

BOARD STAFF INTERROGATORY #1

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

Issue 2.1 Is the Operating Budget of \$5,749 thousand allocated to Goal 2 reasonable?

Issue 3.1 Is the Operating Budget of \$15,028 thousand allocated to Goal 3 reasonable?

Issue 4.1 Is the Operating Budget of \$24,577 thousand allocated to Goal 4 reasonable?

Issue 5.1 Is the Operating Budget of \$4,389 thousand allocated to Goal 5 reasonable?

INTERROGATORY

Issues 1-5/Board staff/1

Reference: Pre-Filed Evidence of OPA, Exhibit A, Tab 1, Schedule 2, page 1.

Preamble: OPA states:

“In 2014, the OPA has a planned operating budget of \$60.3 million. This is a reduction of nearly 6% compared to the OPA’s Board-approved 2011 operating budget. This reduction has been achieved through a combination of administrative and process efficiencies...”

Question:

Provide a description and itemized cost breakdown of the OPA’s administrative and process efficiencies.

RESPONSE

The OPA has achieved a reduction of nearly 6% or \$3.8 million compared to the OPA’s Board-approved 2011 operating budget. This was achieved through measures, as described below, which result in the streamlining of processes and the creation of efficiencies that generate cost reductions and savings. The benefits of process automation and investments in technology are more immediate in nature and are realized once the efficiencies are implemented. The benefits relating to increased outreach, stakeholder engagement and greater coordination are realized through an improved understanding of stakeholder needs and provide opportunities to further align activities and help drive long-term sustainability of OPA programs.

General Efficiencies:

- Reduced travel and meeting expenses
- Rationalized corporate partnerships
- Reallocation of staff with accompanying retraining as required

- Partnerships with information technology and various business groups to develop solutions that support changing business needs, process efficiencies and increased automation
- Focus on simpler standard offer activities for ease of delivery

Efficiencies in Electricity Resources

- Improved application validation allowing more accurate data entry to streamline processes and improve processing times and user friendly FIT/microfit application submission via the use of step-by-step wizards to ensure application quality
- Improved manageability with reduced time spent per application, time to action FIT/microFIT tickets from 7.5 days to 4.7 days (2013 vs 2012) while handling a 23% increase in ticket volume in the same period
- Coordination project between procurement, contract management and IT is moving forward to design and develop a new platform for both microFIT and FIT, which in addition to improving application receipt and review, will also enhance reporting capability, data integrity and retention
- Improved integration of procurement and contract management, reducing duplicate data entry and improving processing times
- Slower pace of program delivery utilizing fewer resources and longer to review applications and respond to inquiries

Efficiencies in Conservation

- Invested in the use of technology to facilitate interaction with Local Distribution Companies and stakeholders
- Working with natural gas distribution companies to co-promote existing conservation programs, and identify opportunities for integrated solutions
- Working to further streamline program application processes through development of tools to validate the cost-effectiveness of conservation investments

Efficiencies in PSP

- Efficiencies realized through greater coordination with stakeholders like OPG, Hydro One and IESO to implement planning and siting recommendations

Efficiencies in Communications

- Efficiencies realized through expanded outreach programs through Local Advisory Committees and Stakeholder Advisory Committee and increased focus on stakeholder engagement activities

BOARD STAFF INTERROGATORY #2

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Issue 5.1 Is the Operating Budget of \$4,389 thousand allocated to Goal 5 reasonable?

INTERROGATORY

Issues 1-5/Board staff/2

Reference: Pre-Filed Evidence of OPA, Exhibit A, Tab 1 Schedule 1, page 4.

Preamble: OPA states:

"...the 2014 operating plan incorporates learnings from the 2012 merger process with the Independent Electricity System Operator, for example, reorganization of the marketing function; coordination of activities with our sister agency will continue during the planning period."

Question:

Provide a description and associated documentation of learnings from the 2012 merger process with the Independent Electricity System Operator that informed the 2014 operating plan.

RESPONSE

Preparation work for the proposed merger in 2012 included analysis and evaluation of organizational structure, activities and resources for both the OPA and the IESO to identify areas of focus for efficiencies. While the merger work was paused, both organizations took back learnings that were applicable to each on a stand-alone basis. Specific Impacts on the 2014 Operating Plan as a result of 2012 merger learnings:

1. Rationalize Stakeholder consultation spend level
2. Consolidate corporate marketing and conservation marketing organizations and spend
3. Discontinue certain corporate partnerships
4. Discontinued use of external speech writing service
5. Rationalize travel/meetings

Other areas of consideration include implementation of best practices, rationalization of operations and further collaboration – to be implemented in a combined organization:

1 Communications

- 2 • Sharing of information between companies on general customer issues or concerns
3 (for relevant matters)
4 • Improved alignment of consumer facing information on websites for common topics

5 Human Resources

- 6 • Collaboration on non-technical training/development between organizations
7 • Continuing to exchange information on compensation direction/decisions/disclosure
8 • Exchanging information and work product related to complying with legislative
9 requirements, such as the Accessibility for Ontarians with Disabilities Act
10 • Continuation of secondment policy between IESO and OPA

11 Strategic Functions

- 12 • Ongoing communications on respective items that are considered 'smart grid'.

13 Markets and Contracted Resources

- 14 • Improved information sharing and alignment between market rules and contract
15 design/management, including increased and/or formalized information sharing
16 between OPA and IESO.

17 Settlements

- 18 • Continue to coordinate and consult over developing next set demand response
19 programs

20 Power System Planning

- 21 • Continue to share information and tool development.

22 The OPA incorporated key merger lessons learned that might be considered for
23 application to separate organizations. Where synergies arose only through
24 organizational consolidation, these were retained for future consideration.

BOARD STAFF INTERROGATORY #3

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Issue 5.1 Is the Operating Budget of \$15,028 thousand allocated to Goal 3 reasonable?

INTERROGATORY

References:

1. Pre-Filed Evidence of OPA, Exhibit A, Tab 2, Schedule 1, page 7.
2. Pre-Filed Evidence of OPA, Exhibit C, Tab 2, Schedule 1, page 2.

Preamble: OPA states:

1. "In spite of the expected increases in the volume and complexity of our workload in all areas of our mandate, we are maintaining staff levels in 2014 consistent with those of 2011 and 2012. We expect to make reductions to staff levels in 2015 and 2016."
2. "In 2014 OPA headcount will be reduced from 2013 levels, declining from a total of 267 to 260 Full Time Equivalents ("FTEs"). This reduction will be achieved through a combination of headcount decreases, and administrative and process efficiencies, including effective management of vacancies and redeployment of existing staff. Nevertheless, reducing headcount while implementing program priorities and an expanding mandate and volume and complexity of work is challenging, and may result in impacts to the OPA's service and delivery levels."

Questions:

- a) For each Goal and Strategic Initiative, provide a description and risk assessment on how the OPA plans to meet increases in the volume and complexity of its workload in all areas of its mandate while reducing staff levels in 2015 and 2016.
- b) For each Goal and Strategic Initiative, provide a description, risk assessment, and itemized list of the potential impacts to the OPA's service and delivery levels caused by reducing headcount while implementing program priorities and an expanding mandate and volume and complexity of work.

1 RESPONSE

2 a) The OPA has not performed a risk assessment around how the OPA will meet
3 increases in the volume and complexity of its workload while reducing staff levels in
4 2015 and 2016 for each Goal and Strategic initiative. Due to the current uncertainty
5 in the external environment, particularly with respect to the implications of a possible
6 merger with the IESO, plans for 2015 and 2016 are at a high level only and do not
7 include final detail at the strategic initiative level. However, the OPA acknowledges
8 that there could be potential impacts to its service and delivery levels, and is
9 therefore exploring the following efficiencies to mitigate these risks:

- 10 • Focus on policy and analysis, reduce retail delivery activities where possible
- 11 • Greater planning integration with IESO and other sector entities
- 12 • Response to the Conservation First initiative, with possible headcount reductions
- 13 • New FIT platform to improve application receipt and review
- 14 • Migration of delivery and administration of the labour intensive microFIT program
15 to LDCs
- 16 • Greater leveraging of the IESO settlement system
- 17 • Ongoing efficiencies through further automation and system enhancements
- 18 • Consideration of MOU with IESO (as indicated in OPA MOU with Ministry) to
19 further collaborate, with a mutually supportive relationship resulting in effective
20 and efficient delivery of respective mandates

21 b) The OPA has not performed a risk assessment around how the OPA will implement
22 program priorities and an expanding mandate and volume and complexity of work
23 while reducing headcount in 2015 and 2016 for each Goal and Strategic initiative.
24 Due to the current uncertainty in the external environment, particularly with respect
25 to the implications of a possible merger with the IESO, plans for 2015 and 2016 are
26 at a high level only and do not include final detail at the strategic initiative level.

27 The OPA remains committed to complying with the government's goal of restraining
28 staffing levels and will manage an increased volume of activities in 2014 as follows:

- 29 • Greater utilization of third party entities to support program delivery
- 30 • Focus on simpler standard offer activities for ease of delivery
- 31 • Reallocation of staff with accompanying retraining as required
- 32 • Realizing further efficiencies in administration

33 Potential impacts of reduced headcount on OPA's service and delivery levels include:

- 34 • Slower pace of program delivery utilizing fewer resources
- 35 • Longer to review applications and respond to inquiries

BOARD STAFF INTERROGATORY #4

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

Issues 1/Board Staff/4

Reference: Pre-Filed Evidence of OPA, Exhibit B, Tab 1, Schedule 1, page 22.

Preamble: OPA states:

“In 2013, independent quality control and quality assurance assessments of LDCs were undertaken. More than 30 LDCs were assessed for compliance in their delivery of programs, and 21 LDCs were also assessed to ensure proper program administrative spending as outlined in the Master Agreement.”

Questions:

- a) What were the general findings of the compliance audits? Were any issues raised?
- b) What were the general findings of the assessments of the 21 LDCs on proper program administrative spending as outlined in the Master Agreement? Were any issues raised?
- c) How has the OPA responded or intend to respond to the results of the audits and assessments?

RESPONSE

- a) As of June 2014, 70 LDC compliance audits have been initiated; 40 of which have been fully completed. All LDC compliance audits will be complete by year-end 2014.

In general, the auditor responsible for conducting the compliance audits (Bronson Consulting) has found manageable compliance-related issues within the CDM operations of the LDCs reviewed. Many of these issues - as expected for any large, multi-year program - occurred early on in the 2011-2014 CDM programs period and have been determined by the auditor to be the result of LDC inexperience and lack of familiarity with program delivery requirements. Examples of these compliance issues include: the process used by LDCs to contract with third-party service providers; failure to collect all required information for completed CDM projects; and LDCs' approaches to the submission of incentive payment requests.

As discussed in part c) of this response, all issues identified by the auditor have been resolved with the LDC.

- 1 b) As of June 2014, 33 LDC program administration budget ("PAB") audits have been
2 initiated; 25 of which have been fully completed. All LDC PAB audits will be
3 completed by year-end 2014.

4 The following three separate parties have been responsible for the 25 completed
5 PAB audits:

- 6 • Deloitte (4 completed);
7 • OPA (17 completed); and,
8 • Bronson Consulting (4 completed).

9 Bronson Consulting will be responsible for completing the balance of the LDC CDM
10 PAB audits.

11 Overall, the results of all PAB audits undertaken to-date demonstrate that LDCs
12 continue to spend their PAB budgets in compliance with contractual obligations.

- 13 c) Following the completion of an LDC compliance audit, the OPA initiates a
14 Management Response process with each LDC. This process is used to:
15 a. Inform the LDC on the results of their compliance assessment (by providing a
16 copy of the final compliance audit report generated by Bronson Consulting); and,
17 b. Ensure any observed deficiency within the LDC's CDM operations is
18 appropriately addressed and cured.

19 At a high-level, the following provides an overview of the steps included within this
20 Management Response process:

- 21 1. OPA provision of the final QA/QC report to the LDC.
22 2. OPA provision of a response document to the LDC for purposes of providing a
23 Management Response to all observed deficiencies.
24 a. For all deficiencies, LDCs are required to discuss how the situation will be
25 remedied as well as associated timelines for remedy implementation.
26 b. LDCs are given between two (2) and three (3) weeks to provide Management
27 Responses. Time given for management responses is based on the
28 significance and/or number of deficiencies observed.
29 3. OPA meeting with LDC to discuss Management Responses.
30 a. Should the OPA be unsatisfied with any remedial actions planned by the
31 LDC, this meeting is used to develop jointly agreeable solutions to the
32 observed deficiency.
33 4. Thirty (30) days following the submission of the approved Management
34 Response document, the OPA follows-up with the LDC to ensure remedial
35 actions have been implemented and the desired outcome(s) of the action has
36 been obtained.

1 As of June 2014, the OPA has fully completed the Management Response Process
2 with over 30 LDCs. To be considered complete, an LDC must:

- 3 • Acknowledge the observed deficiency as being valid;
- 4 • Propose or agree to a viable and appropriate solution to the deficiency;
- 5 • Implement the solution within approved timelines; and,
- 6 • Demonstrate resolution implementation to the OPA within agreed to timelines.

7 All audit reports, recommendations and follow-ups are also reviewed with
8 management and “in camera” on an ongoing basis by the OPA Board of Directors’
9 Audit Committee.

10 Following PAB audits, a follow-up process has not been required given LDCs have
11 been determined to be compliant. Should, during a future PAB audit, an LDC be
12 found to be non-compliant with contractual obligations, a similar Management
13 Response process to that described for the compliance audit process will be used.

BOARD STAFF INTERROGATORY #5

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Issue 5.1 Is the Operating Budget of \$4,389 thousand allocated to Goal 5 reasonable?

INTERROGATORY

Issue 1-5/Board Staff/5

Reference: Pre-Filed Evidence of OPA, Exhibit B, Tab 4, Schedule 1, page 12.

Preamble: OPA states:

“Internal Audit Program

“During this period, the OPA managed and coordinated 35 internal audit projects to confirm the effectiveness and efficiency of its business processes and systems. The status of actions taken to implement ongoing improvements in operations provided in the audit recommendations confirmed that the OPA has addressed all outstanding recommendations. In addition, the OPA achieved further assurance through internal audits conducted at the program counter-party level (i.e. at the LDC level). These related to the review of the legitimacy and accuracy of amounts paid or received pertaining to OPA funded conservation and FIT programs.”

Question:

Please describe the recommendations and what actions the OPA has taken to address the recommendations arising from the internal audits.

RESPONSE

The mandate of the OPA is varied with respect to the types of programs under its administration. Accordingly, the range of internal audits is equally broad to cover off the different aspects of the business. The internal audits that are performed are primarily operational in nature, in that they review a specific program, fund or internal process/group. While there are numerous findings, they can be categorized as:

- a) controls assessment;
- b) gap identification / process improvement; and
- c) best practice recommendations.

1 Each of the findings is also categorized as High/Medium/Low risk, to assist in the
2 prioritization of implementation. At the conclusion of the audit, there is a management
3 response to each finding, which includes a course of action to remediate the finding.
4 Additionally, the OPA performs an annual follow-up audit, to review the progress made
5 on all outstanding recommendations since the last follow-up audit was performed.

1 **BOMA INTERROGATORY #1**

2 **Issue 1.1** Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

3 **INTERROGATORY**

4 Reference: Exhibit A, Tab 2, Schedule 1, Page 11 of 40: "The division will increase its
5 efforts with transmission-connected customers and national accounts."

6 1) Has the OPA considered delegating conservation activities with transmission
7 connected customers to Hydro One's transmission division? If not, why not? Please
8 discuss.

9 **RESPONSE**

10 The OPA has worked closely with transmission connected customers since 2006, taking
11 a holistic approach to both conservation and non-conservation activities. As a result,
12 several tailored programs have been developed to engage these customers in the suite
13 of OPA programs, including: Demand Response, Industrial Accelerator Program ("IAP")
14 and Industrial Electricity Incentive ("IEI") Program. More recently the OPA has engaged
15 these customers to better understand the potential for energy storage solutions. The
16 OPA will continue to explore opportunities to further evolve programs for transmission
17 connected customers.

