blueprint for a reliable, sustainable electricity system in Ontario for the next 20 years. It will provide the basis for immediate decisions that have to be made on conservation, supply and transmission infrastructure; develop options for the medium term; and preserve opportunities for the longer term.

After extensive research and consultation on the IPSP during the past year, the plan was filed with the OEB in August 2007 for approval. The OEB will review the plan in a public hearing process that is expected to take about a year to complete. A major task for the OPA in 2008 will be to support and participate in the regulatory proceedings. OPA resources will be dedicated to providing legal representation during the hearing process and participating as expert witnesses. In addition, the OPA will pay OEB-prescribed cost awards to stakeholders, which will enable them to participate in the proceedings.

The OPA is required to review and amend the IPSP every three years to ensure that the plan is regularly updated to incorporate changing circumstances in the economy, new information, technological innovations and other developments that could affect the overall plan. In preparation for the next iteration of the IPSP, the OPA will consolidate and analyze the lessons learned and experience gained from the first IPSP. The analysis will identify the tools and capabilities the OPA will need to have in place to prepare the next IPSP.

Certain areas of the province, such as the northern York Region, Kitchener-Waterloo and the Greater Toronto Area, have electricity supply constraints so critical that immediate solutions are required. The OPA has been working to address these critical supply issues and will continue to do so in 2008. Some solutions are in development but still require support from the OPA through both technical studies and consultation with local municipalities and community groups. In other localized areas, we will be conducting research, consultation and analysis to recommend solutions that are most appropriate for each specific situation.

The OPA will also continue to work with others toward streamlining approval processes and advancing policy development related to power system planning. This will involve sharing information through meetings with other industry participants, the Ontario government and municipalities.

As an example, one activity is to encourage municipalities across the province to incorporate future electricity infrastructure needs in their official plans. This can be accomplished by designating right-of-way corridors and zoning land for future electricity facilities.

A municipal strategy will also be developed and launched in 2008 to foster a greater understanding of issues and to identify opportunities related to planning, conservation, siting of new generation facilities, taxation policies and other relevant topics.

We will achieve Strategic Objective 1 by:

- Supporting the OEB hearings on the IPSP with expert witness testimony, legal resources and payment of cost awards.
- Assessing and developing solutions for localized areas with urgent reliability issues and concerns.
- Advancing policy development and processes related to power system planning.
- Developing and implementing a municipal strategy that addresses a range of issues and objectives.

You will see that we have achieved this objective when:

- The IPSP has been reviewed and accepted as a sound planning approach.
- Immediate reliability concerns have been resolved or evaluations of alternatives have been developed as needed and in a timely manner.
- Progress is made toward streamlining approval processes and integrating electricity planning into municipal planning processes.
- Municipalities have a greater appreciation of the needs of the electricity industry and the benefits to be realized, both locally and provincially.

	2008 Budget	2007 Budget	Variance
Planning	11,010,870	9,318,588	1,692,282

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Strategic Objective 2

Contribute to the achievement of Ontario's conservation resource targets and to fostering a culture of conservation using market-based approaches.

Strategic Context

The OPA continues to focus on its role as leader and coordinator of the province-wide effort to reduce peak electricity demand by 6,300 megawatts (MW) by 2025. Interim targets were also established – to reduce peak electricity consumption by 1,350 MW by the end of 2007, and another 1,350 MW by the end of 2010.

Ontario's progress so far is encouraging. In the May 2007 supplement to his 2006 Annual Report, Ontario's Chief Energy Conservation Officer (CECO) reported that the province is already well on track to meeting the 2007 conservation target, having achieved peak energy savings of 1,080 MW by the end of 2006.

In 2008, the OPA will step up its efforts toward reaching the 2010 target. Twenty-nine conservation programs – 19 existing programs and 10 new initiatives – will be implemented for a target reduction in electricity demand of 410 MW.

Because documenting and analyzing the results of these projects is critical for assessing program design and monitoring progress against the targets, the OPA will also introduce and begin implementing a system to accurately evaluate, measure and verify program data and results. An annual portfolio report will be produced to:

- compare planned, reported and verified results and identify the reasons behind the differences;
- provide reasonable assurances to all interested parties that verified benefits are being attained and program spending is cost effective;
- provide verified savings results that are reliable for integrated power system planning purposes; and
- provide feedback on program design and delivery to facilitate continuous improvement of the ongoing OPA conservation program portfolio.

Also in 2008, we will be designing and preparing to implement the 2009 portfolio of conservation programs. This activity will encompass a strategic review of market sector plans to identify opportunities and extensive consultations with relevant stakeholders, such as local electricity distribution companies, energy service companies and other potential program delivery agents. The lessons learned from pilot projects supported by the OPA's Conservation Fund will also be analyzed and applied to the design of programs in the 2009 portfolio. For projects being launched early in 2009, procurement processes will be conducted in late 2008.

Efforts to foster the development of a conservation service industry will continue in 2008. A sustainable, competitive supplier industry for conservation products and services will provide consumers with choice, lead to greater efficiencies in the delivery of conservation and over time reduce or eliminate the need for OPA programs, which are funded by electricity ratepayers. The OPA will continue to help build capability in the marketplace through many of its activities, including programs such as a new Commercial Buildings New Construction initiative and a broadened suite of demand response initiatives.

The Conservation Fund also has a part to play in this evolution. For example, the pilot projects help to build the capability of sectoral associations to offer value-added conservation-related services to their members. New pilot projects funded in 2008 will continue to help identify and develop new conservation delivery channels in Ontario.

Developing public awareness will be another key focus of the OPA's activities in 2008. The CECO will continue his work to engage individuals, communities, institutions and businesses in electricity conservation. He will take advantage of opportunities to speak publicly across the province to raise awareness of the importance and benefits of conservation. He will also recognize individuals and organizations that show leadership through their conservation-related actions by presenting certificates of recognition and business leadership awards. The OPA will also develop education programs for Ontario youth and promote brand awareness of "Every Kilowatt Counts" through advertising and social marketing campaigns. "Every Kilowatt Counts" will become the overarching brand used in the programs to raise awareness of the importance of conservation and to influence behaviour toward wiser use of electricity. In this way, the OPA will deliver a cohesive and unified voice on conservation.

The OPA is projecting 15 MW in electricity savings by 2010 from recently implemented changes to codes and standards. The CECO will continue to be a voice for policy and regulation changes to promote energy efficiency. He will work with industry participants to identify opportunities for improved energy efficiency and advocate for improvements in equipment and appliance standards and building codes.

Another 70 MW of savings in electricity demand is expected to be achieved by 2010 with a new fuel switching program. The OPA will consult with relevant stakeholders, including the natural gas local distribution companies, on the program design in 2008.

The Chief Energy Conservation Officer is required to report annually to the Minister of Energy and the people of Ontario on conservation progress. In May 2008, he will issue a supplement to the 2007 CECO Annual Report to announce final 2007 results. In November, he will issue the 2008 CECO Annual Report, a comprehensive account of the year's conservation activities and results, future plans, and current policy and regulatory barriers and opportunities.

As in previous years, promoting the development and commercialization of new technologies that have the potential to improve electricity supply, conservation or demand management

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will be another key activity in 2008. The strategy and funding guidelines for the Technology Development Fund will be reviewed and revised as necessary.

We will achieve Strategic Objective 2 by:

- Implementing and managing the 2008 portfolio of conservation programs.
- Identifying a 2009 conservation program portfolio that contributes to Ontario's conservation goals.
- Procuring and/or designing the programs in the 2009 portfolio.
- Fostering the development of a conservation service industry through procuring conservation services rather than directly providing programs wherever prudent to do so.
- Building public awareness and a conservation culture.
- Promoting policy and regulatory opportunities that support energy efficiency by working with the government to identify priorities and undertaking research to support minimum energy performance standards.
- Establishing an evaluation, measurement and verification system to track the results of conservation programs.
- Reporting publicly on conservation progress in Ontario.
- Continuing to promote development and commercialization of new technologies consistent with the OPA's mandate through the Technology Development Fund.

You will see that we have met this objective when:

- Twenty-nine programs have been implemented in 2008 and are delivering electricity savings.
- A situational analysis of the conservation marketplace has been completed and the portfolio of programs has been planned for 2009.
- A request for proposals (RFP) has been issued for the design and delivery of some of the 2009 conservation programs.
- Research and development is contractually committed, underway or completed to the full extent of the Conservation Fund.
- An innovative, market-driven, conservation service industry has begun to develop, pre-commercial pilot projects focused on conservation are operational, and capability building is taking place in target market sectors.
- Public opinion research shows that awareness of electricity conservation is rising.
- The OPA has developed a plan for minimum energy performance standards to support achievement of the government's conservation goals.

- New technologies and evolving codes and standards have been evaluated and assessed for their relevance, both to the conservation portfolio and the future needs of the system.
- Program results are being evaluated, measured, verified and reported on an annual basis and portfolio reports are being produced to track program results against planned targets.
- Mid-year progress reports on the programs delivered in 2007 by local distribution companies have been produced.
- The CECO has issued his 2008 Annual Report.
- The Technology Development Fund has been fully committed and is leveraging contributions from others for developing technologies that are consistent with the IPSP and the OPA's mandate.

	2008 Budget	2007 Budget	Variance
Conservation	27,778,526	22,253,377	5,525,149

Strategic Objective 3

Consistent with the IPSP, ensure that the Province of Ontario has diverse electricity generation resources.

Strategic Context

While the province's conservation targets are ambitious, conservation alone will not be enough to meet Ontario's projected demand for electricity over the next 20 years, as well as replace about 70 percent of our current supply capacity that will be lost over the next 10 to 15 years due to the phase out of the coal-fired plants and the replacement or refurbishment of the nuclear plants as they reach the end of their service lives.

The Government of Ontario began to address this significant electricity supply challenge in 2004, with competitive procurement processes for clean energy and renewable energy supply projects. When the OPA began operations in early 2005, it took over management of the contracts that were signed by the government and assumed responsibility for the procurement of additional supply for the province where the market was not meeting the need.

Since then, there has been encouraging progress in ensuring that Ontario has adequate and diverse electricity generation resources. The OPA is currently managing 40 supply contracts for more than 10,000 MW of new electricity supply, ranging from renewable projects to natural gas-fired cogeneration plants to contracts with Bruce Power to refurbish four of its nuclear units. In addition, by September 2007, 140 contracts had been signed for projects under the OPA's Renewable Energy Standard Offer Program, for almost 600 MW of electricity from wind, solar, biomass and hydro sources. A Clean Energy Standard Offer Program, designed to encourage the development of clean energy projects of 10 MW or less, such as combined heat and power plants, is in development and will be launched in the fall of 2007.

In 2008, the OPA will focus on procuring new electricity supply for high priority areas of the province where there is a critical need to improve reliability, including the northern York Region, the Greater Toronto Area and southern Ontario. Once the IPSP is approved by the OEB, the OPA will be responsible for procuring additional electricity supply resources as identified in the plan.

A process to determine the appropriate type of procurement to launch – competitive, sole-source or standard offer – has been developed and is included with the IPSP for OEB review. This is the same process that the OPA has used to date and will continue to use in 2008.

Contract design and management will also be key activities in 2008. A review of contracts in competitive jurisdictions will be carried out to ensure that best practices are being used and that the terms being offered are competitive. The OPA will also consult with stakeholders on appropriate contract designs and incorporate lessons learned from managing the growing number of facilities now under contract from earlier procurement exercises. Procurement processes will also be reviewed and revised as necessary to recognize any duty the Crown may have to consult with affected First Nations. As well, potential revisions related to realizing value from environmental attributes, renewable energy credits or carbon offsets will be investigated.

In 2008, managing the current portfolio of supply contracts that have an aggregate life-time value of more than \$11 billion will entail ongoing communications, including site investigations, to monitor the progress of permitting, approvals and construction of the projects, as well as any actions that may be required to address issues as they arise. The goal is to ensure that all contractual milestones are met. Contract management also includes managing the financial settlement of procurement contracts – ensuring that monthly payments are made to projects that are operational and generating electricity for the province.

Also in 2008, the OPA will continue to review applications and sign contracts for renewable and clean energy projects under the Renewable Energy Standard Offer Program and the Clean Energy Standard Offer Program. As well, the programs will be improved as experience builds from their ongoing operation. Options for the long-term management and administration of the standard offer programs will also be explored with the participation of relevant stakeholders.

We will achieve Strategic Objective 3 by:

- Using a standard procurement process as set out in the IPSP.
- Designing contracts that are efficient vehicles for procuring generation and efficiently allocating risk between customers and developers.
- Managing contractual obligations and financial settlement of procurement contracts.
- Implementing and managing the standard offer programs.

You will see that we have achieved this objective when:

- Additional contracts have been signed for the development of new electricity supply projects that meet the targets identified in applicable government directives or the IPSP.

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- Supply contracts compare favourably to those in other jurisdictions in ensuring that necessary capital investments occur while economically allocating risk between customers and developers.
 - The growing number of supply contracts are being effectively administered and counterparty issues are being efficiently managed and addressed as they arise.
 - The OPA has consulted with stakeholders regarding the standard offer programs and is engaged in continuous improvement of the contracts for the benefit of electricity users.

	2008 Budget	2007 Budget	Variance
Electricity Resources	8,807,192	8,339,495	467,697

Strategic Objective 4

Define sector development goals and facilitate the efficient allocation of risk between customers and investors in conservation and generation.

Strategic Context:

The OPA is also working to support the continued evolution of the electricity sector. The goal is to transfer to the private sector much of the risk that is currently borne by electricity customers and that is associated with investment in generation and conservation. This will be achieved when generating capacity is built without the need for support contracts from the OPA and when conservation programs are being designed and delivered by a healthy conservation service industry, instead of being initiated and funded by the OPA. To this end, one of the key strategies we are pursuing on the supply side is fostering the creation of a forward price signal for electricity to encourage commercial investment in new supply and conservation.

Progress in this area has been necessarily slow but has also been steady. The OPA facilitated a series of forward auctions in 2006 involving about \$1 billion worth of future electricity products. In 2007, Ontario electricity products began to trade on the Natural Gas Exchange (NGX), a wholly owned subsidiary of the TSX Group, which also owns and operates the Toronto Stock Exchange and the TSX Ventures Exchange. While the volumes have been relatively small compared to other commodities traded on NGX, it is an encouraging start. As the traded volume increases, a more robust forward price curve will develop for Ontario electricity.

In 2008, the OPA will examine the use of forward markets in other jurisdictions as well as continue to monitor progress in the development of a forward market for Ontario electricity products. We will also develop a structure to enable the OPA to participate in the sale of supply into the forward market. As part of this initiative, heat-rate contracts will be developed to help promote the efficient use of cleaner, natural gas-based generation units.

The OPA also plans to continue work with the Independent Electricity System Operator (IESO) to develop the sector. We will participate in and provide information to the IESO's stakeholder consultations on a day-ahead market and the Market Pricing Working Group.

Another important initiative in 2008 will be the continued development of a load serving entity (LSE) approach for Ontario. Load serving entities are independent organizations that act as bulk purchasers of electricity on behalf of smaller consumers and provide the benefit of locked-in prices to these customers. The experiences of other jurisdictions with this approach will be examined and the feasibility of implementing an LSE program in Ontario will be assessed. The OPA will complete a report on the results of the LSE consultation process undertaken in 2007, with recommendations on how to effectively implement an LSE

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program in Ontario. We will then consider filing with the OEB an application to implement an LSE program.

Also in 2008, the OPA will explore policy options for realizing the value of the environmental attributes associated with its supply and conservation contracts. These environmental attributes could be manifest as renewable energy credits, carbon offsets or other avoided emission certificates. We will consult with our contract counterparties for their views on the treatment of environmental attributes. An inventory of OPA-contracted environmental attributes will also be compiled. In addition, recommendations on an appropriate framework for value realization of environmental attributes will be developed and shared with industry and the government. The OPA is also considering facilitating a pilot auction of environmental attribute products in 2008. Any value captured would be credited to electricity customers either as a rebate on electricity costs or in reducing the cost of new renewable supplies and conservation.

We will achieve Strategic Objective 4 by:

- Continuing to support the development of a forward market for electricity.
- Working co-operatively with the IESO and other industry participants to develop a phased-in process for sector development.
- Continuing to develop an LSE approach for Ontario.
- Exploring policy options for realizing the value of environmental attributes that will help deliver value for ratepayers.

You will see that we have achieved this objective when:

- There is a steady increase in the volume of Ontario electricity products that are exchange-traded and heat-rate contracts for natural gas-based generation units begin trading.
- The cooperative work between the OPA and the IESO has resulted in further development and potential implementation of a day-ahead market for electricity in Ontario, along with progress having been made on reliability contracts.
- A report has been released that outlines the results of the LSE consultation process, including recommendations on how to effectively implement an LSE program in Ontario.
- A consultation with selected OPA counterparties on the treatment of environmental attributes has been completed and an inventory of OPA-contracted environmental attributes has been compiled and registered with an accredited registry. A pilot initiative for Renewable Energy Certificate price transparency has been completed.

	2008 Budget	2007 Budget	Variance
Sector Development	1,334,507	890,803	443,705

Strategic Objective 5

Maintain and develop organizational capacity to achieve the strategic objectives.

Strategic Context

To help achieve its strategic objectives, the OPA depends on the contributions of a number of internal service groups. These groups provide support and guidance to the organization through technical expertise, information infrastructure and management capabilities needed to help deliver on the OPA's important mandate.

In 2008, the OPA will rely heavily on the support of its legal, regulatory and communications services group throughout the OEB's reviews of the IPSP and the 2009 Revenue Requirement Submission. The group will also continue to provide general legal counsel on matters ranging from the OPA's powers and duties to advice on procurement processes and drafting of contracts. Legal and regulatory services will also support the OPA's Board of Directors, helping to ensure the Board's effective functioning and enhancing its ability to provide strategic oversight to the organization.

The corporate communications section will work to establish the OPA as an authoritative source of electricity information in 2008, manage issues effectively to ensure the public receives accurate messages, and enhance stakeholder and customer relationships. Electronic technology, webcasts and web-based information as well as public speaking engagements, ongoing media and government relations initiatives, printed reports and brochures will be used to engage and inform both internal and external audiences.

Human resources will continue to play a pivotal role in the organization's plan for 2008. Hiring of new staff to address regular turnover as well as growth of the organization will be an ongoing priority. Initiatives will also be undertaken to ensure high levels of staff retention and help the organization continue to attract high-calibre employees, including the introduction of new training and development programs. Recognizing that the OPA has an ongoing need for highly skilled and experienced staff members in a rapidly transitioning industry, a management development strategy and a succession planning process will be created to help prepare tomorrow's leaders and effect smooth succession plans.

Assurance that the OPA's financial resources are being effectively and transparently managed will be provided by the organization's finance and business services group. In 2008, this group will continue to lead the organization's financial stewardship and reporting, strategic and business planning, risk management, budgeting and forecasting initiatives. Following a major review and redesign of the organization's financial reporting system in late 2007, a new structure will be implemented in 2008. The OPA will also develop and implement new internal control procedures in 2008 based on the results of a risk-based internal control assessment to be undertaken in the fall of 2007.

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Managing the complete roster of information services for the organization is the responsibility of the OPA's information systems group. Its support will be critical as the organization looks for more and improved ways to store and manage the results of conservation programs and support its conservation program evaluation, measurement and verification efforts.

We will achieve Strategic Objective 5 by:

- Providing the organization with the advice and guidance needed for regulatory filings, managing other legal matters and proceedings and supplying secretariat services to the Board of Directors.
- Supplying the organization with advice and support to communicate effectively with internal and external audiences.
- Providing the necessary leadership, processes and support for recruiting, retaining, compensating, managing and developing the organization's human resources.
- Developing comprehensive, timely and accurate financial and business plans, reports and client-driven administrative services.
- Maintaining the OPA's information management systems, tools, electronic-communication vehicles and storage capacity.
- Developing a method to forecast costs in subsequent years that will provide context for electricity users and participants in Ontario's electricity sector.

You will see that we have achieved this objective when:

- Our applications to the OEB are successfully guided through their regulatory process.
- Opinion polls indicate that the OPA is widely viewed as an authoritative source of information on electricity.
- Programs and strategies are in place to assist employee development and performance, a robust performance management system is in place, the employee retention level is high and employees with appropriate expertise continue to be recruited when necessary and as needed.
- Reliable, accurate financial planning and reporting is being provided to stakeholders, the OPA Board of Directors and management, helping them to monitor the status of programs and plan for the future.
- Computer systems and information storage capacity are reliably meeting the organization's needs, and the whole organization is working effectively through the provision of client-driven administrative support services.

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- The OPA has developed an approach to cost analysis and forecasting that will provide ongoing information on the cost of electricity service in the future.

	2008 Budget	2007 Budget	Variance
Corporate	18,590,141	15,819,748	2,770,393

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Concluding Statement

Since the OPA began operations in early 2005, significant progress has been made in ensuring a reliable, sustainable electricity system for Ontario. Pressing reliability and supply issues are being addressed. A new, sustainable electricity system is taking shape, with new opportunities for innovation and less risk for electricity users. The year 2008 promises to be a time of new challenges and priorities as we move ahead to implement plans and strategies in several key focus areas.

Pro-forma Financial Statements of

ONTARIO POWER AUTHORITY

Plan 2008

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ONTARIO POWER AUTHORITY

Pro-forma Statement of Financial Position

Plan 2008, with comparative figures for Forecast 2007

	2008 Budget	2007 Forecast
ASSETS		
Current Assets:		
Cash and cash equivalents	\$ 63,356,096	\$ 74,127,450
Accounts receivable, net	-	-
Other current assets (note 3)	120,000	120,000
Total Current Assets	\$ 63,476,096	\$ 74,247,450
Retailer Settlement Balance (note 6 and 10)	\$ 48,000,000	\$ 47,000,000
Government procurement deferral account (note 3)	-	1,603,822
Capital Assets (note 5)	6,833,168	5,645,268
TOTAL ASSETS	\$ 118,309,264	\$ 128,496,540
LIABILITIES		
Current Liabilities:		
Accounts payable and accrued liabilities	\$ 4,059,837	\$ 4,059,836
Contract deposits (note 15)	1,535,641	1,535,641
Deferred rent inducement, net (note 8)	923,213	1,059,145
Operating loan (note 10)	13,788,770	17,116,447
Regulated Price Plan Variance (note 4)	81,987,168	91,086,634
Total Current Liabilities	\$ 102,294,629	\$ 114,857,703
NET ASSETS:		
Internally restricted for Conservation and Technology Funds (note 11)	\$ 4,607,822	\$ 4,141,962
Investment in capital assets	6,833,168	5,645,268
Unrestricted / accumulated operating surplus/(loss)	4,573,646	3,851,606
Total Net Assets	\$ 16,014,636	\$ 13,638,836
Commitments (note 8)		
TOTAL LIABILITIES and NET ASSETS	\$ 118,309,264	\$ 128,496,540

See accompanying notes to financial statements.

ONTARIO POWER AUTHORITY

Pro-forma Statement of Operations

Plan 2008, with comparative figures for Forecast 2007

	2008 Budget	2007 Forecast
REVENUES:		
Fees	\$ 67,121,237	\$ 55,282,167
Registration fees	400,000	-
Interest income	-	358,340
Total revenues	67,521,237	55,640,507
EXPENSES:		
Staff and board costs	\$ 23,507,841	\$ 20,047,427
Professional and consulting fees	24,595,730	18,423,621
Conservation/Technology Development Fund expense (note 11)	4,034,140	2,326,714
General operating costs (note 7)	13,518,866	6,948,758
Amortization of capital assets	1,364,661	1,221,665
Total expenses	\$ 67,021,237	\$ 48,968,184
Income before other interest, other income and expense and global adjustment:	\$ 500,000	\$ 6,672,323
OTHER (INCOME) AND EXPENSE:		
Financing costs	500,000	-
Interest on RPP balance	770,000	769,232
Interest on RPP loan	838,390	805,650
Interest on retailers loan	(1,608,390)	(1,574,882)
Total Other (Income) and Expense	\$ 500,000	\$ -
GLOBAL ADJUSTMENTS AND SETTLEMENTS: (note 14)		
Non-utility generation contracts	\$ 400,000,000	\$ 403,573,952
Designated nuclear generation	95,000,000	95,861,628
Designated hydro electric generation	(240,000,000)	(239,643,181)
Global adjustment / provincial benefit	(255,000,000)	(259,792,399)
Total Global Adjustments and Settlements	\$ -	\$ -
Excess of revenues over expenses (expenses over revenue)	\$ 0	\$ 6,672,323

See accompanying notes to financial statements.

ONTARIO POWER AUTHORITY

Notes to Financial Statements

Plan 2008, with comparative figures for Forecast 2007

1) Nature of Operations

The Ontario Power Authority (the “OPA” or the “Authority”) was established as a non-share corporation, on December 9, 2004, by the *Electricity Restructuring Act, 2004* (the “Act”). In accordance with the Act, the OPA’s main objectives are:

- 1) To forecast electricity demand and the adequacy and reliability of electricity resources for Ontario for the medium and long-term.
- 2) To conduct independent planning for electricity generation, demand management, conservation and transmission and develop integrated power system plans for Ontario.
- 3) To engage in activities in support of the goal of ensuring adequate, reliable and secure electricity supply and resources in Ontario.
- 4) To engage in activities to facilitate the diversification of sources of electricity supply by promoting the use of cleaner energy sources and technologies, including alternative energy sources and renewable energy sources.
- 5) To establish system-wide goals for the amount of electricity to be produced from alternative energy sources and renewable energy sources.
- 6) To engage in activities that facilitate load management.
- 7) To engage in activities that promote electricity conservation and the efficient use of electricity.
- 8) To assist the Ontario Energy Board by facilitating stability in rates for certain types of customers.
- 9) To collect and provide to the public and the Ontario Energy Board information relating to medium and long-term electricity needs of Ontario and the adequacy and reliability of the integrated power system to meet those needs.

The Authority’s ability to continue as a going concern is dependent upon its ability to obtain financing to support operations. The OPA’s credit worthiness is provided by:

- (1) The ability of the OPA to meet its obligations is provided for in legislation.
- (2) The OPA’s minimal counterparty risk, given that its principal counterparty will be the IESO, a creation of the province and a strong counterparty.

ONTARIO POWER AUTHORITY

Notes to Financial Statements (*continued*)

Plan 2008, with comparative figures for Forecast 2007

Definitions:

OPA	Ontario Power Authority
RPP	Regulated Price Plan
IESO	Independent Electricity System Operator
NUG	Non Utility Generation
OFA	Ontario Financing Authority
RFP	Request for Proposal
OEB	Ontario Energy Board
OPG	Ontario Power Generation
LDC	Local Distribution Company
HOEP	Hourly Ontario Energy Price

2) Summary of Significant Accounting Policies

Basis of accounting:

The financial statements are prepared in accordance with Canadian generally accepted accounting principles.

Revenue recognition:

Fees earned by the OPA are based upon OEB approved rates for electrical energy withdrawn from the IESO controlled grid by electricity consumers of Ontario. Such revenue is recognized in the period in which it is collected.

Cash and cash equivalents:

Cash and cash equivalents is comprised of bank deposit balances, term deposits and other short term investments with original maturity dates of up to 120 days.

Investments:

Market investments with maturity dates of 121 days or longer are classified as investments and valued at amortized cost. Premiums and discounts are amortized to income over the period to maturity.

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ONTARIO POWER AUTHORITY

Notes to Financial Statements (*continued*)

Plan 2008, with comparative figures for Forecast 2007

Capital assets:

Capital assets are recorded at cost. The capital cost of property and equipment is amortized on a straight-line basis over their estimated service lives, as follows:

Class of Asset:	Estimated Service Life
Furniture and equipment	10 years
Leasehold improvements	length of lease
Computer hardware and software	2.5 years
Audio visual equipment	10 years
Telephone system	5 years

Measurement Uncertainty:

Uncertainty in the determination of the amount at which an item is recognized in the financial statements is known as measurement uncertainty. Such uncertainty exists when it is reasonably possible that there could be a material variance between the recognized amount and another reasonably possible amount, as there is whenever estimates are used. Measurements of uncertainty in these financial statements exist in the valuation of the power purchase contracts and the estimated defeasance date for OPA's obligations. Estimates are based on the best information available at the time of preparation of the financial statements and will be updated annually to reflect new information as it becomes available.

3) Other Current Assets

	2008 Budget	2007 Forecast
Global adjustment recoverable	\$ -	\$ -
Government procurement costs	-	1,603,822
Prepays	120,000	120,000
Other	-	-
Total	\$ 120,000	\$ 1,723,822

The OPA applied for and received approval to establish a deferral account for the Government procurement costs in its 2007 Revenue Requirement Submission to the OEB. This account records the 2006 deferral amount and 2007 expenditures. The OPA will propose a settlement of these costs with its 2008 Revenue Requirement Submission. The costs as paid in 2006 will be received with the settlement of the 2008 Revenue Requirement Submission. Refer to note 14 for information on the legislative authority related to the Government procurement costs.

ONTARIO POWER AUTHORITY

Notes to Financial Statements (*continued*)

Plan 2008, with comparative figures for Forecast 2007

4) The Regulated Price Plan Variance Account

The RPP has been designed to provide stable electricity pricing so that consumers will not experience the volatility from electricity spot market prices.

While prices for RPP consumers are set every six months by the OEB based upon a forecast of the cost of power over the next year, it is likely that there will be a difference between the actual and forecast cost of supplying electricity to all RPP consumers.

The OPA is tracking this variance in the RPP variance account.

To assure smooth prices are provided to residential, small commercial and other designated customers, while recovering the full cost of electricity, this difference will be blended into future prices.

The following outlines the composition of the variance account:

	2008	2007
	Budget	Forecast
Ontario Power Generation rebate contribution	\$ (22,165,836)	\$ (15,795,042)
Total RPP variance before interest	(69,821,332)	(88,969,918)
Interest earned	10,000,000	13,678,326
Total	\$ (81,987,168)	\$ (91,086,634)

The OPA receives payment of the OPG rebate for RPP customers to apply against the outstanding RPP variance. The calculation of the rebate is on a lagging three-month basis and payment is quarterly by OPG.

5) Capital Assets

	Furniture & Equipment	Leasehold Improvements	Computer Hardware & Software	Audio/Visual Equipment	Telephone	Total
2006 Net Book Value	\$ 1,274,121	\$ 1,393,411	\$ 610,572	\$ 124,876	\$ 112,990	\$ 3,515,970
2007 Additions	1,158,796	1,385,983	502,000	108,000	86,685	3,241,464
2007 Amortization	(213,870)	(260,800)	(576,849)	(20,910)	(39,737)	(1,112,166)
2008 Additions	627,000	1,401,542	496,520	-	27,500	2,552,562
2008 Amortization	(309,598)	(459,909)	(514,922)	(26,910)	(53,323)	(1,364,662)
Ending Net Book Value	\$ 2,536,449	\$ 3,460,227	\$ 517,321	\$ 185,056	134,115	6,833,168

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2008 Business Plan

ONTARIO POWER AUTHORITY

Notes to Financial Statements (*continued*)

Plan 2008, with comparative figures for Forecast 2007

6) Retailer Settlement Balance

Legislation provisions ensure that electricity retailers will be made whole by the OPA for contracts with low-volume and designated consumers that were entered into before prices were frozen by legislation effective November 11, 2002. These provisions are achieved by the OPA and retailers settling any differences between the HOEP and the contract price for each contract. When HOEP is below the contract price, the OPA will make payments to the retailers. When HOEP is above the contract price then the OPA receives a payment. Many of the retailer contracts that were in effect on November 11, 2002 had terms of three to five years. As a result, the number of contracts and associated volumes will decline as these contracts expire. It is expected that by November 2007, all of these contracts will have expired.

7) General Operating Costs

	Forecast 2008	Forecast 2007
General program costs	\$ 6,221,707	\$ 3,576,954
Information technology	558,500	209,508
Premise	2,639,374	2,441,211
Office and administration	883,988	721,085
Contingency fee	3,215,297	-
Total	\$ 13,518,866	\$ 6,948,758

ONTARIO POWER AUTHORITY

Notes to Financial Statements (*continued*)

Plan 2008, with comparative figures for Forecast 2007

8) Commitments

The OPA entered into two new long-term lease commitments for office space during the fiscal year 2006, which included various lease inducements. Deferred rent inducement represents the benefit of operating lease inducements amortized on a straight-line basis over 10 years being the term of the lease. In addition to a rent-free period until May 2006 (valued at \$212,589) for the initial lease, the OPA received an additional rent-free period on a portion of the new space until May 15, 2007 (valued at \$28,728). The OPA initially obtained an allowance for leasehold improvements of \$1,359,332. At December 31, 2007 the deferred rent inducement net of amortization is forecasted to be \$1,059,145. At December 31, 2008 the balance is forecasted to be \$923,213.

In accordance with guidance provided by the Canadian Institute of Chartered Accountants, the OPA reports an average rental cost for premises over the term of the lease agreement and amortizes the benefit of the lease inducements over the same period. At December 31, 2007 the accrued rent liability is forecasted to be \$278,937.

The minimum annual payments under the operating lease are approximately as follows:

Commitments		
2007	\$	804,000
2008		903,000
2009		903,000
2010		920,000
2011		983,000
2012 to 2015		3,729,000
	\$	<u>8,242,000</u>

The lease commitments entered into in 2006 are set to expire consistent with the initial lease terms. All lease commitments are set to terminate on October 14, 2015.

9) Pension Plan

The OPA makes contributions to Ontario Pension Board, a multi-employer plan, on behalf of all staff. The plan is a contributory defined benefit plan, which specifies the amount of the retirement benefit to be received by the employees based on the length of service and rates of pay.

September 2007

2008 Business Plan

ONTARIO POWER AUTHORITY

Notes to Financial Statements (*continued*)

Plan 2008, with comparative figures for Forecast 2007

10) Revolving Line of Credit, Outstanding Promissory Notes:

The OPA has available a revolving operating facility in the amount of \$975 million, provided to it by the Ontario Financing Authority.

	Forecast 2008	Forecast 2007
Operating loan/(investments)	\$ 13,788,770	\$ 17,116,447
RPP loan/(investments)	(81,987,168)	(91,086,634)
Retailer settlement balance	48,000,000	47,000,000
Total outstanding	\$ (20,198,398)	\$ (26,970,187)

All outstanding promissory notes are cleared monthly and replaced with new promissory notes.

11) Internally restricted funds

The Ontario Power Authority established the Conservation Fund to assist electricity conservation projects. Annually fund amounts are set as depicted in the table below.

	Restricted Fund	Expensed Prior Years	Expensed 2007	Expensed 2008	Balance 2007	Balance 2008
2005 Conservation Fund	\$ 1,100,000	\$ 830,096	\$ 269,904	\$ -	\$ -	\$ -
2006 Conservation Fund	1,500,000	300,228	980,778	218,994	218,994	-
2007 Conservation Fund	3,000,000	-	721,236	1,978,138	2,278,764	300,626
2008 Conservation Fund	3,000,000	-	-	700,000	-	2,300,000
2006 Technology Development Fund	1,000,000	1,000	304,796	500,000	694,204	194,204
2007 Technology Development Fund	1,000,000	-	50,000	400,000	950,000	550,000
2008 Technology Development Fund	1,500,000	-	-	237,008	-	1,262,992
Total fund amounts	\$ 12,100,000	\$ 1,131,324	\$ 2,326,714	\$ 4,034,140	\$ 4,141,962	\$ 4,607,822

12) Fair Value of Financial Assets and Financial Liabilities

The carrying amounts for cash, accounts receivable, accounts payable and accrued liabilities approximate their fair values because of the short-term maturity of these instruments. The fair values of the Regulated Price Plan Variance, Operating loan, Revolving loan-Regulated Price Plan and Retailer Settlement Balance are not provided because it would not provide additional useful information as they would be offset and/or would not be practical to determine.

ONTARIO POWER AUTHORITY

Notes to Financial Statements (*continued*)

Plan 2008, with comparative figures for Forecast 2007

13) RFP Costs Transferred to the OPA

Under section 25.18 of the *Electricity Act, 1998*, the OPA is required to reimburse the Crown, or, if so directed by the Minister of Finance, an agency of the Crown for certain costs incurred by the Crown or an agency of the Crown after January 20, 2004 and before the Ontario Energy Board's first approval of the OPA's procurement process under subsection 25.31(4) of the *Electricity Act, 1998*. These costs include costs incurred related to the OPA, a contract to procure supply, capacity or CDM, an initiative that was commenced by the Crown that the OPA has been required to assume under a Minister's directive or a matter within the objects of the OPA.

14) Global Adjustments and Settlements

The OPA carries the responsibility to record the balance of the Global Adjustment account. This is accomplished through the monthly IESO invoicing process. There are three categories of items that are recorded through the global adjustment account. They are; NUG's, Regulated Nuclear and Regulated Hydro as one category, OPA generation procurement contracts and Conservation Demand Management procurements.

The categories of charges (Charge type 193,194,195) are calculated by the IESO based on the individual contracts and the results are either debited or credited via the respective charge types. The net result is either debited or credited to the OPA via charge type 196 on the monthly invoice. Therefore on a monthly basis the charge types 193, 194, 195 produce a net zero impact on the OPA general ledger. The charges for generation procurement contracts under management by the OPA are processed differently.

Generation procurement contracts are contracts under management by the OPA for power supply. On a monthly basis, the OPA estimates the cost of the power supplied and provides the estimate to the IESO. The IESO in turn creates a debit to the OPA account and offsets this amount with a credit to the global adjustment account and invoices the OPA accordingly. The variance between the actual contract settlement and the estimate included on the IESO invoice is carried forward to the estimate for the following month. The variance if any, results in a debit or credit in the OPA general ledger.

The conservation demand management global adjustment charge is similar to the generation procurement contracts. The OPA records the costs incurred in CDM as a receivable from the global adjustment account. Each month the OPA provides an estimate to IESO for invoicing. The IESO generates the invoice credit which is offset in the OPA general ledger by a credit to the receivable and a debit to the general ledger account for the global adjustment. Any variance is carried in the OPA global adjustment receivable account.

ONTARIO POWER AUTHORITY

Notes to Financial Statements (*continued*)

Plan 2008, with comparative figures for Forecast 2007

15) Contract Deposits

Deposit amounts received from RES Customers. The deposit amounts are larger during the construction phase and reduce once the project commences commercial operations. The deposits are classified as current liabilities as the projects are expected to enter commercial operations in 2007.

16) Contingent Liabilities

In the normal course of its operations, the OPA becomes involved in various legally binding agreements. Some of these agreements contain potential liabilities that may become actual liabilities when one or more future events occur or fail to occur. To the extent that a future event becomes likely to occur or fail to occur, and a reasonable estimate of the loss can be made, an estimated liability will be accrued and expense recorded on the OPA's financial statements. As this forecast period, the OPA has no contingent liabilities that have become likely to occur or fail to occur and has recorded no liabilities or expenses on its financial statements. At this time, we do not anticipate the likelihood of any future event occurring, or not occurring, that warrants the recording of a liability and expense. The OPA has one contract outstanding associated with this contract have a value of \$302,044.00. The contingent liabilities connected with these outstanding loans are valid until May 2012.

17) Comparative Figures

Certain comparative figures have been reclassified to conform with the basis of presentation adopted in the current year.

October 1, 2007

The Honourable Dwight Duncan
Minister of Energy
900 Bay Street, 4th Floor
Toronto, ON M7A 2E1

Dear Minister:

I am pleased to submit the Ontario Power Authority's proposed 2008 Business Plan for your approval, in accordance with the requirements under the *Electricity Act, 1998*.

The 2008 Business Plan outlines the key initiatives planned in 2008 toward the OPA's mandate of ensuring a reliable and sustainable electricity system for the benefit of Ontario's consumers.

Respectfully submitted,



Michael Lyle
Acting Chief Executive Officer

Enclosures

STRATEGIC OBJECTIVE 1

PLAN FOR AN ADEQUATE, RELIABLE AND SUSTAINABLE SYSTEM THAT INTEGRATES CONSERVATION, GENERATION AND TRANSMISSION

The first strategic objective for the OPA for 2008 is to plan for an adequate, reliable, and sustainable electricity system that integrates conservation, generation, and transmission.

To meet this strategic objective, three initiatives are being pursued:

- Provide evidence in the regulatory proceedings for approval of the Integrated Power System Plan (the "IPSP" or the "Plan") and consolidate the experience gained from the first IPSP in preparation for the next IPSP;
- continue to address critical local area supply issues in the province; and
- continue to work towards streamlining approval processes and advancing policy development related to power system planning.

The Power System Planning division ("PSP") is the lead business unit, but will work closely with other OPA divisions such as Legal and External Affairs, Conservation and Sector Development, and Electricity Resources to accomplish these initiatives. PSP will also work closely with customers and external parties such as the Independent Electricity System Operator (the "IESO"), transmission and distribution companies, Ontario Power Generation ("OPG"), developers and other stakeholders across the province.

This strategic objective is important because ensuring an adequate, reliable, and sustainable electricity system is critical to the province's economy, prosperity and quality of life.

Actions to Achieve Strategic Objective 1

Initiative 1 – The Integrated Power System Plan

Provide Evidence in the regulatory proceedings for approval of the IPSP. Consolidate the experience gained from the first IPSP in preparation for the next IPSP.

1 After extensive analysis, planning, and stakeholder consultation on the IPSP during the
2 past year, the Plan was filed with the OEB in August 2007 for approval. The OEB will
3 review the Plan in a public hearing process that is expected to take about one year to
4 complete.

5 The IPSP will serve as the blueprint for Ontario's electricity system for the next 20 years. It
6 will provide the basis for immediate decisions that have to be made on energy efficiency,
7 demand management, fuel switching and customer based generation ("Conservation"),
8 generation, and transmission infrastructure; it will develop options for the medium term; and
9 it will preserve opportunities for the longer term.

10 Therefore, a major task for the OPA in 2008 will be to provide evidence in this regulatory
11 proceeding. Supporting the OEB hearing on the IPSP will involve working with the OPA's
12 Legal and Regulatory Services ("LRS") group and external counsel to participate in
13 technical conferences and settlement processes, respond to interrogatories, prepare
14 updates as necessary, review intervenor evidence, prepare cross-examination, arguments
15 and rebuttal of intervenor evidence as required, and provide expert witness testimony.

16 The OPA is required to develop an IPSP every three years to ensure that the Plan is
17 regularly updated to incorporate changing circumstances in the economy, new information,
18 technological innovations, and other developments that could affect the overall Plan. The
19 work required for the next IPSP will commence in 2008 and can be separated into three
20 broad categories:

21 The first is modeling, data gathering, and analysis. In terms of modeling work, the OPA will
22 identify needs for modeling capability, investigate modeling practices in other jurisdictions,
23 and research available models, particularly in the Conservation area. Data gathering will
24 involve updating information currently contained in the IPSP and obtaining new information
25 sources where required. It will also involve monitoring technological and regulatory
26 developments in other jurisdictions for incorporation into the next IPSP.

27 The second category of work is monitoring project implementation progress, load trends,
28 Conservation achievements, policies, and prices impacting the next IPSP.

The third is consolidating and analyzing the lessons learned and experience gained from the first IPSP.

Measures of Success

The following are indicators of success for meeting this first strategic initiative:

- the IPSP has been reviewed and accepted by the OEB as a sound basis for planning;
- required models, data, and their capabilities have been identified for the next IPSP; and
- monitoring of current developments is underway.

Initiative 2 – Local Area Supply Concerns

Continue to address local area supply issues in the province.

Certain areas of the province have electricity supply constraints so critical that near-term solutions are required. The OPA has legislated responsibilities to examine integrated solutions and a role to play in identifying solutions for alleviating near-term local area supply constraints.

The OPA has been working to address local area supply issues and will continue to do so in 2008. Many of the local areas in Ontario with supply concerns are in different stages of the planning process. In some local areas, the needs have already been assessed and a plan has been developed. These areas are now in the implementation phase, but still require support from the OPA for further technical studies and consultation with local municipalities and community groups. Examples include Northern York Region, Kitchener-Waterloo-Cambridge-Guelph, and Downtown Toronto. Work in these areas will include monitoring implementation of the recommended solution and initiating back-up plans if necessary.

In other areas, the OPA will be identifying future needs for areas with upcoming supply concerns by conducting analysis, consultation, and developing plans to recommend solutions that are most appropriate for each specific situation. An example of this type of

work is in the Ottawa area. In these cases, the OPA will define the nature and timing of near-term local area supply concerns in consultation with the IESO, transmitters, and distributors, and identify and assess solutions. Proposed solutions will be determined on the basis of the OPA's planning criteria: feasibility, flexibility, reliability, cost, environmental performance, and societal acceptance. The OPA will also obtain input on potential solutions from stakeholders such as municipal and community leaders, and the general public, and then recommend a preferred solution in coordination with other parties in the electricity sector.