18 When developing programs for transmission connected customers, the OPA explored
19 potential synergies with Hydro One's transmission division. Through these discussions,
20 it was determined that the OPA should retain control over all conservation initiatives
21 targeting the sector.

BOMA INTERROGATORY #2

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

Reference: Exhibit A, Tab 2, Schedule 1, Page 11 of 40: "The division will increase its efforts with transmission-connected customers and national accounts."

2) Please describe the process for dealing with national accounts.

RESPONSE

A national account is the industry term for a company - typically a retail or property portfolio organization - that has multiple locations across the province or country. Ontario has many national account corporate offices as well as locations across the province (e.g., banks, restaurants, grocery chains, home improvement centres, etc.).

In Ontario, with over 70 LDCs, national accounts have identified that it can be cumbersome to participate in conservation programs given the need to coordinate projects between their corporate headoffice and branch locations that fall within various LDC jurisdictions.

To help deal with this barrier, a Head Office Model was developed and is included in the present **saveONenergy** programs. This model enables the national account to choose a Lead LDC to assist in managing participation in CDM initiatives. Consequently, national accounts can submit one application - inclusive of multiple locations across multiple LDC jurisdictions and the Lead LDC manages the administration, coordination and incentive payments associated with the applications.

The OPA's role is to work collaboratively with the national accounts and LDCs to help the customer quickly and easily implement conservation projects.

The following excerpt from the March 31 2014 Conservation First directive states that the OPA and LDCs should continue to provide and enhance a centralized approach to effectively manage national accounts.

The OPA shall encourage Distributors to maximize administrative and delivery efficiencies by utilizing appropriate program delivery models. Specifically, the OPA and/or Distributors shall provide enhanced co-ordination efforts with regards to:

- a) *Opportunities to target consumers with multiple locations across several licenced service areas (e.g., national accounts) and CDM measures delivered or promoted through provincial or national channels (e.g., retailer in-store rebates or coupons);*

BOMA INTERROGATORY #3

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

Reference: Exhibit A, Tab 2, Schedule 1, Page 11 of 40: "Energy benchmarks across various sectors are being developed to better articulate and communicate electricity consumption to customers."

3) Please provide the energy benchmarks that have been developed.

RESPONSE

Energy benchmarks, based on data from the Long-Term Energy Plan and the OPA Achievable Potential Study, have been developed for specific building types in both the residential and commercial sectors.

These benchmarks were cross-referenced and compared to relevant benchmarks published in other jurisdictions. Additionally, these benchmarks were cross-referenced against "best-in-class" performing residential and commercial buildings.

Residential and commercial sector benchmarks are provided as Appendix 1 attached to this exhibit.

Currently, the OPA is in the process of developing additional benchmarks based on Broader Public Sector Data: Energy Use and GHG Emissions data publicly available on the Ministry of Energy's website.

It is expected that these benchmarks will be used in a variety of ways to advance conservation in Ontario, including as data against which customers can compare their performance and as the basis for performance-based programs within the commercial sector.

Attachment 1 – Residential and Commercial Benchmarks

Residential Sub Sector (kWh/household)	2012			2017			2022			2027			2032		
	Baseline Benchmark	After Lower AP	After Upper AP	Baseline Benchmark	After Lower AP	After Upper AP	Baseline Benchmark	After Lower AP	After Upper AP	Baseline Benchmark	After Lower AP	After Upper AP	Baseline Benchmark	After Lower AP	After Upper AP
Multi_Res_High_Rise	7,011	6,925	6,925	6,243	6,044	5,949	6,300	5,770	5,439	6,320	5,669	5,278	6,432	5,643	5,207
Multi_Res_Low_Rise	7,053	6,955	6,955	6,125	5,895	5,799	6,072	5,560	5,257	6,061	5,427	5,042	6,193	5,393	4,936
Other_Residential_Buildings	10,088	9,929	9,929	7,857	7,520	7,520	6,951	6,510	6,447	6,797	6,324	6,205	6,905	6,346	6,234
Row_House	10,004	9,754	9,754	8,314	7,819	7,708	8,221	7,400	7,150	8,156	7,248	6,920	8,350	7,304	6,939
Single_Family	10,014	9,690	9,690	8,310	7,705	7,602	8,201	7,214	7,024	8,226	7,152	6,899	8,501	7,287	6,986
Total	9,168	8,922	8,922	7,714	7,238	7,136	7,641	6,813	6,576	7,647	6,722	6,419	7,864	6,798	6,447

Commercial Sub Sector (kWh/ft2)	2012			2017			2022			2027			2032		
	Baseline Benchmark	After Lower AP	After Upper AP	Baseline Benchmark	After Lower AP	After Upper AP	Baseline Benchmark	After Lower AP	After Upper AP	Baseline Benchmark	After Lower AP	After Upper AP	Baseline Benchmark	After Lower AP	After Upper AP
Food Retail	40	38	38	36	32	32	35	29	28	35	28	27	35	28	27
Hospital	39	35	35	36	31	31	35	28	27	34	29	28	35	28	27
Large Hotel	24	22	22	22	19	19	22	17	17	22	17	17	22	17	16
Large Non Food Retail	16	14	14	15	12	12	15	13	12	15	13	13	15	13	13
Large Office	21	19	19	20	17	17	20	17	16	20	17	16	20	16	16
Nursing Home	28	26	26	26	22	21	26	21	20	26	21	20	26	20	19
Other Commercial_Buildings	14	13	13	13	11	11	13	11	11	13	11	11	13	11	10
Other Hotel_Motel	8	7	7	8	6	6	8	6	6	8	6	6	8	6	6
Other Non_Food_Retail	6	6	6	6	5	5	6	5	5	6	5	5	6	5	5
Other_Office	18	17	17	17	15	15	17	14	14	16	14	14	17	14	13
Restaurant	45	41	41	41	33	33	40	31	30	39	31	30	40	30	29
Schools	16	15	15	15	13	12	14	12	12	14	12	12	14	12	12
University_Colleges	22	19	19	21	17	16	21	18	17	21	18	17	21	17	17
Warehouse_Wholesale	10	10	10	10	8	8	10	8	8	10	8	8	10	8	8
Total	17	16	16	16	14	13	16	13	13	16	13	13	16	13	12

Benchmark Overview

- Benchmarks for both sectors were developed over the years 2012-2032 to reflect the forecast used in the LTEP and Achievable Potential (AP) Study. Specifically, the years of 2012, 2017, 2022, 2027, 2032, were the milestone years that were analyzed in the AP study.
- “After Upper AP” is a benchmark that calculates energy use assuming that all of the Upper Achievable Potential that was estimated in the AP study is captured. Therefore the average energy use per household, or square foot, declines.
- “After Lower AP” is a benchmark that calculates energy use assuming that all of the Lower Achievable Potential that was estimated in the study is captured.
- These benchmarks are based on the LTEP and AP Study data, and are therefore theoretical. Regardless of their nature, benchmark performance can and will be evaluated using a rigorous EM&V process.

BOMA INTERROGATORY #4

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

Reference: Exhibit A, Tab 2, Schedule 1, Page 11 of 40: "Energy benchmarks across various sectors are being developed to better articulate and communicate electricity consumption to customers."

4) What sector member based organizations have been involved in development of the benchmarks?

RESPONSE

Benchmarks were developed internally by the OPA as a joint effort between the Conservation and Power System Planning divisions.

As discussed in the response to BOMA Interrogatory 3, at Exhibit I, Tab 1, Schedule 2.03, the Achievable Potential Study was a key point of reference during benchmark development. This Achievable Potential Study was informed by the Advisory Council of Conservation represented by the members of the organizations listed in the response to BOMA Interrogatory 7, at Exhibit I, Tab 1, Schedule 2.07.

Additionally, during development, the developed benchmarks were compared with benchmarks from the following agencies:

- NRCan's Office of Energy Efficiency Comprehensive Energy Use Database Tables
 - Baseline benchmarks by sector for the province
 - http://oee.nrcan.gc.ca/corporate/statistics/neud/dpa/trends_egen_ca.cfm
- REALpac 20 by '15 Report - Achieving the Office Building Target of 20 kWh/ft²/year by 2015
 - Best in class for the office sector
 - (Please see Attachment 1 to this exhibit for the report)
- Municipal Energy Performance Benchmarking Project – Local Authority Services
 - "Best in Class" for Municipal Facilities
 - http://amotestwcm01.amo.on.ca/WCM/las/LAS_Content/Energy_Consulting/EnergyPerformanceBenchmarking.aspx
- Passive Haus Standard
 - Residential "Best in Class" Standard
 - <http://www.passivehouse.ca/requirements/>



20 by '15

Achieving the Office Building Target of

20 ekWh/ft²/year by 2015



About REALpac

REALpac, the Real Property Association of Canada is Canada's senior national real property association whose mission is to bring together the country's real property investment leaders to collectively influence public policy, to educate government and the public, and to ensure stable and beneficial real estate capital and property markets in Canada. REALpac members currently own in excess of CDN \$150 Billion in real estate assets located in the major centres across Canada and include real estate investment trusts (REITs), publicly traded and large private companies, banks, brokerages, crown corporations, investment dealers, life companies, and pension funds. Visit REALpac at www.realpac.ca

About Enerlife Consulting Inc.

Enerlife Consulting is a Canadian-owned management consulting firm, based in Toronto, Canada. Enerlife provides a range of services which enable property owners and managers to achieve and sustain high levels of energy and environmental performance in their individual buildings and whole building portfolios. Visit Enerlife at www.enerlife.com

About the Author

Ian Jarvis has been President of Enerlife Consulting since 2001, and is an authority in the fields of energy efficiency, green building performance and sustainable communities. From 1992-1999 he was CEO of a leading energy performance contractor responsible for several of the largest energy retrofit projects in North America. From 2003-2007, Ian served as founding chair of the Canada Green Building Council. He is also a member of the National Advisory Council on Energy Efficiency which advises the federal Office of Energy Efficiency, and of the Ontario Energy Minister's Advisory Committee. Contact Ian at ian.jarvis@enerlife.com

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20 by '15

Achieving the Office Building Target of 20 ekWh/ft²/year by 2015

Executive Summary

The Real Property Association of Canada (REALpac) is adopting an energy consumption target for office buildings of 20 equivalent kilowatt-hours of total energy use per square foot of rentable area per year (20 ekWh/ft²/year), to be achieved by 2015. In other words, “20 by '15”. The target represents a reduction of up to one half of today's energy use in Canadian office buildings. Achieving the target will lead to estimated energy cost savings in the order of \$1.85 billion/year, and greenhouse gas emissions savings of 7.5 Megatonnes/year contributing 5% of Canada's national 2020 goal.

The REALpac target is derived from national, large-scale pilot projects conducted by the Canada Green Building Council (CaGBC) in 2008. The projects engaged more than 40 commercial office and government real property owners with 144 buildings totalling 48 million ft², and created a large, detailed database of Canadian office building energy performance. Audits were conducted of top-performing buildings to document their building system characteristics, leading to identification of best practice design standards. Workshops have also been conducted with participants to document best operational practices. Combining these design and operations best practices yields target energy use in the range of 16-20 ekWh/ft²/year.

The CaGBC pilot projects produced a number of remarkable conclusions. The range between the highest and lowest office building energy users per ft² is more than 2.5:1. The range of lighting power density (Watts/ft²) is also more than 2.5:1 in new and retrofitted office buildings using similar technology for similar office space lighting applications. There is no apparent correlation between building age and performance – several of the top-performing buildings are more than 40 years old. A number of office buildings are already operating at or close to the REALpac target, and even top-performing buildings were shown to have room to improve.

The pilot project workshops, and the continuing engagement of many owners in CaGBC's ongoing Green Up program, have also helped clarify how individual buildings and portfolios can work towards achieving the target. The common perception has been that improving energy efficiency in buildings is all about technology, retrofitting and capital expenditure. The emerging new understanding is that policy, process and people are in fact at the heart of achieving and sustaining high levels of energy efficiency and deep reductions in greenhouse gas emissions. Financial returns should be greater than has previously been

expected, but significant organizational change is required to align policy, management, leasing, procurement, and HR programs with the demands of consistent energy efficient practice.

A roadmap is presented for achieving and sustaining high levels of energy performance in individual buildings and portfolios. The roadmap begins with benchmarking, and works through to performance monitoring, feedback and continuous improvement. Canada's real estate industry is positioned to have a meaningful impact on the climate change mitigation agenda, through both its own potential to demonstrate greenhouse gas emission reductions, and the example it can provide. The methodology, metrics, standards and tools described in this paper did not exist a year ago. The commercial office sector and government real property departments have shown leadership, through their participation in the CaGBC pilot projects, in both substantiating the opportunity for deep cuts in energy use and emissions, and developing the means to achieve and sustain them. REALpac's " 20 by '15 " target takes this leadership to the next level.

20 by '15

Achieving the Office Building Target of 20 ekWh/ft²/year by 2015

1. THE TARGET – 20 ekWh/ft²/year by 2015

Experience in business, education and health care has demonstrated the power of target-setting for achieving substantial improvements in important fields of endeavour. Targets set by the executive, affirmed in governance, and written into policy, clarify goals and expectations, engage and empower individuals, and align organizations.

Climate change is one of today's critical fields of endeavour. Construction and operation of buildings directly account for between 30% - 40% of greenhouse gas emissions in Canada (Canada Green Building Council). Improved energy efficiency in buildings presents an attractive policy option for addressing climate change mitigation. Concerted action promises substantial cuts in emissions while adding to economic growth, creating healthier indoor environments and renewing infrastructure. Policy-makers are aware of this potential, leading to increased adoption of energy efficiency regulations and incentives across North America.

Following extensive research and consultation, the Real Property Association of Canada (REALpac) is adopting an energy consumption target for office buildings of 20 equivalent kilowatt-hours of total energy use per square foot of rentable area per year (20 ekWh/ft²/year), to be achieved by 2015. In other words, "20 by '15".

The REALpac target includes all energy used in the operation of buildings (electricity, natural gas and other thermal energy sources) converted to the common energy unit of equivalent kilowatt hours (ekWh)¹. As described in this paper, the target is set at a level which is attainable by following current best practices, and represents a reduction of up to one half of today's median energy use in Canadian office buildings. The target is intended as an essential first step in demonstrating substantial, sector-wide emissions reductions and operating cost savings, while taking full advantage of incentives and enabling it to get in front of potential legislation and/or regulations.

¹ For example, one cubic meter of natural gas equals approximately 10.5 ekWh

“20 ekWh is achievable at reasonable cost, in Canada, today. The achievement of the 20 by ‘15 target will show real estate as a leadership industry in Canada and the world.”

S. Michael Brooks, CEO, REALpac

Based on the results of the Canada Green Buildings Council’s (CaGBC) national pilot projects described below, achieving the target would lower median energy use for commercial office and government office buildings by 48.1% and 34.9% respectively². The potential operating cost and emissions savings for Canada are summarized in Table 1.

Table 1

Office Type	Total Floor Area in Canada (millions ft ²) ¹	2007 Median ² (ekWh/ft ²)	Target (ekWh/ft ²)	Median Percent Reduction	Potential Operating Cost Savings ³		Emissions Savings (MT)
					Total (millions)	(\$/sq ft ²)	
Commercial Office Buildings	1,059	38.5	20.0	48.1%	\$1,652	\$1.56	6.8
Government Administration Office Buildings	311	30.7	20.0	34.9%	\$199	\$0.64	0.7
Totals	1,370			45%	\$1,851		7.5

¹Source: NRCAN Commercial and Institutional Consumption of Energy Survey - Summary Report June 2007

²Based on 56 commercial office buildings at ~31 million ft² and 73 government administration office buildings at ~13 million ft²

³Target energy costs based on: \$0.10/kWh electricity, \$0.39/m³ gas

2. WHY 20?

In 2008, 14 commercial office landlords took part in CaGBC’s national pilot project with 64 buildings totalling 32 million ft². A parallel project for government office and administration buildings engaged Public Works & Government Services Canada, five provincial government real property departments, and 22 cities with 80 buildings totalling 16 million ft². The total area of these participating buildings is equivalent to more than 25 Toronto Eaton Centres.

The CaGBC initiative has created a large, dynamic database of actual energy and water use performance for Canadian office buildings, conducted workshops and teleconferences with participants, and developed metrics, standards, tools and templates to help owners improve the performance of their buildings. Top-

² Government administrative office building median based on larger sample size than benchmark Figure 2, which contains only buildings with complete utility data from every year between 2005-2007.

performing buildings were identified and documented, and participants were able to assess their own buildings' performance and plan individual building improvements accordingly.

"We were surprised that some of our best buildings were only around the median on the benchmark charts. External benchmarking has helped us identify the potential for improvement."

CaGBC Pilot Project Participant

Total energy use benchmarking, for 2005 and 2007 is shown for commercial and government buildings in Figures 1 and 2 respectively. These benchmark charts are normalized for weather differences across the country by adjusting the heating portion of gas or oil use, and the air conditioning portion of electricity use by the ratios of heating and cooling degree days respectively between the Environment Canada weather station closest to the building and the Toronto City weather station.

The results are remarkable for the ranges between highest and lowest energy users (2.5:1 for commercial offices and 4:1 for government buildings), and the magnitude of savings already being recorded by many of the buildings.

Figure 1

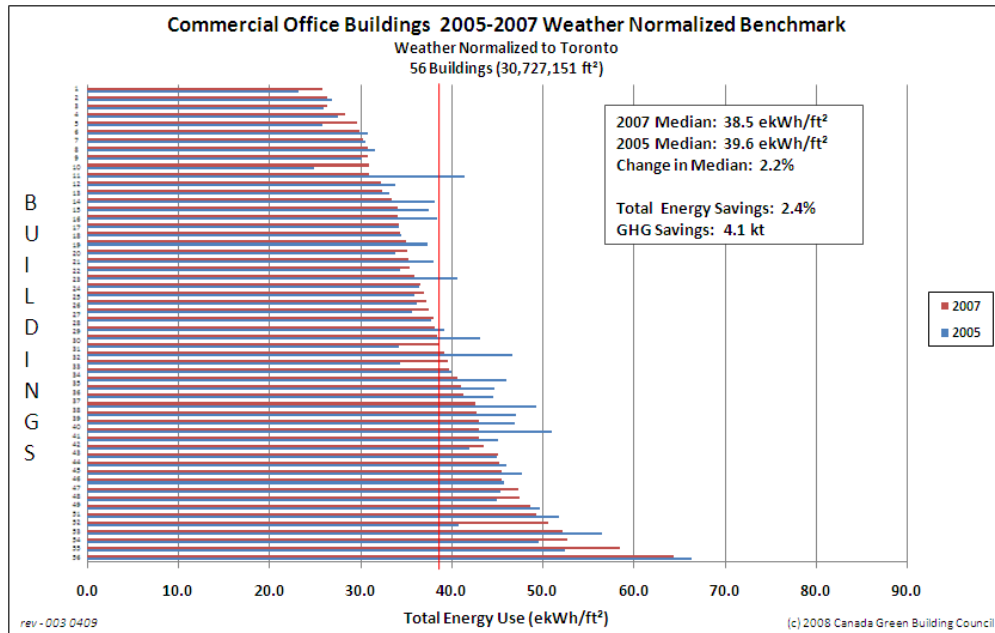
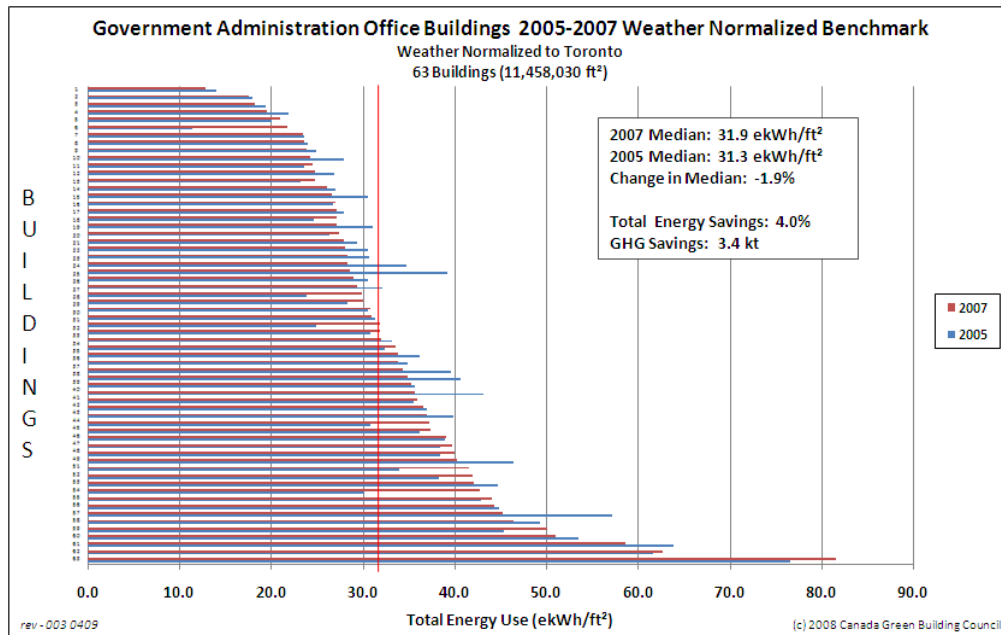


Figure 2



A normalization template was developed to account for material space, occupancy and energy source differences between buildings (such as data centres, retail space and electric heat). The template has been aligned with the U.S. Environmental Protection Agency's Portfolio Manager so that Energy Star scores can also be calculated. Normalization allowed the identification of top-performing buildings presented in Table 2. These results are interesting in a number of ways, including no apparent correlation between building age and performance, and the indicated room for further improvement in energy use components.

Table 2

2008 Commercial and Government Administration Office Building Top Performers (Weather Normalized to Toronto Lester B Pearson Int)									
Building Characteristics				Total Energy		Electricity			Thermal
						Consumption	Demand	Load Factor	
Type	Location	Approximate Size (ft ²)	Construction Decade	Space Normalized (ekWh/ft ²)	Actual (ekWh/ft ²)	kWh/ft ²	W/ft ²	Annual (hrs/day)	Consumption (ekWh/ft ²)
PROV	QC	150,000	1980's	12.9	11.9	10.8	3.2	9.3	1.1*
PROV	ON	250,000	1980's	15.5	17.1	17.0	3.4	13.8	0.0*
FED	QC	200,000	2000's	17.5	17.0	15.9	2.7	16.2	1.1*
FED	ON	350,000	1930's	18.5	19.3	10.7	3.6	8.2	8.6
PROV	MB	50,000	1970's	19.5	19.2	11.1	2.8	10.9	8.1
PROV	MB	50,000	1970's	20.8	21.6	18.7	4.5	11.3	2.9*
MUNI	ON	200,000	1980's	22.0	22.0	14.4	3.2	12.3	7.7
COM	BC	200,000	1980's	22.4	25.1	19.4	4.3	12.3	5.7
MUNI	BC	200,000	2000's	22.8	21.6	14.5	-	-	7.0
COM	ON	400,000	1950's	23.7	28.5	28.2	5.4	14.4	0.3*

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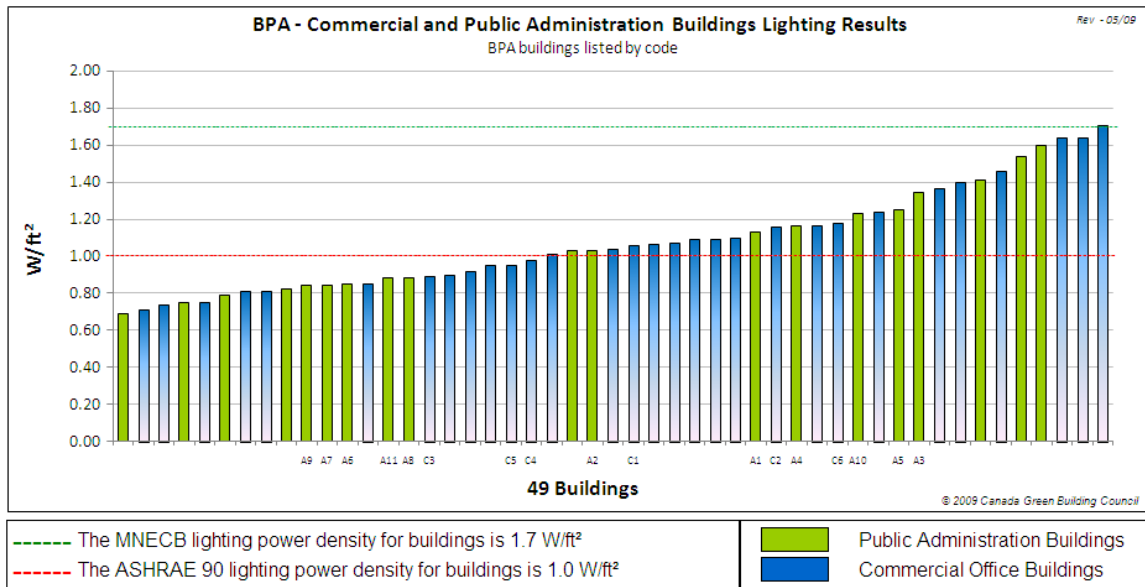
(c) 2008 Canada Green Building Council

* over 10% electric heat

Note: coloured cells indicate potential for further improvement

Several of the top-performing buildings were then audited by engineering firms pre-qualified by CaGBC using a standard Building Performance Audit (BPA) template to test, document and compare design metrics such as Watts/ft² and plant capacity per thousand ft². The audit was applied to all major building systems - lighting, ventilation, heating, air conditioning, office equipment, building envelope and water fixtures – and reconciled test results with the actual electrical demand for the buildings. Figure 3 shows results for lighting, and includes buildings where participants used that part of the template themselves to see where they stood. The metrics shown for the 49 buildings are simply total installed lighting Watts on a typical floor divided by the rentable area. The remarkable findings are first the range of 2.5:1 in power density using similar technology for similar office space lighting applications, and secondly that industry good practice is substantially better than either Canada's Model National Energy Code or the current ASHRAE standard. The results also demonstrated that even the top-performing buildings have room to improve energy efficiency in one or more of their primary building systems.

Figure 3



“We thought we were doing the right thing retrofitting from T-12 to T-8 lighting until we found our building at the right hand end of the chart. Now we know we have to redesign, not just replace fixtures.”

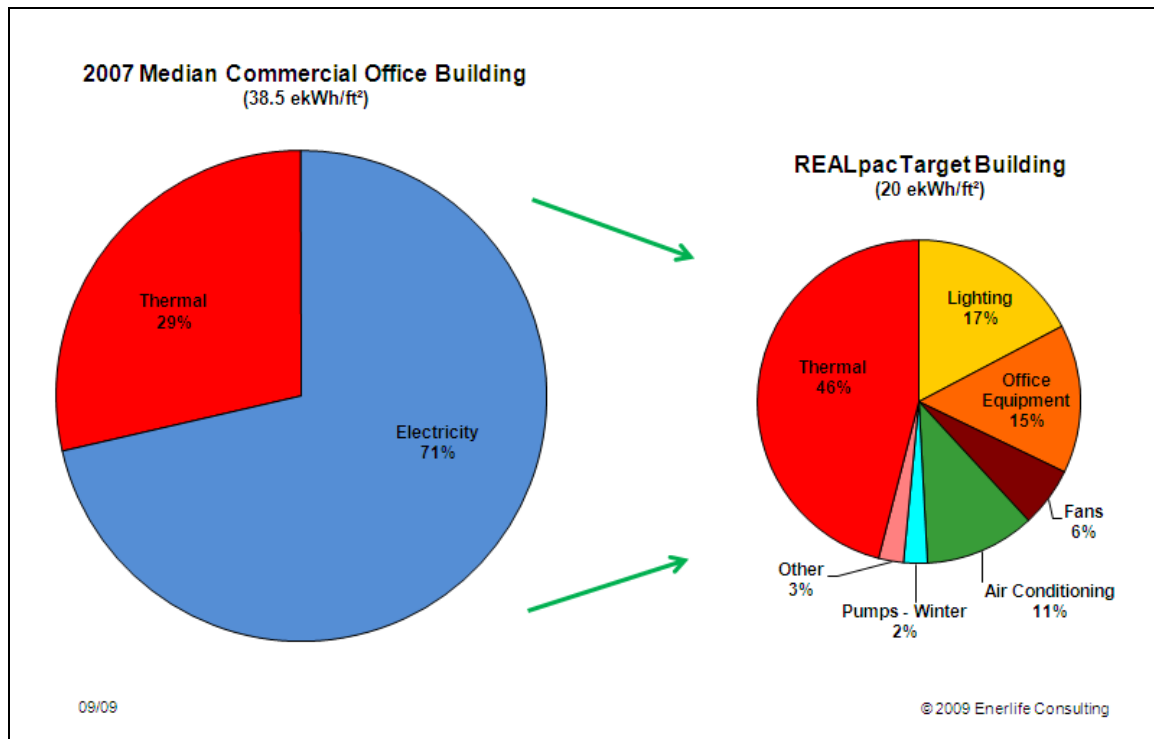
CaGBC Pilot Project Participant

“We have lowered our tenant lighting design standard from 1.1 to 0.85 Watts/sq ft based on these results from the pilot project.”

CaGBC Pilot Project Participant

The results of the CaGBC pilot projects, which are being reinforced by the ongoing developments through their new Green Up initiative, are transforming the way that owners, managers and designers understand and think about the actual energy performance of buildings. Several buildings are already close to the REALpac 20 by '15 target, and even the top-performing buildings have been shown to have significant room to improve. Modelling the good practice design standards for each building system derived from the pilot project audits with typical office building occupancy periods yields total energy use in the range of 16-20 ekWh/ft²/year. Figure 4 presents the typical energy use breakdown of the 20 ekWh/ft²/year building compared with the 2007 median commercial office building.

Figure 4



In short, achieving the target requires only consistent application of good system design/retrofit standards for each building system identified through the CaGBC pilot project, together with operating periods and practices that are already in common practice.

3. GETTING THERE FROM HERE

3.1. It's Not What You Think

The common perception has been that improving energy efficiency is all about technology, retrofitting and capital expenditure. The emerging new understanding is that policy, process and people are in fact at the heart of achieving and sustaining high levels of energy efficiency and deep reductions in greenhouse gas emissions.

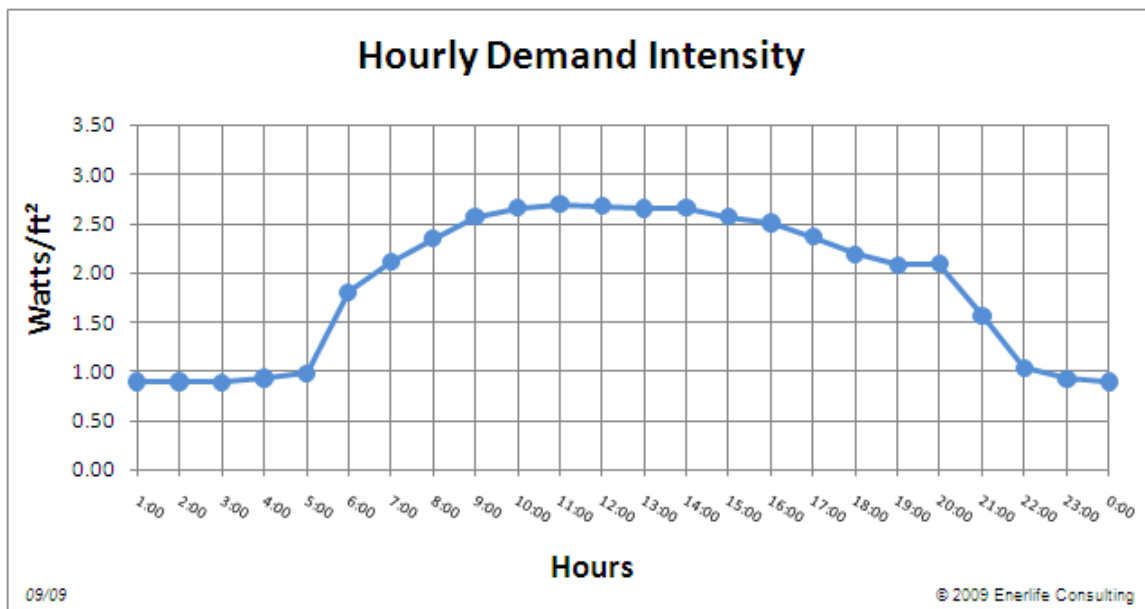
The good news is that operating cost savings should generally be greater and Capex less than had previously been expected, with higher rates of return on investments. The more challenging conclusion is that high levels of performance cannot be achieved and sustained without significant organizational change to align policy, management, leasing, procurement, and HR programs with the demands of consistent energy efficient practice. The recommended strategy for most owners and managers (which

fits well with today's capital constrained times) is to address organizational alignment first, before taking on capital retrofit projects. Introducing benchmarking, target-setting and performance monitoring into management practice builds internal capacity and confidence while generating significant savings at low cost through operational improvements and re-commissioning – getting the best out of the building as it is. With this experience, staff and service providers are then better able to contribute to defining future capital projects and ensuring their success.