The OPA will also monitor planning choices, trends, and technological and regulatory developments in other jurisdictions for incorporation into future local area supply planning.

Measures of Success

The following are indicators of success for meeting this strategic initiative:

- near-term local area supply concerns have been resolved or solutions have been developed in consultation with local communities, the IESO, transmitters, distributors, developers and other stakeholders; and
- implementation of these plans advances in a timely manner.

Initiative 3 – Policy Development

Continue to work towards streamlining approval processes and advancing policy development related to power system planning.

There are many barriers to the development of electricity infrastructure in Ontario. These barriers include local objections to the installation of electricity infrastructure, lack of zoning for electricity infrastructure in official plans, and complex and sometimes duplicative approval processes. This initiative is important for ensuring that the electricity infrastructure needs of the province are met in a timely fashion. The OPA has a role to play in streamlining approval processes and advancing public policy with respect to these issues.

In order to meet the requirements of this strategic initiative, PSP will monitor, anticipate and influence key policy and regulatory developments relevant to power system planning by

consulting, intervening and providing information and advice through meetings with other industry participants, the Ontario government, and municipalities. The OPA will also monitor relevant policy developments at the national level that could impact Ontario's electricity industry and electricity-related policy developments and best-practices in the United States and internationally. The OPA's goal is to encourage municipalities across the province to incorporate future electricity infrastructure needs in their official plans by designating right-of-way corridors and zoning land for future electricity facilities.

Measures of Success

Indicators of success for meeting this initiative will be:

- steps are taken toward streamlining approval processes; and
- electricity infrastructure has begun to be integrated into municipal planning.

2008 Budget

This budget was derived based on experience in 2007 and on analysis of projected activities and associated costs as described above for 2008. Due to the significant amount of work done in 2007 on the preparation of the IPSP, the OPA is cognizant of the expected costs in transitioning from the preparation stage to the hearing process. Costs incurred for this strategic objective will facilitate an open and transparent process to support planning decisions. The total cost of \$10.4 million will include supporting and participating in the regulatory proceeding for the IPSP (approximately \$5.0 million); initiation of the next IPSP; local area supply concern projects; and work on key policy and regulatory developments relevant to power system planning.

The 2008 Budget for Strategic Objective 1 by major cost category, as well as a summary of the variance between the 2007 and 2008 Budgets can be found in Table 1, including a break-down of the operating costs by division for Strategic Objective 1.

1

Table 1
Strategic Objective 1
Operating Costs
Variance Between 2008 Budget and 2007 Budget
(\$'000s)

Major Cost Category	2008 Budget	2007 Budget	Variance	2007 Forecast
Compensation and Benefits	3,225	2,898	327	3,095
Professional and Consulting Costs	6,669	5,114	1,555	5,326
General Program Costs	517	577	(60)	600
Office and Administration	34	13	21	21
Total Costs	10,445	8,602	1,843	9,042

Division	2008 Budget	2007 Budget	Variance	2007 Forecast
Power System Planing	5,316	5,126	190	6,195
Legal and Regulatory	5,074	3,010	2,064	2,322
Communications	30	466	(436)	525
Information Systems	25	0	25	0
Total Costs	10,445	8,602	1,843	9,042

2

3 The total 2008 Budget will increase by \$1.8 million from the 2007 Budget. The variance
4 between the 2007 Budget and the 2008 Budget is mostly attributable to Professional and
5 Consulting costs via Legal and Regulatory. These costs are comprised of anticipated IPSP
6 intervenor cost awards, legal fees for external counsel in the regulatory process, and
7 consulting fees for expert witnesses to testify in support of the IPSP. Other Legal and
8 Regulatory cost increases are due to expenses for court reporting, transcripts and other
9 OEB-related costs for the IPSP proceeding. Variances in terms of Compensation and
10 Benefits are due to an increase in the number of resources in PSP in order to provide the
11 large amount of work required to support the IPSP regulatory proceeding.

2007 Results

The activities in support of Strategic Objective 1 are possible because of the success of the 2007 activities. In 2007, PSP's successfully completed goals include:

- incorporating feedback, revising the preliminary Plan, and carrying out additional studies based on more recent analysis and stakeholder consultation to prepare the IPSP for regulatory filing;
- filing the Plan with the OEB in August 2007;
- developing and implementing solutions for areas with critical supply issues, in consultation with other parties in the electricity industry, such as the IESO, transmitters, distributors and developers; and
- offering suggestions for regulatory and policy developments based on the understanding gained from planning.

PSP also expects by the end of 2007 to have begun participating in the IPSP proceeding, which will involve working with LRS and external counsel to assist in the determination of an issues list.

The OPA has participated in regulatory and municipal policy development in the electricity sector. One example of this success has been participation in the Technical Advisory Committee for Peel Region planners.

Settlement Commitments EB-2006-0233

Pursuant to the Settlement Proposal in EB-2006-0233, the OPA indicated in Exhibit C-4-1 of the EB-2007-0707 IPSP evidence how the views of stakeholders were taken into account in the development of the IPSP.

The OPA also made a commitment that following the release of the OEB's decision on the first IPSP, the OPA will prepare a report on lessons learned from the IPSP process for the purposes of the development of the second IPSP. This report will be filed as part of the OPA's submission to the OEB for its 2009 revenue requirement case, or if that filing is not made within three months of the release of the OEB's decision on the first IPSP, the report will be provided to stakeholders within that three month period.

STRATEGIC OBJECTIVE 2

CONTRIBUTE TO THE ACHIEVEMENT OF ONTARIO'S CONSERVATION RESOURCE TARGETS AND TO FOSTERING A CULTURE OF CONSERVATION USING MARKET-BASED APPROACHES

The second strategic objective for the OPA for 2008 is to contribute to the achievement of Ontario's Conservation resource targets and foster a culture of Conservation using a market-based approach. For the purpose of this evidence "Conservation" refers collectively to electricity efficiency, demand reduction/Conservation behaviour, self-generation and fuel switching.

Achieving Strategic Objective 2 is primarily the responsibility of the Conservation and Sector Development ("CSD") division and the Chief Energy Conservation Officer (the "CECO"). The work of the Evaluation, Measurement and Verification ("EM&V") group, which is part of the Finance and Administration division, is vital to ensuring the cost-effective achievement of this objective. This strategic objective is also supported by the OPA's other divisions, and details about their work can be found in other exhibits of this application. The 2008 Budget and plan of work for the CSD division and the CECO, as well as a discussion of EM&V plans, are set out below.

Table 1 sets out the targeted savings in megawatts ("MW"), both gross and net of free ridership. Descriptions of individual programs and activities are provided at Tables 3 to 7 below. Customer-based generation programs will contribute to the Conservation target, but fall within the responsibility of the Electricity Resources division. These programs are facilitated through the Renewable Standard Offer Program ("RESOP") and the Clean Energy Standard Offer Program ("CESOP") which are described in the evidence at Exhibit B-3-1. RESOP projects are defined as being less than or equal to 500 kW and CESOP as being less than or equal to 10 MW.

Table 1: Conservation Programs 2008

	Target MW (Gross)	Free Rider Rate - %	Target MW (Net)
<i>Mass Markets</i>			
New Construction Program	1.0	30.0	0.7
Existing Buildings Retrofit	65.0	30.0	45.6
Low Income - Single Family	1.5	30.0	1.1
Aboriginal	0.5	30.0	0.4
Demand Response	40.0	30.0	28.0
Total Mass Market Programs	108.0	30.0	75.8
<i>Commercial/Institutional Markets</i>			
New Construction Programs	26.0	30.0	18.2
Existing Buildings Retrofits	124.1	30.0	86.9
Socially Assisted Housing	11.5	30.0	8.1
Total Commercial/Institutional Market Programs	161.6	30.0	113.2
<i>Industrial Markets</i>			
Industrial Program	25.0	30.0	17.5
Demand Response	115.5	30.0	80.9
Total Industrial Market Programs	140.5	30.0	98.4
Customer-based Generation Programs	28.2	30.0	19.7
Total OPA Resource Acquisition Programs	438.3		307.1

Actions to Achieve Strategic Objective 2

The OPA continues to focus on its role as leader and coordinator of the province-wide effort to reduce peak electricity demand by 1,350 MW by 2010, and an additional 3,600 MW by 2025. In 2008, the OPA will build on the program experience gained in 2007 as it continues with an extensive portfolio of programs.

To meet this objective the following strategic initiatives will be undertaken in 2008:

1. Implement and manage the 2008 portfolio of Conservation programs;
2. Continue to promote development and commercialization of new technologies consistent with the OPA's mandate through the Technology Development Fund;
3. Continue to inform the development of the Conservation portfolio through Conservation Fund projects;

4. Foster the development of a Conservation service industry through procuring Conservation services rather than directly providing programs, wherever prudent to do so;
5. Build public awareness and a Conservation culture;
6. Promote codes and standards opportunities that support energy efficiency;
7. Establish an EM&V system to track the results of Conservation programs;
8. Identify a 2009 Conservation program portfolio that contributes to Ontario's Conservation goals; and
9. Report publicly on Conservation progress in Ontario.

Conservation Organization at the OPA

Conservation program activities are consolidated in the Conservation and Sector Development ("CSD") division reporting to a single vice-president. CSD is divided into six groups: (1) Portfolio Development and Planning, (2) Mass Markets and Conservation Awareness, (3) Commercial and Institutional Markets, (4) Industrial Markets and Demand Response, (5) Channel Development, and (6) Sector Development. Sector Development activities and budget are addressed in Exhibit B-4-1, as they support Strategic Objective 4. The Conservation Bureau continues under the leadership of the CECO and will focus on public leadership and Conservation reporting. The EM&V group continues as part of the Finance and Administration division. This organizational structure was put in place in 2007 to improve delivery of Conservation activities.

Staffing

The OPA has committed approximately 66 full time equivalent employees ("FTEs") across the organization to achieving Ontario's Conservation goals. A break-down of the FTE allocations supporting Strategic Objective 2 is set out in Table 2 below. This increase in staff is discussed below following Table 14.

Table 2: Conservation FTEs

	2008 Budget	2007 Budget	Variance	2007 Forecast
Conservation Programs	41.7	25.6	16.1	30.7
Funds (CF and TDF)	3.0	2.0	1.0	2.9
Codes and Standards	2.0	1.5	0.5	1.7
Portfolio Planning	2.0	–	2.0	–
Conservation Support	5.2	1.0	4.2	3.4
CECO	3.3	1.8	1.5	1.7
EM&V	9.0	1.0	8.0	2.8
Total	66.2	32.9	33.3	43.2

2008 Portfolio of Conservation Programs

In 2008, the OPA will continue to expand its resource acquisition program offerings to contribute to the achievement of Ontario's target of 1,350 MW of Conservation resources by 2010. In 2008, the OPA plans to have 26 programs in market: 18 of these build on programs designed and/or in market in 2007, and eight are new. These programs, plus the customer-side generation projects implemented by the Electricity Resources division, target a reduction in electricity demand of 438 MW. The tables below provide details on the portfolio of programs that the OPA will run in 2008. The programs are organized into the following categories:

1. Mass Market Programs;
2. Commercial/institutional Market Programs; and
3. Industrial Market Programs.

Mass Market Programs

Mass Market programs target residential and small commercial customers. These programs are typically delivered or advertised through mass media, local distribution companies and large retail channels.

In 2008, the OPA will continue seven programs from 2007 and add five new programs.

1 **Table 3: Mass Market Programs for 2008**

	Sector	Program	Description	Gross MW	Net MW*	Directive
1	Demand Management	peaksaver™ Program (LDC Standard Program)	Install devices to curtail central air conditioning and other interruptible residential loads	40	28	July 13, 2006
2	Existing Buildings Retrofit	The Great Refrigerator Roundup Program (LDC Standard Program)	Removal and safe disposal of old appliances	21	15	October 20, 2005 & July 13, 2006
3	Existing Buildings Retrofit	Every Kilowatt Counts Program	Residential educational and incentive booklets delivered across Ontario	2	1	October 20, 2005, March 10, 2006 & July 13, 2006
4	Existing Buildings Retrofit	Cool/Hot Savings Rebate Program	Incentives for select ENERGY STAR products	21	15	March 10, 2006
5	Existing Buildings Retrofit	Provincial Energy Efficiency and Conservation Measures for Aboriginal Communities Program	Technical skills training, education and awareness, community retrofit rollout	0.5	0.4	October 6, 2005
6	Demand Management	Summer Savings Program (LDC Standard Program)	Customers who sign up for the program and are able to reduce consumption by a certain % become eligible to win a suite of energy efficient products. This is proposed to be a significant re-design of the 2007 program.	1	0.7	July 13, 2006

	Sector	Program	Description	Gross MW	Net MW*	Directive
7	Existing Buildings Retrofit	Single Family Low Income Housing Program	Assist income-qualified households manage electricity use and reduce energy cost burden with free electric energy-efficiency and fuel-switching measures.	1.5	1	October 6, 2005
New Programs						
8	New Construction	New Construction Program	Influence single and multi-family residential appliance purchase decisions to high efficiency products at point of new home sale	1	0.7	October 20, 2005, March 10, 2006 & July 13, 2006
9	Existing Buildings Retrofit	Local Distribution Company Custom Programs	Strategic targeting of opportunities in regional, sectoral, economic or demographic sub-sectors	15	10	July 13, 2006
10	Existing Buildings Retrofit	Community Engagement Program	Develop community based delivery channels to deliver education and efficiency measures	2	1	October 20, 2005
11	Existing Buildings Retrofit	New Appliance Program	Leverage work of appliance retirement program and dovetail with national standards for new appliances	2.5	2	October 20, 2005
12	Existing Buildings Retrofit	Home Energy Efficiency	Incentives for "whole home" efficiency retrofits specific to electricity. Look to co-fund with gas LDCs	0.5	0.4	October 20, 2005, March 10, 2006

1 * The "Gross MW" represents the total participation in the program. The "Net MW" is derived by removing the free-riders. A standard
2 30% free-rider rate is used, pending the development of program specific free-rider rates based on program experience.

3 Commercial/Institutional Markets Programs

4 Commercial/institutional markets programs target all commercial, multi-family, institutional,
5 and agricultural customers. These customers are large enough to be contacted directly or
6 through various industry associations, for example, the Building Owners and Managers
7 Association.

8 The OPA will offer seven programs that build on 2007 activities, and plans to add an
9 additional two programs in 2008.

1 **Table 4: Commercial/Institutional Market Programs for 2008**

	Sector	Program	Description	Gross MW	Net MW	Directive
1	Existing Building Retrofit	Electricity Retrofit Incentive Program (LDC Standard Program)	Standard offering of prescriptive products to small, medium and large, commercial, industrial, institutional and agricultural customers. This is a continuation of the Business Incentive program offered in 2007.	19	13	July 13, 2006
2	Existing Building Retrofit	Electricity Conservation on Ontario Farms Program	Education program to encourage farmers to take advantage of ERIP, increase and support awareness of Standard Offer Program, OPA and other LDC programs. This is a continuation of the Agricultural Energy Efficiency program offered in 2007.	1	0.7	June 15, 2005, February 9, 2006
3	Existing Building Retrofit	Commercial Direct Install Program	Turnkey retrofit program including a pre-defined set of energy efficiency measures focused on lighting, HVAC and motors	3	2	June 13, 2006 & July 13, 2006
4	Existing Building Retrofit	Large Commercial Buildings Program	Promotes energy efficiency and fuel switching in large (>25,000 sq ft) buildings. This is a continuation of the programs and activities delivered under the Toronto Directive in 2007.	88	61	June 15, 2005, February 10, 2006, March 10, 2006, & June 13, 2006
5	Existing Building Retrofit	Multi-Family Buildings Program	Financial incentives, operator education and tenant education offered to all multifamily buildings for energy retrofit, with separate streams for social housing, private rental and condominium. This program replaces the Social Housing program offered in 2007.	17	12	October 6, 2005
6	New Construction	High Performance Commercial New Construction	Education, Incentives and Awareness to encourage implementation of energy efficient measures and design in new construction.	6	4	March 10, 2006 & June 13, 2006

	Sector	Program	Description	Gross MW	Net MW	Directive
7	Existing Building Retrofit	Fuel Switching	Working in collaboration with Ontario natural gas LDCs, identify high-potential end-uses for which fuel switching is viable for jointly sponsored delivery.	18	13	March 10, 2006
New Programs						
8	Existing Building Retrofit	Building Re-commissioning	Focus on building operators; provide full re-commissioning and operator training to maintain efficiency gains	5	4	March 10, 2006
9	Existing Building Retrofit	Institutional Program	Focus on targeted programs in the institutional market; incentive and education-based	5	4	March 10, 2006

Industrial Market Programs

Industrial market programs target industrial customers. The emphasis for this sector is both on improving technology and industrial process efficiency, and on developing energy management knowledge, expertise and acceptance at all levels of the organization. Building expertise in the service and supply chains that serve the industrial market is also an area of interest. Industrial markets are the primary targets for the Demand Response (“DR”) programs.

For 2008, the OPA will implement the industrial efficiency program designed in 2007, will continue the three DR programs, and add one new DR program, developed based on the learnings and observed gaps from the existing programs.

Table 5: Industrial Market Programs for 2008

	Sector	Program	Description	Gross MW ¹	Net MW	Directive
1	Demand Response	Demand Response 1	Voluntary demand response product targeting up to 350 highest priced peak hours per year	1.5	1	June 15, 2005 & February 9, 2006
2	Demand Response	Demand Response 2	High reliability contractual load shifting product; achieve load shifting from On-Peak to Off-Peak during 1000 to 2000 hours of intermediate peak load days.	14	10	June 15, 2005 & February 9, 2006
3	Demand Response	Demand Response 3	High reliability contractual load shedding product; target 100-200 highest value peak hours	88	62	June 15, 2005 & February 9, 2006
4	Industrial Programs	Industrial Process and Technology	Suite of programs to be developed targeting all sizes of industrial customer. Program will target efficiency improvements and address business culture improvement and the embedding of energy efficiency in decision making	25	17	June 13, 2006
New Programs						
5	Demand Response	Demand Response 4	A placeholder to address any identified gaps in the existing DR suite	12	8	June 15, 2005 & February 9, 2006

Conservation and Technology Development Funds

The Conservation and Technology Development Funds are innovative initiatives that the OPA has developed to build capability in the market, accelerate the adoption of Conservation, and to stimulate market transformation.

Conservation Fund

The goals of the Conservation Fund (the "CF") are to:

- build marketplace capability for the design, delivery, marketing and uptake of Conservation programs;
- test new or unique Conservation program elements; and
- use the results from pilots to help inform the development of future Conservation programs.

¹ These savings are incremental to savings still under contract from 2007

1 Funding available for commitment to new projects in 2008 will be \$3.0 million, consistent
2 with 2007. Since its inception in 2005, the CF has provided assistance to 44 pilot projects
3 and, with a cumulative expenditure of \$3.9 million, has leveraged an additional \$8.0 million
4 in resources from partner organizations.

5 In 2008, development will begin on a new initiative to complement the work of the CF in
6 incubating program concepts and building market capability. The new initiative would offer
7 funding for pilots which are reasonably able to deliver cost-effective Conservation
8 resources in limited or niche applications that are not well covered by existing province-
9 wide programs. This initiative would complement the CF by providing an additional vehicle
10 beyond the pilot phase for niche programs that are ready to deliver Conservation resources
11 in a niche market under contract. These initiatives, in combination with province-wide
12 resource acquisition programs, would constitute a feeder system extending from the
13 incubation of program concepts and/or new delivery channels through the CF, to
14 acquisition of niche market programs that can complement existing OPA programs in
15 delivering Conservation resources.

16 As well, guidelines, application processes and project reporting will be amended to
17 harmonize with the OPA's emerging EM&V approach. This will enable parallel metrics to
18 be applied to CF projects to better inform internal decision-making on whether or not to
19 provide continued pilot funding, or to consider the pilot as a candidate for resource
20 acquisition.

21 Technology Development Fund

22 The purpose of the Technology Development Fund (the "TDF") is to provide funding for
23 projects that promote the development and commercialization of technologies or
24 applications that have the potential to improve electricity supply, Conservation or demand
25 management. Note that while the TDF does not apply solely to Conservation initiatives, it
26 focuses exclusively on technologies or applications that are pre-commercial or are facing
27 barriers to commercialization, and provides funding for further study, development,
28 demonstration or performance verification.

1 Funding available for new projects in 2008 will increase by \$500 thousand to \$1.5 million to
2 accommodate anticipated additional activity and interest in emerging technologies, and
3 reflects the OPA's intentions to begin funding projects through its non-technical review
4 processes in 2008.

5 In 2006, agreements with two managing institutions were signed with the Ontario Centres
6 of Excellence (the "OCE"), and CEA Technologies, Inc. ("CEATI"), through which the OPA
7 leverages considerable expertise related to new and emerging technologies. To date,
8 \$900 thousand from the OPA has been provided to 15 projects, leveraging over \$11.0
9 million in partner funding. The managing institution structure of the TDF has provided the
10 OPA with access to two significant networks of technical expertise in the field of new and
11 emerging technologies. In the case of the OCE, the OPA leverages the expertise of staff
12 and expert technical reviewers from Ontario universities and businesses. In the case of
13 CEATI, the OPA leverages the expertise of leading utilities and energy-related agencies
14 from across North America.

15 In addition to the expertise leveraged through its two managing institutions, the OPA will
16 undertake research in 2008 that is informed by the IPSP, the OPA's Conservation portfolio
17 and the best recent emerging technologies research related to Conservation, generation
18 and relevant electricity system technologies. This research will help guide the selection
19 process used by the OPA and its managing institutions.

20 **Building Public Awareness and a Conservation Culture**

21 Developing public awareness is a key focus of the OPA's activities in 2008. While these
22 activities are not expected to generate electricity savings in the short term, they will
23 contribute to building a base for sustained, market-based Conservation. These activities
24 will be undertaken by the CECO, as well as staff from the Mass Markets and Conservation
25 Awareness group and the Corporate Communications group. A summary of Conservation
26 Awareness programs can be found at Table 6 below.

1 **Table 6: Conservation Awareness Programs**

Program	Description
Chief Energy Conservation Officer Public Leadership	• Public speaking to raise awareness • CECO website • Summer messages program • Powerlines radio show • Certificates of Recognition
Conservation Awareness	• Market research (Consumer and Business markets) • Website development and maintenance • Brand development • Call centre management • Advertising, marketing and social marketing activities
Education Awareness	• Interactive energy Conservation displays in public venues • School energy Conservation program • Youth Challenge Fund program
Business Leadership	• Business leadership awards program

2 **Promoting Codes and Standards**

3 Codes and standards setting out minimum energy efficiency levels are a proven and
4 reliable way of generating sustainable energy efficiency savings.

5 In 2008, the OPA will continue to take a leadership role in promoting regulation of minimum
6 energy performance standards ("MEPS") to achieve the long-term Conservation goals of
7 Ontario. A summary of 2008 activities can be found at Table 7 below.

Table 7: Codes and Standards Activities

Activity	Description
Research & Planning	- The identification of and justification for increases to commercial and industrial sector MEPS based on priorities identified in the IPSP - Work with government and utilities to refine and collaborate on data collection, evaluation and reporting of MEPS work
Institutions & Process	- Identify key institutions and influencers and develop account management plans designed to accelerate the process of improving MEPS - Work with other utilities and governments to improve the process to achieve MEPS regulation in Ontario and Canada, including research regarding best practice. Work with the Forum for Energy Efficiency Leadership to achieve this end. - Participate in appropriate groups to share knowledge and best practices and collaborate on action
Standards Development	- Participate in CSA groups, including the Steering Committee on Performance, Energy Efficiency and Renewable Standards, as appropriate - Fund the development of standards to support OPA priorities at the CSA or other standard development agencies, as appropriate
Promoting Regulation	- Develop and implement program to improve MEPS of commercial and residential cooling, as appropriate - Continue with activities from 2007 to increase MEPS for residential appliances to support OPA and provincial appliance programs and tax incentives, if necessary - Support federal government's lighting and stand-by power programs, as needed

Planning the 2009 Portfolio

The Portfolio Development and Planning group is responsible for leading the planning effort for the portfolio of Conservation programs and activities for the OPA. Planning is undertaken on an annual basis.

The planning process has three distinct stages: (1) situation assessment; (2) target setting and program prioritization; and (3) portfolio finalization. The 2008 planning process for 2009 will also include the development of longer-term market transformation targets, in addition to short-term resource acquisition targets, to guide the portfolio development process.

CECO Reporting

In May 2008, the CECO will issue a supplement to the 2007 CECO Annual Report to announce final 2007 results. In November 2008, he will issue the 2008 CECO Annual Report, a comprehensive account of the year's Conservation activities and results, future plans, and current policy and regulatory barriers and opportunities.

The CECO will continue to be a voice for policy and regulation changes to promote energy efficiency. He will work with industry participants to identify opportunities for improved energy efficiency and advocate for improvements in equipment and appliance standards and building codes.

Evaluation, Measurement and Verification

EM&V is an integral part of the OPA Conservation activities. EM&V is used for three primary purposes:

- Confirming that the province has met its Conservation targets;
- Enhancing the quality of the data used for forecasting and to verify the feasibility of Conservation potential for planning purposes; and
- Informing new and existing program design and development.

The EM&V group reports through the Finance and Administration division of the OPA. This separation of EM&V from the Conservation Programs reporting structure allows the EM&V group to deliver its mandate of establishing the actual effectiveness of Conservation programs in an unbiased way.

In 2008, every Conservation program will have an evaluation plan. Evaluations will be carried out for the majority of the portfolio, considering program progress and results schedule. The OPA plans to implement a web-based Conservation program activity tracking system in 2008 that will also be utilized by staff in the EM&V group.

In order to provide transparency and information to the market and key stakeholders, the OPA will:

- 1 • Verify savings results that are reliable for planning purposes;
- 2 • Compare planned, reported and verified results, and identify the reasons behind the
- 3 differences;
- 4 • Provide reasonable assurances to all interested parties that verified benefits are
- 5 being attained and program spending is cost-effective; and
- 6 • Provide feedback on program design and delivery to facilitate continuous
- 7 improvement of the ongoing OPA Conservation program portfolio.

8 Measures of Success

9 For 2008, the OPA's success metrics include:

- 10 • Twenty-six (26) resource acquisition programs have been implemented by the end
- 11 of 2008 and are delivering electricity savings;
- 12 • The Conservation Fund has informed the development of the Conservation portfolio;
- 13 • The Technology Development Fund has leveraged funding from other partners to
- 14 help developing technologies that are consistent with the IPSP and the OPA's
- 15 mandate;
- 16 • Public opinion research shows that awareness of electricity Conservation is rising;
- 17 • New and emerging technologies and evolving codes and standards have been
- 18 evaluated and assessed for their relevance, both to the Conservation portfolio and
- 19 the future needs of the system;
- 20 • A situational analysis of the Conservation marketplace has been completed and the
- 21 portfolio of programs has been planned for 2009;
- 22 • Requests for proposals have been issued for the design and delivery of some of the
- 23 2009 Conservation programs;
- 24 • The CECO has issued his 2008 Annual Report;
- 25 • Program results are being evaluated, measured and verified on an annual basis and
- 26 quarterly portfolio reports are being produced to track program results against
- 27 planned targets; and
- 28 • Mid-year progress reports on the programs delivered in 2007 by local distribution
- 29 companies have been produced.

30 **2007 Results**

31 In 2007, the OPA's strategic objective relating to Conservation was to "execute on
32 prioritized Conservation initiatives, build CDM capability across all sectors and advance a

sustained Conservation culture”, i.e. Strategic Objective 1. The success metrics for 2007 were:

- Several major Conservation programs have been implemented and are producing electricity savings. These reductions are being tracked by an established EM&V process to determine the contributions of these programs towards the 2007 target;
- An initial set of Conservation programs is in place and consistent province-wide;
- The OPA reports that the province has met the 2007 target of 1,350 MW;
- The OPA has identified regulatory and policy barriers to energy efficiency and advocated for change through formal and informal consultations with the government; and
- The Chief Energy Conservation Officer has monitored progress towards Conservation targets and reported on the findings in his Annual Report, which will be submitted to the OPA Board of Directors and Minister of Energy.

As outlined in the evidence below, the OPA was successful in fulfilling these broad objectives. In its EB-2006-0233 evidence before the OEB, the OPA indicated that it planned to deliver 19 resource acquisition programs and a suite of Conservation awareness activities. The OPA is currently projecting that 17 programs will be in market by the end of the year, with one program in the procurement stage, and two in design stage, for a total of 20 programs. The delay in delivery of some programs is a result of a number of factors:

- Underestimation of the complexity of the task of designing and drafting contracts for a number of the programs, including the LDC suite of programs and the initiative known as “Demand Response 3”;
- Greater than expected difficulty locating qualified delivery partners; for example the new construction program was significantly delayed as no qualified delivery agents responded to the OPA RFP for this program; and
- More extensive need to consult and hold stakeholder sessions than originally anticipated, for example, for the DR consultations, and stakeholder process for the multi-unit residential building programs.

Conservation Programs Implemented

In 2007, the OPA worked on 20 resource acquisition programs, as well as a number of Conservation Fund, Technology Development Fund, Conservation Awareness, Codes and

1 Standards programs. These programs were supported by research, marketing and
2 evaluation activities. These programs and activities are discussed in this section of the
3 evidence.

4 Resource Acquisition Programs

5 In EB-2006-0233, the OPA stated that it would deliver 19 programs to achieve savings of
6 40 to 50 MW in the mass markets and 225 to 250 MW in the business markets. The OPA
7 is currently projecting that it will have worked on 20 programs by the end of 2007. The
8 status of these programs is set out in Table 8: 17 are delivered in market, one is in the
9 procurement stage and two are in the design stage. The programs have been re-classified
10 to match the 2008 portfolio. Specifically, the City of Toronto, Toronto Hydro and BOMA
11 initiatives were counted as three programs in 2007, while in 2008 they are counted as one;
12 and DR 1 and 2 were counted as one program in 2007, while in 2008 they are counted as
13 two. Results from these programs will not be available until 2008, and will be released in
14 the CECO mid-year report, as well as in evaluation reports posted on the OPA web site.

1 **Table 8: 2007 Program Status**

	Mass Market Programs		Design	Procurement	In market	Comments
1	Home Heating and Cooling Efficiency ("Cool Savings and "Hot Savings")	Education and incentives to improve efficiency of existing and displacement residential heating and cooling			x	
2	Every Kilowatt Counts ("EKC") Residential Education and Incentive	Education and incentives to manage residential consumption			x	
3	Residential Demand Response	Infrastructure and incentives for aggregated load control for residential and small business - LDC delivery			x	This program is being delivered through the LDC channel
4	Appliance Retirement	Removal and recycling of old, inefficient appliances			x	This program is being delivered with the support of the LDC channel
5	Summer Savings Challenge 10-10	Incentives for residential consumers to reduce consumption during summer months			x	This program is being delivered through the LDC channel. In 2008, it will be delivered in modified form.
6	Single Family Low - Income Housing	Provision of lighting and insulation at no cost in conjunction with social benefits agencies and LDC's			x	This program was delivered as a pilot in 2007. In 2008 it will be delivered province wide. In the 2007 rate application, this program was listed within the Business Markets sector.
7	First Nations	Education, awareness and energy audits focused on low-cost initiatives			x	In 2008, this is called the Provincial Energy Efficiency Conservation Measures for Aboriginal Communities Program
	Business Market Programs					
8	Business Incentive Program – Standard Offer	Incentives provided for energy efficiency retrofits for both prescribed and custom projects			x	This program is delivered through the LDC channel. In the 2007 rate application, this was counted in the Mass Market sector.
9	Direct Install	Installation teams at point of sale to facilitate lighting and HVAC retrofits for small commercial sector			x	This program was delivered as a pilot program through the CF. For 2008, this program will be included in the Commercial and Institutional programs

	Mass Market Programs		Design	Procurement	In market	Comments
10, 11, 12	Toronto Directive	Custom energy efficiency (retrofit and new construction) and demand response projects for all sectors delivered by Building Owners and Managers Association, Toronto Hydro and the City of Toronto.			x	In the 2007 rate application, this program was described as three separate programs: City of Toronto, BOMA, and Toronto Hydro.
13	Social Housing	Education, training resources and financial assistance to promote energy efficiency in social housing			x	In 2008, this will be replaced with a more comprehensive multi-unit residential program
14	Affordable Housing Program	Financial incentives, training and education to promote energy efficiency in lighting and appliances in new affordable housing units			x	This program is not being continued in 2008, but its elements will be continued in the new construction program
15	Agricultural Energy Efficiency programs	Education and awareness for agriculture energy efficiency measures, including incentive component for sector-specific technologies			x	
16	Industrial Technology	Program suite offering evaluation and optimization for particular end uses for large and small/medium industrial participants	x			
17	Commercial/Industrial New Construction	Provide assistance to incorporate CDM measures into the design, construction and operation of new and substantially renovated buildings		x		
18a	Voluntary Economic Demand Response – Phases I and II of DR 1	Voluntary peak shedding and contracted load shifting for large industrial facilities			x	In the 2007 rate application, DR I and II were counted as one program.
18b	Load Shifting product, DR 2	Voluntary peak shedding and contracted load shifting for large industrial facilities			x	
19	DR3	Committed resource peak shedding pilot for small and medium industrial and commercial sites			x	

	Mass Market Programs		Design	Procurement	In market	Comments
20	Fuel Switching	Working in collaboration with Ontario natural gas LDCs, identify high-potential end-uses for which fuel switching is viable for jointly sponsored delivery.	x			Not in the original plan for 2007. This was added to the list as part of the settlement conference in EB-2006-0233

1 LDC Programs

2 The OPA has succeeded in putting in market five province-wide programs: Every Kilowatt
3 Counts ("EKC"), and four summer programs delivered with the assistance of the electricity
4 LDCs. The four LDC programs are the Great Refrigerator Round-up, the Electricity Retrofit
5 Incentive Program, Summer Savings Challenge and peaksaverTM. Seventy-seven (77) out
6 of 86 LDCs participated in at least one of the four summer Conservation programs. Ninety-
7 nine percent (99%) of local distribution company customers in the province have access to
8 at least one program.

9 **Table 9: LDC Programs**

Program	Number of participating local distribution companies	Percent coverage of Ontario residential customers*	Objective
Great Refrigerator Round-up	75	99	Recycle 2% of refrigerators
Electricity Retrofit Incentive Program	66	N/A**	Improve energy efficiency in businesses
Summer Savings Challenge 10-10	70	97	Raise awareness with
peaksaver TM	52	92	Reduce residential peak summer demand

10 Note: *Coverage is estimated, as some areas may not have electricity service.

11 **The Electricity Retrofit Incentive Program is a Business Markets program that is not targeted at residential customers.

12 Funding Innovation and Pilot Programs

13 As described earlier, the OPA has developed two programs that promote innovative
14 technologies or approaches to electricity supply and demand across Ontario. The CF
15 supports the development of promising Conservation pilot programs. The TDF supports
16 the development of emerging Conservation or generation technologies.

Conservation Fund

Total available funding for new CF projects in 2007 was \$3.0 million. There are three rounds of funding in 2007, two rounds of which have been completed as of September 30, 2007. In the first round, the CF committed \$1.5 million of its \$3.0 million budget for the seven approved projects summarized in Table 10 below.

Table 10: Round One 2007 Conservation Fund Project List

Title	Description	Proponent	Funding
Energy Efficiency Education Program for Trade Contractors Serving Small and Medium Enterprise Sector	Training and educational program for trade contractors to identify energy-efficiency opportunities, propose retrofit projects and develop cost-benefit analyses. A website will provide access to existing incentives from gas and electricity distribution companies.	Energy Efficient Contractors Network	\$154,000
Ontario Forest Industry Association 2007 Energy Management Program	The association will provide site energy audits, a roving energy manager, help desk facility, regular webinars and appointment of a part-time Energy Conservation Officer.	Ontario Forest Industries Association	\$191,320
Energy Management and Engagement Program for University Health Network Hospitals	An energy-management and engagement program to increase awareness of electricity Conservation and reduce overall consumption. Piloted at Toronto Western Hospital, the program will consist of employee engagement, social marketing, operator and senior manager training and equipment retro-commissioning.	University Health Network	\$250,000
Direct Install Small Business Pilot Project	Pilot project in four York Region business areas to deliver up to \$1,000 in free Conservation upgrades, as well as assessment and retrofits of up to 180 small retail operations.	GreenSaver	\$250,000
ENERGY STAR® for New Homes	This project supports the development of the ENERGY STAR® for New Homes Program to improve the energy efficiency of the thousands of new low-rise houses built each year in Ontario.	Enerquality	\$240,000
Market-Driven Incentives for the Residential Sector – Pilot Project	GreenSaver will deliver energy efficiency education to key commercial agents to help them use energy (and environmental) performance to develop products, services and incentives that encourage customers to invest in energy improvements.	GreenSaver	\$152,000
Greening Sacred Spaces – Phase II	Phase II follows the successful Phase 1 of the Greening Sacred Spaces project. It will develop energy Conservation services for greening faith communities focused on energy audits and retrofits. 100 faith communities in four city regions in Ontario will be involved; 50 of these will engage in audits and retrofits.	Faith and the Common Good	\$244,105

1 Strategic partnerships are also leveraged through the CF. For every dollar of funding
2 provided, an additional two dollars are leveraged through partner support.

3 Informing the development of the Conservation portfolio is a key success measure for the
4 CF. In 2007, this objective was accomplished through a number of pilots. For example,
5 the Sustainable Compressed Air Leak Control Management program developed by the
6 Ontario Mining Association is feeding into the development of the OPA's Industrial Process
7 and Technology program, scheduled to be in market in 2008. The results of this pilot have
8 been useful in demonstrating important techniques for engaging both shop floor workers
9 and executives, leading to demonstrable savings. This pilot has also taught the OPA the
10 potential value of industry associations as a marketing and delivery channel for programs.

11 Increasingly, program development staff are collaborating with CF staff to solicit specific
12 pilots from the marketplace. The Direct Install pilot, run by Green\$aver, a Toronto-based
13 energy services company, targeted 180 main street or shopping plaza retail outlets in four
14 different areas of the Greater Toronto Area. Members of this hard-to-reach sector were
15 offered \$1,000 in free energy efficient upgrades including lighting and refrigeration retrofits.
16 The pilot is providing a significant data pool from hundreds of retrofit installations. These
17 installations have helped the OPA understand the types of energy efficiency upgrades
18 consumers choose, how many consumers decide to pay for additional upgrades out of
19 pocket through up-sell strategies, and have provided the OPA with valuable logistics and
20 marketing lessons. This information is feeding directly into the development of the
21 Commercial Direct Install Program scheduled to be in the market in 2008.

22 Technology Development Fund

23 The TDF became fully operational in 2007, meeting a key performance objective described
24 in EB-2006-0233. Total available funding for new TDF projects in 2007 was \$1.0 million.
25 The second round of funding in 2007 has resulted in the selection of three projects totalling
26 approximately \$250 thousand. The TDF is currently leveraging partner funding at a rate of
27 1:11. Projects granted funding in round one of 2007 are summarized in Table 11.

Table 11: Round One 2007 Technology Development Fund Project List

Title	Description	Proponent	Funding
Nanowire-based Solar Cells	To use nanowires to enhance the efficiency of plastic solar cells while maintaining the attractive cost advantages.	University of Toronto	\$100,000
Mechanical Pulping	A five-year, \$2 million multi-disciplinary research program to reduce electrical energy consumption in mechanical pulping.	University of British Columbia	\$100,000
Variable Speed Drive Performance Testing	To carry out a benchmark study to establish a common protocol for Variable Frequency Drive efficiency that will form the basis of a new standard, CSA C838: Variable Frequency Drives.	LTE Hydro Quebec	\$25,300

Research and Marketing Support

The OPA conducted a large number of market research projects in 2007 to inform the design and delivery of business sector and mass markets programs and messaging, and to measure communications effectiveness in the market place.

One important initiative is a weekly province-wide poll that has been conducted since early April 2007 to measure the awareness and opinions of, and participation in, the OPA's mass markets programs. The survey also reports on the progress of the programs in establishing a culture of Conservation in Ontario.

Poll results reveal that OPA programs are successful in gaining attention and persuading people to participate. About three in four Ontarians knew about the Spring 2007 EKC program, and one in four participated by using at least one of the incentives. The actual market research reports are available on the OPA's website, in the Stakeholder Consultation section.

The OPA's programs and messages are also well-respected. According to research conducted by Harris-Decima, more than 80% of Ontarians are aware of them, and say that they trust information and advice coming from the OPA. These programs are believed to be effective at encouraging people to conserve electricity, and Ontarians say the OPA offers the kinds of program that make sense for themselves and others in their households.

OPA market research has contributed as well to the development of its messaging and programs. Early in 2007, focus groups and surveys were used to identify the most effective

brand positioning for persuading people to raise the importance of using electricity wisely in their lives and to take electricity Conservation action. This positioning is used in messaging for programs such as Every Kilowatt Counts.

In addition, focus groups held with contractors who deliver the Cool Savings program revealed opportunities to improve program operations in 2007. As well, advertising tracking research measured the impacts of a campaign designed to increase participation in the Electricity Retrofit Incentive Program in the agricultural sector. The research results show that the campaign was successful at making energy efficiency more relevant to farmers, and also suggested strategies for future campaigns. Similar market research initiatives will continue into 2008.

Awareness Programs

In 2007, the OPA planned to undertake a number of Conservation awareness activities to inform the marketing of Conservation programs, and build awareness of Conservation issues. OPA programs and activities are summarized at Table 12 below.

Table 12: Conservation Awareness Programs

Program	Description
Chief Energy Conservation Officer Public Leadership	• Public speaking to raise awareness • CECO website • Summer messages program • Powerlines radio show • Certificates of Recognition
Conservation Awareness	• Market research (Consumer and Business markets) • Website development and maintenance • Brand development • Call centre management • Habitat for Humanity • Rogers Centre advertising program
Education Awareness	• Youth Challenge Fund program
Business Leadership	• Development of Business leadership awards program

1 Evaluation, Measurement and Verification

2 The OPA has produced a complete "Evaluation Framework" for Conservation programs
3 that includes evaluation protocols constructed for the Ontario context. Consultation on this
4 package will occur in late 2007.

5 A number of non-program specific initiatives have also been undertaken in 2007 as
6 indicated in Table 13:

1 **Table 13: EM&V Initiatives**

Initiative	Summary
OPA Measures and Assumptions List	• Part of Framework consultation • Proposed process for nominating and adopting new measures • Only measures with substantiation will be put on the list • 2008 list in the final stages of being completed
OPA Savings and Estimation Tools	• A new approach to refining the energy savings estimates for quasi-prescriptive programs (e.g., commercial retrofits) by utilizing industry/sector or project-specific attributes and limited project/participant information • RFP process at the contractor selection stage • New approach will be built into OPA's online application forms system to allow better estimation and tracking of savings and for project proponents to be able to run what-if scenarios and economic analyses in a user-friendly manner
OPA Cost-Effectiveness Tools	• Program-specific "calculators" embedded in program application forms • General program cost-effectiveness tool that could be used to manage a portfolio of programs/projects
OPA Conservation Programs Cost-Effectiveness Tests Guide	• Part of Framework consultation • A more user-friendly explanation of the Total Resource Cost (TRC) and related tests • Intended as an educational tool for those who want to understand the elemental concepts of the cost-effectiveness of energy conservation programs • A companion to the Cost-Effectiveness Tools.
Certified M&V Professional Concept	• Part of Framework consultation • Examining the concept of requiring an industry-driven and accepted certification for consultants involved in project-level M&V work in OPA programs (custom programs and quasi-prescriptive above a certain size/dollar value) • Will examine facilitating the certification process in Ontario as part of the concept • Would take effect no earlier than calendar year 2009
Conservation Fund	• Working on a new application template that will better permit useful evaluation of and eventual translation of fund recipients' concepts into OPA programming

2 Promotion of Codes and Standards

3 In 2007, the OPA's focus was on standards to drive energy efficiency savings. The OPA
4 undertook four streams of activity: (1) process and institutional development; (2) research,
5 planning and evaluation; (3) standard development; and (4) promotion of new regulations.
6 Activities included:

1 Process

- 2 • launched the Forum for Energy Efficiency Leadership, with partners, to promote
3 coordination and collaboration on regulatory and market transformation planning;
4 and
- 5 • participated as vice-chair of the Strategic Committee on Performance, Energy
6 Efficiency and Renewable Standards of the Canadian Standards Association.