3.2. A New Literacy

The foundation for addressing energy efficiency in individual buildings and portfolios is the seemingly mundane (and sometimes arcane) world of utility bills. While there is considerable room for improvement in billing reliability and clarity, unlocking the wealth of data contained in monthly utility bills is necessary for carbon reporting, and can also provide essential insight into current performance, point to areas for improvement, and verify the effectiveness of actions taken. New metering technology expands this potential. Interval meters and smart meters can provide real-time windows into daily, weekly and seasonal building operations and areas for improvement. Figure 5 shows clearly what time the building starts up and shuts down, how it is used through the day, and how much electrical load is left running all night long.

Figure 5



Sub-metering of tenants and equipment can take this performance analysis and diagnosis further still. However, effective management of the data contained in monthly utility bills remains the starting point

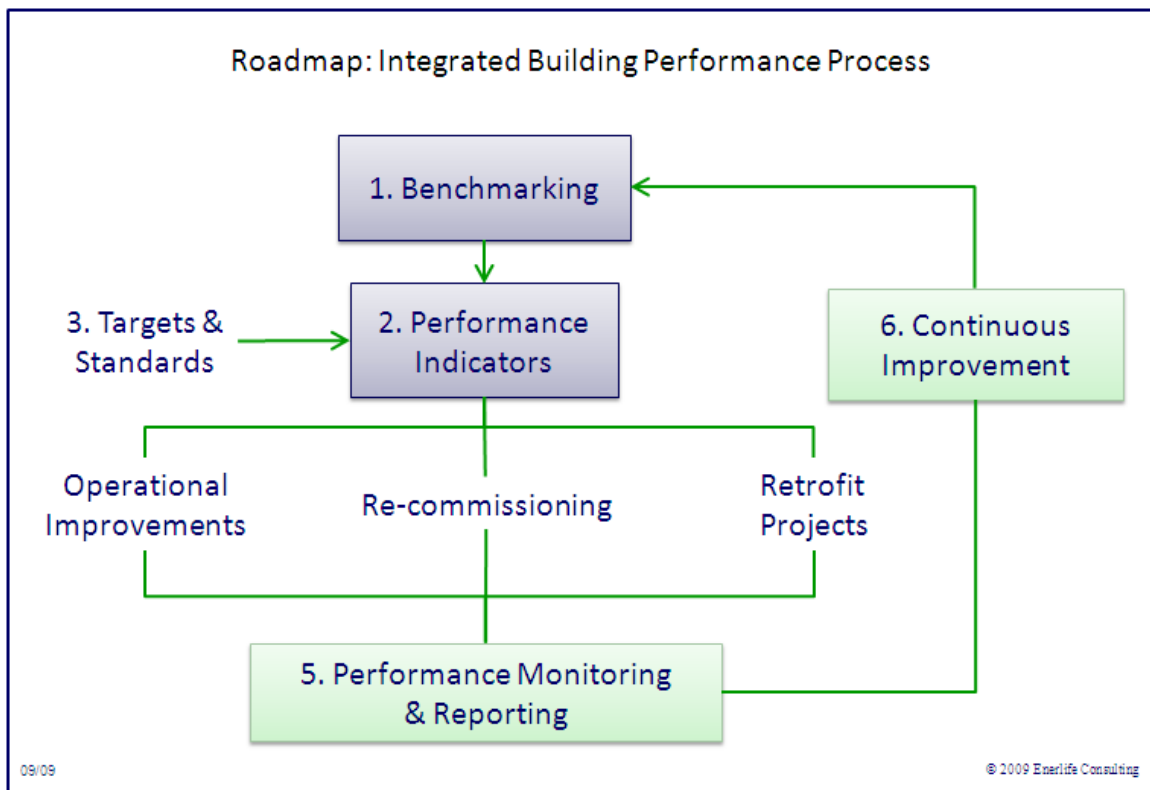
for energy performance management and carbon reporting. Similarly, building owners and managers need to become familiar with the building performance and system-level metrics developed by the CaGBC and referred to in this paper, and reflect current good standards in their specifications, leases and contracts with consultants, tenants, contractors and service providers.

This new literacy should be internalized within building owner and manager organizations in order to effectively set targets, develop strategy and plans, support good building operations, direct outside suppliers, and report on progress. It is an essential new skill in the pursuit of sustainability.

4. A ROADMAP TO 20 ekWh

Figure 6 presents the “Roadmap to 20 ekWh”, which is described in the following sections.

Figure 6



4.1. Energy Use Benchmarking

It is 2009. Do you know the total energy performance of your building? Benchmarking is the starting point for addressing energy efficiency. High performance can be used by leasing agents to market a building.

Lower performance should factor into target setting and individual performance objectives. Executives should know how their properties compare with each other and with the office buildings market as a whole.

4.2. Performance Indicators

Beyond total energy use benchmarking, drilling down into component parts of energy use helps create building-specific targets, and identify which buildings are candidates for operational improvements, re-commissioning and/or retrofits. Interval meter profiles allow identification and quantification of operational improvements. The interpretation of utility data to guide conservation action is becoming an essential management capability.

4.3. Targets and Standards

Every building can have an individual energy target, based on its actual and potential energy performance. The target guides allocation of effort and resources, planning of improvements, and performance objectives for staff and service providers. Building owners should adopt good practice design/retrofit standards for individual building systems, as identified by the CaGBC program, to be incorporated into specifications and service agreements.

4.4. Implementation

There are typically three streams of activity involved in implementing energy efficiency improvements in existing buildings. First are operations – reducing “on-time” for building systems, shutting equipment off during unoccupied periods and adjusting building control “set-points”. This is the least cost, highest payback stream, but requires training and accountability for operators and engagement of tenants. Second is re-commissioning – testing, diagnosing, repairing, upgrading and adjusting building systems to perform to their best potential. This is generally a relatively low cost stream with a good payback, and requires direct involvement of operators as a learning process, and to ensure high performance is maintained over time. The third stream is system redesign and retrofit projects – lighting, ventilation and hydronic system upgrades, and replacement of plant and equipment. This is the highest cost stream and requires a robust business case.

Every building has its own unique set of opportunities. The performance indicators derived from benchmarking point to which streams apply to which buildings. In general, the lower cost streams should be implemented first in order to gain immediate savings with high returns, engage and train operators, and build internal confidence and capacity for tackling large capital projects.

4.5. Performance Monitoring and Reporting

Transparency of performance maintains organizational engagement and commitment, and drives continuous improvement. Operators and property managers should have access to monthly changes and trends in energy use for their building so they can make the connections between cause and effect – how their actions and operating practices impact performance – and take appropriate measures for improvement. Executives should see quarterly progress reports compared with baselines and targets. High performing buildings and large improvements should be recognized and celebrated, and corporate reporting should include targets, actual savings, and profiles of measures implemented and improvements made.

4.6. Continuous Improvement

Energy performance management is a continuous management system which needs to respond to new standards and technology, and improved operating procedures. As the energy efficiency of the office building sector as a whole continues to rise, and better standards and practices continue to emerge, so individual building targets are raised and the cycle of continuous improvement takes us to 20 by '15 and beyond.

5. MAKING A DIFFERENCE

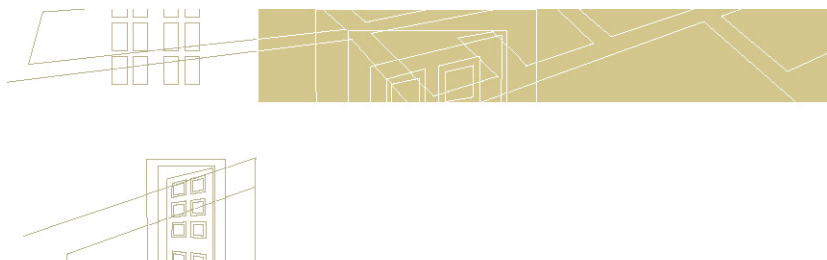
Canada's real estate industry is positioned to have a meaningful impact on the climate change mitigation agenda, through both its own potential to demonstrate greenhouse gas emission reductions, and the example it can provide to other building sectors, other parts of the economy, and other regions of the world. The methodology, metrics, standards and tools described in this paper did not exist a year ago. The commercial office sector and government real property departments have helped, through their participation in the CaGBC pilot projects, to both substantiate the opportunity for deep cuts in energy use and greenhouse gas emissions, and develop the means to achieve and sustain them. REALpac's 20 by '15 target takes this leadership to the next level.

"Ontario Realty Corporation is committed to systematically working towards energy efficiency targets for high performing buildings across its whole portfolio. The RealPac 2015 target is a useful development in moving this agenda forward."

Gavin Maher, Senior Sustainability Program Specialist, Ontario Realty Corporation

The common theme through this rapid evolution has been that nothing is what it had seemed. Use of more efficient technology does not necessarily achieve optimal performance – attention to system design and standards are equally important. Effective building operations and engagement of tenants are essential to high performance, and expected to provide at least half of the projected energy and emissions savings. There is no apparent correlation between building age and energy performance, and

even top-performing buildings today have significant room to improve. And the REALpac target can be reached, and median energy use level for the commercial and government office sectors reduced by up to one half, simply by consistently practicing what we already know how to do.



www.realpac.ca

1 **BOMA INTERROGATORY #5**

2 **Issue 1.1** Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

3 **INTERROGATORY**

4 Reference: Exhibit A, Tab 2, Schedule 1, Page 11 of 40: "enhanced conservation
5 participation and awareness for partners and customers through effective
6 communication strategies, and celebration and promotion of Ontario's conservation
7 successes."

8 5) How will the OPA measure this milestone? Will the milestone be cast in terms of
9 improvements? If so, what previous studies exist to compare progress?

10 **RESPONSE**

11 As discussed in Exhibit A-2-1, by the end of 2014 the OPA will have achieved enhanced
12 conservation participation and awareness for partners and customers through effective
13 communication strategies, and celebration and promotion of Ontario's conservation
14 successes. In order to measure this milestone, the OPA has been tracking
15 conservation participation and awareness on an ongoing basis since the launch of the
16 current suite of **saveONenergy** programs in 2011. The OPA utilizes a weekly market
17 research tracking study and a web analytics dashboard to monitor energy conservation
18 awareness on an ongoing basis. **saveONenergy** program participation is monitored on
19 a monthly basis utilizing an internal dashboard.

1 **BOMA INTERROGATORY #6**

2 **Issue 1.1** Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

3 **INTERROGATORY**

4 Reference: Supplemental Evidence, Exhibit A, Tab 3, Schedule 3, Page 1: "Ontario's
5 conservation programs are being delivered at a program cost of less than four cents per
6 kwh".

7 6) Please provide the analysis (and calculations) to support this claim.

8 **RESPONSE**

9 The OPA believes that costs of conservation and generation programs are not in scope
10 of this rate application as they are not included in the OPA's operating fees budget.

11 While the information requested by BOMA is not within the scope of this proceeding, to
12 be helpful, the OPA has provided the following link to information on program delivery
13 costs, which can be found in Appendix B of the 2012 Conservation Results Report:
14 [http://www.powerauthority.on.ca/sites/default/files/conservation/Conservation-Results-](http://www.powerauthority.on.ca/sites/default/files/conservation/Conservation-Results-Report-2012.pdf)
15 [Report-2012.pdf](http://www.powerauthority.on.ca/sites/default/files/conservation/Conservation-Results-Report-2012.pdf).

BOMA INTERROGATORY #7

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

Reference: Exhibit B, Tab 1, Schedule 1, Page 3 of 36: "In December 2011, the OPA established the Advisory Council on Conservation ("ACC"). The mandate of this group is to provide insight into the future of conservation that informs program design and customer-centric strategy. In 2014, the ACC will continue to meet on a quarterly basis to provide advice on the transition from the current to the next generation conservation framework."

7) Please provide the past and current list of the members of the ACC. Please file copies of reports for each of these meetings.

RESPONSE

The Advisory Council on Conservation ("ACC") was established by the OPA in January 2012 to provide insight and recommendations on the development of conservation opportunities. Focused on the long-term drivers of conservation success and the direction that future conservation activities should take, the Council is made up of individuals from diverse backgrounds that have significant insight on electricity conservation-related topics. Members of the ACC participate as individuals willing to share their experience, perspective and insight rather than as representatives of their organizations or specific consumer groups. The OPA plans to release the 2012/2013 Report on Activities of the ACC this summer. Current members include:

Name	Title
Adam White	President, Association of Major Power Consumers in Ontario
Alan Korell	Managing Director, Engineering, Environmental Services & Works, City of North Bay
Andrew Pride	Vice President, Conservation, Ontario Power Authority
Bob Bach	Senior Associate, Energy Profiles Limited
Clifford Maynes	Executive Director, Green Communities Canada
Don Aldridge	Industry Executive, Research, IBM
Eileen Campbell	Vice President, Customer Service, Horizon Utilities Corporation
Ian Rowlands	Professor, Environment and Resource Studies, University of Waterloo
Josh Laughren	Director, Climate and Energy Program, WWF Canada
Julia McNally	Director, Market Transformation, Ontario Power Authority
Mark Schembri	Vice-President, Supermarket Systems and Store Maintenance, Loblaw Properties Limited
Mary Todorow	Research/Policy Analyst, Advocacy Centre for Tenants Ontario

Name	Title
Michael Brooks	Partner, Aird and Berlis
Norm Ryckman	Director, Market Development and Sales, Enbridge Gas
Stephen O'Keefe	Vice President, Operations, Retail Council of Canada

Two former members of the ACC include:

Name	Title
Mike McGee	Founder, Energy Profiles Ltd.
Julie Girvan	Consultant to Consumers – Council of Canada

BOMA INTERROGATORY #8

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

Reference: Exhibit B, Tab 1, Schedule 1, Page 11 of 36: "The Conservation division will manage an annual 1 budget of \$483.4 million in charges. This does not include the Conservation division's fees budget.

8) Please provide a table showing the actual conservation related fees and charges from 2005 to 2013 and the projected for 2014, 2015 and 2016.

RESPONSE

The OPA believes that costs of conservation and generation programs are not in scope of this rate application as they are not included in the OPA's operating fees budget.

While the information requested by BOMA is not within the of scope of this proceeding, the OPA offers the information in the following table to be helpful. The table below shows the actual conservation related fees and charges from 2006 to 2014:

Conservation Division (\$'000)									
Fees & Charges	2006 Actual	2007 Actual	2008 Actual	2009 Actual	2010 Actual	2011 Actual	2012 Actual	2013 Actual	2014 Budget
Fees	5,989	13,335	15,205	17,108	17,180	13,766	10,947	11,522	10,588
Charges	9,880	107,101	161,734	222,752	321,650	317,780	301,066	335,163	483,436

Data from 2005, the OPA's inaugural year, is not available. Given that the 2015-2020 Conservation First Framework is still under development, 2015 and 2016 budget data is not yet available.

BOMA INTERROGATORY #9

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

Reference: Exhibit B, Tab 1, Schedule 1, Page 12 of 36: "The OPA maintains a Measures and Assumptions List ("MAL") which provides the deemed energy and demand savings, measure life, and other data associated with energy conservation measures. This publically available database is updated on an annual basis and serves as a vital resource for the design, implementation and evaluation of conservation programs in Ontario. The OPA will continue to provide results reports in order to monitor and report on conservation achievements and their impact on system needs and conservation targets. This includes providing: quarterly reports to LDCs of preliminary results (unverified); final annual results reports (verified) to LDCs, the Ministry of Energy, the Environment (sic) Commissioner of Ontario, and the Board; and an annual report published on the OPA website in support of the OPA's annual energy reporting activities. A series of enhancements to the MAL will be implemented in 2014, focused on improving the usability of the database, including providing additional cost and program design information for all measures presented.

9) What process is in place to verify the accuracy of the "deemed energy and demand savings, measure life, and other data associated with energy conservation measures?"

RESPONSE

All program savings are verified annually in accordance with the EM&V Protocols and Requirements. Results from these evaluations, including a description of the methods used, are published annually and can be found on the OPA website at:

<http://www.powerauthority.on.ca/evaluation-measurement-and-verification/evaluation-reports>.

Measure-level assumptions are reviewed on an annual basis or as new information becomes available. Information presented in this prescriptive list is derived and gathered from various sources, including from previous evaluation studies involving engineering calculations and in-situ metering studies. Data may also be based on studies undertaken in jurisdictions outside Ontario and updated to reflect Ontario conditions. If necessary, independent research is commissioned to develop deemed energy and demand savings, measure life, and other data associated with new energy conservation measures that have no program history or evaluated results to base estimates on.

The Measures and Assumptions List can be found at:

<http://www.powerauthority.on.ca/evaluation-measurement-and-verification/measures-assumptions-lists>.

1 **BOMA INTERROGATORY #10**

2 **Issue 1.1** Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

3 **INTERROGATORY**

4 Reference: Exhibit B, Tab 1, Schedule 1, Page 1

5
6 10) Please provide a copy of the OPA's 2014 energy efficiency achievable potential
7 study. If it is not yet available, please file a copy of the 2013 study.

8 **RESPONSE**

9 BOMA has clarified that the reference is Exhibit B-1-1, Page 31.

10 The latest OPA Achievable Potential Study, published on March 26, 2014, is available
11 through the following link:

12 <http://www.powerauthority.on.ca/news/conservation-achievable-potential-study>.

BOMA INTERROGATORY #11

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

Reference: Exhibit B, Tab 1, Schedule 1, Page 1

11) The OPA filed its evidence in this case on March 6, 2014. On March 31, 2014, the Minister of Energy issued its 2015-2020 Conservation First Framework directive to the OPA. The evidence states:

"In 2014, the Conservation division will be preparing for the next conservation framework. As of the submission of this application, the details of the new six-year framework have not yet been announced. As such, the amount of effort and resources needed for a smooth transition to the new framework are not yet known, and there will be some variability around resource requirements. Prioritization of activities will be required throughout the year" (our emphasis) (Exhibit B, Tab 1, Schedule 1, Page 1 of 36).

- (a)
 - (i) Please provide the shifts in priorities, or prioritizations that will be required throughout the year. Please discuss in detail.
 - (ii) Will these shifts in priorities include shifts of resources into the conservation division from other divisions?
- (b)
 - (i) Please provide a detailed estimate of any additional resources, including full-time or part-time employees, contract employees and dollars that will be required to accommodate the ramp-up of activity during the year to ensure that the new program is operational by January 1, 2015.
 - (ii) Will the OPA amend its application to seek additional resources it requires, to ensure the Conservation First program can be successful, and launched in a timely fashion?
- (c) If the new six-year program will not be operational by January 1, 2015, please advise what date the OPA has targeted for having it operational. Please explain fully and explain the steps that will need to be taken, and the milestones to measure the completion of each step.
- (d) Schedule C, Tab 2, Table 1 shows a shift of nine FTEs out of the conservation division in 2014 relative to the 2011 Board approved. Please explain why the reallocation has occurred in the light of the increasing demands on the conservation division in 2014, particularly with respect to establishing the Conservation First Plan with seventy-one distributors. Can you assure intervenors and the Board that this reallocation of resources away

1 from the conservation division will not compromise the effectiveness,
2 including the timely launch, of the new six-year Conservation First Program.
3 Please discuss.

4 (e) The OPA 4-year conservation program scheduled to end in 2014 was, in
5 BOMA's view, severely delayed by the lengthy negotiations between the OPA
6 and distributors on the program, overly complicated contracts, and overly
7 literal interpretations of Ministry guidelines by the OPA and the OEB. These
8 difficulties caused the program to be very late starting. The integrity of the
9 program was substantially compromised. The recent Ministry Directive
10 (Conservation First) is clearer than the previous one, and appears to give the
11 agencies more flexibility. What steps will the OPA be taking to ensure that
12 the ramp-up of the new program will improve upon the ramp-up of the current
13 one?

14 (f) Please provide data on the extent to which the current program will achieve
15 the targets mandated for 2014 in the 2010 LTEP plan.

16 (g) What tools does the division have to monitor the progress year by year, in
17 quantitative terms, of the Conservation First Program? Please discuss.

18 (h) More specifically, the evidence indicates that the OPA does not provide its
19 analysis of the results achieved by each distributor's CDM program until nine
20 months after the end of the year in question, which means the distributors
21 cannot report their results to the OEB for almost two years after the year
22 ended. That is an unacceptable lag. Please advise what steps the OPA can
23 take to ensure the results of each distributor's CDM program are available
24 earlier, and early enough to be in the distributor's report to the OEB for the
25 previous year's CDM program. What additional resources would the OPA
26 require to accomplish this objective?

27 (i) What steps will the OPA take to help ensure the OEB is fully supportive of
28 electricity and gas distributors' CDM efforts, and that such efforts will be co-
29 ordinated, as set out in the Minister's Directive? Did the OPA make
30 submission to the OEB on its recent proposal to change its electricity rate
31 design to replace its volumetric charge with a fixed charge? If so, please
32 provide a copy of this submission. If not, why not?

33 (j) The evidence does not appear to discuss the role of Energy Service
34 Companies ("ESCOs") in the implementation of conservation programs, even
35 though these companies have been active in Ontario for twenty-five years
36 and have performed hundreds of retrofits of facilities. What role does the
37 OPA see for ESCOs, and how does it collaborate with them?

1 RESPONSE

2 a) (i) Per the Minister's direction, the 2015-2020 Conservation First Framework
3 ("framework") will provide customers with more CDM program choice along with
4 streamlined oversight and administration. Through streamlined contracts with the
5 OPA, distributors will have accountability and authority to meet their CDM targets
6 cost-effectively. The OPA will provide long-term, stable funding to LDCs and support
7 LDCs in the design and delivery of CDM programs.

8 The OPA and LDCs are working together to determine the details of implementation
9 of the new Framework to ensure that it meets the needs of customers and serves
10 the interests of ratepayers.

11 This collaboration represents a shift in priorities. Specifically, the OPA has
12 established an internal team of 7 dedicated staff reporting to 2 executives to oversee
13 the development of the new framework. Additionally, this team is supported by other
14 staff on an as needed basis.

15 Upon completion of the framework, further shifts in staff priorities are expected as
16 the OPA moves from the development to implementation stage of the 2015-2020
17 programs. The exact nature of these shifts will remain unknown until framework
18 completion.

19 (ii) As per the response a (i) above, the OPA and LDCs are working together
20 throughout 2014 to both develop and determine the best approach to implement the
21 new framework. A part of this process includes the OPA assessing its current
22 compliment of internal resources against the likely requirements of 2015 and
23 beyond. Until the final framework is approved, the OPA is uncertain as to what
24 these requirements will be.

25 b) (i) Yes, to assist in the development of and transition to the new framework, the OPA
26 has retained additional resources, including:

- 27 • A Project Coordinator on a part time basis to assist with the coordination of
28 working groups, including the Conservation First Advisory Working Group
29 ("CFAWG") as well as managing the overall communications process with LDC
30 partners.
- 31 • Retained PwC to support a project management office until December 31, 2014
32 to ensure the 2015-2020 framework is ready for January 1 launch.
- 33 • A writer to assist with the scoping and writing of the framework and associated
34 documents.

35 The following table provides a breakdown of the costs associated with these staffing
36 resources as well as detail on all other costs anticipated as a result of the framework
37 development process.

Item	Term	Approximate expected cost (000's)
Project Management (PWC)	9 months	\$400
Project Coordination Support	9 months	\$60
Writer for Guidelines and Reports	5 months @ \$1000/week	\$20
Stakeholder Engagement Sessions	7 months @ \$5000/event	\$35
Follow-up Sessions with LDCs	6 months @ \$5000/event	\$30
Total		\$545

(ii) The OPA will not be amending its application.

c) The OPA is working with LDCs to ensure that the agreements supporting the new framework are available for LDCs by January 1, 2015, per the Minister's direction. See response to parts a) and e) of this response for further information.

d) BOMA has clarified that the reference is Exhibit B, Tab 2, Schedule 1.

The shift of 9 FTEs reflects an effort to streamline OPA processes and make more efficient use of staff resources. Of the 9 FTEs, 4 were marketing staff who were relocated from the Conservation division to the Communications division into a newly consolidated Marketing group responsible for all marketing activities. The remaining staff relocations were the combined result of a consolidation of the accounts payable function within the Business and Support Services division, as well as reorganization and realignment of roles within the Conservation division.

While these changes will present challenges, it will not deter the OPA's ability to deliver the framework by January 1, 2015.

e) The OPA and LDCs are working together to determine the details of implementation of the new framework to ensure that it meets the needs of customers and serves the interests of ratepayers. Efforts to ensure an efficient ramp-up include: establishment of a dedicated internal OPA transition team (as discussed above), extensive and continuous consultation with LDCs, consultation with the Advisory Council on Conservation ("ACC"), Stakeholder Advisory Committee ("SAC") and the CFAWG. The CFWAG is inclusive of OPA, LDC, the provinces two major gas distributors, as well as OEB and Ministry representation. This working group serves as a forum to discuss and agree upon all elements of the framework. To ensure the perspective

1 of all relevant stakeholders are brought to bear, customer and partner consultation is
2 planned for June 2014. Please note the OEB and Ministry staff act as observers in
3 CFAWG.

4 In addition, to ensure a seamless transition for customers and partners, the OPA
5 and LDCs are extending priority existing programs into 2015 pursuant to the
6 Ministers Direction of December 21, 2012.

7 f) Please see the response to Energy Probe Interrogatory 4 and BOMA
8 Interrogatory 26 at Exhibit I, Tab 1, Schedules 6.04, and 2.26 respectively.

9 g) The March 31, 2014 direction to the OPA requires that "The OPA shall continue to
10 produce and publish an annual report on overall progress toward achieving the
11 provincial CDM target of 30 TWh...". For the 2011-2014 period, unverified results
12 are reported quarterly to OPA management, LDCs and the Ministry to monitor in-
13 year progress. Annually, in September, final verified results are reported to OPA
14 management, LDCs, the Ministry and the Environmental Commissioner. A copy of
15 the OPA 2012 Conservation Results can be found on the OPA website at:
16 <http://www.powerauthority.on.ca/news/2012-conservation-results-report>

17 For the 2015-2020 period (the Conservation First Program period), the OPA will use
18 the same or similar tools used during the 2011-2014 period to report progress to
19 targets.

20 h) The OPA provides final, verified results to the LDCs by September 1 of each year for
21 the previous year, which enables LDC reporting to the OEB by September 30 for the
22 previous year's results. This timeline reflects the time needed to appropriately
23 assess program performance and is consistent with the timelines and practices of
24 other jurisdictions. The OPA continues to seek opportunities to accelerate the
25 process for reporting final results.

26 i) The OPA and OEB are working collaboratively on implementation of the Minister's
27 direction and directive to our respective companies. OPA staff is participating in the
28 OEB's DSM Advisory Group, while OEB staff and LDC gas distributors are
29 participating in the CFAWG process.

30 The OPA's submission regarding the OEB's proceeding on rate design for electricity
31 distributors can be found at:
32 [http://www.rds.ontarioenergyboard.ca/webdrawer/webdrawer.dll/webdrawer/search/r](http://www.rds.ontarioenergyboard.ca/webdrawer/webdrawer.dll/webdrawer/search/ec&sm_udf10=eb-2012-0410&sortd1=rs_dateregistered&rows=200)
33 [ec&sm_udf10=eb-2012-0410&sortd1=rs_dateregistered&rows=200](http://www.rds.ontarioenergyboard.ca/webdrawer/webdrawer.dll/webdrawer/search/ec&sm_udf10=eb-2012-0410&sortd1=rs_dateregistered&rows=200)

34 j) ESCOs, and other delivery channels, are important and valued partners for
35 achieving conservation goals and making conservation second nature in Ontario.
36 Areas for ESCO collaboration will be explored by the OPA and LDCs during the
37 development of the framework.

BOMA INTERROGATORY #12

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

Reference: Exhibit B, Tab 1, Schedule 1, Page 3

12)How does the OPA intend to leverage its relationship with each of the six "strategic channels" noted at line 24?

RESPONSE

BOMA has clarified that the reference for the question is noted at line 25.

As discussed in Exhibit B-1-1, in 2014 the OPA will expand outreach and engagement with six strategic channels (HVAC, building controls, lighting, compressed air, industrial controls and retailers) in order to promote the value of conservation today and in the future. The OPA will leverage these strategic channels to influence customer decisions that affect their energy consumption (e.g. buying space heating equipment or investing in new lighting fixtures), and to encourage and facilitate customer participation in **saveONenergy** programs.

To support the successful engagement of these channel partners, in 2014 the OPA will leverage direct outreach, networking opportunities, and presentations at industry events; will host channel-specific workshops; and will organize channel-specific training initiatives.

These engagement activities will be the prime responsibility of three business managers in the Business Development, Alliances group.

BOMA INTERROGATORY #13

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

Reference: Exhibit B, Tab 1, Schedule 1, Page 3

13) Please provide the documentation for a typical one-day conservation workshop for LDC staff.

RESPONSE

Please see Attachment 1 to this exhibit for an example of a typical one-day conservation workshop for LDC staff organized by the OPA.



saveONenergyTM TRAINING & SUPPORT

Maximizing 2014: Lighting (LED) Workshop
May 27, 2014
International Centre
6900 Airport Road, Mississauga, Ontario

Morning Agenda

08:30am **Continental breakfast and networking**

09:00am **Welcome, Introductions and Workshop Overview (Jon Feldman, OPA)**
Jon will provide an overview of the key objectives for the day.

09:10am **Lighting Efficiency Fundamentals**
(Gerry Cornwell, Gerry Cornwell Lighting & Kyle Hemmi, CLEAResult)
Terminology and metrics
Lighting Codes & Standards
Overview of new technology options and opportunities

- High performance luminaires
- High performance T8/T5/T5HO
- LED strengths and weaknesses.

10:20am **Morning coffee break**

10:45am **Identifying Opportunities in Your Facilities**
(Gerry Cornwell, Gerry Cornwell Lighting & Kyle Hemmi, CLEAResult)

- Identifying and working with lighting professionals
- Collecting data and assessing opportunities
- Preparing saveONenergy applications
- Selecting and applying the best technologies and practices.

12:00pm **Lunch**

Afternoon agenda on the reverse



saveONenergyTM TRAINING & SUPPORT

Maximizing 2014: Lighting (LED) Workshop
May 27, 2014
International Centre
6900 Airport Road, Mississauga, Ontario

Afternoon Agenda

- 01:00pm Running the Numbers in Real-life Examples**
(Gerry Cornwell, Gerry Cornwell Lighting & Kyle Hemmi, CLEAResult)
Case Studies – best practices illustrating performance and economics
- Examples including downlights, highbay, controls, troffer, exterior
 - Application Questions.
-

- 02:00pm Preparing Your Lighting Project for a saveONenergy Application**
(Donald Chu, OPA)
- The new engineered worksheet
 - Useful tools and tips.
-

- 02:20pm Afternoon coffee break**
-

- 02:40pm Case Study: Lighting and LEDs in the Institutional Sector**
(Danielle Piluso, Niagara College Embedded Energy Manager)
Danielle will walk us through the project development and implementation.
-

- 03:00pm Case Study: Lighting and LEDs in the Industrial/Manufacturing Sector**
(Andrew Hejnar, 3M Company)
Andrew will walk us through the project development and implementation.
-

- 03:30pm Event closes & networking**

Morning agenda on the reverse

1 **BOMA INTERROGATORY #14**

2 **Issue 1.1** Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

3 **INTERROGATORY**

4 Reference: Ibid, Page 10: "The IESO will be responsible for evolving existing demand
5 response programs and introducing new initiatives".