7 Research

- 8 • began detailed analysis to identify priority end uses for regulation; and
- 9 • undertook research regarding best practices for planning and evaluation of
10 regulatory and market transformation programs.

11 Standard Development

- 12 • funded, along with four partners, a slate of thirty-four products for new or
13 improved standards at the CSA. The OPA specifically contributed funds to a
14 number of products with an impact on summer peak, including large and small
15 motors, lights and light fixtures, portable air conditioners, digital television
16 adapters, external power supply and battery chargers and appliances that use
17 standby power.

18 Promotion of New or Improved Regulations

- 19 • began the process of promoting improved standards for residential appliances to
20 support the government's PST rebate and the OPA's appliance retirement
21 program.

22 Staff from the OPA participated in a variety of groups to support the codes and standards
23 work, including: the Consortium for Energy Efficiency, the Demand Side Management
24 Working Group (as co-chair), the Energy Efficiency Working Group, the Strategic Lighting
25 Initiative Committee, the Buildings Labeling Sub-committee and the Stand-by Power
26 Advisory Committee.

27 CECO Reporting

28 The CECO issued his first interim report in May 2007 setting out results of 2006 programs.
29 The purpose of this report is to ensure transparency and accountability of the Conservation

effort in Ontario by issuing results as soon as is practicable. This report is posted on the CECO section of the OPA website.

The 2007 CECO Annual Report has been published and is provided at Exhibit A-6-1. The CECO plans to release a second interim report in May 2008 with 2007 program results.

In the annual report, the CECO sets out key recommendations to remove legal and government policy barriers to Conservation. These recommendations were informed by research, consultation with OPA staff, and a stakeholder session with interval meters customers.

2008 Budget

In 2008, the OPA's budget for conservation activities is \$26.444 million. Budget detail is provided at Table 14:

Table 14 – 2008 Budget - \$Thousands

Division	2008 Budget	2007 Budget	Variance	2007 Forecast
Conservation	20,561	18,693	1,868	13,790
Conservation Bureau	985	927	58	951
Evaluation, Measurement & Verification	1,641	293	1,348	460
Legal and Regulatory	1,770	1,150	620	1,315
Communications	738	255	483	552
Information Systems	750		750	
Total Costs	26,445	21,317	5,127	17,068

Major Cost Category	2008 Budget	2007 Budget	Variance	2007 Forecast
Compensation and Benefits	8,324	5,033	3,291	6,096
Professional and Consulting Costs	10,083	9,568	515	6,537
Conservation Fund	2,897	3,000	(103)	1,984
Technology Development Fund	1,137	1,000	137	343
General Program Costs	3,617	2,670	948	2,060
Information Technology	300		300	
Office and Administration	86	46	40	49
Total Costs	26,445	21,317	5,127	17,068

Professional and Consulting Costs	2008 Budget	2007 Budget	Variance	2007 Forecast
Conservation Programs	8,334	8,255	79	5,800
Conservation Fund	109	80	29	80
Technology Development Fund	212	50	162	124
Conservation Awareness	576	578	(2)	0
Codes and Standards	560	462	98	515
Overheads	292	143	149	18
Total Costs	10,083	9,568	515	6,537

General Program Costs	2008 Budget	2007 Budget	Variance	2007 Forecast
Conservation Programs	1,039	170	869	907
Conservation Awareness	1,878	1,894	(16)	900
Overheads	700	606	94	253
Total Costs	3,617	2,670	947	2,060

Note: (numbers may not add due to rounding)

Variance Explanations

2008 vs. 2007 Budget Comparisons

The 2008 Conservation Budget exceeds the 2007 Budget by \$5.1 million. This difference is primarily driven by the OPA's 2008 plans to implement additional Conservation programs, in addition to undertaking market transformation and capability building activities. This represents an increase of seven programs over the 19 planned for 2007, and an increase in staff from approximately 33 to 66 FTEs. This increase in program volume results in an increase to most budget lines: Compensation and Benefits, Professional and Consulting; Legal and Regulatory, Information Technology, General Program and Communications costs. In addition, the following factors have driven the budget increase:

- Introduction of a more robust EM&V process than existed in 2007, as well as the need for more in-depth EM&V to assess the set of mature OPA programs;
- Increased contractual complexity of the commercial and demand response programs; and
- Development of more sophisticated tools to ensure efficiency and accurate program tracking and management.

2007 Budget vs. Forecast Variance

In 2007, the OPA planned to launch nineteen Conservation programs plus supporting activities, at a cost of \$21.0 million. Currently, the OPA is forecasting to have 17 programs in market, with three other programs in the design or procurement stages plus supporting activities, at a total cost of \$17.0 million, or a variance of approximately \$4.0 million. This variance is primarily a result of a slower-than-planned ramp-up as discussed above. This was identified as a possible risk in 2007; specifically the slow ramp-up rate experienced in other jurisdictions explained in EB-2007-0233. Going into 2008, the OPA anticipates less challenge getting programs into the market as a result of increased experience within the OPA, a greater degree of capability in the market, and strengthened relationships between the OPA and key market players.

Another cause of the variance is a change in the accounting treatment for the CF and the TDF. Based on the direction of the OEB in the EB-2007-0233 Decision, only the expected expenses against the Funds on committed projects are presented in the 2008 Budget. This is a change of practice from previous years when the full amount of funds available for commitment to projects was presented for Board approval, rather than monies to be actually paid out on projects the OPA committed to fund.

Settlement Commitments EB-2006-0233

In the OPA's 2007 RRS, parties agreed to a settlement of Issue 1, Conservation and Demand Management 2007 Operating Budget, subject to certain conditions. The OPA fulfilled the conditions as follows:

- The OPA established the Conservation Business Stakeholder Advisory Group ("CBSAG"), which was formed to advise the OPA on the overall development of its Conservation portfolio for 2008, and more broadly for the 2008 to 2010 period. The CBSAG was comprised of a broad cross-section of stakeholders, representing a diverse array of perspectives, priorities and insights on Conservation.
- The OPA used the Ontario Energy Board's TRC guide and assumptions for program design, and provided these screening assumptions and expected program results (including expected savings and cost-effectiveness) to the CBSAG.

- 1 • The OPA engaged ICF International (“ICF”) to assist with a broad review of its
2 existing Conservation programs in order to identify opportunities for consideration in
3 the 2008 to 2010 timeframe. For example, ICF was directed to produce a list and
4 description of recommended Conservation programs to be promoted by the OPA --
5 programs that are not being covered by current designs. The ICF review was made
6 available to the CBSAG as part of the stakeholder consultation and is available on
7 the OPA website.
- 8 • In addition to producing the May 2007 supplement to the CECO’s 2006 Annual
9 Report, existing program evaluation reports have been posted on the OPA web site.
- 10 • The OPA has begun discussions with the natural gas distribution companies to
11 discuss collaboration or cooperation of development of a fuel switching program
12 aimed to reduce summer peak demand.

13 All EB-2006-0233 commitments have been fulfilled.

STRATEGIC OBJECTIVE 3

CONSISTENT WITH THE IPSP, ENSURE THAT THE PROVINCE OF ONTARIO HAS DIVERSE ELECTRICITY GENERATION RESOURCES

The Electricity Resources division comprises the Generation Procurement and Contract Management groups. The strategic objective for this division is to ensure that Ontario has diverse electricity generation resources, consistent with the IPSP. Until such time as the IPSP has been approved by the OEB, the Generation Procurement group shall launch procurements for generation resources solely through directives received from the Minister of Energy ("Government Directives" or singularly, "Government Directive").

To meet this strategic objective, the Generation Procurement and Contract Management groups will undertake the following strategic initiatives in 2008:

1. Use a standard Procurement Process, as set out in the IPSP filing with the OEB, to procure identified generation resources, including use of standard offer programs;
2. Design contracts that facilitate procurement of generation resources, and effectively allocate risks between customers and generation developers; and
3. Manage contracts and financially settle these contracts.

Actions to Achieve Strategic Objective 3

Initiative 1 – Standard Procurement Process

Use a standard Procurement Process to procure identified generation resources, including use of standard offer programs:

On August 29, 2007, in conjunction with the IPSP, the OPA filed a Procurement Process with the OEB for approval. This Procurement Process outlines the steps the OPA will take to procure identified generation resources in the IPSP. Until such time as the Procurement Process is approved by the OEB, the OPA will follow the steps identified in this Procurement Process to procure generation resources identified in Government Directives. The Procurement Process identifies three main procurement types to be used to procure

1 Conservation and generation resources. The three procurement types are: competitive
2 procurement; standard offer procurement; and, non-competitive procurement.

3 The following section describes the generation resources which will be procured or for
4 which procurement work will have begun, in 2008.

5 Based on a June 15, 2005 Government Directive, as of September 30, 2007 the OPA has
6 completed the first phase of procurement for Combined Heat and Power ("CHP")
7 generation resources. This first phase has resulted in a procurement of seven projects
8 totalling 414 MW. Since the quantity specified in the original Government Directive calls for
9 up to 1,000 MW of CHP generation resources, the OPA will launch a second procurement
10 for CHP generation resources in late 2007. This procurement is expected to be completed
11 by the end of 2008.

12 On August 27, 2007, the OPA received a Government Directive to procure up to 2,000 MW
13 of Renewable Energy Supply ("RES") from projects greater than 10 MW in size. The OPA
14 will commence the first phase (for approximately 500 MW) of this multi-phased
15 procurement by the end of 2007. This first phase is expected to be completed by the end
16 of 2008.

17 In both the June 2006 and March 2007 issues of IESO's *The Ontario Reliability Outlook*,
18 generation resource requirements to meet local area supply needs and general power
19 system needs for additional peaking generation capacity are identified (see also
20 EB-2007-0707 Exhibits E-5-1 and E-5-3) These requirements are most urgent for the
21 following local areas: Northern York Region; western Greater Toronto Area (GTA West);
22 and Kitchener-Waterloo-Cambridge-Guelph. Even though these requirements have been
23 identified in the IPSP, there is the potential for some or all of these requirements to be
24 addressed by Government Directives in 2008. Therefore, the Generation Procurement
25 group has anticipated that procurement work will be required in 2008.

26 Based on the March 21, 2006 Government Directive, the OPA launched the Renewable
27 Energy Standard Offer Program (the "RESOP") in 2007. The RESOP facilitates

1 development of small renewable energy generation projects under 10 MW that are
2 distribution connected (e.g., wind, hydroelectric, biomass and photovoltaic). RESOP
3 projects that are less than or equal to 500 KW completed as a result of this program
4 contribute to Conservation savings targets. All projects less than or equal to 10 MW under
5 the Clean Energy Standard Offer Program (the "CESOP"), discussed below, contribute to
6 Conservation savings, which are addressed in Exhibit B-2-1, within the category of
7 "customer-based generation". RESOP projects greater than 500 kW contribute to
8 renewable energy procurement targets. As of September 30, 2007, over 150 contracts
9 have been executed for a total of approximately 600 MW. In 2008, the OPA will continue to
10 facilitate the RESOP. Due to the infancy of this program, the OPA will closely monitor its
11 progress and will undertake appropriate changes as necessary to improve the program.

12 The OPA will be launching the CESOP in late 2007 or early 2008. In response to the
13 June 14, 2007 Government Directive, the CESOP will facilitate development of small clean
14 energy generation projects (e.g., natural-gas, by-products, district energy). Throughout
15 2008, like the RESOP, the OPA will facilitate the program by reviewing the CESOP
16 applications and signing contracts using the same process as with the RESOP.

17 To fulfill Government Directives, the Generation Procurement group will form project teams
18 (consisting of OPA staff and external consultants as appropriate) to: develop applicable
19 procurement documents, such as Requests-for-Proposals ("RFPs"), program rules,
20 contracts, etc.; define procurement schedules; and manage all procurement obligations. A
21 key component of this process is stakeholder consultation. Stakeholders will be consulted
22 prior to finalization of procurement documents.

Initiative 2 – Design Contracts

Design contracts that facilitate procurement of generation resources and effectively allocate risks between customers and generation developers:

The OPA facilitates new investment in generation resources when such investments do not arise within the electricity market itself. These new resources are facilitated via OPA contracts with generation developers. These contracts will only provide sufficient support for new investment, so that participation in the existing electricity market is encouraged. These contracts will also be structured to support further evolution of the electricity market.

Under the RESOP, a simplified process provides the opportunity for smaller scale renewable energy generators to contribute to the electricity supply for the province. The contracts are structured in a manner that is intended to support the development of renewable energy in a manner that benefits Ontario customers. Future market evolution may create additional value from these contracts, again on behalf of Ontario consumers.

The design of the generation procurement contracts effectively allocates risks between customers (i.e., the OPA, taking on considered risk as a proxy for electricity customers, as the buying contractual counterparty) and generators, by ensuring efficient participation in the electricity markets. For example, generators under contract with the OPA, that can be dispatched in accordance with the IESO's Market Rules, are subject to contractual incentives to operate in accordance with market signals through the 'deemed dispatch' model. As a result of these incentives, the allocation of risks between customers and the generator under contract are more effectively allocated.

To help ensure that OPA procurement contracts facilitate new generation investment and effectively allocate risks between customers and generators, in 2008 the OPA will continue to compare similar contracts and/or mechanisms from other jurisdictions.

Initiative 3 – Manage Contracts

Manage contracts and financially settle these contracts:

The OPA is the counterparty to a series of Conservation and generation resource contracts that arise from:

- Ministry of Energy-initiated RFPs for new Conservation and generation resources (e.g., RES I, RES II, Clean Energy Supply RFP);
- Negotiation between the Ministry of Energy and a counterparty (e.g., Bruce Power Refurbishment Implementation Agreement);
- OPA-initiated RFPs in response to Government Directives for new Conservation or generation resources (e.g., CHP, GTA West, Northern York Region demand-response); and
- Sole-source negotiations between the OPA and counterparties in response to Government Directives (e.g., Goreway Generating Station (GS) and Portlands Energy Centre GS).

A list of the Conservation and generation resource contracts that are managed and administered by the Contract Management group is attached to this exhibit as Appendix A. These 40 contracts have a total capacity of approximately 10,000 MW and include renewable generation, demand-response, natural-gas fired generation (including CHP generation) and refurbishment of nuclear generation.

This work involves managing/facilitating the development of these projects from the contract execution stage, through permitting, construction and start-up, to commercial operation. Technical, operational, managerial, regulatory and economic issues are addressed as they arise, which involves ongoing communication with counterparties, including site investigations, to monitor the progress of permitting, approvals and construction of the projects and undertaking all necessary actions to ensure that all contractual milestones are met.

The portfolio of contracts listed in Appendix A represents approximately \$12.0 billion of new investment in Ontario's electricity sector.

As counterparty to the contracts listed in Appendix A, the OPA is responsible for the financial settlement of each facility that reaches its Commercial Operation Date (“COD”), as well as meeting any other financial obligations of the contracts. This involves producing timely and accurate settlement statements listing all relevant information, which includes calculating monthly settlement values; researching contracts to clarify interpretation; and resolving issues and concerns with suppliers in a professional and timely manner. It also involves adapting existing processes and systems to accommodate new contracts.

In 2007, the OPA automated its in-house financial settlement system; however, it expects to further enhance and modify the system throughout 2008. The OPA financially settles 18 of the 40 contracts listed in Appendix A; these contracts are identified with a check mark in the “Settlements” column. The remaining 22 contracts will be financially settled by the OPA once they reach commercial operation.

RESOP contracts are settled by the Local Distribution Companies on behalf of the OPA. As of September 30, 2007, approximately 22 such contracts were in-service and being settled. The OEB amended its Retail Settlement Code in 2006 as one of the mechanisms associated with RESOP development that reduced barriers to smaller scale renewable energy generators.

Measures of Success

The Generation Procurement and Contract Management groups will achieve the above actions by delivering the following:

- Procurements have commenced and/or executed: procurements are launched in a timely manner following receipt of Government Directives where schedules, timelines and procurement rules are made clear in order to best ensure an efficient procurement process and potential participants have sufficient information;
- Activities to engage relevant stakeholders have been undertaken: for procurements involving multiple participants (e.g., competitive and standard offer procurements), potential participants have been consulted regarding the scope of the procurement, and have been provided sufficient opportunity to comment on draft procurement documents;

- Comparison of generation procurement contracts: the OPA will have compared similar contracts and/or mechanisms from other jurisdictions and will have documented its findings;
- Contracts have been signed for new generation resources: procurements result in contracts signed within the schedules and timelines set out within applicable procurements;
- Procurement contracts are being effectively managed: counterparty issues are being efficiently addressed as they arise; specifically, contracted facilities achieve their COD meeting all contract requirements; and
- For post-COD facilities, accurate settlements are being calculated: settlement statements are being issued to generators in a timely manner, and payment is being paid or received by the due date; responses to counterparty requests are informative and accurate and disputes are being resolved in a timely and fair manner.

Table 1

Strategic Objective 3

Operating Costs

Variance Between 2008 Budget and 2007 Budget

(\$'000s)

Major Cost Category	2008 Budget	2007 Budget	Variance	2007 Forecast
Compensation and Benefits	3,141	2,930	211	2,448
Professional and Consulting Costs	4,826	4,625	201	3,426
General Program Costs	322	132	190	113
Office and Administration	75	87	(12)	27
Total Costs	8,364	7,774	590	6,014
Division	2008 Budget	2007 Budget	Variance	2007 Forecast
Electricity Resources	8,120	7,774	346	5,741
Communications	133	0	133	273
Information Systems	111	0	111	0
Total Costs	8,364	7,774	590	6,014

Variance Explanations

The 2008 Budget of approximately \$8.364 million will include:

- development, stakeholder consultation and management of all procurements;
- drafting all procurement documents;

- 1 • negotiation of contracts, where appropriate;
- 2 • finalization of contracts;
- 3 • management of all finalized contracts, including the ones procured pre-2008;
- 4 • site visits to generation facilities under construction; and
- 5 • financial settlement of contracts for in-service facilities.

6 The total 2008 Budget of \$8.364 million represents a \$590 thousand increase from the total
7 2007 Budget of \$7.774 million. This change results mainly from Contract Management
8 activities. Specifically, based on the 2006 and 2007 experience, the budget for external
9 legal counsel (within Professional and Consulting Costs) has been increased.

10 Furthermore, the Bruce Power contract requires a provision for additional audit and due
11 diligence work. Some of the natural-gas fired contracts require the OPA to participate in
12 the gas management process, which is also included in this budget. Costs associated with
13 the financial settlement of post-COD facilities have decreased for 2008 as automation work
14 will be largely complete by the end of 2007. Increased amounts for Information Systems
15 relate to work on an automated settlement system and further development work on the
16 Standard Offer Program internet micro-site. Communications expense provides for
17 webinars, printed materials and stakeholder consultations for both Standard Offer
18 Programs and procurements. Finally, the net increase of \$590 thousand also addresses
19 additional generation procurements for 2008.

20 The 2007 Forecast of \$6.014 million represents a decrease of \$1.76 million from the
21 2007 Budget. Therefore, the 2008 Budget of \$8.364 million represents a \$2.35 million
22 increase from the 2007 Forecast of \$6.014 million. The 2007 Forecast decrease results
23 from the OPA not receiving anticipated Government Directives to procure generation for
24 local area supply (e.g., Northern York Region, Kitchener-Waterloo-Cambridge-Guelph, and
25 the GTA West). However, due to the timely need to address these local area supply
26 needs, the OPA anticipates receiving applicable Government Directives for some or all of
27 these projects. This is slightly offset by increased Contract Management costs related to
28 the Bruce Power Refurbishment Implementation Amending Agreement and other
29 unforeseen legal and consulting expenses associated with other contracts in Appendix A.

Therefore, the budget increase for 2008 mainly represents increases in OPA staffing and use of consultants to manage the growing number of contracts, and execution of procurements. In addition, further RESOP contracts are expected to be executed (i.e., for 2007, since program launch, an average of approximately 30 RESOP contracts are executed per month) resulting in increased workload. Finally, the CESOP program will be live in 2008, potentially creating a similar workload to that of the RESOP.

2008 Budget – Income from Registration Fees

In accordance with the Procurement Process filed with the Board, the OPA charges a registration fee to prospective participants in its competitive procurement processes. The registration fee is \$10,000 per proposal for electricity supply and capacity procurement, and \$2,500 per proposal for demand response procurement.

The amount of registration fees collected in a given year varies depending on the number of procurement processes, as well as the number of participants in each procurement.

For 2008, the OPA expects to launch at least three supply procurements:

- Combined Heat and Power – Phase 2
- Northern York Region
- Renewable Energy Supply – Phase 3

Based on these anticipated procurement processes, and its experience in previous procurements, the OPA has budgeted to collect \$400,000 in registration fees in 2008.

2007 Results

In accordance with the 2007 Business Plan, the Generation Procurement and Contract Management groups accomplished the following:

- *Planned procurements have been completed on time with appropriate stakeholder consultation resulting in timely contract execution:* Procurements for local area supply were not launched last year, as anticipated Government Directives were not received. Therefore, RESOP represented the only planned procurement in 2007 where stakeholder consultation occurred and contracts were signed, and continue to be signed, in a timely manner;

- 1 • *Contracts are designed to enable effective facility operation no matter what the*
2 *structure of Ontario's electricity sector, and to help the transition of Ontario's*
3 *electricity system to a market-based system:* Generation procurement contracts
4 signed in 2006 and 2007 have enabled facility development while not negatively
5 impacting the electricity market;
- 6 • *Standard offer programs for small and micro energy generators are fully*
7 *implemented, with program rules and documents completed, and are available to all*
8 *potential participants:* RESOP was launched in 2007 resulting in over 150 contracts
9 totalling approximately 600 MW as of October 2007;
- 10 • *The CESOP, including fuel risk mitigation pricing mechanisms, is initiated:* CESOP
11 recommendations were approved by the Minister of Energy in 2007 and program
12 rules will be drafted by the end of 2007;
- 13 • *Contracted facilities achieve their commercial operation date and meet all contract*
14 *requirements:* In 2007, two generation resources under contract reached COD. As
15 of September 30, 2007, annual administration of the 40 Conservation and
16 generation resources contracts listed in Appendix A included over 40 site
17 investigations, over 150 reports from counterparties, and work to resolve
18 11 outstanding claims of force majeure;
- 19 • *Accurate settlements are calculated, statements are issued to suppliers in a timely*
20 *manner and payment is paid or received by the due date:* As of September 30,
21 2007, 217 invoices were sent in 2007 to in-service facilities under contract. No
22 invoices were sent late, nor were any payments made or received late in 2007. One
23 error was identified on one invoice. The amount in question was less than 1% of
24 that invoice's full amount and was corrected in the next month's invoice to that
25 counterparty;
- 26 • *Responses to suppliers' requests are informative and accurate, and disputes are*
27 *resolved in a timely and fair manner; and suppliers have confidence in the*
28 *settlement information provided by OPA:* Up to September 30, 2007, there was one
29 dispute on contractual language as it relates to settlement. That issue was resolved
30 with the counterparty in question and for future contracts, contract language has
31 been adjusted to avoid the ambiguity in the contract language that resulted in this
32 situation; *and*
- 33 • *Web-enabled renewable energy information clearinghouse is available at the OPA*
34 *Website and populated with links to information pertinent to the development of*
35 *renewable generation technologies and generation projects.* The renewable energy
36 information clearing house was developed to complement the RESOP launch at the
37 end of 2006. The OPA RESOP micro-site has information for potential project
38 proponents that will help them better understand the technologies, assess their
39 capabilities to develop the projects, and find additional resources and expertise that
40 they may need to develop detailed business plans. OPA staff in the Electricity
41 Resources group review the website at least quarterly to ensure that the information
42 posted is still current, accurate and useful.

Settlement Commitments EB-2006-0233

In the OPA's 2007 RRS, the OPA and certain intervenors agreed to a settlement of Issue 3, Generation Procurement and Contracting Operating Budget, subject to the following:

(1) the OPA will prepare a report on the procurement of generation in Ontario through competitive and non-competitive means and provide it in its 2008 Revenue Requirement Submission ("2008 RRS"). The report will include a list (counter-party and capacity in MWs, where this is available) of the generation contracts entered into by the OPA in 2007 to the date of the report that did not arise from a competitive procurement process.

Please see Exhibit C-3-1.

1 Appendix A

2 OPA – Electricity Resources Managed Contracts

3

Technology	Project Name	Capacity (MW)	Location	Settlement
Renewable	Melancthon I	67.5	Shelburne	√
	Melancthon II	132	Melancthon and Amaranth counties	
	Kingsbridge I	39.6	Goderich	√
	Kingsbridge II	158.7	Goderich	
	Erie Shores	99	Port Burwell	√
	Prince I	99	Sault Ste Marie	√
	Prince II	90	Sault Ste Marie	√
	Enbridge Ontario Wind Power A	100.7	Kincardine	
	Enbridge Ontario Wind Power B	99	Kincardine	
	Ripley	76	Ripley	
	Kruger Energy Port Alma	101	Port Alma	
	Wolfe Island Wind Farm	198	Wolfe Island	
	Glen Miller	8	Trenton	√
	Umbata Falls	23	White River, near Marathon	
	Island Falls	20	Bradburn Township	
	Eastview Landfill Gas	2.5	Guelph	√
	Hamilton Community Energy Digester	1.6	Hamilton	√
	Trail Road Landfill Gas	5	Ottawa	√
Natural Gas	Brighton Beach	580	Windsor	√
	Sarnia District Energy	550	Sarnia	√
	Sudbury District Energy	16	Sudbury	√
	Sudbury Hospital Cogeneration		Sudbury	√
	Trent Valley Cogeneration		Trenton	√
	GTAA	90	Mississauga	√
	St. Clair Energy Centre	570	near Sarnia	
	Greenfield Energy Centre	1005	near Sarnia	
	Greenfield South Power	280	Mississauga	
	Goreway	860	Brampton	
	Portlands Energy Centre	538	Toronto	
	Halton Hills Generating Station	600	Halton Hills	
Combined Heat and Power	Algoma Energy	63	Sault Ste Marie	
	Great Northern Tri-Gen	11.5	Kingsville	
	East Windsor	84	Windsor	
	Durham College	2.3	Oshawa	
	Thorold CHP	236.4	Thorold	
	Countryside London	12	London	
	Warden Energy Centre	5	Markham	
Nuclear	Bruce Power Refurbishment Implementation Agreement	3000	Kincardine	√
Demand Reduction	Loblaw	10	province-wide	√
	York Region	15.5	York Region	√

4

STRATEGIC OBJECTIVE 4

DEFINE SECTOR DEVELOPMENT GOALS AND FACILITATE THE EFFICIENT ALLOCATION OF RISK BETWEEN CUSTOMERS AND INVESTORS IN CONSERVATION AND GENERATION

The OPA's Strategic Objective 4 for 2008, is to define sector development goals and facilitate the efficient allocation of risk between customers and investors in Conservation and generation. The Conservation and Sector Development ("CSD") division has primary responsibility for this strategic objective.

The development of the competitive electricity sector and the use of market-based solutions are essential tools that will be used to fulfill the generation and Conservation targets set out in the Integrated Power System Plan ("IPSP"). As per Ontario Regulation 424/04 the OPA is obligated to identify and develop innovative strategies to encourage and facilitate competitive market-based responses and options for meeting overall system needs, and to identify measures that will reduce reliance on procurement under section 25.32 of the *Electricity Act, 1998*.

The presence of a clear, consistent plan for the electricity system will establish stability in the electricity marketplace, making it an inviting environment for private sector investment. The emergence of a robust forward price curve for electricity – facilitated by the OPA – will serve as a signal for new infrastructure investment, and will ensure Ontario achieves and maintains an efficient and reliable electricity system.

Actions to Achieve Strategic Objective 4

To meet this objective the following strategic initiatives will be undertaken in 2008:

1. Establish Load Serving Entities ("LSEs") to manage consumptive risk on behalf of customers;
2. Continue the development of electricity market products for forward trade on a third party exchange;

3. Develop a transactable market to promote value recognition and price discovery for the environmental attributes associated with electricity production; and
4. Support the continued development of a competitive electricity market in cooperation with the IESO.

Despite the relatively small budget for Strategic Objective 4 versus the budgets of the other strategic objectives, the OPA believes that it is helpful to parties if detailed explanations are provided with respect to how these initiatives will be pursued. These initiatives are discussed separately and in detail in the evidence that follows:

Initiative 1 – Establish Load Serving Entities

Establish Load Serving Entities (LSEs) to manage consumptive risk on behalf of customers:

Continuing work commenced earlier in 2007, the OPA will be producing a technical document in the fall of 2007, outlining the results of the LSE industry dialogue series and Proof of Concept initiatives. This document will be discussed and revised throughout late 2007 and early 2008 in order to iterate towards a robust LSE development and implementation model. After further consultation with affected stakeholders, the OPA will take the next steps to implement an LSE proposal.

As the OPA described in its 2007 RRS evidence, LSEs are entities that contract on behalf of retail customers. LSEs will pro-actively manage electricity risks rather than the limited situation where consumers are obligated to take spot price pass-through. An LSE will be responsible for a specified portion of the Ontario default load and will procure a portfolio of electricity supply, via the wholesale market, on behalf of this load. In the case of a distributed model, LSEs will be assigned responsibility for certain local distribution areas, (likely up to a maximum load). The procurement responsibilities of the LSEs will increase wholesale market liquidity and transfer risk away from electricity consumers to the private sector. Electricity rates for each default supply load will be set in a transparent manner, reflecting the portfolio pricing established partially through exchange-traded, public pricing events, managed by LSEs.

1 The procurement responsibility for default supply will increase interest in load management
2 techniques such as demand response and Conservation. LSEs will look to procure these
3 products to assist in managing volumetric risk. Under a distributed model, using the
4 knowledge from their own load forecasts, LSEs will be able to procure Conservation and
5 reliability products well in advance of the real-time markets, injecting liquidity into these
6 alternative supply markets. This improvement in the timing of Conservation and reliability
7 price signals will advance the effectiveness of these tools.

8 Portfolio procurement may also enable the development of environmental attribute markets
9 to achieve obligations for more environmentally friendly sources of generation. Examples
10 of environmental attributes include renewable energy certificates and greenhouse gas
11 offsets.

12 **Initiative 2 – Electricity Market Products**

13 *Continue the development of electricity market products for forward trade on a third party*
14 *exchange:*

15 Development of a transparent and robust forward market is a key component of efficient
16 long-term electricity decision-making. From a generator perspective, the forward price
17 curve provides a signal for new investment and an opportunity for generators to lock-in a
18 revenue stream and avoid the volatility of the spot market. From a load perspective, the
19 forward price curve provides the opportunity to budget for future electricity costs, and make
20 business decisions based on the implications of these costs. The forward market can
21 protect customers by providing rate stability and price transparency. With the forward
22 market providing price signals for various electricity products – including on-peak, off-peak
23 and baseload electricity – market participants will have vital information readily accessible.
24 For example, industrial loads can examine the peak-to-base electricity price differentials to
25 decide on how to optimize a plant's production schedule in the future, and whether or not
26 they should consider peak load shedding or load shifting programs.

27 The OPA facilitated a series of three forward energy auctions in 2006. The auctions were
28 designed to foster market liquidity and forward price discovery for Ontario electricity.

1 Phase 1 of the auction involved baseload electricity products with Bruce Power as the
2 seller. Phase 2 of the auction included both Bruce Power and Ontario Power Generation
3 ("OPG") as sellers of baseload products. In order to participate in these two phases,
4 buyers were required to have bilateral agreements with the seller(s). These two auction
5 events were operated electronically by the Natural Gas Exchange ("NGX"). The third
6 phase of the auction included both peak and baseload products and was centrally cleared
7 through the NGX clearinghouse.

8 In 2007, NGX launched screen-trading for standardized Ontario electricity products. To
9 date, trading activity on the NGX screen has been limited. The OPA continues to work with
10 NGX to encourage new supply to enter the forward market, and to support the development
11 of new electricity products such as market heat rate contracts. Through the 2006 and 2007
12 forward pricing initiatives, the OPA has made progress in promoting price transparency and
13 product standardization.

14 Through 2008, the OPA will continue to work towards these objectives, creating market-
15 based infrastructure and addressing key issues such as product specifications, buyer
16 qualifications and access, pricing mechanism evolution and credit concerns.

17 In 2008, the OPA plans to facilitate the trading of market heat rate contracts which will
18 effectively transfer liquidity from the natural gas markets into the Ontario electricity market.
19 A heat rate is an energy ratio of gas to electricity, and is expressed in GJ/MWh. Trading a
20 heat rate contract is extremely useful because it allows the buyer to protect itself against
21 volatility and/or price spikes in the power market; while allowing the seller to manage its
22 generation facility more productively and/or transact power while managing risk in the gas
23 market.

24 The OPA will continue to work with industry partners, including third party exchanges
25 (e.g., via NGX screens) and publishers of daily energy fundamentals to disseminate
26 forward market information to market participants. In 2008, the OPA will continue to
27 research and examine the use of forward markets in other jurisdictions, as well as continue
28 to monitor progress in the development of a forward market for Ontario electricity products.

Initiative 3 – Develop a Transactable Market

Develop a transactable market to promote value recognition and price discovery for the environmental attributes associated with electricity production:

Environmental attributes relate to the environmental impact associated with a unit of electricity generation. Different fuel sources of electricity generation result in different associated environmental attributes (green house gas emissions, renewable credits), and may have a positive or negative value impact on the price of that electricity generated.

The OPA has developed a spectrum of pilot projects to recognize the value of the environmental attributes associated with electricity supply. While the foundations for three of these initiatives are being developed at present, the OPA plans to expand on these initiatives throughout 2008. The initiatives will look to recognize value for ratepayers from supply already under OPA contracts, provide a mechanism to differentiate environmental attribute pricing from electricity commodity pricing in future OPA contracts, and provide an avenue for value recognition to drive new investment in renewable technologies.

The OPA is participating in an ongoing dialogue with interested market participants on these topics, and intends to run a pilot auction for renewable energy certificates in late 2007, with the potential for regular on-going auctions in 2008. The OPA will continue to consult with contract counterparties for their views on the treatment of environmental attributes.

Initiative 4 – Competitive Electricity Market

Support the continued development of a competitive electricity market in cooperation with the IESO:

The OPA continues to work with the IESO to exchange knowledge on the implications of various initiatives within the responsibilities of the respective entities. One key area is the Day-Ahead Market (“DAM”) development.

1 The IESO's DAM initiative will facilitate energy transactions in advance of real-time. The
2 OPA's ability to initiate demand-side programs through Conservation and LSEs, and to
3 procure new supply, will be enhanced by the availability of a functional DAM and a more
4 volatile hourly market, which encourages forward transactions and risk management as
5 well as appropriate demand response.

6 The IESO-OPA discussions focus on the synergistic benefits of DAM and LSEs, as well as
7 their interrelation with the output of the regulated OPG prescribed assets. These three
8 initiatives are critical to Ontario ratepayers in order to ensure transparent, equitable and
9 efficient allocation of OPG regulated asset output, pro-active management of volumetric
10 risks, and an effective timeframe to allow forward transactions to occur.

11 Measures of Success

12 Strategic Objective 4 will be achieved when:

- 13 • There is a steady increase in the volume of Ontario electricity products that are
14 exchange-traded, and heat-rate contracts for natural gas-based generation units
15 begin trading;
- 16 • The cooperative work between the OPA and the IESO has resulted in further
17 development and potential implementation of a day-ahead market for electricity in
18 Ontario, along with progress being made on reliability contracts;
- 19 • A technical report has been released that outlines the results of the LSE consultation
20 process, including recommendations on how to effectively implement an LSE
21 program in Ontario, and next steps in the implementation of an LSE have been
22 taken; and
- 23 • A consultation with selected OPA counterparties on the treatment of environmental
24 attributes has been completed and an inventory of OPA-contracted environmental
25 attributes has been compiled and registered with an accredited registry.

Table 1

Strategic Objective 4
Operating Costs
Variance Between 2008 Budget and 2007 Budget
(\$'000s)

Major Cost Category	2008 Budget	2007 Budget	Variance	2007 Forecast
Compensation and Benefits	458	487	(29)	504
Professional and Consulting Costs	683	275	408	275
General Program Costs	109	22	87	22
Office and Administration	2	0	2	
Total Costs	1,252	784	468	801

Division	2008 Budget	2007 Budget	Variance	2007 Forecast
Sector Development	667	659	8	676
Legal and Regulatory	525	125	400	125
Communications	60		60	
Total Costs	1,252	784	468	801

Variance Explanations

The Legal and Regulatory budget variance is associated with an anticipated OEB proceeding on the LSE approach, and development of environmental attribute trading, both to occur in 2008.

2007 Results

A market transition plan that is focused on reducing reliance on OPA procurement has been submitted in support of the IPSP. This is found in the IPSP filing at Exhibit F-2-1, Reducing Reliance on Procurement.

Over-the-counter and exchange trading volumes on the Natural Gas Exchange for Ontario electricity supply contracts are well documented, but volume growth has been admittedly limited. The OPA continues to support the development of new electricity products such as market heat rate contracts, along with multi-year base-load and peaking products, and full-

1 load and load following contracts. Initial auctions for renewable electricity and for heat rate
2 products are scheduled for late 2007.

3 The Day-Ahead Market initiative is still in its design phase by the IESO, and the OPA
4 continues to provide on-going input to this process.

5 **Settlement Commitments EB-2006-0233**

6 In the OPA's 2007 Revenue Requirement Submission, parties agreed to a settlement of
7 Issue 4, Sector Development Operating Budget, subject to a condition. The OPA fulfilled
8 this condition because its development of market mechanisms in 2007 was not inconsistent
9 with the goals set out in the Directives.

STRATEGIC OBJECTIVE 5

**MAINTAIN AND DEVELOP ORGANIZATIONAL CAPACITY TO ACHIEVE THE
STRATEGIC OBJECTIVES**

OPA's fifth strategic objective is to maintain and develop organizational capacity to achieve the external services of the OPA; specifically, the strategic objectives associated with long-term planning, Conservation, electricity resources and sector development. To help achieve its strategic objectives, the OPA depends on the contributions of a number of internal service groups. These groups provide support and guidance to the organization through technical expertise, information infrastructure and management capabilities needed to help deliver on the OPA's important mandate.

Finance and Business Services reports to the Vice President, Finance and Administration (Acting), and so do the groups Human Resources, and Information Systems. Corporate Communications, and the Legal and Regulatory Services department report to the General Council and Vice President, Legal and External Affairs.

As the OPA ramps up to deliver on its goals – moving forward with the IPSP, driving Conservation efforts, improving supply reliability and facilitating sector development – the organization must grow to support the additional demand these initiatives will make on its services and resources. Consequently, the 2008 Budget reflects a proportionate increase in corporate and administrative costs. The groups and their respective budgets that perform this strategic function are provided in the following table:

1

Table 1

Strategic Objective 5
Operating Costs
Variance Between 2008 Budget and 2007 Budget
(\$'000s)

Division	2008 Budget	2007 Budget	Variance	2007 Forecast
Chief Executive Office	1,098	860	238	915
Finance and Business Services	8,718	6,991	1,727	7,998
Human Resources	1,380	1,226	154	1,298
Information Systems	867	847	20	967
Legal and Regulatory	2,656	2,500	156	2,905
Communications	3,081	2,521	560	1,960
Contingency Fund	3,215	3,200	15	0
Total Costs	21,015	18,145	2,870	16,043

2 The Contingency Fund, which has been included in the above table, is discussed in
3 Exhibit D-2-1. The purpose of the following evidence is to provide a discussion of each of
4 the groups identified in Table 1 with their initiatives being undertaken in 2008.

5 **CHIEF EXECUTIVE OFFICE**

6 In addition to the Chief Executive Officer and his executive assistant, a newly created
7 position of Special Advisor has been established in the office of the CEO. This position has
8 been established to assist in dealing more effectively with the broad range of cross-
9 functional strategic, organizational and operational matters that the CEO is increasingly
10 required to address. The Special Advisor will also continue to work with key stakeholders.

11 In this capacity, the Special Advisor is accountable to the CEO in serving as the "Right
12 Hand" on internal and external matters that are the CEO's responsibilities, and to provide
13 some overload relief to the CEO. The Special Advisor's responsibilities include handling
14 details of commitments or initiatives undertaken by the CEO, via assembly and analysis of
15 technical, financial and policy information, preparation (directly or indirectly) of reports and
16 presentations for both internal and external use, and monitoring progress of internal

projects, particularly where multiple business units or external parties are involved. This role also supports the CEO in developing a vision and direction for the OPA, and in propagating that vision throughout the organization and externally.

FINANCE AND BUSINESS SERVICES

Assurance that the OPA's financial resources are being effectively managed continues to be provided by the organization's Finance and Business Services ("FBS") group. Proper financial management is essential for the success, credibility, and viability of the OPA. The financial initiatives carried out by FBS relate to the prudent expenditure and management of public funds. The list of major responsibilities for FBS is as follows:

- strategic planning;
- risk management;
- business planning and budgeting;
- financial reporting;
- treasury management;
- process management;
- internal and external audits;
- records management;
- office administration; and
- security and work place safety.

Following a major review and redesign of the organization's financial reporting system in late 2007, a new structure will be implemented in 2008. The OPA will also develop and implement new internal control procedures in 2008 based on the results of a risk-based internal control assessment to be undertaken in the fall of 2007.

In 2008, FBS will focus on the following activities:

1. Implementation of a new financial reporting system based on a major review and redesign of the existing system, in order to develop more comprehensive, timely and accurate financial reports. The OPA has established a budget of \$100 thousand to support the new financial reporting system in 2008;

2. Development of a method to better predict costs of OPA procurements in subsequent years that will provide context for electricity users and participants in Ontario's electricity sector. The resource support for this development is \$315 thousand in the 2008 Budget;
3. The continued assurance of proper financial management and reporting through an external audit of the OPA's financial statements. Also, the development and implementation of new internal control procedures in 2008 based on the results of the risk-based internal control assessment. The 2008 Budget for audit requirements and the new internal control procedures is \$503 thousand;
4. Process management efficiency improvements for the OPA. The 2008 Budget for this initiative is \$490 thousand; and
5. Development of a multi-year strategic plan that includes comprehensive strategic planning sessions with the OPA's executives and its Board of Directors. A budget of \$112 thousand is established for the development of this strategic plan.

Measures of Success

The specific measures of success are identified by the following outcomes for 2008:

1. Implementation of a new financial reporting system that will provide the OPA management, Board of Directors, and stakeholders with required financial information in a timely and efficient manner;
2. Development of an approach to cost analysis and forecasting that will provide ongoing information on the cost of electricity service in the future;
3. Implementation of new internal control procedures in 2008;
4. Documentation mapping of key corporate processes available to all staff; and
5. A multi-year strategic plan is developed.

2008 Budget

Table 2

Finance and Business Services
Operating Costs
Variance Between 2008 Budget and 2007 Budget
(\$'000s)

Major Cost Category	2008 Budget	2007 Budget	Variance	2007 Forecast
Compensation and Benefits	2,887	2,115	772	2,739
Professional and Consulting Costs	653	460	193	1,035
General Program Costs	192	43	149	129
Premises	2,639	2,863	(224)	2,441
Office and Administration	482	480	2	432
Amortization	1,365	1,030	335	1,222
Interest	500		500	
Total Costs	8,718	6,991	1,727	7,998

2008 Budget Variance Explanations

The Compensation and Benefits increase is due to an increase in 2008 of five additional positions, two of which will work on OPA procurement contract costs. The remaining three positions are associated with staff required to deliver financial and administrative support for the growing organization.

Consulting costs in 2008 will increase by \$200 thousand due to the financial accounting system upgrade and the strategic planning workshops.

The premise cost decrease of \$200 thousand in 2008 is attributed to no longer requiring additional temporary space, which was required in 2007 for office renovations and staff moves.

The amortization cost increase in 2008 is due to the increase in capital expenditures in 2007 and the required capital budget in 2008. See Exhibit D-2-1 for additional details on the capital budget.

Interest expense in 2008 is associated with the cost of borrowing from the OPA line of credit to fund the OPA's operations from a cash flow management perspective.

2007 Results

In 2007, the OPA continued to provide accurate and reliable financial reporting as committed to in the 2007 Business Plan, which specifically stated the following:

Financial management processes and reporting are viewed as sound by the external auditors and provide OPA management with effective decision-making information.

On February 12, 2007, the external auditors, KPMG LLP, provided the OPA with a positive review of its 2006 financial statements. Specifically, the letter from KPMG as provided in the 2006 Annual Report states:

In our opinion, these financial statements present fairly, in all material respects, the financial position of the Authority as of December 31, 2006 and the results of its operations and its cash flows for the year then ending in accordance with Canadian generally accepted accounting principles.

Furthermore, the OPA's 2006 credit rating reports from DBRS, and Moody's Investors provide the OPA with a double "A" rating, with a stable outlook for the future.

Variance Explanations for the 2008 Budget vs. 2007 Budget

The 2007 Forecast for FBS is expected to be approximately \$1.0 million in excess of the 2007 Budget. The expected overage is due to the following:

- Payroll/benefit review determined the Employer Health Tax has not been paid since the OPA's incorporation: \$700 thousand;
- Contract extension required to complete Conservation process mapping initiative: \$225 thousand;
- Financial system enhancement project: \$200 thousand;
- Organizational structure changes to implement a Chief Financial Officer position within the OPA: \$120 thousand;

- 1 • Reduced need for temporary office space: \$420 thousand reduction; and
- 2 • Increased amortization resulting from increase in leasehold improvements:
- 3 \$175 thousand.

4 **Settlement Commitments EB-2006-0233**

5 In the OPA's 2007 RRS, the OPA and certain intervenors agreed to a settlement of Issue 5,
6 Building Organizational Capacity Operating Budget, subject to certain conditions.

7 Condition 5 (4):

8 *[I]n its 2008 RRS, the OPA will provide any incremental external consulting and legal costs*
9 *incurred in 2007 for each new directive arising in 2007.*

10 The OPA has received the following two new directives in 2007: (1) Clean Energy and
11 Waterpower in Northern Ontario Standard Offer (June 14, 2007); and (2) Procurement of
12 up to 2,000 MW of Renewable Energy Supply (August 27, 2007). As of September 30,
13 2007 there have been no incremental external consulting and legal costs incurred.

14 Condition 5 (5):

15 *[W]ith respect to the OPA's practices in the procurement of professional and consulting*
16 *services, the OPA will, subject to any confidentiality limitations, take the following actions:*

17 *(ii) file, as part of the 2008 RRS, management's most recent report to the Audit Committee*
18 *of the Board regarding all non-competitive procurements by the OPA;*

19 This report has been filed at Exhibit C-1-1.

20 *(iii) retain an independent consultant to review the OPA's Procurement Policy and related*
21 *Signing Authorities and compare them with the procurement and authorization practices of*
22 *other public entities (e.g., OEB, Ministry of Energy, etc.) and provide the results of this*
23 *review and comparison in the 2008 RRS:*

24 The results of this review have been filed at Exhibit C-2-1.

CORPORATE COMMUNICATIONS

The Corporate Communications group within the Legal and External Affairs division will work to establish the OPA as an authoritative source of electricity information in 2008, manage issues effectively to ensure the public receives accurate messages, and enhance stakeholder and customer relationships.

Actions to Achieve Strategic Objective 5

In the fulfillment of the OPA's corporate mandate, the Corporate Communications group has determined three areas of focus. These areas are:

1. Electricity Business Information
2. Stakeholder Relations
3. Issues Management

1. Electricity Business Information

In the conduct of its business, the OPA handles and produces information related to the electricity industry, including:

- the production of regular progress reports on conservation results;
- new electricity supply contracts, and new standard offer program contracts;
- information backgrounders and brochures to inform municipal and community audiences about local electricity development initiatives;
- major speeches to diverse audiences across the province;
- brochures about specific OPA initiatives such as the IPSP and standard offer programs;
- newsletters;
- discussion papers; and
- teachers' electricity information kits for use in classrooms across Ontario.

1 The OPA will also produce in 2008, as it does every year, a corporate Annual Report, the
2 Chief Energy Conservation Officer's ("CECO's") Annual Report, the May Supplement to the
3 CECO Annual Report, and the Business Plan, as well as guidelines for the Conservation
4 Fund and Technology Development Fund. These communication vehicles inform industry
5 participants and the public of the progress, quality and nature of the OPA's initiatives
6 toward its mandate of ensuring a reliable, sustainable supply of electricity for Ontario. In
7 addition, electronic technology, webcasts and web-based information as well as ongoing
8 media and government relations initiatives are all used to engage and inform both internal
9 and external audiences.

10 In 2008, Corporate Communications will be undertaking two major communication
11 information initiatives aimed at supporting future planning and procurement activities. The
12 purpose of both of these initiatives is driven by the perceived need to move the IPSP from a
13 position of "shared understanding" to one of "shared action".

14 The first consists of additional developmental work on a web-based software product
15 enabling stakeholders' understanding of planning for electricity infrastructure in a simplified
16 manner versus that demonstrated in the IPSP. The value of such a product is so that non-
17 technical stakeholders can learn about and appreciate the challenges of planning for a
18 reliable and secure electricity supply in the province. This software product is designed as
19 a mechanism whereby users will not only read about the components of electricity
20 infrastructure planning, but through an interactive exercise learn about the dynamics
21 among various resource choices and their resulting impact on planning criteria. The
22 parameters of the exercise will be governed by the dictates of existing government policy.

23 The second initiative is a stakeholder conference planned in the second quarter of 2008
24 that will bring together industry stakeholders with municipal officials and community
25 leaders. The premise of the conference is to create a forum in which industry players, and
26 key municipal and community representatives can dialogue on critical elements supporting
27 the implementation of future infrastructure projects that will derive from an OEB-approved
28 IPSP. The OPA will work closely with other interested parties such as generators and

1 municipal associations to generate both sponsorship interest and program content for the
2 planned conference.

3 2. Stakeholder Relations

4 Sound stakeholder relations are a vital component to ensuring that the business of the OPA
5 is fully informed and supported by stakeholders. A major factor contributing to the support
6 of these relations derives from consistent and regular briefings via general and topic-
7 specific web conferences. For example, on the first Friday of every month, the OPA's
8 executives host an open web and teleconference with stakeholders to field questions
9 pertaining to any aspect of the OPA's business. The purpose of these sessions is to
10 facilitate transparency in the OPA's business, enabling stakeholders to obtain information in
11 areas of most interest to them. Queries may include topics such as standard offer
12 programs, or the status of Conservation program developments. These teleconferences
13 have permitted participants a regular avenue through which questions can be addressed.
14 On occasion the open teleconference has been designated as topic-specific such as when
15 the IPSP was launched in the summer of 2007 to allow stakeholders to ask questions on
16 the scope of the project, or coincident with the release of the CECO Annual Report.
17 Although designated as topic-specific sessions, questions on other areas of OPA business
18 were still entertained.

19 Costs for carrying out these ongoing broad communications are accommodated in the
20 2008 Budget. In addition to outbound communication with stakeholders, it is anticipated
21 that in 2008 there will be input data maintenance costs specific to stakeholder engagement.
22 Given the new customer relations software system installed at the OPA in the last quarter
23 of 2007, Corporate Communications anticipates that some work may be necessary to
24 ensure that the system is tailored to respond to the automated collection of stakeholder
25 input through formal calls for written submissions related to a variety of initiatives. Such a
26 software module will enable Corporate Communications to track stakeholder participation
27 across the breadth of the organization, capture stakeholder feedback efficiently and re-

1 direct it for consideration by a network of in-house technical experts, and further support
2 analytical tracking of stakeholder participation in various events.

3 3. Issues Management

4 Issues Management reflects the need of the OPA to carefully identify, consider and develop
5 communication strategies that ensure the public receives accurate messages about the
6 organization's business activities. The two primary activities which generally support this
7 objective include a comprehensive speech program for all of the OPA's executives; and a
8 strategic move to more fully engage municipal governments through an outreach program.
9 These opportunities allow the OPA to communicate key messages on its business activities
10 in a timely manner, and further provide industry context so that informed opinions may be
11 developed. Key messaging to critical stakeholders such as the media, elected officials, and
12 influential community participants is necessary as the general public develops its opinions
13 as filtered by those stakeholders mentioned above. Furthermore, Corporate
14 Communications strategically directs the OPA's executives to speak only in forums where
15 there is specific interest in energy issues.

16 Another significant area of focus within issues management for 2008 is the development of
17 an effective, sustainable and relevant engagement strategy with First Nations Communities
18 and Métis Community Councils on the next iteration of the IPSP. The OPA committed to
19 both First Nations and Métis people that, consequent to the initial outreach and
20 engagement undertaken for the recently filed IPSP, ongoing discussions of this nature
21 would continue. The purpose of these interactions would be to work with key First Nations
22 and Métis groups in designing an appropriate long term engagement framework related to
23 electricity planning.

24 Measures of Success

25 The Corporate Communications elements of Strategic Objective 5 will be achieved when:

- 26 • Opinion polls indicate that the OPA is widely viewed as an authoritative source of
27 information on electricity;

- News stories on identified issues consistently reflect key OPA information;
- Website hits related to the web-based IPSP information product grows by more than 10% within six months of its launch in 2008;
- Stakeholders continue to participate in monthly open web conferences;
- Public survey, focus groups and interviews with key stakeholders indicate majority approval of OPA activities and accomplishments;
- The majority of stakeholders surveyed respond that they use OPA sources to keep up-to-date on broad industry developments; and
- Annual Reports, Business Plan, quarterly conservation and electricity supply reports and other reports and information resources continue to be produced accurately and on time.

Table 3

Communications
Operating Costs

Variance Between 2008 Budget and 2007 Budget
(\$'000s)

Major Cost Category	2008 Budget	2007 Budget	Variance	2007 Forecast
Compensation and Benefits	1,010	939	71	952
Professional and Consulting Costs	842	1,001	(159)	564
General Program Costs	1,218	546	672	424
Office and Administration	11	35	(24)	20
Total Costs	3,081	2,521	560	1,960

1

Table 4
Communications
Operating Costs
Variance Between 2008 Budget and 2007 Budget
(\$'000s)

Strategic Objective	2008 Budget	2007 Budget	Variance	2007 Forecast
Objective 1 (Planning)	30	466	(436)	525
Objective 2 (Conservation)	738	255	483	552
Objective 3 (Electricity Resources)	133	0	133	273
Objective 4 (Sector Development)	60	0	60	0
Objective 5 (Corporate)	3,081	2,521	560	1,960
Total Costs	4,042	3,242	800	3,310

2 **Variance Explanations for the 2008 Budget vs. 2007 Budget**

3 Moving forward in 2008, the implementation of various IPSP-driven projects will require
4 more extensive and intensive municipal outreach, thus resulting in higher consultation costs
5 in 2008 than actually incurred in 2007.

6 In order to prepare for the implementation of the IPSP, considerable outreach to First
7 Nations and Métis peoples as well as to Ontario municipalities will be required, as their
8 direct participation in the implementation of the approved IPSP is a necessary condition of
9 its ultimate realization.

10 A new e-newsletter will be introduced in 2008. The newsletter will be e-mailed monthly to a
11 list of about 4,200 general subscribers, enhancing the regular e-mail notices regarding
12 updates to the websites that the OPA has been sending monthly, and improving this
13 information service to interested stakeholders. The e-newsletter will also be available on
14 the OPA website.

15 The stakeholder conference described above is also a new activity planned for launch in
16 2008.

Variance Explanations for the 2007 Forecast vs. 2007 Budget

Expenses associated with municipal and provincial outreach were constrained by efforts undertaken in the consultation of the IPSP; the IPSP public consultation to some extent replaced an explicit need to engage in broader outreach with these audiences in 2007.

This decrease in costs was offset slightly by:

- A significant increase in demand for speechwriting services in 2007, particularly for the CECO, resulting in an increase in consultants' fees for writing services; and
- The new quarterly progress reports on Supply, Conservation and Renewable Energy Standard Offer Program ("RESOP") were not budgeted in 2007.

2007 Results

Throughout 2007 the OPA engaged with over 2000 stakeholders regarding the IPSP alone. This participation by stakeholders included attending web/teleconferences, workshops, listening to speeches and various stakeholder sessions. This statistic is further augmented when considering the volume of feedback aggregated during initiatives such as the development of Conservation programs and standard offer programs. The final work products of the OPA including the IPSP filed with the OEB, demonstrate how such feedback was included into the work of internal technical experts. Corporate Communications is able to track formal (i.e., solicited) stakeholder input internally through its customer relations software system.

To date in 2007, the OPA media relations team arranged some 60+ individual interviews with senior OPA spokespeople; undertook to respond directly to over 100 specific media queries and planned and executed more than a dozen media-related communications events, alone or in concert with Ministry, industry and/or other program partners.

Settlement Commitments EB-2006-0233

In the OPA's 2007 RRS, the OPA and certain intervenors agreed to a settlement of Issue 6, General, subject to a condition on the OPA's future approach to stakeholder funding. The OPA remains committed to an approach to stakeholder funding that recognizes the level of effort that is required in order for stakeholders to provide meaningful input.

HUMAN RESOURCES

Human Resources ("HR") will continue to play a pivotal role in the organization's plan for 2008. Hiring of new staff to address regular turnover as well as growth of the organization will be an ongoing priority. Initiatives will also be undertaken to ensure high levels of staff retention and help the organization continue to attract high-calibre employees, including the introduction of new training and development programs. Recognizing that the OPA has an ongoing need for highly skilled and experienced staff members in a rapidly transitioning industry, a management development strategy and a succession planning process will be created to help prepare tomorrow's leaders and effect smooth succession plans.

HR continues to focus on providing the necessary leadership, processes and support for recruiting, retaining, compensating, managing and developing the organization's human resources.

In 2007, the OPA focused its human resources efforts on employee acquisition and retention, compensation programs, skill development and the introduction of a performance management system. This work continues to be the focus in 2008.

Employee Acquisition and Retention

As the OPA continues to grow to the size required to deliver its mandate, HR supports the management team by providing recruiting services. In addition to the growth in staff, the OPA has experienced some turnover and has been recruiting to fill these vacancies.

1 Additionally, HR manages the placement of temporary employees including students and
2 contract employees to cover temporary work assignments.

3 To assist in filling these roles, the OPA continues to engage recruitment services, as well
4 as engaging new media for advertising roles.

5 In 2008, the OPA expects the recruitment task to continue at the same level of activity as it
6 has been in 2007, and expects to continue to leverage recruitment firms to assist in finding
7 the best candidates.

8 Compensation Systems

9 The OPA uses the Hay Compensation System. The system is used to assess new jobs,
10 assess market rates and to ensure the compensation system is competitive.

11 Corporate Skills Evaluation and Skill Development

12 Courses for employees developed with the assistance of consultants were made available
13 to OPA staff in 2007 and will continue to be available in 2008.

14 The OPA is also reviewing external training and education courses that can be made
15 available to employees. These courses, offered by universities, colleges and other training
16 institutions can be made available to managers as they form development plans for
17 employees in order to improve employee and team skills as identified in the Performance
18 Management Process described below.

19 To further assist employees in developing their own careers and skill sets, the OPA has
20 developed an educational assistance policy that provides tuition assistance to employees
21 working towards an accredited certificate, undergraduate or graduate degree.

1 Performance Management Program

2 In 2007, the OPA worked with an external consultant to develop a performance
3 management system. The system encompasses an objective setting process, a
4 competency review, employee development plans and performance review.

5 In 2007, the performance review portion of the process has been introduced. All regular
6 full- and part-time employees are participating in a performance review process. In 2008,
7 the process will be expanded to include the competency review piece along with the
8 development of personal improvement plans. These plans will leverage the corporate skills
9 development initiative where possible.

10 The goal in 2008 is to establish the performance management program as the basis of
11 employee development, compensation adjustment, and succession planning.

12 Measures of Success

13 Human Resources will have contributed to the achievement of Strategic Objective 5 when
14 programs and strategies are in place to assist employee development and performance, a
15 robust performance management system is in place, the employee retention level is high
16 and employees with appropriate expertise continue to be recruited when necessary and as
17 needed.

18 The OPA will measure success in the HR goals and objectives by establishing a target
19 turnover rate of less than 5%. The OPA will also continue to survey employee attitudes
20 and establish a goal of having employees identify the OPA as their employer of choice.

2008 Budget

Table 5

Human Resources
Operating Costs
Variance Between 2008 Budget and 2007 Budget
(\$'000s)

Major Cost Category	2008 Budget	2007 Budget	Variance	2007 Forecast
Compensation and Benefits	922	802	120	951
Professional and Consulting Costs	350	350	0	271
General Program Costs	93	65	28	67
Office and Administration	15	9	6	9
Total Costs	1,380	1,226	154	1,298

Variance Explanations for the 2008 Budget vs. 2007 Budget

The major variance in the HR budget between 2008 and 2007 is the variance in Compensation and Benefits of \$120 thousand. This variance reflects an increase in Full Time Equivalents from two to three in order to handle the increased support needs of the growing organization.

2007 Results

In 2007, the Human Resources Department established the following success measures:

- Recruitment initiatives result in candidates selecting the OPA as their “employer of choice”; employee turnover is less than 5% per year; and
- The workforce has current skills, tools and resources to successfully execute defined work programs and deliverables.

Progress has been made on these fronts. A performance management system has been introduced, and training and employee development opportunities have expanded. These initiatives are expected to deliver results over the next number of years.

As of September 30, 2007, HR has been involved in 36 job placements. Of these, 23 are new positions and 10 are related to internal vacancies. In 2007, employee turnover has been higher than expected with a rate of 10% as of September. The OPA continues to work to understand the causes, and to design solutions for implementation.

In late 2006, the OPA completed a needs analysis of the training and development needs of employees. As a result of the analysis, the OPA focused first on three priority areas:

- An industry orientation that provides industry and OPA insight for all new employees;
- an effective negotiation course; and
- a communications course with emphasis on selling ideas.

These courses were developed in 2007 with the assistance of consultants and made available to OPA staff.

Settlement Commitments EB-2006-0233

In the OPA's 2007 Revenue Requirement Submission, the OPA and certain intervenors agreed to a settlement of Issue 5, Building Organizational Capacity Operating Budget, subject to certain conditions.

Condition 5 (3):

[I]n its 2008 RRS, the OPA will provide a report addressing how incentives for executives are linked to the achievement of corporate objectives:

Executive Incentives

Executive performance, and the extent to which individual executives have contributed to the achievement of corporate goals, is assessed by the Chief Executive Officer. The incentive payment to each individual is decided by the Chief Executive Officer within a global budget established by the Board of Directors, on the basis of a recommendation developed by the Human Resources Committee of the Board of Directors. The Committee and Board of Directors establish this budget in the context of their assessment of the

1 success OPA staff has had in delivering on its Business Plan, and responding to matters
2 which arose throughout the year but were not foreseen in the Business Plan.

3 Condition 5 (6):

4 *[W]ith respect to OPA's compensation practices, the OPA agrees to provide in its 2008*
5 *RRS the following:*

6 *(i) any advice received from Hay (as a result of the report filed in this revenue requirement*
7 *submission and the OPA's ongoing work with Hay) regarding:*

8 *(a) the appropriate compensation element(s) to be used in benchmarking the OPA's staff*
9 *compensation levels with comparables;*

10 *(b) the appropriate percentile to be used in benchmarking the OPA's staff compensation*
11 *levels with comparables;*

12 *(ii) the OPA's position with respect to the Hay advice - if no advice has been received, the*
13 *OPA will provide its position on the above issues; and*

14 *(iii) any action plan arising from the OPA's position referred to above:*

15 The advice that the OPA has received related to these two matters from Hay, stemming
16 from the February 15, 2006 report filed in last year's proceeding, is contained in a report
17 from Hay dated February 28, 2006. This report entitled Compensation Principles and
18 2006 Salary Range Structure was filed with the Board on March 16, 2007 and copied to
19 intervenors. Hay's recommendations with respect to the compensation elements and the
20 appropriate percentile can be found for each of the OPA's job classifications at pages 7 and
21 8 of the report. The OPA accepted and implemented these recommendations.

22 Subsequently, in light of Phase I of the Report of the Agency Review Panel, the OPA has,
23 with the assistance of Hay, moved to using the 50th percentile in benchmarking the Salary
24 Grade 2 positions to the comparator group for the purpose of setting the compensation for
25 new hires in Salary Grade 2 positions.

LEGAL AND REGULATORY SERVICES

The Legal and Regulatory Services ("LRS") group is responsible for providing legal advice on a broad range of matters including corporate and commercial law, and the statutory powers and duties of the OPA. LRS also manages and coordinates the OPA's involvement in regulatory proceedings before the OEB, and is responsible for the Corporate Secretary function.

In 2008, the OPA will rely heavily on the support of LRS throughout the OEB's reviews of the IPSP, and the 2009 Revenue Requirement Submission. Regulatory assistance will also be provided for the OPA's involvement in other parties' applications, such as transmitter's leave-to-construct proceedings, which are directly related to the OPA's planning mandate. In addition, LRS represents the OPA at the OEB by commenting on OEB discussion papers and consultations, and by monitoring other proceedings of interest to the OPA.

LRS will continue to provide general legal counsel on matters ranging from the OPA's powers and duties, to advice on procurement processes and drafting of contracts.

LRS will also support the OPA's Board of Directors, helping to ensure the Board's smooth functioning, and enhancing its ability to provide strategic oversight to the organization. In addition to supporting the Board of Directors, the Corporate Secretary is also responsible for a number of other functions including dealing with the *Freedom of Information and Protection of Privacy Act* requests, and conflict of interest issues.

There continues to be significant demand for legal services within the OPA, particularly with respect to corporate and commercial law. This demand arises primarily from the development of Conservation programs and the procurement of new renewable generation resources. This demand will be met in 2008 by the three existing in-house legal counsel focused on corporate and commercial law.

1 External counsel will continue to be procured judiciously in order to access specific
2 expertise to meet other corporate and commercial needs, as well as for regulatory
3 representation.

4 Measures of Success

5 LRS will have achieved its 2008 objective when the OPA's regulatory applications to the
6 OEB continue to be well received and decisions are expeditiously rendered.

7 **2008 Budget**

8 The Compensation and Benefits costs include the salaries and benefits of LRS and the
9 remuneration of the OPA board of directors. The professional and consulting expenses
10 include significant funding for IPSP intervenor cost awards by the OEB, legal fees related to
11 OPA cases before the OEB, and legal costs for advice on such corporate-wide issues as
12 employment law, intellectual property, tax, and environmental issues.

1

Table 6
Legal and Regulatory
Operating Costs
Variance Between 2008 Budget and 2007 Budget
(\$'000s)

Major Cost Category	2008 Budget	2007 Budget	Variance	2007 Forecast
Compensation and Benefits	2,114	1,976	138	1,925
Professional and Consulting Costs	290	325	(35)	760
General Program Costs	86	47	39	68
Office and Administration	166	152	14	152
Total Costs	2,656	2,500	156	2,905

2 **Variance Explanations for the 2008 Budget vs. 2007 Budget**

3 The bulk of the small difference of \$156 thousand between the 2008 Budget and the
4 2007 Budget shown in Table 6 is attributable to Compensation and Benefits, which arises
5 from a budgeted increase in the number of regulatory staff in 2008 to reflect the increased
6 workload due to the IPSP proceeding. General program costs will also increase slightly for
7 some employee training.

8 Legal and Regulatory costs by Strategic Objective are listed in Table 7, below. In 2008,
9 LRS will be responsible for managing the external legal costs and some consulting costs
10 applicable to Strategic Objectives 1, 2, 4 and 5. Legal and Regulatory Service
11 management of these expenditures is different from prior year's arrangements whereby
12 each division was responsible for managing its own external legal and consulting costs.
13 This explains the significant increase from 2007 to 2008 in this budgeted item for the LRS
14 group.

15 The large variance attributable to Objective 1 (Planning) of over \$2.0 million is in the budget
16 for the IPSP proceeding, reflecting increased amounts for intervenor funding and expert
17 witnesses, offset by a slight decrease in legal counsel.

1

Table 7
Legal and Regulatory
Operating Costs
Variance Between 2008 Budget and 2007 Budget
(\$'000s)

Strategic Objective	2008 Budget	2007 Budget	Variance	2007 Forecast
Objective 1 (Planning)	5,074	3,010	2,064	2,322
Objective 2 (Conservation)	1,770	1,150	620	1,315
Objective 3 (Electricity Resources)	0	0	0	0
Objective 4 (Sector Development)	525	125	400	125
Objective 5 (Corporate)	2,656	2,500	156	2,905
Total Costs	10,025	6,785	3,240	6,667

2 Other increases in legal costs are a result of external legal counsel being retained for work
3 on commercial contracts in the areas of Conservation and Sector Development. This is a
4 result of both the increased volume of work and the need for specific legal expertise.

5 **2007 Results**

6 In 2007, LRS contributed to Strategic Objective 5 by building organizational capacity to
7 achieve the other four strategic objectives. The hiring of an in-house legal counsel
8 supported the OPA's commercial contracting efforts, generally reducing dependence on
9 external counsel, and increasing the in-house expertise which can be drawn upon in future
10 years, and for different files.

11 In supporting Strategic Objective 1, LRS provided legal advice in matters of Conservation
12 contracting, programs, culture creation, industry infrastructure development, market
13 mechanisms, and EM&V implementation. Regulatory involvement at the OEB on a range
14 of Conservation issues influenced, for example, electric LDC Conservation and demand
15 management programs. As well, Conservation issues were significantly addressed in the
16 OPA's 2007 Revenue Requirement Submission.

1 For Strategic Objective 2, LRS played a major role in the development, editing and filing of
2 the IPSP application at the OEB. Also, the group was involved in providing solutions to
3 address urgent reliability concerns, such as progress on Northern York Region and
4 reporting such to the OEB, as well as direct involvement in providing supporting evidence
5 for Hydro One's Bruce to Milton leave-to-construct OEB application.

6 LRS played a key role in 2007's Strategic Objective 3, particularly in the Bruce Power
7 contract renegotiations, and in the development of the Renewable Energy Standard Offer
8 Program ("RESOP") and the Clean Energy Standard Offer Program ("CESOP"). OPA
9 regulatory involvement included providing comments to the OEB on barriers to distributed
10 generation particularly with respect to RESOP.

11 Support from LRS for Strategic Objective 4 occurred in the development of Load Serving
12 Entities (pilot testing), drafting Technology Development Fund arrangements, and work on
13 emissions credits. Market development efforts were further supported by the OPA's
14 comments to the OEB on draft filing requirements for setting payment amounts for OPG
15 prescribed assets.

16 **INFORMATION SYSTEMS**

17 Managing the complete roster of information systems for the OPA, within the Finance and
18 Administration division, is the responsibility of the OPA's Information Systems ("IS") group.
19 In addition to providing information systems support as required to all divisions, the group
20 will be focusing much of its effort in 2008 on: 1) providing support for administration of
21 Conservation programs; 2) storing and managing the results of Conservation programs;
22 and 3) supporting its Conservation program evaluation, measurement and verification
23 ("EM&V") efforts.

24 **Actions to Achieve Strategic Objective 5**

25 In the fulfillment of the OPA's corporate mandate, the Information Systems group will focus
26 on maintaining the OPA's information management systems, tools, electronic-
27 communication vehicles and storage capacity.

1 Overall Group Structure

2 The Information Systems ("IS") group is configured solely as a support function. It is
3 divided into information technology ("IT"), information management ("IM") and website
4 support ("Web") sections. The purpose of the IS group is to facilitate the OPA's day-to-day
5 electronic communications operations in as streamlined and efficient a manner as possible.

6 Information Technology

7 The goal and function of IT is to build and provide ongoing support for internal electronic
8 communications, central data storage and security infrastructure, as well as to acquire and
9 maintain the personal computers used by each employee. The OPA has a proven reliable
10 and robust system that operates with minimal maintenance or upgrading cost, which is
11 expected to continue in 2008.

12 The administration of the organization's entire server and storage complex is done in-
13 house. The OPA will continue to employ an advanced off-site back-up system that is also
14 managed internally. The public-facing corporate websites are hosted externally.

15 Due to the limited staff resources dedicated to the IT operation, the OPA has contracted
16 with a third party IT service provider to provide emergency back-up coverage and service in
17 the event that IT staff are on vacation, sick or otherwise unavailable. The 2007 estimate of
18 the extent of the use of this service is approximately 12 person-days, and this is not
19 expected to change significantly in 2008.

20 In order to obtain the best value for its IT purchases, staff regularly undertake market
21 comparisons with IT product reliability and longevity statistics tagged as priorities, even for
22 relatively low cost purchases. These market comparisons will also be done in 2008 as
23 required.

24 Daily helpdesk support to all OPA employees and on-site contractors is also provided by IT
25 staff. The ratio of IT helpdesk staff to employees, and the ratio of IT server administration

1 staff to the number and complexity of servers in 2008 will remain well below industry
2 averages.

3 Information Management

4 The IM function is focused on supporting the other departments of the OPA with their
5 database and information management needs. In 2008, IM will continue to ensure that
6 relevant information is available to those staff who need to analyse or respond to the
7 information.

8 Work will also continue on the deployment of the newly purchased rapid application
9 development system to support a wide variety of OPA business needs, the primary one
10 being external relations management. This system performs the role of interface between
11 the OPA and all external entities (program delivery agents, stakeholders, etc.) who need to
12 exchange information.

13 One of the major uses of the system will be managing the interrogatory process related to
14 the OPA's IPSP filing with the OEB.

15 The IM section also supports the OPA's finance systems (and their connection to the
16 Conservation operations staff who deal with the contracted program delivery agents
17 operating OPA programs in the field).

18 Website Support

19 The OPA uses websites as a key communications vehicle. The OPA's goal has been, and
20 will continue to be in 2008 and beyond, that its websites are an open, comprehensive,
21 timely and efficient source of information on OPA matters for all key stakeholders. The
22 OPA's family of websites consists of:

23 Primary corporate site (www.powerauthority.on.ca) with sub-sites for:

- 24 • IPSP (this was in place in 2007 in order for stakeholders to participate in the
25 development of the IPSP Discussion Papers; in 2008 this has been superseded by
26 the OEB IPSP regulatory proceeding);

- 1 • Generation Procurement (formerly a separate site); and
- 2 • Renewable Energy Standard Offer Program;
- 3 • Conservation Bureau/CECO site;
- 4 • Every Kilowatt Counts conservation programs marketing site; and
- 5 • OPA intranet (internal only).

6 The Web section within the IS group maintains all of these sites and handles a portion of
7 the design work. Some design work will be out-sourced in 2008.

8 Measures of Success

9 The Information System elements of Strategic Objective 5 will be achieved when computer
10 systems and information storage capacity are reliably meeting the organization's needs,
11 and the whole organization is working effectively through the provision of client-driven
12 administrative support services.

1

Table 8
Information Systems
Operating Costs
Variance Between 2008 Budget and 2007 Budget
(\$'000s)

Major Cost Category	2008 Budget	2007 Budget	Variance	2007 Forecast
Compensation and Benefits	495	401	94	521
Professional and Consulting Costs	100	230	(130)	230
General Program Costs	7	10	(3)	10
Information Technology	259	203	56	203
Office and Administration	6	3	3	3
Total Costs	867	847	20	967

2

Table 9
Information Systems
Operating Costs
Variance Between 2008 Budget and 2007 Budget
(\$'000s)

Objective	2008 Budget	2007 Budget	Variance	2007 Forecast
Objective 1 (Planning)	25	0	25	0
Objective 2 (Conservation)	750	0	750	0
Objective 3 (Electricity Resources)	111	0	111	0
Objective 4 (Sector Development)	0	0	0	0
Objective 5 (Corporate)	867	847	20	967
Total Costs	1,753	847	906	967

3 **Variance Explanations**

4 Incremental increases in the IS budget generally track the expanding staff complement of
5 the OPA. The IS group also took over responsibility for website implementation during
6 2007, supporting the Corporate Communications, CECO and Conservation marketing
7 departments with their sites.

2007 Results

In 2007 the group continued to meet the growing IS demands of the organization. IT configured a system to meet the complex needs of the OPA (relative to the size of the staff complement) that included many servers, two server clusters, a load-balanced pair of servers, a storage area network (SAN) and a new network attached storage (NAS) facility specifically designed to accommodate very large (and large quantity) power system planning simulation files.

The OPA works with a vast array of information and data. Some data is common to several departments, but is used in different ways. Much time and effort was spent in 2007 specifying and then undertaking an RFP to purchase a rapid application development system to support a wide variety of OPA business needs, including:

- Conservation program application forms and, in some cases, legal contracting;
- internal administrative operations/communications for Conservation programs and program activity tracking;
- stakeholder relations tracking, registrations for events and electronic communications;
- internal management budget reporting and other connectivity to OPA's finance electronic system;
- Conservation program evaluation, measurement and verification (EM&V) data repository; and
- the internal corporate library.

The RFP resulted in a successful purchase. Implementation of the system will continue through the end of 2007 and into 2008.

Ontario Power Authority
Non-Competitive Procurements over \$75,000 - January 2007 to August 2007

No	Vendor/Consultant Name	Detail of Contract	Division/department	Contract / Purchase Order Amount	Justification	Contract Start Date	Expiry Date
1	Osler, Hoskin & Harcourt LLP (1)	External Support on Lac Seul Negotiations with OPG	GD	-	Time was of the essence and the negotiations with OPG could potentially become complex.	January 1, 2007	December 31, 2007
2	Navigant Consulting (2)	IPSP Analytical support for OPA	PSP	-	Proven expert support for conducting such an analysis.	January 8, 2007	Aug 31, 2007
3	Canada Post	Postage Services for EKC program	CPER	-	Sole Provider	February 1, 2007	December 31, 2007
4	HRAI	Project Manager for the Hot Savings and Cool Savings programs.	CSD	-	Board Approval - HRAI has extensive experience coordinating, training and registering contractors and is subject matter expert on AC systems. They are the primary industry association for HVAC contractors in Ontario and therefore well placed to deliver a program through this channel.	February 2007	July 2007
5	Hardy Stevenson & Associates	IPSP sustainability due diligence review	PSP	-	Supplementation of previous work with revisions and new material. Work required in short timeframe and needs to meet the deadline set by IPSP.	March 8, 2007	May 18, 2007
6	Fluid Media (3)	Design and Development of the EKC website for OPA	CPER	-	It continues previous work, it is the most effective and efficient contractor to ensure a timely launch. They have creative and management depth and industry experience.	March 16, 2007	April 16, 2007
7	Ontario Internal Audit Division	Retail Price Plan Audit Services	CA	-	The lowest rates on the market (\$90/unit of labor) and knowledge of OPA business. Awarding the work to a non-government agency would require significant ramp up time for both OPA and service provider.	April 2007	March 2008
8	Morrison Park Advisors	Stakeholder Consulting	CEO	-	Procurement actually resulted from the change in corporate structure of an existing supplier and is not a new procurement for new services.	May 1, 2007	April 30, 2010
9	CIBC World Markets	Advice and assist OPA in evaluating the Bruce A Refurbishment proposed amendment	GD	-	Board Approval - Update the original Fairness Opinion related to the Bruce Power Refurbishment Implementation Agreement.	June 2007	June 2007
10	PJB Energy Solutions	Analytical, management, strategic, negotiation, operational and execution related to Electricity Resources	GD	-	Unique capability and expertise; contract awarded to retain the services of a departing senior executive for assistance in transitioning to new replacement for the position.	July 1, 2007	December 31, 2007
11	Rogers Media Inc.	Toronto Blue Jays - Conservation Awareness	CB	-	Unique facility that no other source can provide to satisfy the OPA's requirements.	July 2007	July 2007



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October 15, 2007

MEMORANDUM TO: Ron Stewart
Vice President (Acting), Finance and Administration
Ontario Power Authority

FROM: Larry Yarmolinsky
Audit Director

SUBJECT: Review of OPA Procurement Policy and related Signing Authorities

BACKGROUND

As a result of the Ontario Power Authority's (OPA) 2007 Revenue Requirement Submission (RRS) process in the Fall of 2006, the Ontario Energy Board, in its February 5, 2007 Decision and subsequent Order of March 5, 2007, issued the following requirement:

"5) with respect to the OPA's policies in the procurement of professional and consulting services, the OPA will, subject to any confidentiality limitations, take the following actions:"

"(iii) retain an independent consultant to review the OPA's Procurement Policy and related Signing Authorities and compare them with the procurement and authorization policies of other public entities (e.g., OEB, Ministry of Energy, etc.) and provide the results of this review and comparison in the 2008 RRS."

To comply with this request, the OPA contracted with the Financial and Revenue Audit Service (FRAST) of Ontario Internal Audit Division to perform this review.

ENGAGEMENT OBJECTIVE & SCOPE

FRAST's objective was to review the OPA's Procurement Policy and related authorization policies and compare them with procurement and authorization policies of four other public entities; Province of Ontario, Government of Canada, Ontario Energy Board, and Ontario

**Ontario Power Authority – Procurement Policy Review
October 15, 2007**

Power Generation (OPG). The four were selected as they were either leading edge public sectors or public sector organizations in same industry. The detailed results of our comparative analysis will be provided to the OPA.

In this engagement FRAST endeavoured to identify any significant differences between the OPA's policies and public-sector-industry policies; and where possible, evaluate the impact of identified differences in terms of effectiveness and controls.

APPROACH

This engagement focused on the comparison between the OPA Procurement and Authorization policies against that of the four comparative public entities.

Our engagement approach included:

- Developing an understanding of OPA's business environment;
- Obtaining and reviewing organization charts, job responsibilities and reporting relationships;
- Reviewing OPA's procurement, authorization and other related policies; and
- Comparing the procurement and authorization policies with the procurement and authorization policies of the four comparative public entities.

OBSERVATION

FRAST compared OPA's Procurement Policy (as approved by the Board of Directors on April 24, 2007) to the procurement policies of the four comparative public entities, which were obtained either through our interaction with the organizations directly or from their website on the Internet. The summary result of our comparative analysis is outlined on Appendix A.

Our comparative analysis was done using thirteen different variables (see Appendix A for details) which we deemed are key elements of an effective procurement policy according to best practices. While some of the procurement policies obtained by FRAST did not contain information on all thirteen variables, we were able to obtain secondary policies that allowed us to obtain information on the missing variables.

CONCLUSION

In our professional opinion, we believe that the OPA's Procurement Policy and related authorization policies are in line with that adopted by the public-sector-industry. There are no material weaknesses or flaws in the policies as presented to us.

Ontario Power Authority – Procurement Policy Review
October 15, 2007

ACKNOWLEDGMENT

We wish to thank Melanie Sangster, Manager, Business Services for the assistance and cooperation received during the engagements.

A handwritten signature in black ink, appearing to read "Larry Yarmolinsky". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Larry Yarmolinsky, MBA, CA
LY/ep

Copy: Jill Medley, Director, Finance and Business Services OPA

Ontario Power Authority – Procurement Policy Review
October 15, 2007

Appendix A

PROCUREMENT POLICY REVIEW SUMMARY RESULTS

	Key Elements	Rating	OPA Policy
1	Competitive Process	M	OPA has different competitive process for : ➤ \$5,000 - \$10,000 ➤ \$10,000 - \$50,000 ➤ Above \$50,000.
2	Documentation	M	OPA requires a sufficient amount of documentation to maintain the integrity of the procurement process.
3	Contract Development	M	➤ Contracts require Purchase Orders to be issued thru the Finance & Business Services Department. ➤ All Blanket Contracts must have a definitive monetary value approved by the signing authority.
4	PCard / Company Credit Card	E	OPA's Company Credit Card policy clearly lists out the responsibilities of all pertinent levels.
5	Payment Process	M	Payment made against supporting invoice with supporting confirmation that deliverables have been received and payment is in accordance with agreed terms and conditions of the contract.
6	Conflicts of Interest	M	➤ OPA requires employees to report conflict. ➤ OPA involves General Council in the determination of best strategy to avoid conflict.
7	Exemption from Competitive Procurement	M	➤ Requires justification memo. ➤ Requires authorization of memo. ➤ Board of Directors gets a list of all non – compete procurements over \$75,000. ➤ Policy provides a list of examples of Sole Sourcing reasons.
8	Non Competitive Procurement	M	Only procurements of \$5,000 and lower are within acceptable limits for non competitive procurement.
9	Agreements and Extensions	M	➤ Requires pre-approval of amendments ➤ Limits contracts to only one extension, unless written authority from the CEO for an additional amendment.

Ontario Power Authority – Procurement Policy Review
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	Key Elements	Rating	OPA Policy
10	Responsibilities	E	➤ Clear list of duties and responsibilities are included in the policy. ➤ OPA listing exceeds industry standards because it lists business units and their individual responsibilities.
11	Signing Authorities Policies	M	➤ Clear list of policies to govern the delegation process. ➤ Form created to track and record the assignment of signing authorities.
12	Vendor of Record	NA	OPA does not have a VOR policy yet.
13	Authorization Levels	M	OPA signing authority levels are in line with the levels of other industry organizations.

RATING

- NA – Not Applicable
- M – Meets industry standards
- E – Exceeds industry standards

FRAST's ratings are based on the comparison of the OPA's current policies against the policies of the four public entities.

GENERATION PROCUREMENT REPORT

The OPA's Procurement Process, which was filed together with the IPSP, outlines the principles and procedures to be followed in selecting, designing and conducting procurements identified in the IPSP.

The OPA's preference is to use, to the greatest extent possible, competitive procurements. Therefore, a competitive procurement is the default procurement type. In accordance with the Procurement Process, a non-competitive procurement can be executed (i) if the IPSP identifies a particular project/program that is directly linked to a sole proponent; or (ii) if only one project/program can deliver the identified resource (or portion thereof) as per the specified type, location and/or timing of the resource.

Since its inception, the OPA has conducted both competitive and non-competitive supply procurements, using the Procurement Process as defined. However, to date, all of the OPA's generation procurements have been conducted in response to directives from the Minister of Energy. Some of the lessons learned from OPA competitive procurement processes to date are provided in the IPSP, and are summarized as follows:

- Competitions between similar projects ("homogeneous competitions") are preferable to competitions involving a variety of program types. This facilitates the application of the evaluation criteria and ensures a fair comparison;
- Targeted procurements that outline clear requirements for the specific resource will result in a fair procurement with a good result;
- Requirements and evaluation criteria should be set at an appropriate level to ensure robust competition among qualified proponents;
- Mutual exchange and open dialogue between the OPA and proponents ensures a more efficient design and execution of the procurement;
- The OPA needs to remain in touch with industry and current trends to ensure that requirements and evaluation criteria reflect the needs and abilities of qualified proponents; and
- A certain attrition level is possible for projects or programs, due to regulatory approvals or for other business reasons. This can be mitigated through: the evaluation of feasibility-related criteria; security provisions in contracts; or procurement of more projects than needed ("margin for error").

1 On the competitive side, the OPA has executed a procurement for combined heat and
2 power projects (CHP RFP) and one for a gas-fired project in the GTA West (GTA West
3 Trafalgar RFP). These procurements have been completed and have resulted in signed
4 contracts.

5 The OPA was also directed by the Minister of Energy to execute several non-competitive
6 procurements, which are as follows:

- 7 • Goreway Generating Station;
- 8 • Portlands Energy Centre; and
- 9 • Early Mover Projects.

10 Table 1 on page 3 outlines the detailed information for each of the supply contracts
11 executed by the OPA.

1 **Table 1: Procurement Contract Details**

Contract Execution Date	Project/Station Name	Counterparty	Location	Contract Capacity (MW)	Procurement Type
01-Mar-06	Brighton Beach (Early Mover)	Coral Energy Canada Inc.	Windsor	580.0	Non-competitive
01-Mar-06	Trent Valley (Early Mover)	Sonoco	Trenton	7.2	Non-competitive
01-Mar-06	Sudbury Hospital Co-Gen (Early Mover)	Toromont Energy Ltd.	Sudbury	6.8	Non-competitive
01-Mar-06	Sudbury District Energy (Early Mover)	Toromont Energy Ltd.	Sudbury	5.0	Non-competitive
01-Mar-06	Sarnia Co-Gen Plant (Early Mover)	TransAlta Energy Corporation	Sarnia	575.0	Non-competitive
31-Dec-05	Goreway Generating Station	Sithe GlobalPower Goreway ULC	Brampton	860.0	Non-competitive
18-Aug-06	Portlands Energy Centre	Portlands Energy Centre L.P. (TransCanada/OPG)	Toronto	538.0	Non-competitive
14-Nov-06	Halton Hills Generating Station	TransCanada Energy Ltd.	Halton Hills	600.0	Competitive
16-Oct-06	Algoma Energy	Algoma Energy LP.	Sault Ste. Marie	63.0	Competitive
16-Oct-06	Countryside	Countryside London Cogeneration Corp.	London	12.0	Competitive
16-Oct-06	Durham College	Oshawa PUC Energy Services Inc.	Oshawa	2.3	Competitive
16-Oct-06	Markham District Energy	Markham District Energy Inc.	Markham	5.0	Competitive
16-Oct-06	Thorold CoGen	Thorold CoGen L.P. (Northland Power)	Thorold	236.4	Competitive
16-Oct-06	East Windsor Cogen	East Windsor Cogeneration LP	Windsor	84.0	Competitive
16-Oct-06	Great Northern Tri-Gen	Soave Hydroponics Company	Kingsville	11.5	Competitive

2008 REVENUE REQUIREMENT

The OPA is seeking approval of its fiscal year 2008 expense and revenue requirement as specified by sections 25.20 and 25.21 of the Act.