6 14) Please provide a timetable for the steps required for the OPA to transfer the program
7 to IESO and stop supplying DR program.

8 **RESPONSE**

9 The OPA and IESO are working collaboratively to ensure a seamless transition of
10 demand response into the IESO market. The timeline for the transition can be found on
11 the IESO website at:

12 <http://www.ieso.ca/Documents/consult/drwg/drwg-20140403->
13 [PUB IESO DR Workplan.pdf](http://www.ieso.ca/Documents/consult/drwg/drwg-20140403-PUB_IESO_DR_Workplan.pdf).

BOMA INTERROGATORY #15

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

Reference: Ibid, Page 10: "The IESO will be responsible for evolving existing demand response programs and introducing new initiatives".

15) Please summarize the documented peak savings in each of 2011, 2012, and 2013, for existing DR programs, by program.

RESPONSE

The table below provides the 2011-2013 DR portfolio peak demand savings by program.

Initiative	2011	2012	2013*
Demand Response 2	69	56	56
Demand Response 3	315	367	350
peaksaver PLUS	11	53	99
peaksaver PLUS (small commercial)	-	-	1
Pre-2011 peaksaver Residential	100	41	48
Pre-2011 peaksaver Business	3	3	3

Savings Reported at Generator Level

**2013 savings data is preliminary and unverified*

BOMA INTERROGATORY #16

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

Reference: Ibid, Page 11

16) Please provide expenditure details on the \$483.4M 2014 conservation programs initiative by initiative, net of division fees. Please show comparable numbers for 2011, 2012, and 2013.

RESPONSE

The OPA believes that costs of conservation and generation programs are not in the scope of this rate application as they are not included in the OPA's operating fees budget.

While the information requested by BOMA is not within the of scope of this proceeding, the OPA has provided a link to further discussion on charges budgets to be helpful. These are available within the OPA's annual reports at www.powerauthority.on.ca. Please also see the response to BOMA Interrogatory 8, at Exhibit I, Tab 1, Schedule 2.08 for aggregate charges budgets from 2006-2014.

BOMA INTERROGATORY #17

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

Reference: Ibid, Page 11

17) Given the fact that conservation is stated to be the first resource used, please explain the order of magnitude difference between the conservation program budget and the generation program budget.

RESPONSE

The OPA believes that costs of conservation and generation programs are not in the scope of this rate application as they are not included in the OPA's operating fees budget.

While the information requested by BOMA is not within the of scope of this proceeding, the OPA offers the information in the following table to be helpful. The table below outlines the operating costs of the Conservation and Electricity Resources divisions for the 2011-2014 period.

Operating Expenses (\$'000)				
	2011 Actual	2012 Actual	2013 Actual	2014 Budget
Electricity Resources	12,125	11,978	13,185	15,028
Conservation	13,766	10,947	11,522	10,588

Costs for the Electricity Resources division are slightly higher for the following reasons:

- On average, approximately 10% more in staffing resources over the period
- Consolidation of marketing into the Communications division
- A change in the accounting treatment of the conservation fund from operating expenses to program spending
- External legal fees related to Electricity Resource matters are included in the Electricity Resources budget, whereas external legal fees for Conservation matters are included in the LARA budget

When adjusted for these reasons, there is no material difference between the core spending allocated to these two divisions.

BOMA INTERROGATORY #18

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

Reference: Ibid, Page 11

18) Please file the results of the 2013 analysis of Time of Use rates for the five distributors and indicate when the results for 2014 for all LDCs will be reported.

RESPONSE

The 2013 analysis of Time of Use ("TOU") rate impacts is available through the following link:

<http://powerauthority.on.ca/sites/default/files/conservation/Preliminary-Report-First-Year-Impact-Evaluation-of-Ontario-TOU-Rates.pdf>.

2014 TOU impact reports will be available as follows:

Report Title	Delivery Date
Impact Evaluation of Ontario's Time-of-Use Rates: Second Year Analysis	Q4 2014
Impact Evaluation of Ontario's Time-of-Use Rates: Final Province-Wide Results	Q4 2015

1 **BOMA INTERROGATORY #19**

2 **Issue 1.1** Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

3 **INTERROGATORY**

4 Reference: Ibid, Page 29

5 19) Please explain to what extent the OPA measures the results of each of its
6 conservation programs as part of its verification program or otherwise. To the extent
7 savings are not measured, how does the OPA judge the effectiveness of its
8 program? Please discuss, by program.

9 **RESPONSE**

10 Annually, the OPA measures the results of each program included within the CDM
11 portfolio. These evaluation projects are completed by third party evaluators in
12 accordance with the EM&V Protocols and Requirements. Results from these
13 evaluations, including a description of the methods used, are published annually and
14 can be found on the OPA website at:
15 [http://www.powerauthority.on.ca/evaluation-measurement-and-verification/evaluation-](http://www.powerauthority.on.ca/evaluation-measurement-and-verification/evaluation-reports)
16 [reports](http://www.powerauthority.on.ca/evaluation-measurement-and-verification/evaluation-reports).

BOMA INTERROGATORY #20

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

Reference: Ibid, Page 29

20) Please specify which of the LDC-delivered or OPA-delivered programs the savings are measured, and how.

RESPONSE

All program savings are verified annually in accordance with the EM&V Protocols and Requirements and the companion Measures and Assumptions List, which is updated annually. Results from program evaluations, including a description of the methods used, are published annually and can be found on the OPA website at:
<http://www.powerauthority.on.ca/evaluation-measurement-and-verification/evaluation-reports>.

Please see the response to BOMA Interrogatory 9, at Exhibit I, Tab 1, Schedule 2.09 for further information on the Measures and Assumptions List. The Measures and Assumptions List can be found at:
<http://www.powerauthority.on.ca/evaluation-measurement-and-verification/measures-assumptions-lists>.

BOMA INTERROGATORY #21

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

Reference: Ibid, Page 13

21) To what extent has the OPA used benchmarking in its programs; in which programs? Please discuss, by program. To what extent will this increase in 2015 and subsequent years? What milestones have the OPA established to measure the introduction of, and effectiveness of, additional benchmarking in its programs?

RESPONSE

The OPA has a number of pilots and other projects in market or in development that include benchmarks or benchmarking as a key component. The OPA supported the Race to Reduce (<http://racetoreduce.ca/>) and Green Light on a Better Environment (GLOBE) (<http://2014.globeseries.com/>) Utility Management for Social Housing pilots which used Portfolio Manager, a national benchmarking tool, to compare building performance.

Working with Loblaw's Inc., the OPA is testing a performance based program approach that pays for energy reductions below a defined benchmark. OPA staff has also worked with all levels of government to support the development and implementation of benchmarking tools and policies, including the launch of Portfolio Manager for Canadian buildings by Natural Resources Canada. Working collaboratively with LDCs, the OPA intends to expand on this work to advance the use of benchmarks to drive conservation action across Ontario.

As with all CDM programs, benchmarking initiatives will be assessed annually in accordance with the OPA EM&V Protocols and Policies to determine the impact as well as effectiveness. The EM&V process will also facilitate continuous improvement of the benchmarking initiatives.

BOMA INTERROGATORY #22

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

Reference: Ibid, Page 15

22) In how many of the designated regions for regional planning studies has the division been asked to participate? Why has it not been asked to participate in the others (and/or each regional plan study)? Is it participating in all the ongoing regional plan studies? If not, why not?

RESPONSE

BOMA has clarified the question to be:

(a) Please confirm that the conservation division is participating in several regional studies that are now underway, including Central Toronto, Kitchener-Waterloo, Cambridge-Guelph, Brant and North of Dryden, and if not, why not? What is the nature of the division's participation in each of the studies?

(b) Will the division participate in the regional planning studies for all of the eight regions, identified by the Board as Group 1 regions? If not, why not? Please discuss.

a) and b)

The Conservation division is participating in the regional planning studies that are underway, including those listed in the interrogatory. Per the OPA website, the 21 regions have been prioritized and the Conservation division is supporting the development of the conservation components of the Group 1 regional plans. Development includes the allocation of conservation targets to local areas and the identification of additional conservation opportunities. Active regional planning studies are underway at present in Toronto, GTA West (NWGTA), Burlington-Nanticoke (Brant) and NW Ontario. Planning and regulatory support has been and continues to be provided to other Group 1 regions as well (North, York, Ottawa, KWCG, and Windsor-Essex). Conservation assessments will be required in all Integrated Regional Resource Plans both current and future, and the Conservation division will participate as required.

BOMA INTERROGATORY #23

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

Reference: 2014 Milestones, Page 17 of 36: The second 2014 milestone states: "Exceeded energy savings forecasts through local distribution partners achieving their conservation targets".

23) What are the savings forecast(s) that have been made for 2014? To what extent have forecasts – province-wide, and by distributor, been achieved for each of 2011, 2012, and 2013?

RESPONSE

Distributors, on aggregate, were given a four-year cumulative energy savings target of 6,000 GWh and a four-year demand target of 1,330 MW. Province-wide distributors are on track to achieving their 6,000 GWh energy savings target, though they will likely fall short of their 1,330 MW peak demand target.

The Ontario Energy Board monitors progress towards distributor targets and publishes an annual report with results as follows:

Ontario Energy Board 2011 Results Report: Conservation and Demand Management Report – 2011 Results EB-2010-0215:
http://www.ontarioenergyboard.ca/oeb/Documents/EB-2010-0215/CDM_Summary_Report_2011_Results_20121220.pdf.

Ontario Energy Board 2012 Results Report: Conservation and Demand Management Report – 2012 Results EB-2010-0215:
http://www.ontarioenergyboard.ca/oeb/Documents/EB-2010-0215/CDM_Summary_Report-2012_Results_20131205.pdf.

BOMA INTERROGATORY #24

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

Reference: 2014 Milestones, Page 17 of 36: The second 2014 milestone states: "Exceeded energy savings forecasts through local distribution partners achieving their conservation targets".

24) Please provide more specific, concrete milestones, that target measurable progress towards making the conservation program more effective year over year.

RESPONSE

The OPA and LDCs have worked together to continuously improve programs based on EM&V results, research and feedback from the market. Since 2011, a significant number of changes have been made to programs through the change management process. These changes – demonstrated in Appendix 1 to this exhibit – were made to assist in the achievement of the 2014 targets.

In 2014, the focus is on the efficacy of program delivery, including:

- Working with six strategic channels to drive increased participation in programs
- Providing training and support to LDC staff to effectively deliver programs

In addition, the OPA has been piloting new program ideas and measures through the Conservation Fund to drive the efficacy and reach of Ontario's conservation efforts into the future.

1 **BOMA INTERROGATORY #25**

2 **Issue 1.1** Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

3 **INTERROGATORY**

4 Reference: Ibid: The third 2014 milestone states that: "ensure that regional and
5 provincial plans incorporate conservation and integrate land, natural gas, water, and
6 other resources".

7 25) Please discuss how the division will ensure that results of distributors and OPA
8 conservation programs, and third party conservation programs, are properly
9 accounted for in provincial and regional energy (wholesale) plans, and that these
10 "wholesale" forecasts reflect CDM "retail" results.

11 **RESPONSE**

12 The OPA reports annual conservation results each year. The annual report summarizes
13 the conservation initiatives including OPA-Contracted Province-Wide CDM Programs,
14 LDC programs, and estimates of non-OPA conservation initiatives. The reported
15 savings, both capacity and energy, and their persistence are incorporated into the
16 demand forecast and resource planning at the provincial and regional level. The end
17 use level savings are grossed up for transmission and/or distribution line losses.

BOMA INTERROGATORY #26

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

Reference: Exhibit B, Tab 1, Schedule 1, Appendix C, Page 20; 2010 LTEP (Page 40)

26) Results of 2012 conservation program showed Ontario progress in meeting conservation targets set out in the 2010 LTEP. For the years 2011 and 2012, the 2010 LTEP set a 2015 conservation target of 4,550 MW peak demand reduction and 13 Twh in savings (relative to 2010 levels). What are the results achieved for 2013, and the forecasted results for 2014? Please show the 2011, 2012 and 2013 results as a percentage of the 2015 target for both peak demand reduction and energy savings. Please make clear whether the annual results are incremental or cumulative, and if cumulative, what "persistence factors" are assumed.

RESPONSE

Progress Towards 2015 LTEP Target

Savings	2011	2012	2013*	2015 Target (per 2010 LTEP)
Net Annual Persisting Peak Demand Savings (MW)	1,163	1,161	1,487	4,550
Net Annual Persisting Energy Savings (GWh)	2,675	3,056	3,781	13,000
Peak Demand Savings as a % of 2015 Target	26%	26%	33%	-
Energy Savings as a % of 2015 Target	21%	24%	29%	-
<p><i>As prescribed by the LTEP, energy and demand numbers are reported as persisting savings at the generator level.</i></p> <p><i>2011 and 2012 results include savings from codes and standards as well as non-OPA funded programs. Non-OPA funded program savings include ancillary electricity savings generated by natural gas utility demand side management programs, federal and provincial government conservation programs as well as the impacts of third tranche LDC conservation programs.</i></p> <p><i>*2013 results are estimates. These estimates include persisting savings from non-OPA Funded Programs prior to 2013, however, do not include savings that may have been achieved from such programs in 2013. 2013 final verified savings results, inclusive of non-OPA program impacts from 2013, will be issued in Q4 2014.</i></p>				

Please see BOMA Interrogatory 23, at Exhibit I, Tab 1, Schedule 2.23 for forecasts of 2014 savings. These forecasts do not include the savings of non-OPA Funded Programs.

1 **BOMA INTERROGATORY #27**

2 **Issue 1.1** Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

3 **INTERROGATORY**

4 Reference: Ibid, Page 5

5 27) Can you provide a list of Conservation Fund new projects funded in 2013, with a
6 description of each of the ten projects and the funds allocated to each project in
7 2013 and thereafter?

8 **RESPONSE**

9 BOMA has clarified that the reference is Exhibit B-1-1, Appendix C, page 8 of 28.

10 The Conservation Fund website provides a listing of all contracted projects from 2005-
11 2013. Case studies of select projects can also be found on the Conservation Fund
12 website. Please refer to: <http://powerauthority.on.ca/cfund/funded-projects> and
13 <http://powerauthority.on.ca/cfund/case-studies>, respectively.

BOMA INTERROGATORY #28

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

Reference: Ibid, Page 5

28) Provide a list of the projects initiated since 2011, and for each one:

- (a) description of each project;
- (b) OPA funds paid; and
- (c) third party funds leveraged.

RESPONSE

BOMA has clarified that the reference is Exhibit B-1-1, Appendix C, page 8 of 28.

The Conservation Fund website provides a listing of all contracted projects from 2005-2013. Please refer to: <http://powerauthority.on.ca/cfund/funded-projects>.

BOMA INTERROGATORY #29

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

Reference: Ibid, Page 5

29) Describe each of the two fast-track pilots the OPA has sponsored. What are the costs to date for OPA; for the distributor?

RESPONSE

BOMA has clarified that the reference is Exhibit B-1-1, page 9.

As discussed in Exhibit B-1-1, to date, two LDC Program Innovation Stream pilots have been approved and launched, which are outlined in the table below. The OPA fully funds LDC Program Innovation Stream pilots.