The 2008 OPA operating cost budget is \$67.5 million, to be offset by registration fees income of \$400 thousand. A number of further adjustments results in a requested revenue requirement of \$51.9 million.

The OPA is proposing to adjust its operating cost budget by the balance in the OPA's approved Forecast Variance Deferral Account, which is discussed in greater detail in the evidence at Exhibit D-3-3. This deferral account captures the variances arising from differences between revenues and expenses for 2007 and for 2006, as well as variances arising from the change in accounting treatment of the Conservation and Technology Development Funds. These variances are shown separately in Table 1, below. The resulting total adjustment to the revenue requirement is a reduction of \$15.7 million.

Table 1: OPA 2008 Revenue Requirement (\$000s)

Operating Costs Budget	67,521
Adjustments:	
Registration Fees	(400)
Forecast Variance 2007	(13,420)
Forecast Variance 2006	636
Conservation and Technology funds adjusted to expense	(2,469)
2008 net revenue requirement	\$51,868

The OPA proposes to recover this 2008 net revenue requirement by establishing a \$0.346/MWh usage fee to Ontario electricity customers to be effective January 1, 2008.

The OPA is also seeking approval of its 2008 capital expenditures of \$2.6 million, although, as in past submissions, these expenditures will be funded through amortization expense.

The OPA is not seeking recovery of these expenditures through the revenue requirement.

- 1 Exhibit D-2-1 provides a detailed explanation of the registration fees, the OPA's operating
- 2 and capital expenditures, as well as the derivation of the proposed usage fee to recover the
- 3 revenue requirement.

- 4 Exhibit D-3-1 describes the OPA's non-controllable deferral accounts and their balances,
- 5 as well as describing the OPA's proposal to maintain these balances for future disposition.
- 6 There is no impact on the OPA's 2008 revenue requirement from these deferral accounts.

2008 FEES, OPERATING COSTS AND CAPITAL EXPENDITURES

The 2008 Budget was developed to support the strategic objectives detailed in the OPA's 2008 Business Plan. This budget results in a proposed usage fee of \$0.346/MWh for recovery from Ontario electricity customers in 2008. The evidence provided in this exhibit is a detailed explanation of the operating costs by major cost item, the 2008 capital expenditures and the resulting usage fee.

Registration Fees

In 2007, the OPA charged a non-refundable registration fee for participants in OPA competitive procurement processes for electricity supply, capacity and demand side measures. The registration fees brought the OPA practice into alignment with the practice in many other jurisdictions of levying non-refundable registration fees. Furthermore, the registration fees serve as a valuable tool to focus OPA resources on participants who are committed to the competitive procurement process. The OPA proposes to continue this practice in 2008, with a slight modification.

For 2008 the OPA proposes charging a registration fee of \$10,000 per proposal for electricity supply and capacity procurement, and \$2,500 per proposal for demand response procurement. Unlike previous years, the OPA is not requesting a registration fee of \$500 per proposal for all other competitive procurement processes. Concern has been expressed that the application of the \$500 registration fee may have acted as a barrier to potential respondents to the OPA's Conservation RFPs.

While the OPA appreciates that it would be inconsistent to treat supply and Conservation resources differently, due to the limited number of responses from Conservation proponents in the past, the OPA proposes the removal of this possible barrier for the 2008 fiscal year. After some experience in operating without charging a registration fee for these types of procurements, and discovering the impact, if any, the OPA will revisit this issue with the OEB.

In 2008, the registration fee is budgeted at \$400,000. These fees are expected to be collected via requests for Northern York Region (“NYR”), Combined Heat and Power (“CHP”) II and Renewable Energy Supply (“RES”) III projects to be undertaken in 2008, as well as some conservation projects. The OPA proposes to continue charging a non-refundable registration fee for procurement, and to utilize the revenue to reduce operating costs and consequently the OPA’s required usage fee.

Operating Costs

The operating costs are comprised of an aggregation of the costs of each strategic objective as described in the 2008 Business Plan, or in more detail at Exhibit B, Tab 5, Schedules 1 to 5. A summary of the costs by the five strategic objectives is provided below in Table 1:

Table 1		
Operating Costs by Strategic Objective		
2008		
(\$'000)		
		2008 Budget
	Strategic Objective 1	10,445
	Strategic Objective 2	26,445
	Strategic Objective 3	8,364
	Strategic Objective 4	1,252
	Strategic Objective 5	17,800
	Contingency Fund	3,215
	Total	67,521

The OPA’s operating expenses for 2007 and 2008 are provided in Table 2 by major expense category:

1

Table 2				
Operating Costs by Major Expense Category				
2008 vs. 2007				
(\$'000s)				
Operating Costs	2008 Budget	2007 Budget	Variance	2007 Forecast
Compensation and Benefits	23,508	18,353	5,155	20,046
Professional and Consulting Costs	24,596	21,948	2,648	18,424
Conservation Fund	2,897	3,000	(103)	1,984
Technology Development Fund	1,137	1,000	137	343
General Program Costs	6,221	4,196	2,025	3,584
Information Technology	559	203	356	203
Premises	2,639	2,863	(224)	2,441
Office and Administration	884	830	54	722
Amortization	1,365	1,030	335	1,222
Interest	500	0	500	0
Contingency Fund	3,215	3,200	15	0
Total Operating Costs	67,521	56,623	10,898	48,969

2 The total operating costs for 2008 are budgeted to be \$67.5 million, which is an increase of
3 \$10.9 million over the 2007 budgeted operating costs. The increase is driven by the
4 operation, implementation and co-ordination of the increase in Conservation programs from
5 19 to 29, and the approval process for the IPSP, all of which result from the OPA's
6 legislative mandate and the Government Directives. Cost category increases required to
7 support these and the other OPA initiatives include Compensation and Benefits
8 (\$5.2 million), Professional and Consulting costs (\$2.6 million) and other administrative
9 costs (approximately \$3.0 million).

10 Compensation and Benefits

11 The OPA takes into consideration the cost effectiveness and efficiency of various staffing
12 arrangements. These arrangements include: outsourcing, use of consultants/contractors,
13 regular, temporary, full time, and part time employees. Consultants/contractors are

employed where long-term needs are still being assessed, or for the performance of specialized functions. Temporary employees are retained on a fixed-term relationship usually to provide a time-limited specialized function while regular employees are hired to fill ongoing long-term functions.

The 2008 Compensation and Benefits budget is \$23.5 million, which is 35% of the total 2008 Budget. This category illustrates the fact that the OPA is a staff intensive organization. A breakdown of this expense item by sub-category is as follows in Table 3:

Table 3				
Compensation and Benefits				
2008 vs. 2007				
(\$'000s)				
	2008 Budget	2007 Budget	Variance	2007 Forecast
Salaries	19,078	14,880	4,198	15,708
Pension and Benefits	3,059	2,050	1,009	2,880
Other Staff Costs	871	939	(68)	974
Board of Director Remuneration	500	484	16	484
Total	23,508	18,353	5,155	20,046

Of the total Compensation and Benefits costs, \$19.1 million (81%) is associated directly with salaries. The category Pension and Benefits of \$3.06 million includes \$1.4 million related to pension expenses. The remainder is comprised of benefits costs. The category Other Staff Costs includes training and development, recruitment related expenses, professional membership fees and indemnification/liability insurance costs.

Staffing

The staffing level is measured using Full Time Equivalents ("FTEs" or, singularly, "FTE"). This is to clearly demonstrate the employee support that is budgeted for the entire year. It is calculated per person by dividing the total number of budgeted person-work months by the twelve months in the year.

- 1 The FTE levels that underpin the 2008 Compensation and Benefit expenses by strategic
2 objective are as follows in Table 4:

Table 4		
OPA Full Time Equivalent by Strategic Objective		
2008 vs 2007		
	2008 Budget	2007 Budget
Strategic Objective 1	24.7	23.4
Strategic Objective 2	66.2	32.9
Strategic Objective 3	22.7	22.2
Strategic Objective 4	4.0	4.4
Strategic Objective 5		
Legal and Regulatory Services	8.8	7.8
Human Resources	3.0	2.0
Communications	8.8	6.5
Financial and Business Services	24.9	19.3
Information Systems	6.0	4.5
Sub-Total Strategic Objective 5	51.5	40.1
Executive Team and Executive Assistants	14.7	14.0
Total OPA Headcount	183.8	137.0

- 3 The above table provides staff levels by 2008 strategic objective, with Executive Team and
4 Executive Assistants as a separate line item, as their oversight and activities support a
5 multitude of strategic objectives.

- 6 The change in FTE numbers between the 2007 and 2008 Budgets is 46.8. An expansion in
7 activities related to Strategic Objective 2 accounts for 81% (37.8) of the change.

8 Professional and Consulting Costs

- 9 A breakdown of Professional and Consulting costs is provided in Table 5:

1

Table 5				
Professional and Consulting Costs				
2008 vs 2007				
(\$'000s)				
	2008 Budget	2007 Budget	Variance	2007 Forecast
Audit	1,195	515	680	685
Legal	7,430	7,060	370	5,199
Stakeholder Consultation	2,881	1,270	1,611	1,610
Consulting	13,090	13,103	(13)	10,930
Total	24,596	21,948	2,648	18,424

2

3 The Audit cost in 2008 relates to the external audit of the OPA's financial statements, the
4 audit of retailer settlements and the audit of the regulated price plan ("RPP"). The variance
5 from 2007 results from the addition of independent audits of the OPA's Conservation
6 programs and the cost of an outsourced internal audit program.

7 The Legal costs include specialized external legal support required to deliver on the
8 strategic objectives, such as assistance with generation procurement contracts, LDC
9 Conservation and other Conservation delivery contracts, the LSE initiative, and legal
10 counsel for the IPSP and the 2009 Revenue Requirement Submission proceedings. The
11 IPSP approval process is budgeted to incur approximately \$2.0 million in legal costs.

12 Intervenor funding for the IPSP approval process dominates the Stakeholder Consultation
13 costs category. Intervenor funding of \$2.3 million is 80% of the total stakeholder
14 consultation cost. The remaining stakeholder costs are for engagement with First Nations
15 and Métis peoples, and for coordinating and reporting on Conservation initiatives.

16 The increases in Conservation initiatives are responsible for a majority of the change in
17 Consulting Costs. The OPA will also acquire specialized technical expertise for the IPSP
18 approval process and for generation procurement contracts. Consultants will also support
19 corporate communications activities including the First Nations and Métis stakeholder
20 engagement processes.

- 1 A summary of the Professional and Consulting costs by strategic objective is shown in
2 Table 6 below:

Table 6				
Professional and Consulting Costs by Strategic Objective				
2008 vs. 2007				
(\$'000s)				
	2008 Budget	2007 Budget	Variance	2007 Forecast
Strategic Objective 1	6,669	5,114	1,555	5,326
Strategic Objective 2	10,083	9,568	515	6,537
Strategic Objective 3	4,826	4,625	201	3,426
Strategic Objective 4	683	275	408	275
Strategic Objective 5	2,335	2,366	(31)	2,860
Total	24,596	21,948	2,648	18,424

3 Conservation and Technology Development Funds

4 The accounting methodology for the Conservation and Technology Development Funds
5 was changed for 2008 and future years in response to the Board's Decision in
6 EB-2006-0233. In prior years, the OPA sought recovery for each year's restricted fund
7 amounts, which was \$4.0 million in 2007. Going forward, the OPA will budget for and seek
8 recovery of the forecast spending in a given year. The fund amounts approved by the OPA
9 Board of Directors will continue to be established by internally restricting in net assets the
10 amount approved by the OPA Board of Directors. For the 2008 budget year, the OPA
11 Board of Directors approved \$3.0 million and \$1.5 million for the Conservation and
12 Technology Development funds, respectively.

13 The budget for spending is \$2.9 million in 2008 for the Conservation Fund and \$1.1 million
14 for the Technology Development Fund. The total spending budgeted for 2008 equals
15 \$4.0 million and represents the sum of the 2008 spending estimates for grants awarded in
16 2006, 2007 and anticipated 2008 grants. The amounts expected to be spent in 2008 from
17 each fund are shown in Table 7 below:

Table 7					
Conservation and Technology Development Funds					
Spending in 2008					
(\$'000)					
	Year Grant Awarded	2006	2007	2008	Total
	Conservation Fund	74	2,073	750	2,897
	Technology Development Fund	346	416	375	1,137
	Total	420	2,489	1,125	4,034

The Conservation Fund and the Technology Development Fund are described in detail in Exhibit B-2-1.

General Program Costs

General Program costs represent all other costs related to operations support, i.e., conferences and meeting related costs, communications support costs (e.g., website, media, publications, etc.), subscriptions and publications, and travel costs.

The variance in the General Program costs of \$2.0 million is primarily attributable to an increase in corporate communications spending, specifically in Conservation for media and public relations, as well as support requirements for increased activity levels.

Information Systems

Information Systems expenses represent all operating costs related to maintaining and supporting the following OPA needs: software and licenses; data communications; computer maintenance; computer supplies and computer support. The 2008 Budget (as per Table 2 above) shows a significant year over year increase which is largely due to \$300 thousand for a data warehouse for EM&V, which is necessary for storing data, and for Conservation program tracking and reporting. Information Technology initiatives are described in greater detail in Exhibit B-5-1.

1 Premises

2 This cost captures the office rent, premise repairs and maintenance, housekeeping
3 services, and security systems. Premises costs are lower in 2008 by \$200 thousand
4 largely due to a decrease in office rental costs. In 2007, temporary space was required
5 during construction of additional office and meeting room space. This temporary space will
6 not be required to facilitate 2008 refurbishments.

7 Office and Administration

8 The Office and Administration costs include all costs related to general office expenses,
9 such as: telephones; office supplies; office insurance; photocopies; payroll services;
10 equipment repairs, maintenance and board member costs. The cost of these services,
11 \$884 thousand, is 1.3% of the total operating budget in 2008 and reflects a 6% increase
12 from 2007 resulting from increased staff requirements.

13 Contingency Fund

14 In fiscal 2008, the OPA is proposing a \$3.215 million contingency fund to address
15 unexpected operating costs, and additional work associated with new directives or letters of
16 request from the Minister or the OEB. This represents an increase of 0.5% over 2007, or
17 5% of the operating budget. This is a reduction from the 2007 awarded contingency which
18 was 6% of the operating budget.

19 The OPA must be able to respond to unforeseen issues which may arise during the year
20 including Government Directives. The contingency fund will, in effect, act as a rate impact
21 buffer and a fee smoothing mechanism to ratepayers by providing the flexibility to handle
22 unforeseen and unbudgeted events rather than dealing with them through future fee
23 increases.

24 Amortization

25 Amortization in 2008 reflects the increased asset levels that are required to support the
26 increased scope of responsibilities and the higher level of activities handled by the OPA.

Capital expenditures for 2008 are \$2.6 million, \$300 thousand less than 2007. This decrease is the result of larger than normal expenditures in 2007 to furnish new meeting rooms and to implement a new company-wide telephone system.

Amortization expense represents 2.0% of the total 2008 Budget. Table 8 shows the depreciation rates utilized to develop the amortization expense as follows:

Table 8	
Depreciation Rates	
Furniture and equipment	10 years
Leasehold improvements	Over the length of lease
Computer hardware and software	2.5 years
Audio visual equipment	10 years
Telephone system	5 years

Interest

The addition of interest expense in 2008 is due to the nature of the OPA's operations. Revenues are received over the course of the year through the usage fee, and are not directly tied to the timing or amount of the OPA's capital or operating expenditures. Operational financing is required to address the timing differences between the receipt of revenues and the need to meet spending obligations. In 2007 and prior years these amounts were not significant; however, it is expected that these amounts will increase over time as activity, and hence spending, increases.

Capital Expenditures

As in prior years, the OPA will utilize cash flow from amortization expense included in the usage fee to fund the 2008 capital expenditures of \$2.6 million. As a result, the revenue requirement does not propose additional funding requirements for the 2008 capital expenditures.

The budget for 2008 capital expenditures is \$2.6 million, as provided in Table 9:

1

Table 9					
Capital Expenditures					
2005 to 2008					
(\$'000)					
		2008 Budget	2007 Budget	2006 Actual	2005 Actual
	Furniture	627	1,200	1,274	1,163
	Leasehold Imp.	1,402	883	1,393	1,430
	Computers	512	382	611	624
	Telephone/Audiovisual Equip.	28	420	238	178
	Total	2,569	2,885	3,516	3,395

2

3 The spending is required to accommodate the functional needs of the increase in staff
4 complement anticipated in 2008. Leasehold improvements are affected by the requirement
5 to refurbish additional space to accommodate the staff increase. Prior leaseholds were
6 developed on open space at a lower cost. Computer cost increases are to upgrade
7 personal computer software to the new Windows operating system.

8 The 2008 capital expenditures will result in increasing the amortization expense for 2008
9 and beyond in accordance with the depreciation rates established above.

10 Usage Fee

11 The revenue required from the 2008 usage fee is derived from the 2008 operating costs,
12 reduced by the forecast registration fees to be collected in 2008, and the offsetting
13 Forecast Variance Deferral Accounts ("FVDA") balance as described in Exhibit D-3-3.
14 Table 10, below, shows the derivation of the usage fee.

Table 10	
Ontario Power Authority	
2008 Usage Fee Request	
(\$'000)	
	Budget Amount
Operating Costs	67,521
Registration Income	(400)
Forecast Variance 2007	(13,420)
Forecast Variance 2006	636
Conservation and Technology Development Funds adjusted to expense levels	(2,469)
2008 Revenue Requirement	\$ 51,868
IESO Energy Forecast (TWh)	149.8
Usage Fee requested (\$/MWh)	0.346

The OPA is proposing to establish a volumetric usage fee in the same manner as it has done in 2007, to recover the company's net operating costs from Ontario electricity consumers, effective January 1, 2008. This usage fee will be like the IESO usage fee, which is a wholesale market service charge to customers.

The energy forecast utilized is that which underpins the IESO's Ontario Reliability Outlook, Volume 1, Issue 3, released September, 2007.

The derivation of this usage fee is the quotient of the net operating costs (adjusted for the estimated FVDA balance) of \$ 51.868 million divided by the Ontario electricity forecast of 149.8 TWh¹.

The Forecast Variances for 2007 and 2006 and the adjustments to the Conservation and Technology Development Funds have been captured in the FVDA. This deferral account and its balances are discussed in detail in Exhibit D-3-3.

¹ The 2008 demand outlook forecast is 154.5 TWh, and the transmission line loss forecast is 4.6 TWh; hence, the domestic electricity forecast is the net value of 149.8 TWh (some differences due to rounding)

DEFERRAL AND VARIANCE ACCOUNTS

The Act and O.Reg 431/04, amended by O.Reg 475/05, place specific financial obligations on the OPA for non-controllable items that must be dealt with through the revenue requirement submission, which are as follows:

- Government Procurement Costs - reimbursing Government for services provided or costs related to procurement activities;
- Retailer Settlements -making or receiving payments to or from retailers for contracts with low-volume and designated customers; and
- Receiving payments related to retailer discounts.

The evidence in this exhibit will provide a detailed discussion on each of these non-controllable transactions regarding the deferral accounts and balances recorded to-date. Also discussed is the OPA's proposal for disposition of the balances of these accounts.

Government Procurement Costs

Pursuant to the Board's Order in EB-2005-0489, the Government Procurement Costs Deferral Account ("GPCDA") was established to record OPA reimbursement of Government transfer costs as required in section 25.18 of the Act. The accumulated balance in the GPCDA as of September 30, 2007 is \$1.6 million from the Ministry of Energy for procurement-related activities. This includes charges of \$368.5 thousand incurred, but not yet invoiced. Copies of the Ministry's invoices are filed at Exhibit D-3-2.

The OPA is proposing to maintain the GPCDA to record future cost transfers from the Government associated with section 25.18 of the Act.

Retailer Settlements

The Act has two types of retailer payments that relate to the OPA, specifically:

(a) Retailer Contract Settlements - the payments/receipts related to the settlement of certain retailer contracts that were in effect on November 11, 2002; and

(b) Retailer Discount Settlements – the payments of discounts, rebates and allowances that relate to a period commencing after December 31, 2004.

Retailer Contract Settlements

Sections 25.34 (1) and (2) of the Act requires the OPA to make or receive payments to or from retailers with respect to certain contracts with low-volume and designated consumers.

These legislative provisions ensure that retailers will be held whole by the OPA for contracts with low-volume and designated consumers, entered into before prices were frozen by legislation in 2002. To ensure that the retailers receive the same amounts that they would have otherwise received under those contracts, the OPA and each retailer settle any differences between the Hourly Ontario Electricity Prices (“HOEP”) and the contract price. The settlement of these retail contracts is carried out on a monthly basis.

In EB-2005-0489 and EB-2006-0233, 2005 and 2006 Retailer Contract Settlement Deferral Accounts (“RCSDAs”) were established, respectively, to record the balances related to settlement of these retailer contracts. The balances in these accounts as at September 30, 2007 are: \$(37.6) million (payments from retailers) and \$49.7 million (payments to retailers), respectively.

Also in accordance with the Board Order EB-2006-0233, a 2007 RCSDA was established to record the retailer contract settlement amounts for the 2007 fiscal year. The principal balance for this account as of September 30, 2007 is a \$39.7 million

1 payment to retailers accumulated as per the details in Table 1 below. The positive
2 balances for 2006 and 2007 reflect the fact the HOEP was lower than the contract
3 prices over these years.

Table 1			
2007 Retailer Contract Settlement			
by Month			
(\$'000)			
	Principal	Interest	Total
Jan-07			
Feb-07	12,035	161	12,196
Mar-07	7,777	-67	7,710
Apr-07	1,743	85	1,828
May-07	3,456	80	3536
Jun-07	5,823	99	5,922
Jul-07	6,039	131	6,170
Aug-07	2,940	157	3,097
Sep-07	(904)	155	(749)
Oct-07			
Nov-07			
Accrual Interest			
Total	38,909	801	39,710
Note: Negative balances reflect receipts from retailers to the OPA. Positive balances reflect OPA payments to retailers			

4 The cumulative Retailer Contract Settlement balance as of September 30, 2007
5 (inclusive of 2005 and 2006 RCSDA balances) reflects \$51.8 million in payments to
6 retailers, as shown in the following Table 2.

Table 2		
Retailer Contract Settlement Deferral Accounts		
(\$'000)		
Retailer Settlement Accounts (Other Transactions)		
2005 Retailer Contract Settlement	(37,642)	
2006 Retailer Contract Settlement	49,732	
2007 Retailer Contract Settlement (as of Sep 30)	39,710	
Total Retailer Settlement		51,800

Certain retailer contracts in effect on November 11, 2002 are expected to continue to be in effect until November 2007. Some of these accounts are managed on an annual meter reading schedule, therefore final determination of balances will not be available until late 2008. The OPA is requesting approval for continuation of the 2005, 2006 and 2007 RCSDAs, as well as establishment of a 2008 RCSDA, in order to record these settlements pursuant to section 25.34 of the Act, until such time as the final balances are known and verifiable.

Retailer Discount Settlements

On August 18, 2005, O. Reg. 431/04 was amended by O. Reg. 475/05 to provide for the payment from retailers to the OPA of any discounts or allowances required to be paid to regulated consumers under certain circumstances.

In May 2007, the OPA received final discount payments from one retailer. The OPA is expecting to receive notification prior to 2007 year-end regarding potential retailer discounts from other retailers.

The OPA proposes that the Retailer Discount Settlement Deferral Account ("RDSDA") as approved by the Order of the Board in EB-2005-0489, be maintained, as well as establishment of a 2008 RDSDA, in order to record these potential amounts when received.

1 Disposition of Non-Controllable Balances

2 In 2006, the credit balance of the non-controllable transactions detailed above was used to
3 offset the revenue requirement. The OPA stated in its 2007 Revenue Requirement
4 Submission that it did not propose to follow this practice in 2007 or in future years.

5 The OPA is proposing to hold the balances in the non-controllable deferral accounts until
6 the final balances are verified, and to provide a mechanism for disposition of the aggregate
7 balance of the 2005, 2006 and 2007 accounts when these balances are known. Delaying
8 disposition provides for the development of the optimal disposition depending on the
9 magnitude and type of final balance (whether debit or credit) encountered.

Ontario Shared Services
Revenue Management
40 Elm Street, Suite 41A
Sudbury, Ontario
P3C 1S8



For Questions Call: (705) 564-8973
Facsimile: (705) 564-7062

INVOICE

Ministry of Energy

Ontario Power Authority
175 Bloor St E, North Tower, Suite 606
Toronto, ON M4W 3R6
Attn: Lee Bennet, Controller

Invoice Number:	S-0248	Due Date:			
Invoice Date:	20-Mar-06	19-Apr-06			
Description of Service(s)	Price	Quantity	Amount	GST	PST
Recovery of costs from OPA Please refer to attached for more information 029-290201-0000-978601-479090 = \$95,855.84 029-290201-0000-978602-479090 = \$84,886.55 029-290201-0000-978685-479090 = \$463,533.22	644,275.61	1	644,275.61	0.00	0.00
IFIS Coding:	see above	Please pay this amount:		\$644,275.61	

Remittance Advice

Please Detach and Return this Portion with Your Payment

Source: Ministry of Energy	Remit to:	Invoice #
Interest will be charged on all past due accounts	Ontario Shared Services	S-0248
	Revenue Management	Date
	40 Elm Street, Suite 41A	20-Mar-06
	Sudbury, ON P3C 1S8	Amount Due
Certified Cheque or money order payable to the Minister of Finance		\$644,275.61

Ministry of Energy and Ministry of Finance Expenditures (To be recovered from the OPA - Fiscal 2005-06)						
	April - Feb charges Incurred by Ministry	Recovered		Current Invoice S-0248	Potential Accrual (March 31, 2006)	Comments
		Inv # 50186 (Oct 05)	Inv # 50186 (Oct 05)			
<u>Support to Supply 2004-05 RFPs</u>						
Osler, Hoskin & Harcourt (2500/300)	171,017.57	171,017.57	-	-	-	
NERA	84,639.66	84,639.66	-	-	-	
	255,657.23	255,657.23	-	-	-	
<u>Support to Supply 2005-06 RFPs</u>						
Osler, Hoskin & Harcourt (LLP Renewables)	497,089.68	455,323.78	41,765.90	62,050.74		
Knowles (RFP II)	24,900.00	22,553.06	2,346.94	-	-	
Knowles (RFP II)	13,697.06	3,444.00	10,253.06	-	-	
Technical Session	28,498.36	-	-	-	-	
Consultant - B. Purchase	30,000.00	-	30,000.00	-	-	
Blake Cassels	83,217.30	-	83,217.30	56,782.70		Hospitality, Reception, Seminar & Conferences
Other - Incidentals	13,159.19	-	13,159.19	-	-	
	690,561.59	509,819.20	180,742.39	118,833.44		
<u>Bruce Negotiations</u>						
Negotiator - Santangeli	62,500.00	62,500.00	-	-	-	
Consultant - Walker	33,333.00	33,333.00	-	-	-	
Consultant - Kary	33,333.00	33,333.00	-	-	-	
PJB Energy Solutions Inc	21,475.70	17,475.70	4,000.00	-	-	
Strickert & Associates	24,464.00	24,464.00	-	-	-	
Strickert Travel Costs	1,569.09	1,569.09	-	-	-	
Brian Mark Consulting	14,905.00	13,695.00	1,210.00	-	-	
Mark Travel Costs	372.12	372.12	-	-	-	
CIBC World Markets & travel	1,919,991.08	1,711,278.96	208,712.12	-	-	
Blake, Cassels & Graydon	456,391.10	211,280.00	245,111.10	-	-	
Allan Brown & Associates	4,500.00	-	4,500.00	-	-	
	2,572,834.09	2,109,300.87	463,533.22	-	-	
<u>Manitoba Clean Energy / Churchill Falls</u>						
Blake, Cassels & Graydon, Churchill	-	-	-	-	60,000.00	
SNC Lavalin	-	-	-	-	-	
Other - Incidentals	-	-	-	-	60,000.00	
Ministry of Energy Invoices	3,519,052.91	2,874,777.30	644,275.61	178,833.44		

Ontario Shared Services
Revenue Management
40 Elm Street, Suite 41A
Sudbury, Ontario
P3C 1S8



For Questions Call: (705) 564-8973
Facsimile: (705) 564-7062

INVOICE

Ministry of Energy

Ontario Power Authority
120 Adelaide St W
Toronto, ON M4W 3R6
Attn: Terry Gabriele, Finance Manager

Invoice Number:		S-0346		Due Date:		
Invoice Date:		06-Dec-06		05-Jan-07		
Description of Service(s)		Price	Quantity	Amount	GST	PST
Recovery of costs from OPA for 2006/07 Fiscal Year FOR THE PERIOD APRIL 2006 TO OCTOBER 2006 Please refer to attached for more information		320,694.33	1	320,694.33	0.00	0.00
029-290201-0000-978601-479090 = \$28,974.64 029-290201-0000-978602-479090 = \$291,719.69						
IFIS Coding:		see coding above		Please pay this amount:		\$320,694.33

Remittance Advice

Please Detach and Return this Portion with Your Payment

Source: Ministry of Energy		Invoice #	
Interest will be charged on all past due accounts		S-0346	
Remit to:		Date	
Ontario Shared Services		06-Dec-06	
Revenue Management		Amount Due	
40 Elm Street, Suite 41A		\$320,694.33	
Sudbury, ON P3C 1S8			
Certified Cheque or money order payable to the Minister of Finance			

Ministry of Energy and Ministry of Finance Expenditures
(To be recovered from the OPA - Fiscal 2006-07)

PO #	Expiry Date	Total Budget Fiscal 06-07	April 06 - Oct 06 payments by Ministry	Current Invoice	Balance to recover by March 31, 2007)	Comments
<u>RFP Projects (cc 978601)</u>						
29243	Apr 31 06	10,134.94		-	10,134.94	
33050	May 31, 06	60,000.00		-	60,000.00	
N/A	Mar 31, 06	110,667.43	28,974.64	28,974.64	81,692.79	
		180,802.37	28,974.64	28,974.64	151,827.73	
<u>Support to Supply 2005-06 RFPs (cc978602)</u>						
49127	March 31, 07	137,540.00	29,434.45	29,434.45	108,105.55	
49415	July 14, 06	12,800.00	12,800.00	12,800.00	-	
44936	August 31, 06	235,000.00	143,278.33	143,278.33	91,721.67	
N/A	Mar 31, 06 Feb 28, 07	49,271.58	25,050.72	25,050.72	24,220.86	
		350,000.00		-	350,000.00	
		200,000.00	81,156.19	81,156.19	118,843.81	Note 1
		984,611.58	291,719.69	291,719.69	692,891.89	
Total of Ministry of Energy Invoices		1,165,413.95	320,694.33	\$ 320,694.33	844,719.62	verification

Note 1	
Nishnawbe Aski Dev Fund Travel, meetings and accomodation	43,743.93
	6,266.02
	10,021.07
	8,553.45
	7,387.72
Printing	75,972.19
	5,184.00
	81,156.19

Ontario Shared Services
Revenue Management
40 Elm Street, Suite 41A
Sudbury, Ontario
P3C 1S8



For Questions Call: (705) 564-8973
Facsimile: (705) 564-7062

INVOICE

Ministry of Energy

Ontario Power Authority
120 Adelaide St W
Toronto, ON M4W 3R6
Attn: Terry Gabriele, Finance Manager

Invoice Number:	S-0360	Due Date:			
Invoice Date:	16-Apr-07	16-May-07			
Description of Service(s)	Price	Quantity	Amount	GST	PST
Recovery of costs from OPA for 2006/07 Fiscal Year FOR THE PERIOD NOVEMBER 2006 TO MARCH 2007 Please refer to attached for more information	270,311.56	1	270,311.56	0.00	0.00
IFIS Coding: 029-290201-0000-978602-123510		Please pay this amount:		\$270,311.56	

Remittance Advice

Please Detach and Return this Portion with Your Payment

Source: Ministry of Energy	Invoice #
Interest will be charged on all past due accounts	S-0360
Remit to:	Date
Ontario Shared Services	16-Apr-07
Revenue Management	
40 Elm Street, Suite 41A	
Sudbury, ON P3C 1S8	
Certified Cheque or money order payable to the Minister of Finance	Amount Due
	\$270,311.56

Ministry of Energy Expenditures
To be recovered from the OPA - Fiscal 2006-07

		PO #	Expiry Date	Total Budget Fiscal 06-07	Invoice # #S0346 - Jan 07	Invoice March 2007	Comments
<u>RFP Projects (cc 978601)</u>							
Knowles 111		29243	Apr 31, 06	10,134.94			PO closed
Consultant - B. Purchase		33050	May 31, 06	60,000.00			PO closed
Osler, Hoskin & Harcourt (LLP Renewables)		N/A	Mar 31, 06	110,667.43	28,974.64		PO closed
				180,802.37	28,974.64		-
<u>Support to Supply 2005-06 RFPs (cc978602)</u>							
Nishnawabe Aski Development Fund		49127	March 31, 07	137,540.00	29,434.45	90,526.90	
Nishnawabe Aski Development Fund		49415	July 14, 06	12,800.00	12,800.00		
Nishnawabe Aski Development Fund		56141	March 31, 07	24,350.00	-	24,350.00	
SNC Lavalin			August 31, 06	235,000.00	143,278.33	91,721.67	
Blake Cassels & Graydon LLP, Manitoba Clean Energy		N/A	Mar 31, 06	49,271.58	25,050.72	1,812.00	
TORYS, LLP - Ontario Quebec Inter tie		50522	Feb 28, 07	350,000.00		20,158.00	
Incidental Expenses					81,156.19	41,742.99	
				808,961.58	291,719.69	270,311.56	

**Ministry of Energy
Recovery of Charges from OPA
Fiscal 2007-08**

<u>Charges incurred to Sept 18, 07</u>		<u>Comments</u>
Mc Carthy Tetrault (legal)	24,047.62	
Incidentals	44,492.82	Note 1
	<u>68,540.44</u>	
07-08 Encumbrances - TORYS	300,000.00	
Charges incurred to Sept 18, 07	<u>368,540.44</u>	

Note 1

Total postings to IFIS to Sept 18	77,542.82
Nishnawabe 06/07 accrual paid	<u>(24,350.00)</u>
	53,192.82
Incidentals accrued in 06/07	<u>(8,700.00)</u>
	<u>44,492.82</u>

2007 FORECAST VARIANCE DEFERRAL ACCOUNT

In accordance with Board Order EB-2006-0233, a 2007 Variance Deferral Account ("FVDA") was established to record 2007 revenue variances and any cost variances not otherwise incorporated into the revenue requirement submission of the prior year. The 2007 revenue variance is a shortfall of \$747 thousand, the 2007 cost variance is \$(14.168) million for a net excess balance of \$(13.420) million, and the 2006 net excess of revenues over expenses is \$(1.833) million. The FVDA balance and its components are illustrated in Table 1, below:

Table 1	
OPA 2007 FVDA	
(\$'000s)	
2007 revenue shortfall	\$ 747
2007 excess revenue over expenses	(14,168)
Net 2007 excess balance	(13,420)
2006 excess revenue over expenses	(1,833)
Total 2007 FVDA	<u>\$ (15,254)</u>

EB-2006-0233 Settlement Proposal

As part of the EB-2006-0233 Settlement Proposal filed January 22, 2007 (the "Settlement Proposal") the OPA proposed that the remaining \$800 thousand of the estimated shortfall of \$1.6 million carried over from 2006 be recorded in the 2007 Forecast Variance Deferral Account, and that any difference between the estimated shortfall of \$1.6 million and the actual 2006 shortfall also be recorded in this deferral account.

In response to the Board's questions, the OPA also proposed, in the Settlement Proposal, to change the accounting treatment of the Conservation and Technology Development Funds to reflect the forecast spending amount rather than the restricted fund amount requested.

The net effect of these changes created an excess revenue over expenses for 2006, as follows: actual shortfall from operations of \$636 thousand, plus the excess restricted fund

less actual spending related to Conservation and Technology Development Funds of \$(2.469 million), creating a net excess revenues over expenses of \$(1.833 million).

Variance Analysis for the 2007 Forecast vs. 2007 Budget

The 2007 excess revenues over expenses is mainly the result of three changes:

- A reduction in business activity related to generation procurement, resulting in a reduction in legal expenses. Further discussion is provided at Exhibit B-3-1;
- The deferral of Conservation programs, resulting in a reduction in operational expenses. This is described in detail in Exhibit B-2-1; and
- A change in accounting methodology with respect to internally restricted funds for the Conservation and Technology Development Funds, as described in Exhibit D-2-1.

Disposition of the FVDA

In addition to incorporating the 2006 excess revenue over expenses pursuant to the Settlement Proposal, the OPA is requesting to reduce the 2008 revenue requirement by including the forecast 2007 excess of revenues over expenses of \$13.420 million. The total reduction due to the disposition of the FVDA of \$15.254 million in the 2008 revenue requirement submission is shown in detail in Exhibit D-2-1, Table 10.

The OPA's financial results are available at the end of March of each year for the preceding year. This limits the ability to have actual variances available for the revenue requirement submission. Therefore, the OPA is proposing to expand the components of the FVDA for future submissions to include the net effect of:

- the difference between the actual cost variance from the prior year and the prior year forecast cost variance;
- the difference between the actual revenue variance from the prior year and the prior year forecast revenue variance;
- the forecast revenue variance of the current year; and
- the forecast cost variance of the current year.

Therefore, the OPA is requesting the establishment of a 2008 FVDA, to be used for adjustments to the subsequent year's revenue requirement requests.

SUPPLEMENTAL EVIDENCE

2007 UNAUDITED ACTUALS VERSUS 2007 FORECAST

The purpose of this evidence is to provide information regarding the OPA's unaudited actual 2007 spending and its impact on the 2008 revenue requirement. The information provided is a comparison of the 2007 unaudited actual to the 2007 forecast, as originally provided in the OPA evidence filed November 2, 2007. Audited actual information will not be available until the end of March, 2008. The OPA does not intend to provide further information to incorporate differences that may arise through the 2007 audit, but proposes to capture differences, if any, in the 2008 Forecast Variance Deferral Account for disposition in the OPA's 2009 revenue requirement, as discussed in the originally filed evidence at Exhibit D-3-3, page 2.

Based on its unaudited results, actual 2007 spending was \$43.3 million, which represents a spending shortfall of \$5.7 million from the forecast of \$49.0 million provided in the OPA's original submission. The OPA proposes to incorporate this additional amount of \$5.7 million into the 2008 revenue requirement for the benefit of ratepayers now, rather than to wait for audited information and ultimate disposition in the 2009 revenue requirement.

In addition to this supplemental evidence, the OPA is providing updates to Exhibits D-1-1, D-2-1 and D-3-3.

The majority of the shortfall in actual spending is the result of delays in planned activity levels for 2007, activities which are expected to occur in 2008. These activities include:

- A delay in the IPSP proceedings, originally expected to commence in the second half of 2007, which has resulted in delayed expenditures for legal costs, consulting fees and participant funding for stakeholders and First Nations and Métis people;
- Unanticipated delays in Conservation program delivery, as described in the originally filed evidence at Exhibit B-2-1 page 16, resulting in lower than forecast legal and consulting costs; and
- Lower than anticipated procurement activity resulting from receipt of ministerial directives later than had been assumed in the OPA's forecasts.

A summary of the variance by Strategic Objective appears in Table 1, below:

Table 1

Total OPA
Operating Costs
Variance Between 2007 Forecast and 2007 Unaudited Actual Budget
(\$'000s)

Division	2007 Forecast	2007 Unaudited Actual	Variance
Objective 1	9,042	6,599	2,443
Objective 2	17,069	14,374	2,695
Objective 3	6,014	5,552	462
Objective 4	801	509	292
Objective 5	16,043	16,221	(178)
Total Costs	48,969	43,255	5,714

Variances by Strategic Objective are described in detail below.

Strategic Objective 1:

Variances from forecast of approximately \$2.4 million arise primarily in Professional & Consulting costs, which were lower than 2007 forecast through lower than anticipated IPSP regulatory support requirements during the year, due to a delay in the commencement of the IPSP proceeding. Compensation and Benefits costs were lower than forecast due to staff departure and other internal moves which were not replaced during the year.

Strategic Objective 2:

The year end unaudited actual expenditure on Conservation was \$2.7 million below the 2007 forecast. The principle variances were in Professional & Consulting costs relating to program delivery, legal and EM&V expenses. The OPA experienced greater than anticipated difficulty in completing program design, undertaking stakeholder consultation and procuring vendors for delivery of programs for the market. These delays resulted in

1 reductions in expenditures related to legal costs of procuring program managers to manage
2 programs, reduced requirement for consulting support for program rollout and marketing,
3 as well as reduced need for EM&V services to develop EM&V plans and measurement.

4 Strategic Objective 3:

5 The majority of this variance of approximately \$460 thousand is a result of the issuance of
6 government directives to the OPA, with respect to generation procurement initiatives, later
7 than the OPA had assumed in its forecasts. This resulted in lower costs for external
8 counsel, consultants' fees and, within the Communications function, stakeholder
9 consultation.

10 Strategic Objective 4:

11 Variances of almost \$300 thousand for this strategic objective appear primarily in
12 Professional & Consulting and Legal & Regulatory Costs, and are affected by the indefinite
13 postponement of renewable trading initiatives and removal of the requirement for regulatory
14 proceedings to support Load Serving Entities (Customer Entitlement Agents).
15 Approximately one half of this variance was spent in early 2008, and thus, did not appear in
16 2007 actual spending. Much of the remainder represents Compensation and Benefits
17 costs for a full-time equivalent budgeted, but not required, in 2007.

18 Strategic Objective 5:

19 The variance of \$(178) thousand over forecast for Strategic Objective 5 is described by
20 business unit, below. Those business units with insignificant variances are not addressed.

21 **FINANCE AND BUSINESS SERVICES**

22 The increased spending is the result of higher than forecast audit and interest expenses,
23 which are partially offset by a delay in hiring budgeted staff, lower lease expenses and
24 lower forecast leasehold improvements, resulting in a reduction in amortization expense.

CORPORATE COMMUNICATIONS

Corporate Communications experienced increased spending in two areas:

Filing of the IPSP as well as supporting broadly expanded Conservation awareness programs necessitated additions to headcount. In addition, there were significant unanticipated expenses related to the activities of the office of the Chief Energy Conservation Officer including communication and public positioning related to summer messaging, the PowerLines Radio Show and production of a DVD to supplement and extend the CECO's messaging capabilities.

LEGAL AND REGULATORY SERVICES

The majority of the variance is a reflection of the delay in the IPSP proceeding, resulting in unspent budget for stakeholder consultation, intervenor funding, external legal costs, and transcript purchases. These amounts will be spent in 2008.

The remainder of the variance is a reflection of the delay in certain Conservation initiatives, including legal costs for procurement.

INFORMATION SERVICES

The variance from 2007 Forecast is attributable to unspent budget in Professional & Consulting related to Conservation program support. Also, an external relations management system selected in 2007 cost less than budgeted.

CHIEF EXECUTIVE OFFICE

The variance difference is attributable to the expenditure of an unbudgeted amount for consultant facilitation of an OPA management meeting, as well as the fact that a new unbudgeted role, advisor to the CEO's office, was created in 2007.

1 2008 Revenue Requirement Impact

2 The impact of all of these variances is an increase in the 2007 Forecast Variance to
3 \$13.42 million¹. The resulting calculation of the 2008 Revenue Requirement is illustrated in
4 Table 2, below:

Table 2		
OPA		
2008 Usage Fee Request		
(\$'000s)		
	Budget Amount	
Operating Costs	\$67,521	
Registration Income	(400)	
Forecast Variance 2007	(13,420)	
Forecast Variance 2006	636	
Conservation and Technology Development Funds adjusted to expense levels	(2,469)	
2008 Revenue Requirement	\$51,868	
IESO Energy Forecast (TWh)	149.8	TWh
Usage Fee requested (\$/MWh)	0.346	\$/MWh

5 This reduces the requested usage fee from \$0.391/MWh to \$0.346/MWh.

¹ The derivation of the 2007 Forecast Variance Deferral Account is discussed in detail at updated Exhibit D-3-3.

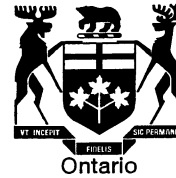
SUPPLEMENTAL EVIDENCE

ONTARIO ENERGY BOARD COST ASSESSMENT

The OPA has received a letter from the OEB dated March 4, 2008, containing an assessment for the three month period from April 1 to June 30, 2008 (see Attachment 1 to this exhibit). Pursuant to Ontario Regulation 16/08, (see p. 3 of Attachment 1) the OPA is identified as a person liable to pay the OEB assessment for 2008-2009 of \$868.5 thousand (net). The first of four equal assessments is \$217 thousand, due April 1, 2008. The total expenditure for 2008 will be \$651 thousand, an amount not contemplated in the OPA's originally filed 2008 revenue requirement submission.

Ontario Energy Board
P.O. Box 2319
27th Floor
2300 Yonge Street
Toronto ON M4P 1E4
Telephone: 416- 481-1967
Facsimile: 416- 440-7656
Toll free: 1-888-632-6273

**Commission de l'énergie
de l'ontario**
C.P. 2319
27e étage
2300, rue Yonge
Toronto ON M4P 1E4
Téléphone: 416- 481-1967
Télécopieur: 416- 440-7656
Numéro sans frais: 1-888-632-6273



MAR 05 2007

March 4, 2008

Ontario Power Authority
120 Adelaide Street West, Suite 1600
Toronto, Ontario
M5H 1T1
Attn: Mary Ellen Richardson

Re: Assessment for the Three Month Period from April 1 to June 30, 2008

This letter gives notice to the Ontario Power Authority identified in Ontario Regulation 16/08 (see Attachment 1), that they are a person liable for the purpose of subsection 26 (1) of the Ontario Energy Board Act to pay the assessment for 2008-09. The Board costs will be recovered through the following four equal assessments:

- April 1 to June 30, 2008;
- July 1 to September 30, 2008;
- October 1 to December 31, 2008; and
- January 1 to March 31, 2009

The first assessment is due on April 1, 2008, and the subsequent assessments are due on the first of the month of the assessment period. Information on various matters related to the assessments is provided in the following attachments:

- Attachment 1 – Ontario Regulation 16/08
- Attachment 2 – Schedule of Net Costs to be Assessed and Apportionment Among Classes

Enclosed with this letter is your assessment for the period April 1 to June 30, 2008, providing the amount payable by your organization as identified in Ontario Regulation 16/08 as a person liable for the purpose of subsection 26 (1) of the Act. Payment of the invoice is to be made no later than April 1, 2008. Please refer to section 26, subsections (3), (4) and (5) of the Act regarding payment and potential consequences of failure to pay the assessment.

The Board has added three new classes of payors (Independent Electricity System Operator, Ontario Power Authority, Ontario Power Generation) to the 2008-09 cost assessment based on Ontario Regulation 16/08. As provided for in the Board's Cost Assessment Model, the 2008-09 budget has been used to estimate 2008-09 costs for assessment of the Board's expenses and expenditures. The Cost Assessment model can be viewed on the Board's website at:

<http://www.oeb.gov.on.ca/html/en/abouttheoeb/corporate.htm>

The Board's 2008-11 Business Plan, containing information on the Board's objectives, activities, and budgets for 2008-11, will be posted on the website shortly.

If you or your staff have any questions or require additional information on this assessment, please contact Laura Cooney at (416) 440-7747.

Yours truly,

A handwritten signature in black ink, appearing to read 'K. Walli', with a stylized flourish at the end.

Kirsten Walli
Board Secretary

Attachments

ONTARIO REGULATION 16/08

made under the

ONTARIO ENERGY BOARD ACT, 1998

Made: January 22, 2008

Filed: February 4, 2008

Published on e-Laws: February 4, 2008

Printed in *The Ontario Gazette*: February 23, 2008

ASSESSMENT OF EXPENSES AND EXPENDITURES

Class of persons liable for Board expenses and expenditures

1. The following persons or classes of persons are liable for the purpose of subsection 26 (1) of the Act to pay an assessment with respect to expenses incurred and expenditures made by the Board:

1. Distributors that are licensed under Part V of the Act.
2. Transmitters that are licensed under Part V of the Act.
3. Gas transmitters, gas distributors and storage companies that are subject to section 36 of the Act.
4. The IESO.
5. The OPA.
6. Ontario Power Generation.

Fiscal year

2. Section 1 applies in respect of the Board's fiscal year, which commences on April 1, 2008 and ends on March 31, 2009.

Revocation

3. Ontario Regulation 130/07 is revoked.

Commencement

4. This Regulation comes into force on April 1, 2008.

[Back to top](#)

**Ontario Energy
Board**

P.O. Box 2319
27th Floor
2300 Yonge Street
Toronto ON M4P 1E4
Telephone: 416-481-1967
Toll free: 1-888-632-6273

**Commission de l'Énergie
de l'Ontario**

C.P. 2319
27e étage
2300, rue Yonge
Toronto ON M4P 1E4
Téléphone: 416-481-1967
Numéro sans frais: 1-888-632-6273



ASSESSMENT

No 80910095

01/03/2008

To: Ontario Power Authority
120 Adelaide Street West, Suite 1600
Toronto, ON M5H 1T1
Attn: Mary Ellen Richardson

Amount Assessed (\$)

**Assessment under Ontario Regulation 16/08 for the three month period
from April 1 to June 30, 2008**

217,130.00

Payment of the assessment to be received no later than April 1, 2008

IMPORTANT INFORMATION ABOUT YOUR INVOICE

This invoice represents the first assessment of the Ontario Energy Board's costs for its fiscal year 2008-09, commencing April 1, 2008 and ending March 31, 2009 under subsection 26(1) of the Ontario Energy Board Act, 1998.

Cost assessment for 2008-09 will be recovered through four equal assessments:

First assessment: due April 1, 2008
Second assessment: due July 1, 2008
Third assessment: due October 1, 2008
Fourth assessment: due January 2, 2009

Please make all cheques payable to the Ontario Energy Board and mail in the enclosed addressed envelope with the enclosed remittance copy.

Inquiries: Please call Laura Cooney at 416-440-7747 or write to the above address referring to the invoice number.

RENSEIGNEMENTS IMPORTANTS CONCERNANT VOTRE FACTURE

La présente facture représente la première évaluation des coûts de la Commission de l'énergie de l'Ontario pour l'exercice 2008-09, lequel commence le 1er avril 2008 et prend fin le 31 mars 2009, aux termes du paragraphe 26 (1) de la Loi de 1998 sur la Commission de l'énergie de l'Ontario.

Les coûts liés à l'exercice 2008-09 seront recouvrés par l'entremise de quatre évaluations égales:

Première évaluation : 1er avril 2008
Deuxième évaluation : 1er juillet 2008
Troisième évaluation : 1er octobre 2008
Quatrième évaluation : 2ème janvier 2009

Veuillez libeller votre chèque au nom de la Commission de l'énergie de l'Ontario et le faire parvenir par la poste dans l'enveloppe préadressée qui est jointe au bordereau de paiement.

Renseignements : Veuillez appeler Laura Cooney au 416 440-7747 ou écrire à l'adresse indiquée plus haut et préciser le numéro de facture.

Ontario Energy Board
Assessments for the Year Ended March 31, 2009

ATTACHMENT 2 - SCHEDULE OF NET COSTS TO BE ASSESSED AND APPORTIONMENT AMONG CLASSES

	2008-09 Budget	Apportionment					OPG
		Gas Utilities	Electricity Distribution	Electricity Transmission	IESO	OPA	
	\$	\$	\$	\$	\$	\$	\$
Expenses and Capital Budget for 2008-09							
Staff and Board Member Costs	23,212,075	5,738,248	13,021,254	2,978,371	416,192	686,706	371,304
Consulting and Professional	2,512,500	499,329	1,678,081	270,292	14,347	36,944	13,508
Meetings, Seminars and Travel	1,297,342	298,736	752,266	178,309	18,668	32,613	16,751
Publications, Media and Publishing	730,200	159,541	455,640	84,953	7,810	15,166	7,090
Premises	2,380,565	573,515	1,366,792	300,649	38,940	65,842	34,826
Information Technology	543,962	131,049	312,314	68,699	8,898	15,045	7,958
Office, Administration and Other	883,544	202,925	533,812	104,566	11,394	20,586	10,261
Amortization	2,144,131	516,555	1,231,044	270,789	35,073	59,303	31,367
	33,704,319	8,119,896	19,351,203	4,256,628	551,323	932,205	493,064
Capital Expenditures	752,250	181,229	431,901	95,004	12,305	20,806	11,005
	34,456,569	8,301,125	19,783,104	4,351,632	563,628	953,011	504,069
Subtract:							
Amounts not Assessed:							
License Fees	383,200						
Investment Income	517,500						
Other Income	10,000						
Amortization of Deferred Revenue	2,144,130						
	(3,054,830)	(735,956)	(1,753,919)	(385,804)	(49,970)	(84,492)	(44,689)
Total 2008-09 Assessment Before Reserve	31,401,739	7,565,169	18,029,185	3,965,828	513,658	868,520	459,380
Add:							
Operating Reserve	0	0	0	0	0	0	0
	31,401,739	7,565,169	18,029,185	3,965,828	513,658	868,520	459,380
Net Costs to be Assessed (After Reserve)							
	31,401,739	7,565,169	18,029,185	3,965,828	513,658	868,520	459,380
Total of Cost Assessments (Billings) for the Year Ended March 31, 2009	\$ 31,401,739	\$ 7,565,169	\$ 18,029,185	\$ 3,965,828	\$ 513,658	\$ 868,520	\$ 459,380
2008-09 % Share of Total Cost	100.00%	24.09%	57.41%	12.63%	1.64%	2.77%	1.46%
Assessment for the period: April 1 to June 30, 2008	\$ 7,850,435	\$ 1,891,292	\$ 4,507,297	\$ 991,457	\$ 128,414	\$ 217,130	\$ 114,845

BOARD STAFF INTERROGATORY 1

QUESTION

ISSUE 2.1

1. Reference: Exhibit D, Tab 1, Schedule 1, page 1, Table 1

Please explain the mechanism and the rationale for the change in accounting treatment of the 2007 Conservation and Technology Development Funds operating expenses that resulted in \$ 2,469 Million available to offset the 2008 revenue requirements.

RESPONSE

The offset amount due to the change in the accounting treatment is \$2.469 million. The rationale for changing the accounting procedures relating to the 2007 Conservation and Technology Development Funds is found in the EB-2007-0233, Receipt of the Settlement Proposal transcript of February 15, 2007, page 14, lines 8 to 16, where the Board states:

First, next year we expect the OPA to file information that shows, for the Conservation Fund budgets included in 2005, 2006 and 2007 revenue requirements, the year in which the amounts were or are expected to be charged to expense.

Second, the Board will require that OPA's proposed 2008 revenue requirement for its Conservation Fund should be no greater than the amount of grants made in 2008 that the OPA expects to fund and charge to expenses in that year.

Thus, the Board required that the OPA adjust its accounting procedures to include only the actual expenditures in a given year related to the Conservation Fund, and for the sake of consistency, the OPA has applied that requirement to the Technology Development Fund as well.

In prior years the OPA included in its revenue requirement the full amounts in the Conservation Fund and Technology Development Fund as approved by the OPA's Board of Directors. This inclusion had the effect of increasing the revenue received above the revenue required in that year, as the expenditures for grant awards under the two funds flow over multiple years, but the funds are received by the OPA, via the OPA's usage fee, in the current year.

BOARD STAFF INTERROGATORY 2

QUESTION

ISSUE 5.1

Reference: Exhibit D, Tab 2, Schedule 1, page 5, Table 4

Referring to the Table 4-OPA Full Time Equivalent ("FTE") please explain the addition of 32.9 FTEs associated with the Strategic Objective No. 2.

Indicate if the hiring has been completed and if not what plans are in place to acquire these resources. Describe types of positions in terms of contract vs. full time and indicate roles that these positions will have in activities associated with the Objective No. 2.

RESPONSE

According to Table 4, Exhibit D-2-1, page 5 there will be an increase of 33.3 FTEs for Strategic Objective 2, from the 2007 Budget of 32.9 FTEs to the 2008 Budget of 66.2 FTEs. A discussion of the Conservation organization and its activities within the OPA is provided at Exhibit B-2-1, pages 3 to 28. Details on the Conservation FTEs can be found at Exhibit B-2-1, Table 2, page 4, and the increase in FTEs is discussed on page 29. The increased program volume in addition to the more robust EM&V process and related activities are the primary factors. Hiring is more than 50% complete, and in conjunction with the Human Resources group, activities are underway through both internal postings and external searches to acquire the necessary resources. The OPA plans on hiring full-time staff in roles principally aimed at designing, delivering and maintaining the portfolio of programs and furthering the EM&V process. As noted in Table 4, additional planning and support roles, that are also full-time, are included.

BOARD STAFF INTERROGATORY 3

QUESTION

ISSUE 5.1

Reference: Exhibit D, Tab 2, Schedule 1, pages 5-7

Please provide the rationale associated with the requirements for consulting and external legal costs allocated in 2008 budget by business objective and by business activity. Please explain the increase in the 2008 consulting and external legal requirements comparing to the 2007 budget level.

RESPONSE

Rationale associated with Professional and Consulting costs (which includes the external legal costs and the contract costs) by strategic objective are provided in the evidence at:

- Strategic Objective 1: Exhibit B-1-1, page 6;
- Strategic Objective 2: Exhibit B-2-1, pages 28-29;
- Strategic Objective 3: Exhibit B-3-1, pages 7-9;
- Strategic Objective 4: Exhibit B-4-1, page 7; and
- Strategic Objective #: Exhibit B-5-1, pages 5, 12-13, 23-24, and 29.

The total increase in external legal costs of \$370,000 is mainly attributable to the drafting of contracts to deliver on eight more Conservation programs and the budgeted amount for a regulatory proceeding for Customer Entitlement Agents (CEAs, formerly known as Load Serving Entities or LSEs). This increase is partially offset by slightly lower budgeted legal costs for the IPSP and the standard offer programs in 2008.

The consulting cost variance between the 2008 and 2007 Budget is not an increase, but a \$(12,000) decline.

Provided below is a table illustrating the Professional and Consulting costs breakdown for the external legal and consulting costs by strategic objective:

Professional and Consulting Costs
Breakdown by Strategic Objective
2008 vs. 2007
 (\$'000s)

	2008 Budget	2007 Budget	Variance
Strategic Objective 1			
Legal	2,250	2,680	(430)
Consulting	2,119	1,782	337
Other	2,300	651	1,649
Total	6,669	5,113	1,556
Strategic Objective 2			
Legal	1,770	1,220	550
Consulting	7,657	8,263	(606)
Other	656	85	571
Total	10,083	9,568	515
Strategic Objective 3			
Legal	2,660	2,810	(150)
Consulting	1,726	1,515	211
Other	440	300	140
Total	4,826	4,625	201
Strategic Objective 4			
Legal	525	125	400
Consulting	119	150	(31)
Other	40	0	40
Total	684	275	409
Strategic Objective 5			
Legal	225	225	0
Consulting	1,470	1,393	77
Other	640	748	(108)
Total	2,335	2,366	(31)
Total OPA			
Legal	7,430	7,060	370
Consulting	13,091	13,103	(12)
Other	4,076	1,784	2,292
Total	24,597	21,947	2,650

Note: Other = Audit and Stakeholder Consulting

BOARD STAFF INTERROGATORY 4

QUESTION

ISSUE 6.1

Reference: Exhibit D, Tab 1, Schedule 1, page 1, lines 15-16 and Exhibit A, Tab 1, Schedule 1, page 2, paragraph 4

On December 20, 2007 the Board issued an Interim Fees Order that allows the OPA to collect \$0.391/MWh starting January 1, 2008. On January 12, 2008 the OPA filed an Amended Submission for Review and proposed that the OPA charge a usage fee of \$ 0.346/MWh.

In the event that the Board's review result in a fee higher or lower than \$0.391/MWh what is the OPA's proposed mechanism for adjustment with respect to difference between interim and final approved fee?

RESPONSE

Should the OEB approve a usage fee that is lower or higher then the effective interim rate of \$0.391/MWh, the OPA proposes to implement the approved fee in the first full month after receipt of the OEB decision. Any variance resulting from the approved rate and the interim rate during the prior months would be captured in the 2008 Forecast Variance Deferral Account ("2008 FVDA"). The disposition of the 2008 FVDA balance would subsequently be addressed in the 2009 Revenue Requirement Submission ("2009 RRS").

Example:

Assuming that the OEB's review results in the lower fee of \$0.346/MWh, (as requested in the Amended Submission for Review at Exhibit A-1-1, Updated: February 11, 2008), the OPA proposes to implement the lower fee of \$0.346/MWh on the commencement of the first full month after receipt of the OEB decision, e.g., April 2008. For the prior months, from January to March 2008 the OPA will then have over-collected the difference between the \$0.346/MWh final fee and the interim fee of \$0.391/MWh. The revenue variance due to the different fees and the volume variance will be collected in the 2008 FVDA. The disposition of the 2008 FVDA balance will be addressed in the 2009 RRS.

BOARD STAFF INTERROGATORY 5

QUESTION

ISSUE 6.3

Reference: Exhibit D, Tab 3, Schedule 1, page 1

Please list and describe any variance and deferral accounts not included in the pre-filed evidence in 2008 OPA Fees Submission. If there are any such accounts please indicate the balances and proposed method of disposition.

RESPONSE

There are no other deferral accounts not included in the pre-filed evidence of the OPA's 2008 Revenue Requirement Submission.

BOARD STAFF INTERROGATORY 6

QUESTION

ISSUE 6.3

Reference: Exhibit D, Tab 3, Schedule 1, page 5

The OPA proposed that the credit balances in 2006, 2007 and 2008 Retailer Settlement Deferral Accounts and the 2007 and 2008 Retailer Discount Settlement Deferral Accounts be disposed at a time when the balances can be final and verifiable.

For each of these OPA deferral accounts please indicate the anticipated time when the aggregate balances will be known and discuss the rationale for delaying the disposition of the deferral accounts.

RESPONSE

The OPA does not have direct knowledge of contract timing related to the retailer deferral accounts. The market was frozen for new contracts in November 2002. At that time, some contracts were in transition and contained start dates beyond November 2002. As well, some accounts in remote parts of the province are on annual meter readings. If any of those accounts were subject to delayed start dates, the meter reading schedule could result in collection of the final aggregated amounts not until sometime in 2009.

Despite the fact that final retailer account balances and subsequent verification will still be outstanding in 2008, the OPA anticipates that by the 2009 Revenue Requirement Submission there will be a better understanding as to the magnitude of the accounts and if there are declining amounts being settled. The OPA proposes to file a methodology on the disposition of all the deferral accounts in the 2009 Revenue Requirement Submission.

The government procurement deferral accounts require no additional verification as they become final as the OPA is invoiced. However, in order to minimize the OPA administration costs and potential ratepayer confusion, the OPA has proposed to dispose of the government procurement deferral accounts in aggregate with the other retailer deferral accounts.

ELECTRICITY DISTRIBUTORS ASSOCIATION INTERROGATORY 1

QUESTION

The Government has directed the OPA to invest \$400 million in energy conservation programs through local distribution corporations ("LDCs") for a three-year period. The Usage Fee proposed in this proceeding is said to cover "Operating Costs", in particular, all of the items set out in Table 2 of Exhibit D, Tab 2, Schedule 1, page 3 of 12.

a. Please advise whether the Operating Costs in Table 2, and therefore the proposed User Fee, include all such costs in connection with the allocation of the \$400 million for the LDC programs.

b. If the User Fee only covers a portion of the operating costs in connection with the allocation of the \$400 million for the LDC programs, please give specifics as to what costs in connection with the allocation of the \$400 million for the LDC programs the User Fee will cover.

c. If any of the \$400 million for LDC programs is being used to cover OPA operating costs, please specify which operating costs are being covered with that fund and specify the quantum allocated to each operating cost.

RESPONSE

a. The budget as shown in Table 2, Exhibit D-2-1, page 3 is the operating budget of the OPA and excludes costs associated with the direct procurement of Conservation resources. All 2008 OPA operating costs associated with the above-noted government directive are included in this 2008 operating budget.

b. Please see response to a), above.

c. Please see response to a), above.

ELECTRICITY DISTRIBUTORS ASSOCIATION INTERROGATORY 2

QUESTION

According to Exhibit B, Tab 2, Schedule 1, page 4 of 31, the OPA plans to have 26 programs in market in 2008. Please break down the Budget to illustrate the portion allocated to each of the 26 programs.

RESPONSE

The table below shows an estimated breakdown of the 2008 budget by program. Many of the budgeted items cannot be assigned to a specific program and are therefore shown as general initiatives. The OPA will reassign budget and resources among programs during the course of the year based on the OPA's understanding of need.

2008 Budget Details Strategic Objective #2		\$ Thousands
Mass Markets	peaksaver™	107
	Refrigerator	336
	Every Kilowatt Counts	185
	Cool/Hot Savings	215
	Aboriginal	85
	Summer Savings	146
	Single Family Low Income	39
	Residential New Construction	106
	LDC Custom Programs	106
	Community Engagement	112
	New Appliance	230
	Home Energy Efficiency	109
Commercial and Institutional	Electricity Retrofit Incentive	77
	Ontario Farms	83
	Commercial Direct Install	108
	Large Commercial Buildings	120
	Multi-Family Buildings	123
	Commercial New Construction	49
	Fuel Switching	58
	Building Recommissioning	201
	Institutional	198
Industrial	Demand Response 1	49
	Demand Response 2	115
	Demand Response 3	237
	Industrial Process & Technology	395
	Demand Response 4	124
Conservation & Technology Funds		4355
Conservation Awareness		2169
Research		980
Portfolio/Channel Development		995
Codes & Standards		560
Conservation Unallocated ⁽¹⁾		7789
Conservation Total		20561
Conservation Bureau		985
EM&V		1641
Legal & Regulatory		1770
Communications		738
Information Systems		750
Grand Total		26445

(1) - predominantly compensation and benefits and related staff costs

ELECTRICITY DISTRIBUTORS ASSOCIATION INTERROGATORY 3

QUESTION

According to Exhibit B, Tab 2, Schedule 1, page 28 of 31, Table 14, the OPA plans to spend \$10.083 million on Professional and Consulting Costs during 2008.

a. Please identify the activities (including sub-categories of activities, be as specific as possible) that these external professionals and consultants will be undertaking (e.g. market research, consumer surveys, program design, etc.).

b. Please allocate these projected costs to each of the above activities.

RESPONSE

a. The activities that are budgeted in the Professional and Consulting costs include the following activities:

- Marketing for programs;
- Market research;
- Technology research;
- Other program research;
- Financial audits of programs;
- Project verification and settlement;
- Development of tools and infrastructure;
- Support and sponsorship of committees and associations aligned with OPA goals in areas such as codes and standards;
- Facilitation for program design and program stakeholdering; and
- External legal costs.

b. The OPA does not have the budget broken out to this level of detail.

ELECTRICITY DISTRIBUTORS ASSOCIATION INTERROGATORY 4

QUESTION

According to Exhibit B, Tab 2, Schedule 1, pages 3-4 of 31, staffing levels have doubled.

- a. Please explain the analysis used to determine the staffing requirements for 2008.
- b. Please allocate Conservation FTEs for each of the 26 programs.

RESPONSE

- a. The OPA determined the number of staff ("FTEs") required to meet the Conservation objectives through an internal business planning process. The analysis considered the OPA's experience gained in 2006 and 2007 in running programs within each market sector, and projected this need to the program portfolio of 26 programs planned in 2008. An estimate was also required of the number of employees that it would take to provide support services to the Conservation program delivery effort. These support services include roles within the Conservation and Sector Development division such as Portfolio Planning and Reporting, Market Research, Administrative, Conservation and Technology Funds as well as roles in other departments such as EM&V, Chief Energy Conservation Officer and staff.
- b. It is not possible to precisely allocate the Conservation FTEs to the specific programs. This is because most employees work on more than one program or are support employees working with all programs. The 41.7 Conservation FTEs listed in Table 2, Exhibit B-2-1 have been allocated by sector in the following table:

Conservation Programs & Marketing FTEs

	2008 Budget	2007 Budget	Variance	2007 Forecast
Commercial & Institutional	11	8.9	2.1	10.2
Mass Markets	14	7.3	6.7	8.1
Demand Response & Industrial	7	4.4	2.6	5.2
Channel Development	1		1.0	1
Marketing	8.7	5	3.7	6.2
Total	41.7	25.6	16.1	30.7

ELECTRICITY DISTRIBUTORS ASSOCIATION INTERROGATORY 5

QUESTION

According to Exhibit B, Tab 2, Schedule 1, page 4 of 31, Table 2, the OPA plans to have 2 FTEs working on Codes and Standards.

- a. Please provide a detailed breakdown of the activities associated with these FTEs and the time which has been allocated to each such task. Please include organizations they will be working with and the Codes and Standards they will be influencing.
- b. Please provide details of the level of funding that might be provided to these organizations (Table 7, Exhibit B, Tab 2, Schedule 1, page 13 of 31).

RESPONSE

The two FTEs working on Codes & Standards are the Manager, Planning, Codes & Standards and the Program Manager, Codes & Standards. This group is responsible for planning codes and standards approaches and also for planning market transformation approaches.

The key codes and standards activities are set out in Exhibit B-2-1, Table 7. This table has been supplemented by Table 1 below entitled "Staff Time Allocation", which includes approximate staff time allocation and market transformation activities.

The OPA is developing market transformation plans that will identify a broad slate of Minimum Energy Performance Standards ("MEPS") to achieve the longer-term objectives identified in the Integrated Power System Plan.

In 2008, the groups with which the OPA expects to work regarding MEPS are listed below. Also listed are the MEPS that each group is seeking to influence.

- Forum for Energy Efficiency Leadership: a forum which brings together government and utility strategic planning staff to collaborate on market transformation planning and MEPS regulation. The Forum is seeking to develop and/or support national market transformation plans for six priority end uses: residential appliances, residential space conditioning, commercial space conditioning, lighting, stand-by power and hot water.
- Strategic Lighting Initiative Committee ("SLIC"): oversees the work necessary to put in place the overarching market measures required to realize the vision of "transforming the incandescent lighting market to high efficiency alternatives by 2015". Members include, Natural Resources Canada, Canadian Electricity Association, BC Hydro, Hydro-Quebec, SaskPower, Manitoba Hydro, Government of Ontario, Hydro One, Hydro Ottawa, Nova Scotia Power, and Maritime Electric. SLIC is seeking to influence lighting regulations.

- 1 • Stand-by Power Advisory Committee ("SPAC"): oversees the work necessary to
2 achieve the vision of 1 watt stand-by power in all electronic devices by 2012. Members
3 include utilities, environmental NGOs and governments. SPAC is seeking to influence
4 stand-by power regulations.
- 5 • Consortium for Energy Efficiency ("CEE"): a nonprofit public benefits corporation which
6 develops initiatives for its North American members to promote the manufacture and
7 purchase of energy-efficient products and services. CEE members include utilities,
8 statewide and regional market transformation administrators, environmental groups,
9 research organizations and state energy offices in the U.S. and Canada. CEE seeks to
10 influence a broad spectrum of minimum and advanced standards.
- 11 • American Council for an Energy Efficient Economy ("ACEEE"): a nonprofit, 501(c)(3)
12 organization dedicated to advancing energy efficiency as a means of promoting both
13 economic prosperity and environmental protection. ACEEE seeks to influence a broad
14 spectrum of MEPS.
- 15 • Canadian Standards Association ("CSA"), including the Steering Committee on
16 Performance, Energy Efficiency and Renewables: a standards development
17 organization currently working on over 50 new or revised MEPS (listed below). The
18 OPA, along with five other funders, supported the CSA standard development work in
19 2007. The OPA provided funds for eight standards projects, all of which had an impact
20 on the summer peak. Details are provided below.

21 OPA Co-Funded Projects

- 22 • Portable A/C C370
- 23 • Digital TV Adapters C380
- 24 • Ext Power Sup & Bat Chrgrs C381.1/.2
- 25 • Large Motors C390
- 26 • Standby Power C62301
- 27 • Small Motors C747
- 28 • LED Performance C866
- 29 • Res Light Fixtures C867

Table 1: Staff Time Allocation	Description	Manager	Project Manager
Codes & Standards			
Research & Planning	The identification of and justification for increases to MEPS based on priorities identified in the IPSP Work with government and utilities to refine and collaborate on data collection, evaluation and reporting of MEPS work	2%	35%
Institutions & Process	Identify key institutions and influencers and develop account management plans Work with other utilities and governments to improve the process to achieve MEPS regulation Participate in appropriate groups to share knowledge and best practices and collaborate on action		15%
Standards Development	Participate in CSA groups Fund the development of standards		10%
Promoting Regulation	Develop and implement program to improve identified MEPS Continue with activities from 2007 Support federal government's lighting and stand-by power programs, as needed	2%	15%
Market Transformation			
Planning	Develop, through internal and external consultation, residential and C&I market transformation plan Identify key committees and associations for membership and initiate Develop and implement account plans for key influencers	65%	10%
Evaluation	Develop plan to measure market transformation in residential and C&I market	5%	5%
Other tools	Participate in organization of relevant conferences, and research on best practices	6%	
Budget, Admin, & Other	Including Regulatory support, reporting support, account management, advice on MEPS and technology to other divisions	25%	10%

ENERGY PROBE INTERROGATORY 1

QUESTION

Reference: Exhibit B, Tab 1, Schedule 1, page 3.

Please provide concrete and measurable indicators of success in reference to stakeholder and OEB acceptance of the OPA's IPSP, especially in reference to Phase 1 of OEB's hearings on the IPSP.

RESPONSE

Success in reference to stakeholder relations will be measured through public surveys, focus groups and interviews that indicate general approval of OPA IPSP activities, as covered under Strategic Objective 5 and detailed in the evidence at Exhibit B-5-1, pages 8-12.

Success in terms of OEB acceptance of the OPA's IPSP will be indicated when the OEB has reviewed the plan and if it has determined that it complies with Supply Mix Directive dated June 13, 2006 and is economically prudent and cost-effective.

ENERGY PROBE INTERROGATORY 2

QUESTION

Reference: Exhibit B, Tab 1, Schedule 1, page 3.

Please describe how and by what criteria "current IPSP developments" are being monitored to achieve success.

RESPONSE

The OPA monitors current IPSP developments by scrutinizing demand load trends, measuring Conservation achievements, and observing progress of various Conservation and supply procurement RFPs and transmission developments. The criteria for monitoring success of current IPSP developments are based on the progression of implementation and achievement.

ENERGY PROBE INTERROGATORY 3

QUESTION

Reference: Exhibit B, Tab 1, Schedule 1, page 4.

Please explain how the OPA “will monitor planning choices, trends and technological and regulatory developments in other jurisdictions for incorporation into future local area supply planning.”

RESPONSE

The OPA intends to carry out research into recent developments in distributed generation, end-use technologies, new transmission technology developments, and other trends by attending conferences, subscribing to related research services and literature, monitoring regulatory proceedings, contributing to development of standards, interacting with and reviewing work undertaken in other jurisdictions, and seeking stakeholder views.

ENERGY PROBE INTERROGATORY 4

QUESTION

Reference: Exhibit B, Tab 1, Schedule 1, page 4.

Please explain how “measures of success” for “solutions” on local area supply concerns “have been developed.”

RESPONSE

Successful alternatives for addressing local area supply concerns are developed in consultation with local communities, the IESO, transmitters, distributors, project developers, and other stakeholders. Success is measured by developing solutions that meet planning criteria.

ENERGY PROBE INTERROGATORY 5

QUESTION

Reference: Exhibit B, Tab 1, Schedule 1, page 4.

Please explain what specific steps are being taken by the OPA to “streamline approval processes” at the local level in relation for the “installation of electricity infrastructure, lack of zoning for electricity infrastructure in official plans, and ...[the problem of duplication].”

RESPONSE

The OPA continues to provide information and to engage stakeholders as a contribution to effective approval processes. The OPA participates in regional municipal planning activities and makes presentations to raise awareness and encourage the addition of electricity requirements into city infrastructure planning. For example, the OPA attended:

- the Peel Region Official Plan Review Workshops on Energy Planning;
- the Technical Agencies Committee for the Halton-Peel Boundary Area Transportation Study;
- the Peel Technical Advisory Committee; and
- GTA Commissioners’ Meeting.

ENERGY PROBE INTERROGATORY 6

QUESTION

Reference: Exhibit B, Tab 1, Schedule 1, page 5.

Please describe what specific “measures of success” i.e. what criteria and/or evaluation methodologies are being/will be used to assess the “streamlining of local [electricity installation] approval processes” for purposes of “integrating” provincial infrastructure into “municipal planning” initiatives.

RESPONSE

The measure of success will be to see electricity requirements, including Conservation, transmission and generation that would meet future local community needs, considered in municipal planning.

ENERGY PROBE INTERROGATORY 7

QUESTION

Reference: Exhibit B, Tab 1, Schedule 1, pages 5-7.

Going beyond the details of Table 1 (p. 6), please explain why the 2008 budget for Strategic Objective # 1 i.e. \$10.445 million is adequate and appropriate. How and why will the budget for activities related to this Strategic Objective likely change in 2009?

RESPONSE

The 2008 Budget was developed based on assumptions about when the IPSP regulatory proceeding will begin and end, the legal costs that will be incurred, and the effort the OPA will put in preparing for the next IPSP. The 2008 Budget is believed to be adequate and appropriate because it relies upon OPA's previous experience in developing the Supply Mix Advice in 2005, the IPSP related discussion papers in 2006, and IPSP activities carried out in 2007. The accuracy of the 2008 Budget largely depends on how assumptions made about the current IPSP regulatory proceeding materialize.

Based on the assumption that the OEB will approve the IPSP, the budget for this strategic objective will change in 2009 because the OPA's focus will shift to implementation of the first IPSP, and it will be engaging in activities to prepare for the next IPSP. Further, it is expected that legal costs and intervenor funding, for example, will be lower in 2009 if the OEB proceeding for the first IPSP is completed by late 2008 or early 2009.

ENERGY PROBE INTERROGATORY 8

QUESTION

Reference: Exhibit B, Tab 2, Schedule 1, page 2, Table 1.

Please explain the rationale/methodology for arriving at/calculating the standardized “free rider rate” of “30%.”

RESPONSE

In planning the portfolio of programs for 2008, OPA committed to count Conservation resources generated by programs as being net of free riders. This required free rider metrics which are currently not available through program specific research. The OPA reviewed the free rider assumptions that are made in other jurisdictions, including Ontario's natural gas industry, and accepted 30% as a reasonable planning assumption. As programs are designed and better information becomes available through research and/or EM&V, free rider rates will be updated. For the purpose of reporting results, the actual free rider rate as determined through EM&V will be used.

ENERGY PROBE INTERROGATORY 9

QUESTION

Reference: Exhibit B, Tab 2, Schedule 1, pages 3-4.

Please explain why 66 FTE personnel for 2008 are adequate and appropriate, which means the OPA intends to double its personnel complement in support of Strategic Objective # 2.

RESPONSE

Please see response to Board Staff Interrogatory 2, at Exhibit I-1-2.

ENERGY PROBE INTERROGATORY 10

QUESTION

Reference: Exhibit B, Tab 2, Schedule 1, pages 4-9.

Please explain in detail how the OPA determines the impetus or demand for new programs that it will be introduced in 2008, specifically those programs identified in Tables 3, 4 and 5.

RESPONSE

The OPA developed the program portfolio for 2008 using a portfolio development process. The process included an internal scan of program opportunities guided by the priorities listed in the Market Potential Study used to inform the IPSP. Additionally, the OPA reviewed existing programs to determine their ability to continue to provide results. A gap analysis by ICF Consulting identified possible program enhancements and looked for gaps in the ability of programs to serve the market. Finally, the OPA engaged stakeholders through the Conservation Business Stakeholder Advisory Group to provide advice on the appropriateness of the portfolio.

In general, feedback from these processes indicated that the portfolio was complete. The OPA is committed to running these programs and will include the practical experience gained from the market in future portfolio development processes.

ENERGY PROBE INTERROGATORY 11

QUESTION

Reference: Exhibit B, Tab 2, Schedule 1, pages 5-6.

Please explain how the OPA verifies the Net MW savings identified in Table 3 for each of the 12 programs cited.

RESPONSE

In general, for the 12 programs cited, the OPA will verify each program's Net MW savings results using third-party evaluation contractors hired through a competitive procurement process. The exception is the continuing Large Commercial Building Program, where the program administrator is contractually responsible for procuring evaluation services for the program.

ENERGY PROBE INTERROGATORY 12

QUESTION

Reference: Exhibit B, Tab 2, Schedule 1, page 6, Table 3, Program # 7.

Please define the term "assist" in Table 3, Program # 7.

RESPONSE

"Assist" refers to providing information, education, other tools and/or incentives to program participants.

ENERGY PROBE INTERROGATORY 13

QUESTION

Reference: Exhibit B, Tab 2, Schedule 1, Table 4, page 7.

Please explain how Program # 2 "Electricity Conservation on Ontario Farms Program" will be integrated with OEB's effort to mitigate "stray voltage" especially on dairy farms in Ontario.

RESPONSE

The OPA currently has no formal plan to integrate the "Electricity Conservation on Ontario Farms Program" with the OEB's effort to mitigate stray voltage. To better understand the issue, the OPA is co-funding a study on stray voltage via the OPA's Technology Development Fund and its managing institution, CEATI (Centre for Energy Advancement and Technology Innovation, a subsidiary of the Canadian Electricity Association). The study entitled "HIGH FREQUENCY ELECTRO-MAGNETIC INTERFERENCE GENERATED BY POWER ELECTRONIC EQUIPMENT AT THE FARM ENVIRONMENT AND ITS EFFECT ON STRAY VOLTAGE" will explore links between electro-magnetic interference ("EMI") and stray voltage and its impact on day-to-day farm practice.

ENERGY PROBE INTERROGATORY 14

QUESTION

Reference: Exhibit B, Tab 2, Schedule 1, page 9, line 8.

Please define the goal: "build marketplace capability" in reference to the Conservation Fund.

RESPONSE

Fostering the development of Conservation industry capability is a critical objective for the OPA as meeting Ontario's targets for Conservation will be difficult without knowledgeable service providers and consumers. The Conservation Fund's goals regarding capability building include:

1. Increase delivery capability through the projects, and applicants' understanding of Conservation in their market;
2. Create forums for sharing best practices and collaboration for Conservation programs which contributes to the delivery capability; and
3. Support new or innovative capability building programs.

A complete listing of projects funded in 2007 is located at B-2-1, Table 10.

ENERGY PROBE INTERROGATORY 15

QUESTION

Reference: Exhibit B, Tab 2, Schedule 1, page 10, line 2.

Please provide the program evaluation results for the “44 pilot projects” the OPA has carried out since 2005. What is the basis for pursuing conservation “pilot projects?” What criteria are used to carry forward with conservation “pilot projects?”

RESPONSE

While the evaluation results for the projects are not available for release to the public due to the confidentiality of details specific to each individual counterparty, all projects with written deliverables are posted to the OPA website at www.powerauthority.on.ca/cfund. The reason, or basis, for pursuing Conservation pilot projects is explained on page 3 of “Conservation Fund – 2007 Program Guidelines,” available publicly on the OPA website at www.powerauthority.on.ca/cfund. The evaluation criteria used to approve pilots is outlined on page 12 of the same document.

ENERGY PROBE INTERROGATORY 16

QUESTION

Reference: Exhibit B, Tab 2, Schedule 1, page 10.

Please explain why pilot programs for “limited or niche applications” are necessary.

RESPONSE

The OPA is scheduled to have 26 programs in market by the end of 2008, and by that time, the OPA will have achieved broad market coverage. Going forward, there is an opportunity to undertake pilots which explore the potential for Conservation savings using program concepts applied in a specific sub-sector and/or employing a specific technology or application. Exploration of “limited or niche applications” in a pilot setting is a very useful function within the OPA by which future program approaches or opportunities can be identified. The OPA can also improve upon currently employed programs by exploring more targeted approaches to complement the OPA’s broad coverage represented by its 2008 portfolio.

ENERGY PROBE INTERROGATORY 17

QUESTION

Reference: Exhibit B, Tab 2, Schedule 1, page 10.

Please identify when the EM&V “metrics” will be available “to inform [OPA] internal decision-making” on the Conservation Fund.

RESPONSE

The EM&V metrics which will inform the OPA decision-making will be completed for use as of Round Two of project selection for the Conservation Fund, for which the proposal deadline is June 25, 2008. The metrics are consistent with the EM&V metrics applied to Conservation programs, but will be flexible enough to be applied to pilots of varying types and scales.

ENERGY PROBE INTERROGATORY 18

QUESTION

Reference: Exhibit B, Tab 2, Schedule 1, page 10.

Please explain why the Technology Development Fund is organized under the institutional rubric of Conservation when "TDF does not apply solely to Conservation initiatives."

RESPONSE

The Technology Development Fund is a program that operates in a similar manner to the Conservation Fund, employing similar recruitment, approvals, assessment, administrative and governance processes, and shared staff resources. It was determined that the most efficient approach is to have both funds managed in the same group, while maintaining relationships with other relevant divisions horizontally, such as Power System Planning and Electricity Resources.

ENERGY PROBE INTERROGATORY 19

QUESTION

Reference: Exhibit B, Tab 2, Schedule 1, page 11.

Please describe any additional plans to outsource development of “new and emerging technologies” related to Conservation or any other OPA function.

RESPONSE

The OPA has no plans to outsource the development of “new and emerging technologies” at this time.

The OPA has partnered with two outside organizations to help manage the identification, selection, and management of projects awarded funding through the Conservation Fund. In this sense, therefore, the OPA has outsourced to two outside organizations some of the aforementioned functions. These two organizations are the Centre for Energy Advancement and Technology Innovation and the Ontario Centres of Excellence, Centre for Energy. For more information see “Technology Development Fund – 2007 Program Guidelines” publicly available on the OPA website at www.powerauthority.on.ca/tdfund.

ENERGY PROBE INTERROGATORY 20

QUESTION

Reference: Exhibit B, Tab 2, Schedule 1, Table 6, page 12 and page 23, lines 6-12.

Please justify the frequent use (weekly) of market research field-testing related to conservation awareness adopted by the OPA. What specific value is there in knowing aggregate public opinion on a weekly basis, when it is well accepted in the market research profession that market/public opinion does not perceptibly change inside 7 days, in the absence of major or catastrophic events? What actual marketing programs have been adopted by the OPA in reference to mass market Conservation programs e.g. the EKC program.

RESPONSE

In 2007, the OPA measured program and program messaging awareness, not Conservation awareness, on a weekly basis, since public awareness of programs and of program messaging can be much more volatile than public opinion. This measuring will continue in 2008.

Market research was done weekly before, during and after program periods in 2007 to measure the awareness and effectiveness of mass market programs and supporting program marketing communications strategies to inform messaging strategies for the current and future years.

Weekly surveys allowed the OPA to monitor how quickly, and to what level, awareness of each program and its messaging rose and how quickly, if at all, after the end of program messaging awareness started to decline (and, again, to what level).

Weekly market research throughout the program period gave the OPA an indicator, in time to make any changes necessary, of whether current-year messaging strategies were being effective or needed to be adjusted. Knowing how quickly, and to what level, program and messaging awareness rose and fell is important input to media planning for future programs.

Conservation awareness surveying is done on a much less frequent basis through the OPA Usage and Attitude research.

The OPA launched 6 key marketing programs in 2007:

1. Every Kilowatt Counts Coupon event (Spring and Fall);
2. Summer Savings;

- 1 3. peaksaver^{TM*};
- 2 4. The Great Refrigerator Roundup;
- 3 5. Cool Savings Rebate; and
- 4 6. Aboriginal – Conserve the Light event.

5 Programs in 2008 will be essentially the same as will marketing communications support
6 for these programs, including a media buy consisting of radio, print, transit shelters and
7 online. Additionally, in 2007, delivery partners developed “direct to customer” marketing
8 tactics that included bill inserts, newsletters, website promotion and grass roots and local
9 media events, which will continue in 2008.

ENERGY PROBE INTERROGATORY 21

QUESTION

Reference: Exhibit B, Tab 2, Schedule 1, page 13.

Specifically define and explain: "situational assessment," "target setting and program prioritization," and "portfolio finalization."

RESPONSE

"Situation assessment" is a review of:

- the existing program performance;
- the market conditions as they relate to Conservation typically done as a SWOT (strengths, weaknesses, opportunities, threats) analysis; and
- any other information that enhances the understanding of the market for Conservation.

"Target setting and program prioritization" is the setting of targets for programs in the coming year, usually expressed as a capacity reduction or awareness goal. "Program prioritization" refers to the review of all potential programs being considered against a set of criteria that allows the OPA to select the programs that are the best fit with the needs of the IPSP. In 2008, the OPA intends to revisit the criteria with the assistance of the Conservation Business Strategic Advisory Council.