LDC	Program Description	Pilot Budget
Toronto Hydro	<p>Determining the Impact of Demand Response in the Multi-Unit Residential Building Sector</p> <p>To test the effectiveness of demand response and whole building energy efficiency in multi-unit residential buildings. The pilot will incorporate the following:</p> <ul style="list-style-type: none"> • Demand Response – control of suite and common area cooling loads aligned with the peaksaverPLUS activation rules • Energy Efficiency – leveraging of installed demand response equipment for energy efficiency and the promotion of a holistic approach to energy efficiency by requiring audits of lighting and hydronic systems 	\$606,000
Toronto Hydro	<p>Commercial Energy Management and Load Control (CEMLC) to Determine the Impact of Demand Response in the 50-250kW Commercial Sector</p> <p>The pilot will include the installation of load control devices (PSTATs) targeting rooftop cooling units, that will permit load reduction during peaksaverPLUS activation periods. In addition, the PSTATs will be used to institute temperature setbacks during unoccupied periods for energy savings and will provide energy usage information to the building owner. The initiative will focus on energy management for the building in combination with demand response capabilities.</p>	\$543,900

1 **BOMA INTERROGATORY #30**

2 **Issue 1.1** Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

3 **INTERROGATORY**

4 Reference: Ibid, Page 5

5 30) Please provide a copy of the primer on community energy planning in Ontario.

6 **RESPONSE**

7 A copy of the primer, entitled "Advancing Integrated Community Energy Planning in
8 Ontario: A Primer" is available on Quality Urban Energy Systems of Tomorrow's
9 (QUEST) website: <http://questcanada.org/primer>.

1 **BOMA INTERROGATORY #31**

2 **Issue 1.1** Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

3 **INTERROGATORY**

4 Reference: Ibid, Page 7. OPA's 2013 IESO report.

5 31) Please provide copies of the draft plans for north of Dryden and Remote
6 Communities or a reference to obtain these from the OPA's website.

7 **RESPONSE**

8 BOMA has clarified that the reference is the OPA's 2013 report.

9 The draft plans referenced in this Interrogatory can be found on the OPA's website at:
10 <http://powerauthority.on.ca/power-planning/regional-planning/northwest-ontario>.

BOMA INTERROGATORY #32

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

Reference: Exhibit A, Tab 2, Schedule 1, Page 4 of 40: Highlights of the 2014-2016 Business Plan states: "the 2014 operating plan incorporates learnings from the 2012 merger process with the Independent Electricity System Operator, for example, reorganization of the marketing function".

32) Please explain what the reorganization of the conservation marketing function entails, and the reasons for doing so. How do those reasons come from the 2012 merger process with the IESO?

RESPONSE

Insight gained during the merger process, as well as through independent review, identified that the reorganization of the Conservation Marketing function could result in operational efficiencies. As a result, the OPA integrated the function into the OPA's existing Marketing function within the Communications division.

Specifically, the move allowed for more efficient deployment of staff to address all marketing and communications needs of the organization. The move also facilitated a tighter integration of conservation marketing programs with the OPA's overall social media and digital strategy.

BOMA INTERROGATORY #33

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

Reference: Business Plan, Page 12. The Plan states: "By the end of 2016, the OPA will have reached the following milestones...partners fully accountable for conservation transactions, while the OPA maintains relationships, evaluates new programs and offers a broad set of information-based tools to its partners".

33) Please discuss what is meant by the reference to its partners being fully accountable for conservation transactions.

RESPONSE

This statement is a reflection of the OPA's evolving conservation business model. In this model, LDCs and other partners have primary ownership of the conservation sales relationship with the customers as well as an increased role in program design. The role of the OPA is to identify the need and opportunities for conservation in the province, provide central services including analysis of data to strengthen information and tools available to the conservation supply chain, and incorporate feedback from customers. This model is currently being implemented, and will be further developed under the new Conservation First Framework.

BOMA INTERROGATORY #34

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

Reference: Business Plan, Page 12. The Plan states: "By the end of 2016, the OPA will have reached the following milestones...partners fully accountable for conservation transactions, while the OPA maintains relationships, evaluates new programs and offers a broad set of information-based tools to its partners".

34) Compare this state to the current situation.

RESPONSE

Please see the response to BOMA Interrogatory 33, at Exhibit I, Tab 1, Schedule 2.33.

1 **BOMA INTERROGATORY #35**

2 **Issue 1.1** Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

3 **INTERROGATORY**

4 Reference: Business Plan, Page 12. The Plan states: "By the end of 2016, the OPA will
5 have reached the following milestones...partners fully accountable for conservation
6 transactions, while the OPA maintains relationships, evaluates new programs and offers
7 a broad set of information-based tools to its partners".

8 35) Why does this transition take a further two and one-half years? Please explain fully.

9 **RESPONSE**

10 Please see response to BOMA Interrogatory 33, at Exhibit I, Tab 1, Schedule 2.33 for
11 further details on the scope and activities associated with the transition. The statement
12 "By the end of 2016..." is a reflection of the three-year time horizon of the OPA's 2014-
13 2016 Business Plan. The OPA will continue to strive to complete this transition within
14 the shortest possible timeframe.

BOMA INTERROGATORY #36

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

Issue 2.1 Is the Operating Budget of \$5,749 thousand allocated to Goal 2 reasonable?

INTERROGATORY

36) Please discuss the degree to which CDM measures are integrated into the electricity planning activity for the eight regional plans currently underway.

RESPONSE

As required by the Regional Planning Process established by the OEB, integrated plans are required to examine conservation, generation (including DG), and infrastructure (transmission and distribution) options. Conservation and demand management is an integrated component of the Integrated Regional Resource Planning process. Existing and planned conservation achievement is considered in the demand forecast and needs analysis. Incremental CDM is considered as a potential option to meet the near-term and longer-term needs.

CME INTERROGATORY #1

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

Issue 2.1 Is the Operating Budget of \$5,749 thousand allocated to Goal 2 reasonable?

Issue 3.1 Is the Operating Budget of \$15,028 thousand allocated to Goal 3 reasonable?

Issue 4.1 Is the Operating Budget of \$24,778 thousand allocated to Goal 4 reasonable?

Issue 5.1 Is the Operating Budget of \$4,389 thousand allocated to Goal 5 reasonable?

INTERROGATORY

Ref: 2014-2016 Business Plan (the "Business Plan"), Exhibit A-2-1., the OPA 2011 Annual Report, Exhibit A, Tab 3, Tab 1; Exhibit B, Tabs 1, 2, 3, 4 and 5

Issues 1.1, 2.1, 3.1, 4.1 and 5.1

CME 1

CME wishes to better understand how the OPA identifies its resource requirements and deploys those resources to achieve its strategic objectives. Specifically, CME wishes to have further information about the actual costs incurred with respect to conservation, power system planning, electricity resources, corporate support and communications (hereinafter collectively referred to as the "five goals"). For each of these five goals, please provide a table which sets out the following information:

- (a) In column 1, each of the years 2009 through to 2014, please list each of the functions and initiatives the OPA performed. Please use actuals for 2009 through to 2013, and plans to perform in the budget year.
- (b) In column 2, please set out the "internal resources" by showing the FTEs and costs that have been allocated to each of the functions and initiatives listed in column 1 for internal resources used in the historic years and the budget year.
- (c) In column 3, please set out the "external resources" by showing for each function and initiative described in column 1 where external resources were utilized, the nature of the external resources used and the costs thereof.
- (d) In a fourth column, to be entitled "program spending", list each of the programs and the related charge-funded activities for each of the strategic objectives pertaining to the five goals.

1 RESPONSE

2 The OPA develops its budget in support of its business plan goals. Each goal is led by
3 one of the OPA's divisions, with shared support across the divisions.

4 The OPA has given careful consideration to the Board's decision on July 8, 2011 in
5 EB-2010-0279 which expected the OPA to assess the actual costs of individual
6 initiatives. The OPA believes that budgeting by business goal and functional area
7 (director) is a reasonable and cost/resource-efficient proxy.

8 For detailed 2014 budgeted costs and FTEs by functional area (by director) please refer
9 to BOMA Interrogatory 58, at Exhibit I, Tab 6, Schedule 2.58.

10 Please see table below for the response to parts a), b), c) and d) of the Interrogatory.

[illegible]

CME INTERROGATORY #3

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

Issue 2.1 Is the Operating Budget of \$5,749 thousand allocated to Goal 2 reasonable?

Issue 3.1 Is the Operating Budget of \$15,028 thousand allocated to Goal 3 reasonable?

Issue 4.1 Is the Operating Budget of \$24,577 thousand allocated to Goal 4 reasonable?

Issue 5.1 Is the Operating Budget of \$4,389 thousand allocated to Goal 5 reasonable?

INTERROGATORY

Ref: Exhibit A, Tab 1, Schedule 1; 2014-2016 Business Plan, Exhibit A-2-1

Issues 1.1, 2.1, 3.1, 4.1 and 5.1

CME 3

Paragraph 1 of the Submission for Review (Exhibit A, Tab 1, Schedule 1, page 1 of 3), confirms that the OPA has submitted its 2014 to 2016 Business Plan to the Minister of Energy (the "Minister"). Did the OPA make any adjustments to its Business Plan as a result of the review by the Minister prior to receiving ministerial approval? If so, please set out all of the changes made to the OPA Business Plan after initial submission to the Minister, but before ministerial approval.

RESPONSE

In response to the government's commitment to further expenditure and staffing restraints across its various agencies, the OPA was directed to review its 2014 operating budget for additional efficiencies and reductions. Please see the Minister's letter dated October 22, 2013 filed as Attachment 1 to SEC Interrogatory 1, at Exhibit I, Tab 1, Schedule 4.01.

The table below provides the reductions that were made to the initial 2014 budget:

(\$ million)	2014	2014	2014
	Original Budget	Revised Budget	Variance
EXPENSES			
Compensation & Benefits	33.3	31.0	(2.3)
Professional & Consulting Fees	16.5	17.0	0.5
Operating & Administration	12.4	12.0	(0.4)
Conservation Funds	0.6	0.3	(0.3)
Total Operating expenses	\$62.8	\$60.3	\$(2.5)

1
2 The 2014 revised operating budget reflects:

- 3 • Operating expenses of \$60.3 million, a reduction of \$2.5 million from the
4 business plan submission of October 1, 2013.
- 5 • This represents a decline in the operating budget of nearly 6% from the 2011
6 budget as submitted to the OEB, and flat relative to OPA spending for 2013.
- 7 • Reduction was achieved via a combination of headcount decreases and
8 administrative efficiencies as well as some increase to professional and
9 consulting fees due to the expected greater use of third party service providers
10 instead of internal resources
- 11 • Reduced headcount while implementing program priorities and meeting
12 adequate service levels within an expanding mandate and increasing volume and
13 complexity.

CME INTERROGATORY #4

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

Ref: Exhibit B, Tab 1, Schedule 1

Issue 1.1

CME 4

At page 8 of 36 of Exhibit B, Tab 1, Schedule 1, the OPA confirms that it manages contracts with 76 LDCs for the delivery of LDC delivered programs. CME understands that the OPA's management activities include audits of the LDC expenditure of program administration budget provided as part of the contract, quality assurance audits for program delivery and audits of third party service providers serving LDCs. OPA states in the evidence that those audits to date have demonstrated compliance. CME wishes to better understand this audit process. Please provide the following information:

(a) How many of the 76 LDCs have been subject to:

(i) Audits of the LDC expenditure of the program administrative budget provided as part of the contract?

(ii) Quality assurance audits for program delivery and project applications? and

(iii) Audits of third party service providers serving LDCs?

(b) Have any of the audits conducted identified shortcomings in the LDC expenditure of the program administrative budget, of quality assurance, or of the services of third party providers serving LDCs? If so, please provide the details of the shortcomings as well as a summary of the recommendations arising out of the audit and steps that have been taken to implement those recommendations.

(c) Are the audits conducted internally by OPA or by external auditors? If they are conducted by external auditors, please identify the identity of those auditors.

(d) Please provide copies of all of the written audits.

RESPONSE

(a) In total, the OPA is currently engaged in four separate vendor assurance projects to assess LDC-related CDM activity. Combined, these four projects, listed below, are being used to ensure the ongoing effective operation of CDM initiatives in Ontario.

1. Quality Assurance Inspections: to ensure LDCs continue to administer their CDM portfolio of programs in accordance with the CDM Master Agreement. This project is also used to assess CDM project activity carried out by third parties. Specifically, this project assesses, amongst other functional responsibilities, that third parties have correctly determined participant eligibility, calculated the correct level of participant incentive, have not submitted duplicative incentive claims for the same project, etc.
2. Home Assistance Program Review: to ensure third-party delivery agents are delivering the initiative in compliance with contractual requirements and to assess the level of participant satisfaction with provided services.
3. Small Business Lighting (SBL) - Third-Party Service Provider Audit: to ensure the service provider, contracted to oversee the processing of SBL incentive claims, continues to maintain an appropriate process.
4. Heating and Cooling Incentive (HCI) - Third-Party Service Provider Audit: to ensure the service provider, contracted to oversee the processing of HCI incentive claims, continues to maintain an appropriate process.

In addition to the above, the OPA intends to implement one additional audit in 2014. This project is a Decommissioning Process Assessment, which will assess participants in various CDM retrofit initiatives to determine their level of compliance with required equipment decommissioning processes.

(i) and (ii) Please see the response to Board Staff Interrogatory 4, at Exhibit I, Tab 1, Schedule 1.04.

(iii) As described above, the five listed audits currently underway, or to be initiated, target, in whole or in part, third party service providers.

(b) Please see the response to Board Staff Interrogatory 4.

(c) The table below demonstrates the party responsible for the audits and services.

Audit Project	Service Provider
Quality Assurance Inspections	Bronson Consulting Inc.
Home Assistance Program Review	Bronson Consulting Inc.
Small Business Lighting: Third-Party Service Provider Audit	A vendor has been selected; however, a contract is yet to be signed. Note: Bronson is not the auditor
Heating and Cooling Incentive: Third-Party Service Provider Audit	A vendor has been selected; however, a contract is yet to be signed. Note: Bronson is not the auditor
Decommissioning Process Assessment	RFP to be posted Q3 2014

(d) Given their scope, and the nature of the LDC information contained within, audit reports are considered to be confidential and as such will not be provided. Please refer to Board Staff Interrogatory 4 for a description of how the OPA responds to results of the audits.

CME INTERROGATORY #5

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

Issue 2.1 Is the Operating Budget of \$5,749 thousand allocated to Goal 2 reasonable?

Issue 3.1 Is the Operating Budget of \$15,028 thousand allocated to Goal 3 reasonable?

Issue 4.1 Is the Operating Budget of \$24,577 thousand allocated to Goal 4 reasonable?

Issue 5.1 Is the Operating Budget of \$4,389 thousand allocated to Goal 5 reasonable?

INTERROGATORY

Ref: Submission for Review, Exhibit A, Tab 1, Schedule 1, Page 1 of 3

Issues 1.1, 2.1, 3.1, 4.1 and 5.1

CME 5

OPA has requested a revenue requirement of \$60.3 million based on its operating budget. CME wishes to better understand how the OPA developed its 2014 operating budget. Please provide the following information:

(a) Does the OPA have a written budget planning process which codifies the roles and responsibilities of both operation and personnel who conduct budgeting determinations as well as the executive or management personnel that review the overall budgets? If yes, please produce a copy of that document. If not, why not?

(b) Was any written direction given from the Minister, the OPA's Board of Directors or by OPA senior management on the manner in which the budget process should be undertaken? If so, please provide copies of any written direction on the budget process. If not, please provide an explanation of the OPA's budget process.

(c) Please set out how the operating budget for each of the five goals is allocated among the various strategic initiatives. If the OPA is not able to provide details on the allocations of its budget for each goal by initiatives, please provide an explanation as to why it is not able to break out the operating budget for each goal into the various initiatives.

(d) Please provide a description of the methods that are applied by the OPA, on an initiative-by-initiative basis, to prepare and monitor the external and internal budgets that, in combination, produce the \$60.3 million requested revenue requirement.