"Portfolio finalization" is the decision on the final portfolio of programs to meet the following year's objectives.

ENERGY PROBE INTERROGATORY 22

QUESTION

Reference: Exhibit B, Tab 2, Schedule 1, page 14.

Please explain in a complete and comprehensive fashion the nature, scope and methodologies used in OPA's Evaluation, Measurement and Verification system for Conservation programs, and how the nature, scope and methodologies will change in 2009. Please respond in a fashion that describes OPA's EMV activities beyond "tracking" activities and the description provided on page 15, lines 1-7 and lines 10-29. Will formal evaluations be available to the public on OPA's Internet website.

RESPONSE

A complete and comprehensive description of the nature, scope and methodologies used in the OPA's Evaluation, Measurement and Verification system can be found in the materials presented at the Webcast/Teleconference Presentation on the EM&V Framework on Thursday, October 25, 2007 and at the EM&V Stakeholder Session held on November 6, 2007. A copy of these materials is available on the OPA's Internet website under Stakeholder Consultation / Consultation Archive / Evaluation, Measurement and Verification at the link:

http://www.powerauthority.on.ca/Page.asp?PageID=122&ContentID=6271&SiteNodeID=313&BL_ExpandID=

The primary documents included in the aforementioned materials, are the OPA EM&V Framework and OPA Evaluation Protocols. The OPA is not able to commit to EM&V methodologies for 2009 in this 2008 Revenue Requirement Submission; however, refinements to the existing methodologies as well as additional details with respect to EM&V activities may be introduced as the OPA gains experience from the process of conducting evaluations on the 2007 programs. The OPA EM&V Framework and OPA Evaluation Protocols will be updated to reflect these refinements, if any.

Formal evaluation reports are expected to be made public via the OPA Internet website on an annual basis. The OPA will provide the formal evaluation reports from the third-party evaluation contractors without editing except in situations where commercially sensitive information is contained in the reports. In these situations, a redacted evaluation report would be provided with the commercially sensitive information removed or "blacked-out".

ENERGY PROBE INTERROGATORY 23

QUESTION

Reference: Exhibit B, Tab 2, Schedule 1, page 16.

Please explain how the OPA will be able to overcome the difficulties cited on page 16, lines 21-29 in 2008.

RESPONSE

In the course of 2007, the OPA gained experience in the development of programs which has helped the OPA to develop timelines and anticipate difficulties in program implementation. This experience will lead to improved delivery of programs. Additionally, the OPA has started the process of improving staffing levels for the quantity of programs that will be delivered in 2008.

ENERGY PROBE INTERROGATORY 24

QUESTION

Reference: Exhibit B, Tab 2, Schedule 1, page 17.

Please report on OPA's ability to meet Conservation program MW savings targets identified in EB-2006-0233 i.e. 40-50 MW in "mass markets" and 225-250 MW in "business markets."

RESPONSE

The data covering the 2007 results is still being submitted and compiled. Once submitted and compiled they will be subject to evaluation and verification which may adjust the reported results. Early indications are that the mass markets target of 40-50 MW will be surpassed. As mentioned in Exhibit B-2-1, page 16, there was a delay in the delivery of some programs particularly in business markets. As a result, the target for business markets will not be met.

ENERGY PROBE INTERROGATORY 25

QUESTION

Reference: Exhibit B, Tab 2, Schedule 1, Table 13 page 26.

Please indicate whether EM&V activities by the OPA for Conservation are principally a new programs development function carried out on an a priori basis or a post facto Conservation program evaluation function. Is "cost-effectiveness" the primary criterion for evaluation in either case?

RESPONSE

EM&V activities by the OPA for Conservation include both a "new programs development function" and a "Conservation program evaluation function". The "new programs development function" includes the EM&V group's active involvement in the portfolio and program development processes, specifically:

- providing assistance to portfolio and program development by confirming the appropriate input assumptions to use in program design;
- bringing program learnings obtained from evaluations on similar programs performed in other jurisdictions (e.g., program delivery);
- ensuring sufficient data is collected in-program in order to facilitate verification of the program impacts and program evaluation; and
- bringing industry experience to the process.

EM&V activities with respect to "Conservation program evaluation" should be clarified. As described in the OPA EM&V Framework and OPA Evaluation Protocols, the OPA Conservation program evaluations start prior to program launch with the development of the program's evaluation plan and the hiring of the third-party evaluation contractor (it was not possible to follow this process for the 2007 Conservation programs but will be implemented for 2008 Conservation programs). EM&V activities may occur prior to program launch (e.g., baseline studies), in-program (e.g., data collection, participant surveys), and post-program, depending on the particular Conservation program and the nature of the evaluation activities contained in the Final Evaluation Plan developed by the third party evaluation contractor. A more accurate characterization would be that EM&V activities are involved throughout the entire program cycle.

"Cost Effectiveness" is not a primary criterion for EM&V activities; however, the evaluation of the inputs used in determining "cost effectiveness" are generally of primary interest in the OPA's EM&V activities. EM&V is tasked with evaluating the programs against the objectives that each program established. This typically includes cost effectiveness but often includes other objectives as well.

ENERGY PROBE INTERROGATORY 26

QUESTION

Reference: Exhibit B, Tab 2, Schedule 1, pages 28-29.

Please account for OPA's decision to make Conservation and Strategic Objective # 2 the largest spending envelope for the organization in 2008 (\$26.445 million). and previously.

RESPONSE

The budget is established based upon the OPA's determination of the resources required to achieve Strategic Objective 2. The tasks required to successfully meet the Conservation objectives to deliver the required Conservation resources and build market capability are significant and are reflected in staff levels and operating budgets.

ENERGY PROBE INTERROGATORY 27

QUESTION

Reference: Exhibit B, Tab 3, Schedule 1, page 5, lines 27-28.

Has the OPA considered expanding its plans for outsourcing electricity development in 2008 and 2009 i.e. beyond current plans?

RESPONSE

The 2008 Budget reflects the OPA's assessment of the optimal balance of OPA staff and Consultants (i.e., legal, auditing, and technical) to ensure it meets its objectives.

ENERGY PROBE INTERROGATORY 28

QUESTION

Reference: Exhibit B, Tab 4, Schedule 1, page 5.

To what extent does the OPA intend to involve itself in emissions trading program going into the future?

RESPONSE

The OPA will involve itself in an emissions trading program only as advised by the Ministry of Energy. The renewable trading programs are currently suspended at the Ministry's request.

ENERGY PROBE INTERROGATORY 29

QUESTION

Reference: Exhibit B, Tab 5, Schedule 1, page 3.

Please explain how the Finance and Business Services Group is organizing and ensuring capacity on the evaluation management function in 2008.

RESPONSE

An EM&V group has been created at the OPA to address the evaluation management function in 2008. To obtain unbiased program evaluation results and to ensure evaluation capacity, third-party evaluation contractors, selected through the OPA's competitive procurement process, will be hired to conduct program evaluations (this includes the development and implementation of the program's final evaluation plan).

In an effort to organize the evaluation management function and to provide consistent forecast, reported, and verified results in 2008, EM&V has created a number of processes and supporting documents including the OPA Evaluation Framework, OPA Evaluation Protocols, OPA Measures and Assumptions List, OPA Cost Effectiveness Test Guide, and OPA Cost Effectiveness Tests Tool. The OPA anticipates annual refinements to its processes and supporting documents based on experience gained from past year's evaluations as well as stakeholder input. To further organize the evaluation management function, EM&V has developed a generic four-stage evaluation process that is applied to each program in support of its evaluation. The four stages of the process are: Program Design Assistance; Draft Evaluation Plan Development; Final Evaluation Plan Development; Program Evaluation; and Feedback of Results.

ENERGY PROBE INTERROGATORY 30

QUESTION

Reference: Exhibit B, Tab 5, Schedule 1, pages 11-12.

Please report the results of opinion polls that indicate "OPA is widely viewed as an authoritative source of information on electricity," and please report the research that indicates OPA has the "majority approval" of key stakeholders.

RESPONSE

The use of opinion polling for the purposes of measuring public perceptions on the OPA's work is an activity planned for implementation in 2008. To date, historic polling activity has not been used to provide indications on the perceived quality or value of the OPA communications work, but rather in support of perceptions related to electricity infrastructure, issues and Conservation programs.

ENERGY PROBE INTERROGATORY 31

QUESTION

Reference: Exhibit B, Tab 5, Schedule 1, pages 15 and 19.

Please explain why OPA personnel turnover figures for 2007 have been higher than expected.

RESPONSE

Given robust job creation and highly competitive labour market conditions in the GTA and across Canada in 2007, the OPA's 2007 turnover target was set too low. The OPA's actual 2007 turnover rate was 9.5%. This rate is comparable to turnover rates experienced generally by employers in 2007.

ENERGY PROBE INTERROGATORY 32

QUESTION

Reference: Exhibit C, Tab 1, Schedule 1, page 1.

Please explain why the firm, Morrison Park Advisors, continues to be hired as an outside consultant on stakeholder relations without a competitive bid. Why is the contract with Morrison Park Advisors for three years?

RESPONSE

The retention of Morrison Park Advisors ("MPA") was done in accordance with the OPA's procurement policy. MPA offers a uniquely skilled and experienced advisor who has been able to help improve the OPA's in-depth knowledge of specific industry issues.

The term of the contract is not for three years, but is a month-to-month arrangement, terminated by either party on one month's notice. Incorrect information appears in Exhibit C-1-1, page 1.

ENERGY PROBE INTERROGATORY 33

QUESTION

Reference: Exhibit D, Tab 1, Schedule 1, page 1.

Please explain the circumstances that led the OPA to choose a \$0.346/MWh. usage fee against Ontario electricity customers starting Jan. 1, 2008. What are OPA's future plans for this provincial ratepayer user fee? Will OPA and the implementing LDCs require a rate rider to pay the fee?

RESPONSE

In accordance with the *Electricity Act, 1998* (the "Act"), subsection 25.20(1) and (2), the OPA recovers its cost by establishing a fee that is approved by the Ontario Energy Board.

Fees and charges

25.20 (1) The OPA may establish and impose fees and charges to recover,

(a) the costs of doing anything the OPA is required or permitted to do under this or any other Act; and

(b) any other type of expenditure the recovery of which is permitted by the regulations, subject to any limitations and restrictions set out in the regulations. 2004, c. 23, Sched. A, s. 31 (1).

Collection

(2) The IESO shall, in accordance with the regulations, collect and pay to the OPA all fees and charges payable to the OPA. 2004, c. 23, Sched. A, s. 31 (1).

The specific derivation of the \$0.346/MWh fee, is provided at Exhibit D-3-4, page 5, wherein the OPA proposes to offset its 2008 operating costs with its 2008 registration fee, 2007 and 2008 forecast variances, and fund adjustment to expenses. The OPA has no plans to change the method for deriving its fee or recovering its costs in the future.

IESO collection of the OPA fee is carried out in a manner consistent with the IESO collection of its own fee, which is to recover the fees from directly-connected customers including local distribution companies ("LDCs"), as part of the Wholesale Market Charge. LDCs then recover the OPA fee as a component of the Wholesale Market Charge from their customers, under the line item "Regulatory Charge" on customers' bills.

The IESO only adjusts the OPA fee component of the Wholesale Market Charge upon receipt of an OEB order approving a change. The LDCs do not implement any rate riders to recover the OPA fee from Ontario ratepayers.

GEC/PEMBINA/OSEA INTERROGATORY 1

QUESTION

ISSUE 1.1

Reference: B-1-1, page 4

- a) Does OPA see itself as having a role in facilitating a coherent, streamlined, simplified process for distributed generation approvals, implementation and contracting?
- b) Please provide details describing the budget and resources assigned and the efforts OPA has made in 2007 and is expected to make in 2008 in that regard for distributed generation initiatives generally, and for renewable generation in particular.
- c) Please outline what specific barriers OPA is seeking to reduce and how OPA is intending to pursue this (for example, analogous to its advocacy for socialization of enabler transmission costs for larger generation clusters, what reforms has OPA identified that it will advocate in the OEB's various consultations on distributed generation connection and rates)?

RESPONSE

- a) Yes, the OPA sees itself as one of a number of parties with a role in facilitating processes for streamlining distributed generation approvals. The OPA is able to assist in this process through implementation of the standard offer programs and participation in industry stakeholder consultations to achieve this goal. The work associated with this role does not amount to a material expenditure in the OPA's budget, as generally it requires only internal staff resources.
- b) Within the Electricity Resources division, budget and resources have been allocated for distributed and renewable generation initiatives as follows:

Budget and Resources for Distributed Generation and Renewable Generation

	Budget (2008)	Resources (2008)	Budget (2007)	Resources (2007)
Renewable Energy Standard Offer Program	\$239,000	1 FTE and 1 PEY (Professional Engineering Year – student); external legal counsel	\$224,000	1 FTE and 1 PEY
Clean Energy Standard Offer Program	\$288,000	1 FTE and 1 PEY; external legal counsel	\$290,000	1 FTE and 1 PEY
Renewable Energy Procurement	\$400,000	2 FTEs; external legal counsel	N/A*	N/A*

*The OPA did not budget for this initiative in 2007 but internal staff resources were utilized.

1 There are many other staff resources that are drawn upon from other areas including
2 Power System Planning, Legal, Regulatory, Communications, and EM&V, as well as the
3 time involved by the senior management in Electricity Resources.

- 4 c) As described in Exhibit B-1-1, page 4, barriers to the development of electricity
5 infrastructure in Ontario include local objections to the installation of electricity
6 infrastructure, lack of zoning for electricity infrastructure in official plans, and complex
7 and sometimes duplicative approval processes. An action plan to address these
8 barriers is outlined in Exhibit B-1-1, pages 4 and 5.

9 The potential for certain barriers through the regulatory process has been identified, and
10 is being addressed through OEB consultation processes currently underway. The OPA
11 is participating in these consultations, and has provided comments which are publicly
12 available on the OEB's website. The relevant proceedings are:

- 13 • EB-2007-0630 Distributed Generation: Rates and Connection;
14 • EB-2007-0031 Rate Design for Electricity Distributors; and
15 • EB-2008-0003 Transmission Connection Cost Responsibility Review.

16
17 The OPA has provided comments which are publicly available on the OEB's website as
18 follows:

- 19 • [http://www.oeb.gov.on.ca/documents/cases/EB-2007-0630/subs-
20 20070904/OPA SUB 20070824.pdf](http://www.oeb.gov.on.ca/documents/cases/EB-2007-0630/subs-20070904/OPA_SUB_20070824.pdf)
21 • [http://www.oeb.gov.on.ca/documents/cases/EB-2007-
22 0031/submissions/opa_20070518.pdf](http://www.oeb.gov.on.ca/documents/cases/EB-2007-0031/submissions/opa_20070518.pdf)
23 • [http://www.oeb.gov.on.ca/documents/cases/EB-2008-
24 0003/submissions/OPA Submission TCCRR 20080211.pdf](http://www.oeb.gov.on.ca/documents/cases/EB-2008-0003/submissions/OPA_Submission_TCCRR_20080211.pdf)

25
26 Further opportunity to participate will arise through the OEB's recently announced
27 Distribution Connection Cost Responsibility Review, which is expected to commence in the
28 latter half of 2008.

GEC/PEMBINA/OSEA INTERROGATORY 2

QUESTION

ISSUE 1.2b

Reference: B-1-1, page 3

- a) What programs are planned and what budget is allocated for each program that OPA intends to pursue in 2008 to address local supply constraints with targeted supply, targeted CDM or a combination?
- b) For each local constraint identified, please indicate the nature and extent of the supply problem being addressed and explain how OPA's proposed approach was developed in light of potential demand side and supply side responses identified. Please provide all studies that identify the potential for fast track CDM efforts in these particular areas and for renewable and higher efficiency generation such as CHP.

RESPONSE

- a) The OPA uses integrated solutions to address all local area supply constraints. Resources in Power System Planning, Electricity Resources, Conservation, Communications, and Legal and Regulatory all contribute to these integrated solutions. However, the OPA does not budget nor track its time in terms of local area supply projects versus other types of projects.
- b) The OPA considers this matter outside the scope of this proceeding, however, some information on the local area supply projects can be found in the Integrated Power System Plan Proceeding (see EB-2007-0707, Exhibit E, Tab 5).

GEC/PEMBINA/OSEA INTERROGATORY 3

QUESTION

ISSUE 2.2

Reference: A-6-1, page 42 and B-2-1 tables 3, 4 & 5

Please reconcile the MW targets listed in table 5.1 of A-6-1 with the values listed in tables 3, 4 & 5 of B-2-1.

RESPONSE

The MW targets listed at Exhibit A-6-1, page 42 represent the portfolio of programs and associated targets that will meet the 2008-2010 targets as detailed in the IPSP. The portfolio of programs and associated targets at Exhibit B-2-1, Tables 3, 4 and 5 represent the 2008 portfolio of programs that will contribute to the goal established for 2010 in the IPSP and by the Supply Mix Directive. These programs are expected to continue to contribute further reductions over the remainder of the 2008-2010 period, and will be supplemented by additional programs to achieve the 2010 targets.

GEC/PEMBINA/OSEA INTERROGATORY 4

QUESTION

ISSUE 2.2

Reference: B-2-1 tables 3, 4 & 5

- a) Please provide MWhr estimates for each program in tables 3, 4, & 5 and explain how OPA develops its MW and MWhr expectations for the various programs.
- b) Please indicate if and how OPA's evaluation of 2008 CDM activities will consider MWhr goals. How will success at obtaining energy savings be determined?
- c) Does OPA view maximization of MWhr efficiency to be an appropriate guiding principle for the design and delivery of its CDM programs and portfolio in 2008? If not please explain and indicate how OPA will avoid lost opportunities due to capital stock turnover and due to lost efficiencies of scope in program delivery.

RESPONSE

- a) Estimates of MWh savings for 2008 programs, where available, are shown in the following table. These estimates are derived using assumptions of the load shapes for the end-use technologies and are estimates only. As such, the OPA does not consider these estimates to be targets.

The OPA utilizes a number of factors in developing the various programs and expectations, including: research studies, past performance, experience from other jurisdictions, overall objectives and directives, as well as internal and external expertise.

2008 Estimated MWh Savings

Every Kilowatt Counts	15000
Refrigerator Round-up	98000
Commercial Direct Install	13000
Aboriginal	1000
Cool/Hot Savings	22000
Electricity Retrofit Incentive	60000
Single Family Low Income	6000
Industrial Process & Technology	223000
Multi-Family Buildings	64000

1 b) The OPA designs Conservation programs primarily to deliver capacity reductions in line
2 with the needs of the IPSP. Programs may also achieve energy savings or increase
3 conservation awareness, and often the programs serve to meet more than one of these
4 goals. The 2008 portfolio of programs will be evaluated against the specific objectives
5 that are established when each program is designed.

6 The OPA will, in its reporting of program results, capture energy savings where the
7 information is available. As the OPA has not established any energy savings targets, a
8 success measure for energy savings does not exist.

9 c) While the OPA sees value in delivering energy savings, the OPA has, in the short term,
10 focused its efforts on delivering the capacity reductions as required in the IPSP and as
11 laid out in the Supply Mix Directive. Given the magnitude of the short-term targets, the
12 OPA does not have the ability to add focus on maximizing energy savings. The OPA
13 therefore accepts that there will be lost opportunities due to capital stock turnover.

GEC/PEMBINA/OSEA INTERROGATORY 5

QUESTION

ISSUE 2.2

Reference: B-2-1, page 14

Concerns have been expressed by some stakeholders about the underestimation of supply costs (particularly nuclear costs) in the IPSP. Please confirm our understanding that the avoided costs that are associated with OPA's IPSP proposal are generally lower than those that the OEB published in its guidelines. Is OPA is currently utilizing the OEB avoided costs or those developed for the IPSP to design and evaluate its 2008 CDM programs?

RESPONSE

The OPA considers the matter of avoided costs associated with the OPA's IPSP proposal to be outside the scope of this proceeding. The OPA confirms that avoided costs used for program design and evaluations in 2008 are those that were developed and filed in the IPSP.

GEC/PEMBINA/OSEA INTERROGATORY 6

QUESTION

ISSUE 2.2

Reference: B-2-1, page 31 and A-9-1, page 14

- a) The ICF report that OPA commissioned as part of the CBSAG CDM consultations noted:

We also note that the assessment of CDM potential contains a discussion of “negative reduction” for multi-residential and for commercial sectors due to increase in number of units using electric heat. If this growth in electric heat refers to efficient applications such as ground source heat pumps or installations which allow load shifting (i.e. storage heaters) then the use of electric heating may be appropriate. In many instances, however, the use of electric resistance heating can be eliminated by improved building and HVAC system design, increasing overall efficiency. This implies an opportunity to manage this “negative potential” as an element in any fuel substitution or new construction programs.

How has OPA addressed this concern in its 2008 CDM portfolio?

- b) Please provide details comparing the expected 70 MW of fuel switching (noted at A-9-1, p. 14) to OPA’s information on potential opportunities for fuel switching?

RESPONSE

- a) The 2008 CDM portfolio has addressed this concern in two ways. First, the fuel switching program, currently being developed includes geo-thermal and solar-thermal applications as both derive their primary energy from sources other than electricity. Second, the New Commercial Buildings Construction Program has a custom applications stream that considers the overall modeled energy use of a new building and compares it to the building code. The incentive is calculated on the net impact based on the overall building performance and not on a particular prescriptive technology.

- b) The OPA considers this matter to be outside the scope of this proceeding as the 70 MW of fuel-switching is a 2010 target.

GEC/PEMBINA/OSEA INTERROGATORY 7

QUESTION

ISSUE 2.2

Reference: B-2-1, page 31

The ICF report noted OPA's MW targets as follows:

Table 10: Existing Program Targets vs. Potential

Existing Programs Targets vs. Potential			
Sector	Achievable as % of Economic	Program Target as % of Achievable	Resulting Target as % of Economic Potential
Residential	41%	14%	6%
Commercial	36%	36%	13%
Industrial	14%	5%	1%

Please update the table and detail if and how OPA has increased its near term CDM targets following the ICF report and the CBSAG Process.

RESPONSE

The OPA has not updated its near term Conservation targets as a result of the ICF Report nor as a result of the Conservation Business Stakeholder Advisory Group ("CBSAG") process. Feedback from these processes indicated that the targets are appropriate and that the OPA should focus on delivering programs and gaining experience. The OPA will revisit the findings of the ICF report and re-engage the CBSAG as the OPA develops the 2009 program portfolio.

GEC/PEMBINA/OSEA INTERROGATORY 8

QUESTION

ISSUE 2.2

Reference: B-2-1, page 31

- a) Please describe any changes made in response to the recommendations submitted by Pembina Institute in the CBSAG process (as reproduced below).
- b) Please indicate if and to what extent OPA allocated additional staff resources and or budget in response to any of these suggestions?

Pembina Institute Recommendations to OPA (CBSAG) Aug. 24, 2007:

1. Raise the targets for the 2008–2010 CDM portfolio to at least the cost effective potential identified by ICF — particularly for those programs that include energy efficiency and fuel switching and that reduce base load demand. The current pilot program approach is unnecessary and should be abandoned.

2. Develop a long-range plan (based on ICF's recommendations) that sets out a strategy, timelines, targets and key programs over the next 20 years for achieving permanent base load reduction. This plan should iteratively inform the 2008–2010 program. We further recommend that the CDM 2025 target be raised to 10,000 MW — the effective long-range potential identified by ICF.

3. Make explicit linkages between lighting CDM programs and the new National Lighting Initiative and standards aimed at phasing out inefficient lighting. Further, implement similar coordination between programs and regulations for other key end uses such as new building and home construction, air conditioning and industrial drive-power.

4. Resolve the confusion over support for self generation as soon as possible.

5. In the interest of facilitating a bolder portfolio that serves to transform all electricity using markets and maximizes cost effective CDM,

- immediately establish a process to develop implementation plans or “road maps” for market transformation in each sector and end use so that CDM programs and regulatory actions can be designed with a specified role and target within this road map
- retain experienced staff from jurisdictions that have implemented comprehensive CDM programming.

- 1 6. Expand the terms of reference of the OPA CDM Business Advisory Group to include
- 2 • ongoing guidance to the OPA on the design of the overall CDM strategy, including
- 3 CDM programs to be delivered by all third parties
- 4 • review and approval of priority sector and end-use implementation plans
- 5 • working with the OPA on CDM implementation plans or “road maps” for each sector
- 6 and end use so that a complementary suite of programs is designed for each market
- 7 segment
- 8 • working with the OPA on a long-range base load reduction plan and strategy.
- 9

10 The advisory group should participate regularly in the government/utility forum on

11 regulation and other policy tools proposed by the Conservation Bureau.

12

13 7. Put in place the government/utility forum on regulations and other policy tools as

14 proposed by the Conservation Bureau. The forum should be backed up by a

15 memorandum of understanding between the relevant provincial agencies and the OPA

16 to regularly update codes and standards based on Conservation Bureau

17 recommendations.

18

19 8. Support a training, certification and oversight initiative through a partnership among

20 the Conservation Bureau, community colleges and contractor organizations across the

21 province. Further, take immediate action to assess gaps in capacity to deliver CDM

22 programs, and ensure that efficient manufacturing, product distribution, service and

23 consulting capacity is available in all regions of Ontario. Plans to fill these gaps via

24 regional training centres or other capacity building programs should be based on this

25 gap analysis and incorporated into all program designs.

26

27 9. Set up a CDM Coordination and Service Unit to help local distribution companies

28 (LDCs) with the delivery of OPA CDM programs. Operated by the Conservation Bureau

29 and experienced LDCs, the service unit would coordinate CDM programming across

30 Ontario so that all customers benefit to a similar extent from common programs.

31

32 RESPONSE

33 The CBSAG (Conservation Business Stakeholder Advisory Group) process, including

34 Pembina's recommendations dated August 24, 2007 and noted above, provided the OPA

35 with valuable advice, as well as confirmation that its portfolio is on the right track. The OPA

36 made no specific changes to its 2008 portfolio as a result of Pembina's recommendations.

37 It will, however, consider Pembina's recommendations, as well as the other advice

38 received, in the process of developing the 2009 portfolio. In 2008, the OPA will also re-

39 establish the CBSAG consultation process.

GEC/PEMBINA/OSEA INTERROGATORY 9

QUESTION

ISSUE 3.2c

Reference: B-3-1, page 3

- a) The June 15th, 2007 Directive to implement a clean energy standard offer (CESOP) does not limit the projects to 10MWs. Please indicate why OPA has limited CESOP to projects 10MWs and under?
- b) Does OPA agree that the costs and delays of an RFP process can be a serious barrier for CHP proponents of all sizes?
- c) Please provide any analysis that OPA has comparing the success of efforts to encourage CHP in other jurisdictions with SOP versus RFP processes.
- d) What was the average and the highest bids that OPA accepted in the first RFP for CHP and what price does OPA currently anticipate offering in the CESOP?
- e) Please provide any information OPA has on the technical, economic and achievable potential values for clean energy generation (specifically for CHP and waste heat recovery generation). In answering this interrogatory please do not limited the information to projects under 10 MWs and to the extent possible, please break out estimates by number of projects in various MW size categories (eg. under 5, 5-10, 10-25, 25-50, 50-100, 100-200).

RESPONSE

- a) The letter from the Minister of Energy on August 18, 2005 requested that the Ontario Energy Board and the Ontario Power Authority cooperate in developing a standard offer program for small generators embedded in the distribution system. As part of this collaboration, the OPA recommended a size limit of 10 MW and under. The 10 MW threshold was selected because it is consistent with both the directive to remove barriers for small generators and with the Independent Electricity System Operator's ("IESO") threshold for registration as a Market Participant as defined in the IESO Market Rules.
- b) – e) The OPA considers these matters to be outside the scope of this proceeding.

GEC/PEMBINA/OSEA INTERROGATORY 10

QUESTION

ISSUE 4.1

Reference: A-9-1, page 21

- a) What is budgeted for environmental attribute trading related efforts?
- b) Please confirm that OPA has suspended its plans to conduct an environmental attribute trading pilot and provide an update of OPA's plans and budgets in this area.
- c) Will OPA commit not to pursue such an effort in future without first giving the public an opportunity to address the appropriateness of the effort before the OEB?

RESPONSE

- a) Approximately 30% of the OPA's Sector Development program budget has been allocated to the environmental attribute program for 2008.
- b) OPA's environmental attribute program has been temporarily suspended at the request of the Ministry of Energy.
- c) The OPA will monitor developments at the national and sub-national level with respect to emissions trading system rules, and will consider these developments before taking any further action on conducting an environmental attribute trading pilot.

GEC/PEMBINA/OSEA INTERROGATORY 11

QUESTION

ISSUE 4.1

Reference: 4-1-1, page 1

- a) What is budgeted for efforts in relation to LSE's in 2008?
- b) Please explain how OPA's proposed LSE models (especially the distributed model) can accommodate provincially regulated, province-wide time-of-use commodity rates or other province-wide smart meter based programs that utilize rate structure or level to induce conservation?

RESPONSE

- a) OPA's Sector Development program budget has approximately 40% budgeted in 2008 for Customer Entitlement Agents ("CEAs"), formerly known as Load Serving Entities ("LSEs").
- b) In the recommended CEA centralized model, the regulated provincial electricity rate for low-volume and small commercial customers, the RPP (Regulated Price Plan) (based on forecast electricity consumption, consequently adjusted depending on actual use) would be gradually replaced by actual forward procurement by CEAs based on actual usage as determined from time-of-use ("TOU") meter data.

Information from each residence (site) will flow to the Meter Data Management/Repository ("MDM/R") and then to the LDC. The LDC's TOU data is the consumption data required for CEAs to forecast and to procure electricity, on behalf of LDCs. Therefore, the RPP rate would reflect TOU patterns. CEAs bear all risks associated with the price they set for this forward procurement. CEAs would also be able to offer demand response products to further induce conservation. It is envisioned that CEAs will set TOU rates within respective LDC regions, consistent with the TOU load shapes, as CEAs are at risk to these loads.

POLLUTION PROBE INTERROGATORY 1

QUESTION

ISSUE 1.2b

A. Northern York Region – Reference: Ex. B, Tab 1, Sch. 1, pp. 3 - 4

1. Please provide a map showing the location of Northern York Region local supply area (the “NYR” or the “Region”).

RESPONSE

The OPA considers this to be outside the scope of this proceeding.

However, over the course of the Northern York Region project, a substantial amount of information has been made publicly available. It may be possible to find some of the requested information in the evidence filed as part of the Integrated Power System Plan Proceeding (EB-2007-0707, Exhibit E-5-1, Northern York Region). In addition, information may be available from the following documents filed as part of the Northern York Region Electricity Supply Proceeding (EB-2005-0315):

- “Northern York Region Electricity Supply Study” report and associated exhibits dated September 30, 2005;
- “Northern York Region CDM” Phase I report dated May 31, 2007; and
- “Phase II Northern York Region Report” dated October 15, 2007.

As well, documentation from the 2005 stakeholder engagement process can be accessed on the OPA website at the following link:

<http://www.powerauthority.on.ca/Page.asp?PageID=1224&SiteNodeID=128>.

POLLUTION PROBE INTERROGATORY 2

QUESTION

ISSUE 1.2b

A. Northern York Region – Reference: Ex. B, Tab 1, Sch. 1, pp. 3 - 4

2. Please provide the following for the Northern York Region by year from 2000 to 2007 inclusive:

- (a) its total peak day area demand (MW);
- (b) a break-out of its total peak day area demand by LDC (i.e. Newmarket Hydro, PowerStream, and Hydro One Distribution);
- (c) a break-out of its peak day local area generation and demand response resources; and
- (d) its net area load (MW).

RESPONSE

Please see response to Pollution Probe Interrogatory 1, at Exhibit I-7-1.

POLLUTION PROBE INTERROGATORY 3

QUESTION

ISSUE 1.2b

A. Northern York Region – Reference: Ex. B, Tab 1, Sch. 1, pp. 3 - 4

3. Please provide the following for the Northern York Region by year from 2000 to 2007 inclusive:
- (a) its total annual demand (MWh);
 - (b) a break-out of its total annual demand (MWh) by LDC (i.e. Newmarket Hydro, PowerStream, and Hydro One Distribution);
 - (c) a break-out of its local area generation supplies (MWh); and
 - (d) its net area load (MWh).

RESPONSE

Please see response to Pollution Probe Interrogatory 1, at Exhibit I-7-1.

POLLUTION PROBE INTERROGATORY 4

QUESTION

ISSUE 1.2b

A. Northern York Region – Reference: Ex. B, Tab 1, Sch. 1, pp. 3 - 4

4. Please provide the following for the Northern York Region (by year from 2008 to 2015 inclusive):
- (a) the OPA's forecast of the Region's total peak day area demand (MW);
 - (b) a break-out of the OPA's forecast of the Region's total peak day area demand by LDC (i.e. Newmarket Hydro, PowerStream, and Hydro One Distribution);
 - (c) a break-out of the OPA's forecast of the Region's peak day local area generation and demand response resources; and
 - (d) the OPA's forecast of the Region's net area load (MW).

RESPONSE

Please see response to Pollution Probe Interrogatory 1, at Exhibit I-7-1.

POLLUTION PROBE INTERROGATORY 5

QUESTION

ISSUE 1.2B

A. Northern York Region – Reference: Ex. B, Tab 1, Sch. 1, pp. 3 - 4

5. Please provide the following for the Northern York Region by year from 2008 to 2015 inclusive:
- (a) the OPA's forecast of the Region's total annual demand (MWh);
 - (b) a break-out of the OPA's forecast of the Region's total annual demand (MWh) by LDC (i.e. Newmarket Hydro, PowerStream, and Hydro One Distribution);
 - (c) a break-out of the OPA's forecast of the Region's local area generation supplies (MWh);
 - (d) the OPA's forecast of the Region's net area load (MWh).

RESPONSE

Please see response to Pollution Probe Interrogatory 1, at Exhibit I-7-1.

POLLUTION PROBE INTERROGATORY 6

QUESTION

ISSUE 1.2b

A. Northern York Region – Reference: Ex. B, Tab 1, Sch. 1, pp. 3 - 4

6. Please provide the annual load duration curves for the Northern York Region for 2006 and 2007. For each year, please also state the incremental loads (MW) during the top 88 and the top 219 demand hours.

RESPONSE

Please see response to Pollution Probe Interrogatory 1, at Exhibit I-7-1.

POLLUTION PROBE INTERROGATORY 7

QUESTION

ISSUE 1.2B

A. Northern York Region – Reference: Ex. B, Tab 1, Sch. 1, pp. 3 - 4

7. Please provide your best estimate of the Northern York Region's electricity demands by end-use (e.g. residential cooling, commercial cooling, lighting, industrial process machine drive, etc.) at the time of the Region's peak day demand.

RESPONSE

Please see response to Pollution Probe Interrogatory 1, at Exhibit I-7-1.

POLLUTION PROBE INTERROGATORY 8

QUESTION

ISSUE 1.2b

A. Northern York Region – Reference: Ex. B, Tab 1, Sch. 1, pp. 3 - 4

8. Please state the existing electricity supply limit for the Northern York Region.

RESPONSE

Please see response to Pollution Probe Interrogatory 1, at Exhibit I-7-1.

POLLUTION PROBE INTERROGATORY 9

QUESTION

ISSUE 1.2b

A. Northern York Region – Reference: Ex. B, Tab 1, Sch. 1, pp. 3 - 4

9. Please state how many MW of demand were curtailed in the Northern York Region at the time of its 2007 peak demand pursuant to:
- (a) the demand response contract with Rodan Energy;
 - (b) the PeakSaver contract with PowerSteam;
 - (c) the PeakSaver contract with Newmarket Hydro; and
 - (d) the PeakSaver contract with Hydro One.

RESPONSE

Please see response to Pollution Probe Interrogatory 1, at Exhibit I-7-1.

POLLUTION PROBE INTERROGATORY 10

QUESTION

ISSUE 1.2b

A. Northern York Region – Reference: Ex. B, Tab 1, Sch. 1, pp. 3 - 4

10. Please state the OPA's demand response resources (MW) in the Northern York Region, as of December 31, 2007, pursuant to:
- (a) the demand response contract with Rodan Energy;
 - (b) the PeakSaver contract with PowerStream;
 - (c) the PeakSaver contract with Newmarket Hydro; and
 - (d) the PeakSaver contract with Hydro One.

RESPONSE

Please see response to Pollution Probe Interrogatory 1, at Exhibit I-7-1.

POLLUTION PROBE INTERROGATORY 11

QUESTION

ISSUE 1.2b

A. Northern York Region – Reference: Ex. B, Tab 1, Sch. 1, pp. 3 - 4

11. Please state the OPA's forecasted demand response resources (MW) in Northern York Region, as of June 1, 2008, pursuant to:
- (a) the demand response contract with Rodan Energy;
 - (b) the PeakSaver contract with PowerStream;
 - (c) the PeakSaver contract with Newmarket Hydro;
 - (d) the PeakSaver contract with Hydro One; and
 - (e) any other demand response contract(s).

RESPONSE

Please see response to Pollution Probe Interrogatory 1, at Exhibit I-7-1.

POLLUTION PROBE INTERROGATORY 12

QUESTION

ISSUE 1.2b

A. Northern York Region – Reference: Ex. B, Tab 1, Sch. 1, pp. 3 - 4

12. Please state the OPA's forecasted demand response resources (MW) in Northern York Region, as of December 31, 2008, pursuant to:
- (a) the demand response contract with Rodan Energy;
 - (b) the PeakSaver contract with PowerStream;
 - (c) the PeakSaver contract with Newmarket Hydro;
 - (d) the PeakSaver contract with Hydro One; and
 - (e) any other demand response contract(s).

RESPONSE

Please see response to Pollution Probe Interrogatory 1, at Exhibit I-7-1.

POLLUTION PROBE INTERROGATORY 13

QUESTION

ISSUE 1.2b

A. Northern York Region – Reference: Ex. B, Tab 1, Sch. 1, pp. 3 - 4

13. Please state the number of homes in the Northern York Region that:
- (a) have central air-conditioning;
 - (b) have enrolled their central air conditioners in the PeakSaver programme as of December 31, 2007; and
 - (c) are forecast to have enrolled their central air conditioners in the PeakSaver programme by:
 - (i) June 1, 2008; and
 - (ii) December 31, 2008.

RESPONSE

Please see response to Pollution Probe Interrogatory 1, at Exhibit I-7-1.

POLLUTION PROBE INTERROGATORY 14

QUESTION

ISSUE 1.2b

A. Northern York Region – Reference: Ex. B, Tab 1, Sch. 1, pp. 3 - 4

14. Please state the number of small businesses in the Northern York Region that:
- (a) have central air-conditioners that are eligible to enroll in the PeakSaver programme;
 - (b) have enrolled their central air-conditioners in the PeakSaver programme as of December 31, 2007;
 - (c) are forecast to have enrolled their central air conditioners in the PeakSaver programme by:
 - (i) June 1, 2008; and
 - (ii) December 31, 2008.

RESPONSE

Please see response to Pollution Probe Interrogatory 1, at Exhibit I-7-1.

POLLUTION PROBE INTERROGATORY 15

QUESTION

ISSUE 1.2b

A. Northern York Region – Reference: Ex. B, Tab 1, Sch. 1, pp. 3 - 4

15. Please state the number of small businesses in the Northern York Region that:
- (a) have central air-conditioners that are eligible to enroll in the PeakSaver programme;
 - (b) have enrolled their central air-conditioners in the PeakSaver programme as of December 31, 2007;
 - (c) are forecast to have enrolled their central air conditioners in the PeakSaver programme by:
 - (i) June 1, 2008; and
 - (ii) December 31, 2008.

RESPONSE

Please see response to Pollution Probe Interrogatory 1, at Exhibit I-7-1.

POLLUTION PROBE INTERROGATORY 16

QUESTION

ISSUE 1.2b

A. Northern York Region – Reference: Ex. B, Tab 1, Sch. 1, pp. 3 - 4

16. Please state how many commercial, institutional and industrial electricity consumers are located in the Northern York Region. Please also state how many of these customers:
- (a) have enrolled in an OPA demand response programme, other than PeakSaver, as of December 31, 2007; and
 - (b) are forecast to be enrolled in an OPA demand response programme, other than PeakSaver, as of:
 - (i) June 1, 2008; and
 - (ii) December 31, 2008.

RESPONSE

Please see response to Pollution Probe Interrogatory 1, at Exhibit I-7-1.

POLLUTION PROBE INTERROGATORY 17

QUESTION

ISSUE 1.2b

A. Northern York Region – Reference: Ex. B, Tab 1, Sch. 1, pp. 3 - 4

17. Please provide your best estimate of how many MW of diesel back-up electricity generation capacity exist in the Northern York Region.

(a) greater than 10 MW in size; and

(b) less than 10 MW in size.

RESPONSE

Please see response to Pollution Probe Interrogatory 1, at Exhibit I-7-1.

POLLUTION PROBE INTERROGATORY 18

QUESTION

ISSUE 1.2B

A. Northern York Region – Reference: Ex. B, Tab 1, Sch. 1, pp. 3 - 4

18. Please provide your best estimate of the total combined heat and power potential in the Northern York Region. Please also break-out your estimates according to projects that are:

- (a) greater than 10 MW in size; and
- (b) less than 10 MW in size.

RESPONSE

Please see response to Pollution Probe Interrogatory 1, at Exhibit I-7-1.

POLLUTION PROBE INTERROGATORY 19

QUESTION

ISSUE 1.2B

A. Northern York Region – Reference: Ex. B, Tab 1, Sch. 1, pp. 3 - 4

19. Please state how much money the OPA has spent, as of December 31, 2007, to obtain reductions in the Northern York Region's electricity demands (regarding both MW and MWh). Please also state the quantity of savings (in both MW and MWh) that the OPA has obtained as of December 31, 2007.

RESPONSE

Please see response to Pollution Probe Interrogatory 1, at Exhibit I-7-1.

POLLUTION PROBE INTERROGATORY 20

QUESTION

ISSUE 1.2b

B. Kitchener-Waterloo-Cambridge-Guelph Local Supply Area – Reference Ex. B, Tab 1, Sch. 1, pp. 3 - 4

20. Please provide a map showing the location of the Kitchener-Waterloo-Cambridge-Guelph local supply area (the “KWCGLSA” or the “Area”).

RESPONSE

The OPA considers this to be outside the scope of this proceeding.

However, evidence on Kitchener-Waterloo-Cambridge-Guelph is filed as part of the Integrated Power System Plan Proceeding, so it may be possible to find some of the requested information there (see EB-2007-0707, Exhibit E-5-2, Kitchener-Waterloo-Cambridge-Guelph).

POLLUTION PROBE INTERROGATORY 21

QUESTION

ISSUE 1.2b

B. Kitchener-Waterloo-Cambridge-Guelph Local Supply Area – Reference Ex. B, Tab 1, Sch. 1, pp. 3 - 4

21. Please provide the following for the KWCGLSA by year from 2000 to 2007 inclusive:
- (a) its total peak day area demand (MW);
 - (b) a break-out of its total peak day area demand by LDC;
 - (c) a break-out of its peak day local area generation and demand response resources; and
 - (d) its net area load (MW).

RESPONSE

Please see response to Pollution Probe Interrogatory 20, at Exhibit I-7-20.

POLLUTION PROBE INTERROGATORY 22

QUESTION

ISSUE 1.2b

B. *Kitchener-Waterloo-Cambridge-Guelph Local Supply Area – Reference Ex. B, Tab 1, Sch. 1, pp. 3 - 4*

22. Please provide the following for the KWCGLSA by year from 2000 to 2007 inclusive:
- (a) its total annual demand (MWh);
 - (b) a break-out of its total annual demand (MWh) by LDC;
 - (c) a break-out of its local area generation supplies (MWh);
 - (d) its net area load (MWh).

RESPONSE

Please see response to Pollution Probe Interrogatory 20, at Exhibit I-7-20.

POLLUTION PROBE INTERROGATORY 23

QUESTION

ISSUE 1.2b

B. Kitchener-Waterloo-Cambridge-Guelph Local Supply Area – Reference Ex. B, Tab 1, Sch. 1, pp. 3 - 4

23. Please provide the following for the KWCGLSA by year from 2008 to 2015 inclusive:

- (a) The OPA's forecast of the Area's total peak day area demand (MW);
- (b) a break-out of the OPA's forecast of the Area's total peak day area demand by LDC,
- (c) a break-out of the OPA's forecast of the Area's peak day local area generation and demand response resources; and
- (d) the OPA's forecast of the Area's net area load (MW).

RESPONSE

Please see response to Pollution Probe Interrogatory 20, at Exhibit I-7-20.

POLLUTION PROBE INTERROGATORY 24

QUESTION

ISSUE 1.2b

B. *Kitchener-Waterloo-Cambridge-Guelph Local Supply Area – Reference Ex. B, Tab 1, Sch. 1, pp. 3 - 4*

24. Please provide the following for the KWCGLSA by year from 2008 to 2015 inclusive:
- (a) The OPA's forecast of the Area's total annual demand (MWh);
 - (b) a break-out of the OPA's forecast of the Area's total annual demand (MWh) by LDC;
 - (c) a break-out of the OPA's forecast of the Area's local area generation supplies (MWh);
 - (d) the OPA's forecast of the Area's net area load (MWh).

RESPONSE

Please see response to Pollution Probe Interrogatory 20, at Exhibit I-7-20.

POLLUTION PROBE INTERROGATORY 25

QUESTION

ISSUE 1.2b

B. Kitchener-Waterloo-Cambridge-Guelph Local Supply Area – Reference Ex. B, Tab 1, Sch. 1, pp. 3 - 4

25. Please provide the annual load duration curves for the KWCGLSA for 2006 and 2007. For each year, please also state the incremental loads (MW) during the top 88 and the top 219 demand hours.

RESPONSE

Please see response to Pollution Probe Interrogatory 20, at Exhibit I-7-20.

POLLUTION PROBE INTERROGATORY 26

QUESTION

ISSUE 1.2b

B. Kitchener-Waterloo-Cambridge-Guelph Local Supply Area – Reference Ex. B, Tab 1, Sch. 1, pp. 3 - 4

26. Please provide your best estimate of the KWCGLSA's electricity demands by end-use (e.g. residential cooling, commercial cooling, lighting, industrial process machine drive, etc.) at the time of the Area's peak day demand.

RESPONSE

Please see response to Pollution Probe Interrogatory 20, at Exhibit I-7-20.

POLLUTION PROBE INTERROGATORY 27

QUESTION

ISSUE 1.2b

B. Kitchener-Waterloo-Cambridge-Guelph Local Supply Area – Reference Ex. B, Tab 1, Sch. 1, pp. 3 - 4

27. Please state the existing electricity supply limit for the KWCGLSA.

RESPONSE

Please see response to Pollution Probe Interrogatory 20, at Exhibit I-7-20.

POLLUTION PROBE INTERROGATORY 28

QUESTION

ISSUE 1.2b

B. Kitchener-Waterloo-Cambridge-Guelph Local Supply Area – Reference Ex. B, Tab 1, Sch. 1, pp. 3 - 4

28. Please state how many MW of demand were curtailed in the KWCGLSA at the time of its 2007 peak demand pursuant to:

- (a) the OPA's PeakSaver contracts with local LDCs (broken out by LDC); and
- (b) all other OPA demand response contracts.

RESPONSE

Please see response to Pollution Probe Interrogatory 20, at Exhibit I-7-20.

POLLUTION PROBE INTERROGATORY 29

QUESTION

ISSUE 1.2b

B. Kitchener-Waterloo-Cambridge-Guelph Local Supply Area – Reference Ex. B, Tab 1, Sch. 1, pp. 3 - 4

29. Please state the OPA's demand response resources (MW) in the KWCGLSA, as of December 31, 2007, pursuant to:

- (a) the OPA's PeakSaver contracts with local LDCs (broken out by LDC); and
- (b) all other OPA demand response contracts.

RESPONSE

Please see response to Pollution Probe Interrogatory 20, at Exhibit I-7-20.

POLLUTION PROBE INTERROGATORY 30

QUESTION

ISSUE 1.2b

B. Kitchener-Waterloo-Cambridge-Guelph Local Supply Area – Reference Ex. B, Tab 1, Sch. 1, pp. 3 - 4

30. Please state the OPA's forecasted demand response resources (MW) in the KWCGLSA, as of June 1, 2008, pursuant to:
- (a) the PeakSaver contracts with local LDCs (broken out by LDC); and
 - (b) any other demand response contract(s).

RESPONSE

Please see response to Pollution Probe Interrogatory 20, at Exhibit I-7-20.

POLLUTION PROBE INTERROGATORY 31

QUESTION

ISSUE 1.2b

B. Kitchener-Waterloo-Cambridge-Guelph Local Supply Area – Reference Ex. B, Tab 1, Sch. 1, pp. 3 - 4

31. Please state the OPA's forecasted demand response resources (MW) in the KWCGLSA, as of December 31, 2008, pursuant to:

- (a) the PeakSaver contracts with local LDCs (broken out by LDC); and
- (b) any other demand response contract(s).

RESPONSE

Please see response to Pollution Probe Interrogatory 20, at Exhibit I-7-20.

POLLUTION PROBE INTERROGATORY 32

QUESTION

ISSUE 1.2b

B. Kitchener-Waterloo-Cambridge-Guelph Local Supply Area – Reference Ex. B, Tab 1, Sch. 1, pp. 3 - 4

32. Please state the number of homes in the KWCGLSA that:
- (a) have central air-conditioning;
 - (b) have enrolled their central air conditioners in the PeakSaver programme as of December 31, 2007; and
 - (c) are forecast to have enrolled their central air conditioners in the PeakSaver programme by:
 - (i) June 1, 2008; and
 - (ii) December 31, 2008.

RESPONSE

Please see response to Pollution Probe Interrogatory 20, at Exhibit I-7-20.

POLLUTION PROBE INTERROGATORY 33

QUESTION

ISSUE 1.2b

B. Kitchener-Waterloo-Cambridge-Guelph Local Supply Area – Reference Ex. B, Tab 1, Sch. 1, pp. 3 - 4

33. Please state the number of small businesses in the KWCGLSA that:
- (a) have central air-conditioners that are eligible to enroll in the PeakSaver programme;
 - (b) have enrolled their central air-conditioners in the PeakSaver programme as of December 31, 2007; and
 - (c) are forecast to have enrolled their central air conditioners in the PeakSaver programme by:
 - (i) June 1, 2008; and
 - (ii) December 31, 2008.

RESPONSE

Please see response to Pollution Probe Interrogatory 20, at Exhibit I-7-20.

POLLUTION PROBE INTERROGATORY 34

QUESTION

ISSUE 1.2b

B. Kitchener-Waterloo-Cambridge-Guelph Local Supply Area – Reference Ex. B, Tab 1, Sch. 1, pp. 3 - 4

34. Please state how many commercial, institutional and industrial electricity consumers are located in the KWCGLSA. Please also state how many of these customers:
- (a) have enrolled in an OPA demand response programme, other than PeakSaver, as of December 31, 2007; and
 - (b) are forecast to be enrolled in an OPA demand response programme, other than PeakSaver, as of:
 - (i) June 1, 2008; and
 - (ii) December 31, 2008.

RESPONSE

Please see response to Pollution Probe Interrogatory 20, at Exhibit I-7-20.

POLLUTION PROBE INTERROGATORY 35

QUESTION

ISSUE 1.2b

B. Kitchener-Waterloo-Cambridge-Guelph Local Supply Area – Reference Ex. B, Tab 1, Sch. 1, pp. 3 - 4

35. Please provide your best estimate of how many MW of diesel back-up electricity generation capacity exist in the KWCGLSA.

RESPONSE

Please see response to Pollution Probe Interrogatory 20, at Exhibit I-7-20.

POLLUTION PROBE INTERROGATORY 36

QUESTION

ISSUE 1.2b

B. Kitchener-Waterloo-Cambridge-Guelph Local Supply Area – Reference Ex. B, Tab 1, Sch. 1, pp. 3 - 4

36. Please provide your best estimate of the total combined heat and power potential in the KWCGLSA. Please also break-out your estimates according to projects that are:
- (a) greater than 10 MW in size; and
 - (b) less than 10 MW in size.

RESPONSE

Please see response to Pollution Probe Interrogatory 20, at Exhibit I-7-20.

POLLUTION PROBE INTERROGATORY 37

QUESTION

ISSUE 1.2b

B. Kitchener-Waterloo-Cambridge-Guelph Local Supply Area – Reference Ex. B, Tab 1, Sch. 1, pp. 3 - 4

37. Please state how much money the OPA has spent, as of December 31, 2007, to obtain reductions in the KWCGLSA's electricity demands (regarding both MW and MWh). Please also state the quantity of savings (in both MW and MWh) that the OPA has obtained as of December 31, 2007.

RESPONSE

Please see response to Pollution Probe Interrogatory 20, at Exhibit I-7-20.

POLLUTION PROBE INTERROGATORY 38

QUESTION

ISSUE 1.2b

B. Kitchener-Waterloo-Cambridge-Guelph Local Supply Area – Reference Ex. B, Tab 1, Sch. 1, pp. 3 - 4

38. Please state the OPA's forecasted incremental electricity savings (in both MW and MWh) and budget for the KWCGLSA for 2008.

RESPONSE

Please see response to Pollution Probe Interrogatory 20, at Exhibit I-7-20.

POLLUTION PROBE INTERROGATORY 39

QUESTION

ISSUE 2.2

Reference: Ex. B, Tab 2, Sch. 1 and (with respect to combined heat and power questions) Ex. B, Tab 3, Sch. 1

39. For 2007, please state the OPA's intended and actual MW and MWh results for each of the following:
- (a) energy conservation;
 - (b) demand response;
 - (c) fuel switching; and
 - (d) combined heat and power resources.

RESPONSE

OPA has provided the targeted and actual MW for each of the categories of Conservation defined. For MWh, OPA did not establish a target for 2007 and has only provided actual results where they are available.

For 2008, OPA has provided an estimate of MWh where such estimates are available. This should not be interpreted as a target as OPA does not establish targets for energy savings.

Actual results for 2007 are preliminary and subject to adjustment as EMV becomes available.

Year		MW		MWh (annualized)		Acquisition Costs - \$ Thousands	
		Planned	Actual	Estimated	Actual	Planned	Actual
2007	Energy Conservation	146	176	--	552,000	109,100	96,400
	Demand Response	270	80	--	--	43,600	24,700
	Fuel Switching	0	0	--	--	0	0
	Combined Heat & Power Sources	0	0	--	0	0	0
2008	Energy Conservation	237	--	502,000	--	196,200	--
	Demand Response	155	--	--	--	99,700	--
	Fuel Switching	18	--	--	--	14,700	--
	Combined Heat & Power Sources	100	--	80,000	--	5,000	--

Acquisition costs are charges only

Actual MW and MWh are preliminary estimates as not all reporting is complete, and are still subject to verification

POLLUTION PROBE INTERROGATORY 40

QUESTION

ISSUE 2.2

*Reference: Ex. B, Tab 2, Sch. 1 and (with respect to combined heat and power questions)
Ex. B, Tab 3, Sch. 1*

40. For 2007, please state the OPA's budgeted and actual expenditures to acquire each of the following:
- (a) energy conservation;
 - (b) demand response;
 - (c) fuel switching; and
 - (d) combined heat and power resources.

RESPONSE

Please see the response to Pollution Probe Interrogatory 39, at Exhibit I-7-39.

POLLUTION PROBE INTERROGATORY 41

QUESTION

ISSUE 2.2

*Reference: Ex. B, Tab 2, Sch. 1 and (with respect to combined heat and power questions)
Ex. B, Tab 3, Sch. 1*

41. For 2008, please state the OPA's intended MW and MWh results for each of the following:
- (a) energy conservation;
 - (b) demand response;
 - (c) fuel switching; and
 - (d) combined heat and power resources for 2008.

RESPONSE

Please see response to Pollution Probe Interrogatory 39, at Exhibit I-7-39.

POLLUTION PROBE INTERROGATORY 42

QUESTION

ISSUE 2.2

*Reference: Ex. B, Tab 2, Sch. 1 and (with respect to combined heat and power questions)
Ex. B, Tab 3, Sch. 1*

42. For 2008, please state the OPA's budgeted expenditures to acquire each of the following:

- (a) energy conservation;
- (b) demand response;
- (c) fuel switching; and
- (d) combined heat and power resources.

RESPONSE

Please see response to Pollution Probe Interrogatory 39, at Exhibit I-7-39.

POLLUTION PROBE INTERROGATORY 43

QUESTION

ISSUE 2.2

Reference: Ex. B, Tab 2, Sch. 1 and (with respect to combined heat and power questions)
Ex. B, Tab 3, Sch. 1

43. Please provide a break-out of the OPA's total cumulative demand response resources (MW) as of December 31, 2007 according to each of its demand response programmes (e.g. **peaksaver**®, Northern York Region, DR1, DR2, DR3, City of Toronto, etc.)

RESPONSE

Total Demand Response resources at December 31st, 2007 are summarized in the following table. Note that the totals are the resources under contract and are not adjusted for actual performance rates. The OPA had no demand response program in effect in 2007 with the City of Toronto.

Demand Response Program	Total Cumulative MW as of December 31, 2007
peaksaver ®.	14.8
Northern York Region	16.4
DR1	317.0
DR2	0
DR3	0

POLLUTION PROBE INTERROGATORY 44

QUESTION

ISSUE 2.2

Reference: Ex. B, Tab 2, Sch. 1 and (with respect to combined heat and power questions)
Ex. B, Tab 3, Sch. 1

44. Please provide a break-out of the OPA's total PeakSaver demand response resources (MW) as of December 31, 2007 by LDC (e.g. Hydro One, Toronto Hydro, etc.).

RESPONSE

The OPA's Conservation programs are designed to achieve province-wide or regional, rather than LDC-specific goals. With regard to specific LDC results, this information is subject to contract confidentiality provisions.

Please see the response to Pollution Probe Interrogatory 43, at Exhibit I-7-43 for the total **peaksaver**® demand response resources.

POLLUTION PROBE INTERROGATORY 45

QUESTION

ISSUE 2.2

Reference: Ex. B, Tab 2, Sch. 1 and (with respect to combined heat and power questions)
Ex. B, Tab 3, Sch. 1

45. Please provide a break-out of the OPA's total number of PeakSaver customers as of December 31, 2007 by LDC (e.g. Hydro One, Toronto Hydro, etc.).

RESPONSE

The total number of **peaksaver**® customers as of December 31, 2007 was 24,264. With regard to specific LDC results, this information is subject to contract confidentiality provisions.

POLLUTION PROBE INTERROGATORY 46

QUESTION

ISSUE 2.2

Reference: Ex. B, Tab 2, Sch. 1 and (with respect to combined heat and power questions)
Ex. B, Tab 3, Sch. 1

46. Please provide a break-out of the OPA's forecasted total cumulative demand response resources (MW) as of June 1, 2008 and December 31, 2008 according to each of the demand response programmes (e.g. PeakSaver, Northern York Region, DR1, DR2, DR3, City of Toronto, etc.)

RESPONSE

Total forecast Demand Response resources at June 1st and December 31st of 2008 are summarized in the following table. Note that the totals are the resources forecast to be under contract and are not adjusted for actual performance rates. The decline in resources under DR1 between June and December reflects an anticipated transfer of customers from the DR1 program to the DR3 program.

Demand Response Program	Total Cumulative MW forecast as of June 1, 2008	Total Cumulative MW forecast as of December 31, 2008
peaksaver™*	36	65
Northern York Region	20	22
DR1	440	200
DR2	40	170
DR3	135	360

Discussions are underway with other parties including the City of Toronto to augment Demand Response resources, however these are preliminary discussions and no projections can be made at this time.

POLLUTION PROBE INTERROGATORY 47

QUESTION

ISSUE 2.2

Reference: Ex. B, Tab 2, Sch. 1 and (with respect to combined heat and power questions)
Ex. B, Tab 3, Sch. 1

47. Please provide a forecast of the OPA's 2008 incremental PeakSaver demand response resources (MW) by LDC as of June 1, 2008 and December 31, 2008.

RESPONSE

The forecast incremental demand resources for **peaksaver**® are detailed in the following table. With regard to specific LDC resources, this information is subject to contract confidentiality provisions.

Demand Response Program	Total Incremental MW forecast as of June 1, 2008	Total Incremental MW forecast as of December 31, 2008
peaksaver ®	21	50

POLLUTION PROBE INTERROGATORY 48

QUESTION

ISSUE 2.2

Reference: Ex. B, Tab 2, Sch. 1 and (with respect to combined heat and power questions)
Ex. B, Tab 3, Sch. 1

48. Please provide a forecast of the OPA's 2008 incremental PeakSaver customers by LDC as of June 1, 2008 and December 31, 2008.

RESPONSE

The forecast incremental **peaksaver**® customers are detailed in the following table. With regard to specific LDC customers, this information is subject to contract confidentiality provisions.

Demand Response Program	Total Incremental customers forecast as of June 1, 2008	Total Incremental customers forecast as of December 31, 2008
peaksaver ®	34,429	81,973

POLLUTION PROBE INTERROGATORY 49

QUESTION

ISSUE 2.2

*Reference: Ex. B, Tab 2, Sch. 1 and (with respect to combined heat and power questions)
Ex. B, Tab 3, Sch. 1*

49. Please provide the OPA's best estimate of the number of residential and small business central air-conditioners that are eligible for enrollment in the PeakSaver programme.

RESPONSE

The OPA's best estimate of the total number of residential and small commercial customers with central air conditioners who are eligible for peaksaver™* is 2.05 million.

POLLUTION PROBE INTERROGATORY 50

QUESTION

ISSUE 2.2

*Reference: Ex. B, Tab 2, Sch. 1 and (with respect to combined heat and power questions)
Ex. B, Tab 3, Sch. 1*

50. Please provide your best estimate of the quantity (MW) of diesel back-up electricity generation capacity in Ontario.

RESPONSE

The OPA does not have an estimate of diesel back-up electricity generation capacity in Ontario.

POLLUTION PROBE INTERROGATORY 51

QUESTION

ISSUE 2.2

*Reference: Ex. B, Tab 2, Sch. 1 and (with respect to combined heat and power questions)
Ex. B, Tab 3, Sch. 1*

51. Please provide your best estimate of the total combined heat and power potential (MW) in Ontario. Please also break-out your estimates according to projects that are:
- (a) greater than 10 MW in size; and
 - (b) 10 MW or less in size.

RESPONSE

The procurement of CHP resources is addressed in the IPSP (see EB-2007-0707, Exhibit D-4-1, Attachment 3, p. 15) but the OPA did not estimate the total potential of CHP projects due to the high degree of uncertainty (based upon such factors as project economics, steam host availability and the overall Ontario economy). The OPA did include an estimate of expected CHP capacity to come online and these estimates were based on experience with previous procurements and feedback from stakeholders.

POLLUTION PROBE INTERROGATORY 52

QUESTION

ISSUE 2.2

*Reference: Ex. B, Tab 2, Sch. 1 and (with respect to combined heat and power questions)
Ex. B, Tab 3, Sch. 1*

52. Please describe your methodologies to estimate the economic benefits to Ontario for each of your demand response programmes.

RESPONSE

The avoided cost estimation methodology presented in the IPSP (EB-2007-0707, Exhibit D-4-1, Attachment 3) is used to estimate the economic benefits to Ontario for each demand response program.

POLLUTION PROBE INTERROGATORY 53

QUESTION

ISSUE 2.2

Reference: Ex. B, Tab 2, Sch. 1 and (with respect to combined heat and power questions)
Ex. B, Tab 3, Sch. 1

53. Please provide your estimates of the economic benefits (i.e. dollars of savings per MW of reduced demand) for each of your demand response programmes. Please also state your assumptions and show all of your calculations.

RESPONSE

The OPA's estimates of the economic benefits per MW of reduced demand for each of the OPA's demand response programs are presented in Column 5, Table 1 below. All avoided costs are estimated using the cost estimation methodology presented in the IPSP (see EB-2007-0707, Exhibit D-4-1, Attachment 3).

The avoided costs for DR 1, **peaksaver®**, and Northern York Region ("NYR") are arrived at by multiplying the Average Forecast 2008 MW in Column 2, Table 1 by the 2008 OPA avoided costs for generation, transmission, and distribution of electricity as presented in the IPSP. No additional benefits from avoided energy costs were used in the calculation of avoided costs for the DR 1, **peaksaver®**, or NYR programs.

The estimated benefits resulting from avoided energy costs as a result of load shifting activities in the DR 2 program were added to the avoided costs of generation, transmission and distribution, as shown in Column 5, Table 1 by assuming eight hours of load shifting from peak to off-peak on all eligible days as described in the program rules.

The estimated benefits resulting from avoided energy costs due to energy reduction activities during on-peak hours in the DR 3 program were added to the avoided costs of generation, transmission and distribution as shown in Column 5, Table 1. An estimation of the total electricity energy reduction during on-peak hours in the DR 3 program by season is shown in Table 2.

Incentive payments to participants in the **peaksaver®** program are considered not applicable as participants are not incented for activation events. The incentive payments made for the NYR program are confidential.

The Average Forecast 2008 MW values in Column 2, Table 1 represent estimations of the average response in any given hour of the resource in 2008. The values in

Column 3, Table 1 represent the estimation of the expected incentive payments as a result of demand response activities in 2008. Two specific issues that have an affect on the values presented in Columns 2 and 3 of Table 1 are:

- The historical experience with the DR 1 program that approximately 40% of the Gross MW is actually available in any given hour of activation.
- Estimation of the effect changes in participation between and within the various demand response programs will have on the average MW available in any given program during the 2008 time period.

Table 1 - Analysis Summary Table

1	2	3	4	5	6
Program	Average Forecast 2008 MW	2008 Expected Demand Response Incentive Payments (\$MM)	Avoided Costs 2008 (\$MM)	Avoided Costs per Average MW for 2008	Variance in dollars per MW
DR1	100	10.8	8.9	88,605	- 19,395
DR2	40	6.0	5.8	144,471	- 5,529
DR3	180	27.5	17.1	95,127	- 57,651
<i>peaksaver</i> ®	50	N/A	4.4	88,605	N/A
Northern York Region	21	Confidential	1.9	88,605	N/A

Table 2 - Estimated total electricity energy reduction during on-peak hours in the DR 3 program

Season	MWh Energy Reduction
Summer	10,953
Winter	2,738
Shoulder	4,564

POLLUTION PROBE INTERROGATORY 54

QUESTION

ISSUE 2.2

*Reference: Ex. B, Tab 2, Sch. 1 and (with respect to combined heat and power questions)
Ex. B, Tab 3, Sch. 1*

54. For each of your demand response programmes, please provide an analysis of the variance (dollars per MW or MWh) between:
- (a) the economic benefits of the demand response programme to Ontario; and
 - (b) the price paid by the OPA to demand response sources for supplying demand reductions.

RESPONSE

Please refer to Column 6, Table 1 of Pollution Probe Interrogatory 53, at Exhibit I-7-53.

POLLUTION PROBE INTERROGATORY 55

QUESTION

ISSUE 2.2

Reference: Ex. B, Tab 2, Sch. 1 and (with respect to combined heat and power questions)
Ex. B, Tab 3, Sch. 1

55. Please describe your methodology for estimating the economic benefits (e.g. avoided nuclear and/or avoided combined-cycle gas generation, avoided transmission and distribution capital costs, avoided electricity losses, etc.) of your proposed standard offer programme for small-scale (i.e. 10 MW or less) combined heat and power projects.

RESPONSE

This information is not currently available. The Clean Energy Standard Offer Program ("CESOP"), which is expected to include combined heat and power projects, is undertaken by the OPA pursuant to the government directive dated June 14, 2007. The original CESOP recommendations, which were released June 8, 2007, included a pricing analysis. However, these recommendations are now under review, therefore the analysis is no longer current.

Based on stakeholder feedback, a consultant was retained in late 2007 to revise the program design, including the costing methodology. The report is expected to be completed in March 2008, and will form the basis of the CESOP program design to be used upon the program launch expected in Q2 2008.

POLLUTION PROBE INTERROGATORY 56

QUESTION

ISSUE 2.2

*Reference: Ex. B, Tab 2, Sch. 1 and (with respect to combined heat and power questions)
Ex. B, Tab 3, Sch. 1*

56. Please provide your estimate of the economic benefits (i.e. avoided cost savings per MW and per MWh) of your proposed standard offer programme for small-scale combined heat and power projects. Please also state your assumptions and show all of your calculations.

RESPONSE

Please see the response to Pollution Probe Interrogatory 55, at Exhibit I-7-55.

POLLUTION PROBE INTERROGATORY 57

QUESTION

ISSUE 2.2

*Reference: Ex. B, Tab 2, Sch. 1 and (with respect to combined heat and power questions)
Ex. B, Tab 3, Sch. 1*

57. Please state when you expect that your combined heat and power standard offer programme will be operational. Please also state the number of combined heat and power standard offer contracts that you expect to sign in 2008.

RESPONSE

The Clean Energy Standard Offer Program, which is expected to include combined heat and power projects, has an expected launch date of Q2 2008. The number of resultant contracts is unknown, but the OPA has assumed approximately 40 MW for 2008 budgeting purposes.

POLLUTION PROBE INTERROGATORY 58

QUESTION

ISSUE 2.2

Reference: Ex. B, Tab 2, Sch. 1 and (with respect to combined heat and power questions) Ex. B, Tab 3, Sch. 1

58. With respect to each of the LDC CDM programmes that the OPA funded in 2007, please state:

- (a) the intended and actual MW acquired;
- (b) the intended and actual MWh acquired; and
- (c) the forecasted and actual budget.

RESPONSE

The requested Information is provided in the table below.

Year		MW		MWh (Annualized)		Costs - \$ Thousands	
		Planned	Actual	Estimate	Actual	Planned	Actual
2007	Summer Savings	57	65	--	217,500	20,900	8,735
	Refrigerator Roundup	12	11.4	--	50,543	6,710	9,330
	Electricity Retrofit Incentive	4	2	--	5,000	2,735	2,942
	peaksaver®	26	14.8	--	--	23,688	11,355
	Marketing & support expenses	--	--	--	--	1,954	292
2008	Summer Savings	1	--	--	--	8,420	--
	Refrigerator Roundup	21	--	98,300	--	16,844	--
	Electricity Retrofit Incentive	19	--	60,000	--	5,575	--
	peaksaver®	40	--	--	--	37,950	--
	Commercial Direct Install	3	--	13,000	--	6,555	--
	LDC Custom Programs	15	--	--	--	12,500	--
	Home Energy Efficiency	0.5	--	--	--	2,809	--
	Marketing & support expenses	--	--	--	--	989	--

POLLUTION PROBE INTERROGATORY 59

QUESTION

ISSUE 2.2

*Reference: Ex. B, Tab 2, Sch. 1 and (with respect to combined heat and power questions)
Ex. B, Tab 3, Sch. 1*

59. With respect to each of the LDC CDM programmes that the OPA plans to fund in 2008, please state each programme's intended 2008 MW and MWh savings and each programme's forecasted cost to the OPA.

RESPONSE

Please see response to Pollution Probe interrogatory 58, at Exhibit I-7-58.

POLLUTION PROBE INTERROGATORY 60

QUESTION

ISSUE 6.2

Reference: EB-2006-0233, Ex. S-1-2, p. 4, Issue 1, Item 1.6

60. Please provide your best estimate of the current typical electricity losses for Ontario's electricity distribution system, as a percent of electricity generation, during Ontario's top 88 annual electricity demand hours.

RESPONSE

The OPA considers this matter to be outside the scope of this proceeding.

However, the best estimate of distribution losses was provided in the OPA's letter of March 16, 2007 in response to a commitment in the EB-2006-0233 Supplemental Settlement Proposal, item 1.6 (Exhibit S-1-2) and can be found at the following link:

http://www.powerauthority.on.ca/Storage/43/3908_OPA_Settlement_Issue_1_Item_1.6_2007-03-16.pdf

For convenience here is the portion of the response applicable to this inquiry.

"The OPA estimated distribution line and transformer losses based on the best available data and information submitted by LDCs via the OEB's Reporting and Record Keeping Requirements.¹ Based on the submitted data for 2005, the distribution line and transformer losses are approximately 4.2%, a province-wide average for all customer classes."

¹ http://www.oeb.gov.on.ca/documents/cases/EB-2006-0268/spreadsheet_ontarioelectricitydistributorscosts_241106.xls

VECC INTERROGATORY 1

QUESTION

ISSUE 1.1

Reference: B, Tab 1, Schedule 1, page 6 and D, Tab 2, Schedule 1, page 5.

- (a) With respect to Strategic Objective 1 and Table 1, please provide the number of FTEs forecast for 2007.
- (b) Re Strategic Objective 1, please reconcile the variance between the 2007 Budget and 2008 Budget for Compensation and Benefits shown in Table 1 at BT1S1 (page 6) with the variance between the FTEs budgeted for 2007 and 2008 for this objective shown in Table 4 at DT2S1 (page 5).
- (c) Please indicate whether the "increase in the number of resources in PSP" is incremental to OPA or reflects a reassignment of existing resources.
- (d) Please indicate whether OPA has a long run end state target regarding resources allocated to PSP.

RESPONSE

- (a) The number of FTEs in the 2007 Forecast is 26.8 FTEs.
- (b) The PSP Compensation and Benefit variance between 2007 and 2008 of \$327,000 is due to an increase in staff count by 1.3 FTEs, general staff merit increases, and Employer Health Tax benefit costs in the 2008 Budget which was not budgeted in 2007.
- (c) The increase in the number of resources of 1.3 FTEs in PSP is incremental to the OPA.
- (d) The OPA does not have an end state target for the allocation of resources to the PSP division.

VECC INTERROGATORY 2

QUESTION

ISSUE 2.1

Reference: B, Tab 2, Schedule 1, page 4 and page 28

Regarding Strategic Objective 2, please explain how the Conservation FTEs shown as line items in Table 2 map into the budget line items shown in Table 14.

RESPONSE

The Conservation FTEs are the planning base for the budget line item of Compensation and Benefits in Table 14. The FTE numbers are multiplied by the anticipated salaries and other compensation costs to derive the budget estimate.

VECC INTERROGATORY 3

QUESTION

ISSUE 2.1

Reference: B, Tab 2, Schedule 1, page 29

Please provide some elaboration regarding the status of the initiative relating to the “[d]evelopment of more sophisticated tools to ensure efficiency and accurate program tracking and management.”

RESPONSE

The OPA is developing a centralized reporting function complete with tools that will permit accurate program tracking and reporting. This initiative will enhance program management capability. The OPA is also investigating the possibility of enabling electronic reporting by external program managers in order to facilitate the gathering of data, increase accuracy and improve the timelines of access to results and information.

Reporting of preliminary program results will be made available on an annual basis. EM&V processes may adjust the results as more information becomes known. Results adjusted for EM&V will be made available annually through the CECO Report.

The team is currently being hired and work will commence in the second quarter of 2008.

VECC INTERROGATORY 4

QUESTION

ISSUE 2.2

Reference: A, Tab 8, Schedule 2, page 10, and B, Tab 1, Schedule 1, pages 2, 6, and 18

Please indicate OPA's view as to whether the current 2008 MW target for its Single family Low Income Housing Program represents an optimal response to the October 6, 2005 Directive.

RESPONSE

The 2008 target for Single Family Low Income is an appropriate target for the first year of operation of this program. The 2008 program will build on the learnings and experience gained in the 2007 pilots, and the 2008 target of 1.5 MW represents an increase over the 2007 achievement of 0.5 MW. The results from the Single Family Low Income program are expected to grow as the program develops, and are currently forecast to achieve 9 MW (net of free riders) in the period of 2008 – 2010, indicating the OPA's commitment to this market.

VECC INTERROGATORY 5

QUESTION

ISSUE 2.3

Reference: B, Tab 2, Schedule 1, pages 14-15

- (a) Please quantify or elaborate on the statement that “[e]valuations will be carried out for the majority of the portfolio, considering program progress and results schedule.”
- (b) Please elaborate on the extent to which and the frequency with which information and raw data will be communicated by EM&V to the market and key stakeholders.

RESPONSE

- (a) Programs launched in 2007 that were not expected to produce significant results in 2007, relative to their overall program targets, will not be evaluated until 2008. The following table outlines the evaluation status for 2007 programs.

2007 Programs		2007 Evaluations
INDUSTRIAL PROGRAMS		
1	Demand Response I	Yes
C&I PROGRAMS		
1	BOMA	Yes
2	Toronto Hydro	Yes
3	ERIP	No (any 2007 activity will be evaluated as part of 2008 Program Evaluation)
5	City of Toronto	No (any 2007 activity will be evaluated as part of 2008 Program Evaluation)
6	Energy Efficiency Assistance for Houses (Pilot)	Yes
7	Affordable Housing EE Program	Yes
MASS MARKET PROGRAMS		
1	Aboriginal program	Yes
2	Every Kilowatt Counts	Yes
3	Summer Savings	Yes
4	The Great Refrigerator Roundup	Yes
5	Cool Savings Rebate	Yes
6	Hot Savings Rebate	Yes

- (b) See response to Energy Probe Interrogatory 22, at Exhibit I-4-22.

VECC INTERROGATORY 6

QUESTION

ISSUE 3.1

Reference: B, Tab 3, Schedule 1, page 7 and D, Tab 2, Schedule 1, page 5

Re Strategic Objective 3, please reconcile the variance between the 2007 Budget and 2008 Budget for Compensation and Benefits shown in Table 1 at BT3S1 (page 7) with the variance between the FTEs budgeted for 2007 and 2008 for this objective shown in Table 4 at DT2S1 (page 5).

RESPONSE

Although FTEs only increased by 0.5 FTEs between 2007 and 2008, there was a reorganization within the Electricity Resources division that resulted in fewer clerical/administrative positions and an increase in the number of Business Analysts, thereby increasing the overall budget for Compensation and Benefits. The variance also contains a provision for merit increases and an increase for Employer Health Tax benefit costs not budgeted in 2007.

VECC INTERROGATORY 7

QUESTION

ISSUE 4.1

Reference: B, Tab 4, Schedule 1, pages 2 and 3

- (a) Please confirm that “Conservation and reliability products” referred to, that LSEs are expected to procure, are financial products.
- (b) Please indicate whether any cost benefit analysis or business case regarding the LSE initiative have been prepared. If so, please provide a copy.

RESPONSE

- (a) Yes, “conservation and reliability products” that Customer Entitlement Agents (CEAs, formerly known as Load Serving Entities or LSEs) are expected to procure are financial products.
- (b) No, a cost benefit analysis or business case regarding CEAs has not been prepared. CEA work was initiated based on the OPA mandate, from O. Reg. 424/04, which is to “identify and develop innovative strategies to encourage and facilitate competitive market-based responses and options for meeting overall system needs.”

VECC INTERROGATORY 8

QUESTION

ISSUE 5.1

Reference: B, Tab 5, Schedule 1, page 4

Regarding the “Measures of Success” for FBS shown on page 4, how will the OPA satisfy itself and stakeholders that each of the five measures adds sufficient value to justify their delivered costs.

RESPONSE

As discussed at Exhibit B-5-1, page 3, the Measures of Success for FBS have been established as a result of a major review and redesign of the organization’s financial reporting system, as well as a risk-based internal control assessment, which were both undertaken in 2007. These initiatives identified specific areas of improvement to support the OPA’s Strategic Objective to “maintain and develop organizational capacity to achieve the Strategic Objectives”, and have been approved by both the OPA’s Board of Directors and the Minister of Energy as appropriate areas of focus for the OPA in 2008. These activities are consistent with typical financial efforts in other organizations, and while the outcomes are not necessarily quantifiable in all cases, together they should result in improvement in processes and information that will provide long-term benefits to the OPA, Ontario ratepayers and the electricity sector.

Certain of these initiatives will enable enhanced performance and control of costs by the OPA, which will provide ongoing benefits to ratepayers through improved control of fees. These include: implementation of a new financial reporting system; key process mapping; new internal control procedures; and the multi-year strategic plan. Development of an approach to cost analysis and forecasting of the future cost of electricity gives all stakeholders the ability to understand the drivers of the future cost of electricity. A broad market understanding of the future cost drivers should inform policy decisions and market actions to ensure the best electricity future for Ontario.

Thus, while the OPA has not done a cost-benefit analysis on the five measures of success for FBS, it has satisfied itself that all of the initiatives described above will improve the group’s ability to support the OPA’s strategic objectives, and that there will be sufficient value to justify the costs.

VECC INTERROGATORY 9

QUESTION

ISSUE 5.1

Reference: D, Tab 2, Schedule 1, page 5

Regarding the "Total OPA Headcount" budgeted for 2008 shown in Table 4, does the OPA anticipate that the 183.8 FTEs represent approximately the long run requirements of the OPA?

RESPONSE

The OPA is not able to determine future headcount requirements at this time.

VIA COURIER AND E:MAIL

November 2, 2007

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

Dear Ms. Walli:

**Re: Ontario Power Authority
2008 Expenditure and Revenue Requirement Submission
Ontario Energy Board File No. EB-2007-0791**

The Ontario Power Authority ("OPA") is hereby filing its 2008 Revenue Requirement Submission (the "Submission") with the Ontario Energy Board ("OEB") for review and approval of its proposed expenditure and revenue requirement and the fees which it proposes to charge for the year 2008.

The OPA proposes that the OEB review of the Submission proceed by way of a written hearing. The OPA has now had two revenue requirement submissions before the OEB, and an oral hearing has not been required in either of the two previous cases, based on the nature of the issues raised by stakeholders. There have been very few contentious issues, and to the small extent that there has been any contention, the points of dispute have not required an oral hearing. In summary, past experience indicates that the OPA's 2008 Revenue Requirement Submission is well-suited to a written hearing process.

The OPA also submits that its Submission is quite different from a full rate case for a privately-owned regulated utility, in which the OEB is the only agency to bring the public interest to bear on the application and its issues. That is not the case with the revenue requirement submission, as the OPA carries out its duties in the public interest in the first instance and the Business Plan has been submitted to the Minister.

The review of the 2008 Revenue Requirement Submission is coincident with that of the OPA's Integrated Power System Plan (the "IPSP"). It is in the best interests of all parties to ensure that limited resources are not being required to address overlapping issues.

Enclosed you will find two (2) paper copies of the OPA's 2008 Revenue Requirement Submission along with the supporting evidence, and an electronic copy in pdf format on CD. Please note that this filing can be obtained from the OPA's website at www.powerauthority.on.ca. The OPA is also sending parties to EB-2006-0233 a link to its website for this information.

Yours truly,

A handwritten signature in black ink, appearing to read 'Michael Lyle', with a stylized flourish at the end.

Michael Lyle
General Counsel and Vice President
Legal and External Affairs

Att. (two paper copies and one CD by courier)

cc: Mr. Fred Cass, Aird & Berlis (by e:mail and courier)
EB-2006-0233 Interested Parties (by e:mail)



Ontario Power Authority

120 Adelaide Street West
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VIA COURIER AND E:MAIL

November 7, 2007

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

Dear Ms. Walli:

**Re: Ontario Power Authority
2008 Expenditure and Revenue Requirement Submission
Ontario Energy Board File No. EB-2007-0791**

The Ontario Power Authority ("OPA") is writing to file the Conservation and Sector Development organization chart that was inadvertently omitted when the OPA filed its Submission on November 2nd.

Enclosed you will find two paper copies of the organization chart and an electronic copy in pdf format on CD.

Yours truly,

A handwritten signature in black ink, appearing to read 'Miriam Heinz', is written over a circular stamp or seal.

Miriam Heinz
Regulatory Coordinator

Encl. (two paper copies and one CD by courier)

cc: Mr. Fred Cass, Aird & Berlis (by e:mail)
EB-2006-0233 Interested Parties (by e:mail)



Ontario Power Authority

120 Adelaide Street West
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VIA COURIER AND E:MAIL

February 12, 2008

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

Dear Ms. Walli:

**Re: Ontario Power Authority
2008 Expenditure and Revenue Requirement Submission
Ontario Energy Board File No. EB-2007-0791**

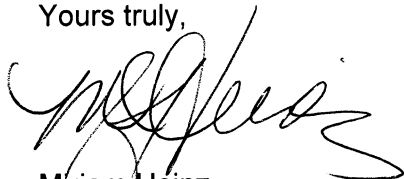
The Ontario Power Authority ("OPA") is writing to file updated evidence with the Board today, the primary purpose of which is to provide an explanation to the variance between its 2007 unaudited actuals and 2007 forecast (see new Exhibit D-3-4). The resulting change to the OPA's 2008 net revenue requirement is from \$58.616 million to \$51.868 million. The change also impacts the OPA's proposed usage fee from \$0.391/MWh, for which the Board issued an interim fees order on December 20, 2007, to \$0.346/MWh. Additionally the OPA is filing updates to the following pieces of evidence listed in the table below:

	<u>Exhibit</u>	<u>Version</u>	<u>Pages Filed</u>	<u>Table of Contents</u>
1	Table of Contents	Updated	All	
2	A-1-1	Updated	All	Submission
3	A-8-1	Updated	2 and 3	List of Directives from the Minister of Energy
9	A-8-3	New	All	Directives and Letters from the Minister of Energy (December 20, 2007 and January 31, 2008)
10	D-1-1	Updated	1	2008 Revenue Requirement
11	D-2-1	Updated	1 and 12	2008 Fees, Operating Costs and Capital Expenditures
12	D-3-3	Updated	All	2007 Forecast Variance Deferral Account
13	D-3-4	New	All	2007 Unaudited Actuals versus 2007 Forecast

Ms. Kirsten Walli
February 12, 2008
Page 2

Enclosed you will find two paper copies. The OPA will use the Board's e-filing services to file the electronic versions of these documents.

Yours truly,

A handwritten signature in black ink, appearing to read 'Miriam Heinz', with a stylized, flowing script.

Miriam Heinz
Regulatory Coordinator

Encl. (two paper copies)

cc: Mr. Fred Cass, Aird & Berlis (by e:mail)
EB-2007-0791 Interested Parties (by e:mail)



Ontario Power Authority

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VIA COURIER AND E:MAIL

February 28, 2008

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

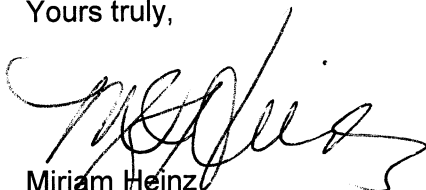
Dear Ms. Walli:

**Re: Ontario Power Authority
2008 Expenditure and Revenue Requirement Submission
Ontario Energy Board File No. EB-2007-0791**

The Ontario Power Authority ("OPA") is writing to file responses to interrogatories received from Board Staff and intervenors. The OPA has attached two paper copies of the exhibits listed in the table below as well as a copy of the confirmation sheet indicating the documents were successfully filed using the OEB's e-filing service.

<u>Exhibit</u>	<u>Version</u>	<u>Table of Contents</u>
1 Table of Contents	Updated: February 28, 2008	
2 I-1-1 to 6	Filed: February 28, 2008	Interrogatory Responses to Board Staff
3 I-3-1 to 5	Filed: February 28, 2008	Interrogatory Responses to EDA
9 I-4-1 to 33	Filed: February 28, 2008	Interrogatory Responses to Energy Probe
10 I-5-1 to 11	Filed: February 28, 2008	Interrogatory Responses to GEC/Pembina/OSEA
11 I-7-1 to 60	Filed: February 28, 2008	Interrogatory Responses to Pollution Probe
12 I-8-1 to 9	Filed: February 28, 2008	Interrogatory Responses to VECC

Yours truly,



Miriam Heinz
Regulatory Coordinator

Encl. (two paper copies)

cc: Mr. Fred Cass, Aird & Berlis (by e:mail and courier)
EB-2007-0791 Interested Parties (by e:mail and courier)



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VIA COURIER, EMAIL, AND EFILING

March 12, 2008

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

Dear Ms. Walli:

Re: Ontario Power Authority - 2008 Revenue Requirement Submission
Ontario Energy Board File No. EB-2007-0791

The Ontario Power Authority ("OPA") is writing to file supplemental evidence with the Ontario Energy Board ("OEB") with respect to the OEB's Cost Assessment for 2008-09. The evidence being filed today is listed below. The OPA is updating its evidence at this time because the OEB's Cost Assessment results in a material new expense in 2008 of \$651 thousand that was not contemplated in the OPA's original 2008 revenue requirement submission.

	<u>Exhibit</u>	<u>Version</u>	<u>Pages Filed</u>	<u>Table of Contents</u>
1	Table of Contents	Updated	page 2	
2	D-3-5	New	All	Supplemental Evidence OEB Cost Assessment 2008-09
3	D-3-5	New	All	Attachment 1 (includes the OEB March 4, 2008 letter, O.Reg 16/08, Assessment from April 1 - June 30, 2008; and the schedule of net costs to be assessed and apportionment among classes)

Enclosed you will find two paper copies. The OPA has used the Board's e-filing services to file the pdf versions of these documents.

Yours truly,

Miriam Heinz
Regulatory Coordinator

Encl. (two paper copies)

cc: Mr. Fred Cass, Aird & Berlis (by e:mail)
EB-2007-0791 Interested Parties (by e:mail)