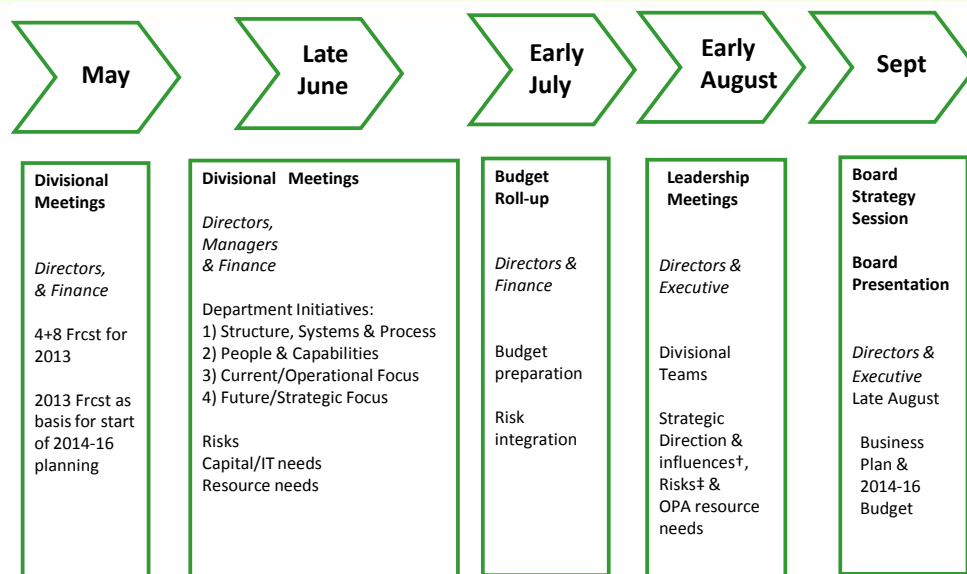
RESPONSE

a) The OPA has an annual business planning process, including quarterly forecast updates, with supporting written documentation. The OPA has experienced some

variability in its business planning processes in the 2011-2014 period due to external factors such as changes in government, 2012 merger planning with the IESO, and variable timing in Ministry of Energy feedback or budget approval. As a result, the organization has streamlined its process and now relies on a Business Plan Roadmap (see tables following) that addresses the key processes, duties, responsibilities, accountabilities, and reporting structure for the budgeting, re-forecasting and reporting processes. These processes include:

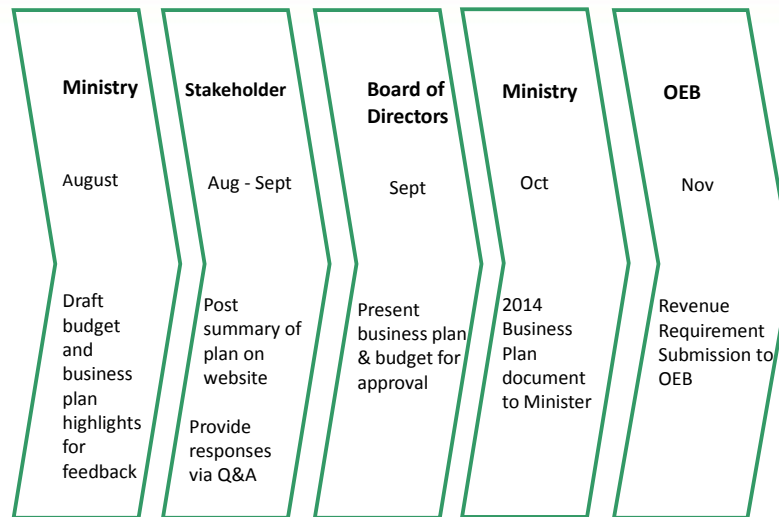
- Budget initiation process;
- Target/metric setting;
- Budget adjustment procedures;
- Divisional Director contribution process;
- Budget discussion and reviews;
- Budget consolidation between divisions;
- Approval process – from divisional level to Executive team;
- Schedules and deadlines;
- Re-forecasting procedures and communication with the Ministry of Energy;
- Mandatory reporting requirements; and
- Monthly/quarterly internal reporting procedures.

2014-2016 Business Plan Process



†Directors to identify what the 'theme' is for their group in the planning period
‡ Directors to outline risk mitigation options

2014-2016 Business Plan Process - Next Steps



- b) During the 2014-2016 business planning process, written direction was provided by the Minister's letter dated October 22, 2013, focusing particularly on management of staffing levels.
- c) The OPA has given careful consideration to the Board's decision on July 8, 2011 in EB-2010-0279 which expected the OPA to assess the actual costs of individual initiatives. The OPA believes that budgeting by business goal and functional area (director), as articulated below, is a reasonable and cost/resource-efficient proxy.

Each of the OPA's 5 business plan goals is led by one of OPA's divisions as its primary owner, with shared ownership across divisions for support function goals. Each division in turn has a number of functional areas, each led by a Director and his/her team, that correspond to the various strategic directives and are accountable for delivering the same. The operating budget is built in a bottom-up fashion, consolidating Director-level inputs for the relevant strategic initiatives into divisional budgets for each goal (see also discussion in d) below).
- d) During the budget preparation process, the OPA prioritizes initiatives and directives based on the outcome of budget discussion meetings held between the Financial

1 Planning & Analysis ("FP&A") team and Senior Management. Some directives have
2 overlapping timing of deliverables and span across divisions, so prioritization is not
3 possible in all cases. Divisional Directors are responsible for working with the FP&A
4 team to prepare their division's annual budgets. Once the divisional level budgets
5 are completed, the FP&A team creates a consolidated budget which is then
6 presented to the OPA's Senior Management (VPs of each division). During this
7 meeting, divisional budget figures are challenged, amended or reduced and some
8 projects/initiatives may be revised or eliminated.

9 Decisions to reduce budget amounts or eliminate initiatives are made after
10 discussing the project/initiative in the context of the OPA's strategic goals and
11 current or expected directives from the Ministry of Energy.

12 Changes and amendments are affected by divisional Directors after which the
13 budget is finalized and presented for the Board of Director's approval.

14 OPA's quarterly forecast processes include initiative-based narrative in support of
15 assumptions and changes in priorities, as well as development of Risks and
16 Opportunities lists that quantify emerging changes to OPA's business plan on a
17 quarterly basis.

CME INTERROGATORY #6

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

Ref: Exhibit B, Tab 1, Schedule 1

Issue 1.1

CME 6

CME wishes to better understand the steps that the OPA takes to ensure that LDC proposed CDM programs are not duplicative of OPA province-wide CDM programs. In this regard, please provide a fulsome description of the manner in which the OPA evaluates the extent to which LDC proposed CDM programs are duplicative of OPA province-wide CDM programs. Since 2010, has the OPA identified any LDC proposed CDM programs that are duplicative of OPA province-wide programs? If yes, please provide details of those duplicative CDM programs and set out the steps which the OPA has taken to address such an issue.

RESPONSE

Since 2010, four LDCs - Hydro One Networks Inc., Hydro One Brampton Networks Inc., Toronto Hydro, and PowerStream - have submitted applications to the OPA for the purposes of gaining support for a proposed CDM program prior to their submission to the OEB for approval.

The OEB combined the review of the two Hydro One applications, and the OPA provided a letter that was supportive of the applicants moving forward with the implementation of the six proposed CDM programs, subject to certain listed conditions. The letter showing support for the six proposed Board-approved CDM programs is attached as Appendix 1 to this exhibit.

Of the nine programs proposed by Toronto Hydro in 2011, the OPA provided a response by way of a letter saying that five were not duplicative. The remaining four proposed programs were deemed duplicative by the OPA.

The letter demonstrating OPA's response to Toronto Hydro's submission is provided as Appendix 2 to this exhibit.

PowerStream submitted one proposal in 2013. The OPA provided a letter regarding duplication that concluded that the OPA was uncertain as to whether or not the proposed program represented a duplication of the province-wide initiatives.

1 The letter demonstrating OPA's response to Powerstream's submission is provided as
2 Appendix 3 to this exhibit.

3 In reviewing an LDC program for duplication, the OPA is guided by section 2.3.3 of the
4 "Conservation and Demand Management Code for Electricity Distributors" issued by the
5 Ontario Energy Board and section 4 of the "Guidelines for Electricity Distributor
6 Conservation and Demand Management". The OPA evaluation involves a review of the
7 proposed program and a comparison against the existing portfolio.



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January 26, 2011

Rick Stevens
VP Asset Management, Hydro One
483 Bay Street
Toronto ON
M5G 2P5

Dear Mr. Stevens,

RE: Hydro One Networks Inc. and Hydro One Brampton Networks Inc. Board-Approved CDM Program Applications – Board file number EB-2010-0332 and EB-2010-0331

On behalf of the OPA, especially all of our staff in the Conservation Division, I would like to personally thank you and your conservation staff for your support over the past 14 months as we have worked together to design and launch the new suite of OPA-Contracted Province-Wide Conservation Programs. The OPA has greatly appreciated the active role which HONI has taken in the design process, through your participation on all seven of the OPA-LDC Working Groups, including chairing the OPA-LDC Residential and Small Commercial Demand Response Working Group. The collaboration between LDCs, including HONI, and the OPA was a critical factor in developing programs which we believe will stand among the 'best in class'.

Based on recent discussion regarding your Board-approved CDM Program Applications, I am writing this letter to state that the OPA is supportive of innovative CDM initiatives that foster a culture of conservation in Ontario. The OPA supports the efforts of Hydro One Networks Inc. and Hydro One Brampton Networks Inc. (the "Applicants") to promote Ontario as a leader in conservation and demand management. CDM initiatives, including potential OEB-Approved programs that are incremental and complementary to OPA-Contracted Province-Wide Programs ("Province-Wide Programs"), would increase Ontario's overall CDM results and provide added opportunities for learning and informing the development of future programs for Ontario.

The OPA has reviewed the Applicants' evidence related to the six proposed CDM programs that have been submitted to the OEB for approval. The six programs are:

- Community Education
- Neighbourhood Benchmarking
- Monitoring and Targeting
- Small Commercial Energy Management and Load Control
- Municipal and Hospital Energy Efficiency Performance
- Double Returns Plus

Ontario Power Authority

The OPA understands that the Applicants intend to deliver these proposed Board-Approved programs in a way that is incremental and complementary to the Province-Wide Programs. The OPA has reviewed the Applicants' description of the Province-Wide Programs in Exhibit C-1-1. That description is generally consistent with key elements of the program designs, the details of which have continued to evolve. Further and more precise information regarding these program designs will be available when the Master Agreement and its associated schedules for the Province-Wide Programs are finalized. The Master Agreement, Consumer Program Schedules and some Commercial Program schedules will be made available to LDCs on January 26th. The remaining Commercial Program schedules and Industrial Program schedules will be made available to LDCs by the end of February, 2011. The OPA expects to make summaries of the Province-Wide Program designs available to the public shortly thereafter.

The OPA is supportive of the Applicants moving forward with the implementation of the proposed Board-Approved programs subject to the following conditions:

- that the OPA may transition these programs to Province-Wide Programs sometime in the future;
- that events under the Community Education program will not use funds available through the Province-Wide Consumer Program;
- with respect to the Applicants' proposed Small Commercial Energy Management and Load Control program ("SCEMLC"),
 - that this program may be adopted under the Province-Wide Programs at a future date;
 - that the Applicants will continue to work with the OPA on coordinating the delivery of this proposed program with the Province-Wide Programs;
- with respect to the Applicants proposed Municipal and Hospital Energy Efficiency Performance program,
 - that institutional customers that are seeking a project-based approach to retrofits would be channeled towards the Electricity Retrofit Incentive Initiative and Commissioning Initiative under the Province-Wide Commercial Program; and
 - that participants will be allowed to participate in only one of the Province-Wide Program or the proposed Board-Approved Program.

The OPA believes that the experience gained by the Applicants in implementing these programs now can contribute to the continuous improvement of OPA-Contracted Province-Wide Programs.

The OPA also confirms that the projected provincial savings from the OPA-Contracted Province-Wide programs are less than the provincial aggregate LDC target. The OPA-Contracted Province-Wide Programs are forecasted to achieve more than 1,000 MW of peak demand reduction and more than 5,400 GWh of reduced electricity consumption accumulated over the four-year period, representing about 78 percent of the total peak and 91 percent of the provincial aggregate LDC CDM Target established for all distributors in accordance with the Minister's March 31, 2010 directive to the Board (1,330 MW peak and 6,000 GWh energy savings).

Sincerely,



Andrew Pride
Vice President, Conservation Division



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April 21, 2011

Via Mail and Email: ctyrrell@torontohydro.com

Toronto Hydro
14 Carlton Street, 4th Floor
Toronto, Ontario, M5B 1K5

Attention: Chris Tyrrell, VP of Customer Care and Chief Conservation Officer

Dear Mr. Tyrrell:

**RE: Toronto Hydro-Electric System Limited's ("THESL")
Board-Approved CDM Program Application – Board file number EB-2011-0011**

On behalf of the OPA, I would like to personally thank you and your conservation staff for your support over the past 14 months as we have worked together to design and launch the new suite of OPA-Contracted Province-Wide Conservation Programs ("Province-Wide Programs"). The collaboration between LDCs, including Toronto Hydro, and the OPA was a critical factor in developing programs which we believe will stand among the 'best-in-class'.

Based on recent discussions, I am writing this letter to state that the OPA is supportive of innovative conservation and demand management (CDM) initiatives that foster a culture of conservation in Ontario. The OPA supports the efforts of Toronto Hydro to promote Ontario as a leader in CDM. CDM initiatives, including potential OEB-Approved programs, will increase Ontario's overall CDM results and provide added opportunities for learning and informing the development of future programs for Ontario.

The OPA has reviewed Toronto Hydro's evidence related to nine proposed CDM programs that have been submitted to the OEB for approval. The nine programs under review are:

1. Greening Greater Toronto Commercial Building Energy Initiative
2. Business Outreach and Education
3. In Store Engagement and Education
4. Community Outreach and Education Initiative
5. Commercial, Institutional and Small Industrial Monitoring and Targeting
6. Flat Rate Water Heater Conversion and Demand Response
7. Multi-Unit Residential Demand Response
8. Hydronic System Balancing
9. Commercial Energy Management and Load Control

The OPA is of the opinion that programs 1 – 4 above are payable through the existing Program Administration Budget provided under the Province-Wide Programs.

The OPA is of the opinion that the remaining five programs (programs 5 - 9 listed above) proposed by Toronto Hydro are not duplicative, based on the following reasons and the conditions which have been agreed to by Toronto Hydro:

- Toronto Hydro will for all 5 programs: deliver the programs in a way that enhances the overall effectiveness of the Province-Wide Programs; work with the OPA to adopt these programs, where cost effective, into Province-Wide Programs; and align its program delivery, including harmonizing dispatch, with the Province-Wide Programs.
- **Commercial, Institutional and Small Industrial Monitoring and Targeting:** Monitoring and targeting is not currently offered to the commercial, institutional and small industrial markets.
- **Flat Rate Water Heater Conversion and Demand Response:** This program includes two bundled components: 1) flat rate water heater conversion and 2) **peaksaver®**. Flat rate water heater conversion is not a product or service currently offered to customers in the Province-Wide Programs. Toronto Hydro has agreed to subtract the funding related to the **peaksaver** component of the proposed program from their application. This will allow Toronto Hydro to pursue the program resulting in energy savings from the changed billing method, as well as bringing new devices into the Province-Wide **peaksaver** initiative that would not otherwise have been available.
- **Multi-Unit Residential Demand Response (MURB DR):** MURB DR is unique and focused on high-density applications. This program integrates the concepts of **peaksaver** and commercial demand response into a single program.
- **Hydronic System Balancing:** This program targets a niche opportunity within the multi-unit residential building (MURB) market that is not currently targeted in the Equipment Replacement Incentive Initiative (ERII). The work done by Toronto Hydro on this proposed program could allow the OPA to introduce a new engineered worksheet to the ERII at a future date, and Toronto Hydro has agreed to work closely with the OPA to develop such a worksheet. The development of this worksheet could facilitate increased participation of the MURB sector in the Province-Wide program.
- **Commercial Energy Management and Load Control (CEMLC):** The small commercial market demand response and load control program is planned for a future iteration of the Province-Wide Programs. It would be beneficial to the development of the new initiative to have Toronto Hydro proceed with the CEMLC to test program design concepts.

The OPA believes that the experience gained by Toronto Hydro in implementing these programs now can contribute to the continuous improvement of OPA-Contracted Province-Wide Programs.

Yours truly,

Original signed by Julia McNally on behalf of

Andrew Pride
Vice President, Conservation Division



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March 4, 2013

Via Mail and Email:

Milan Bolkovic
PowerStream
161 Cityview Blvd.
Vaughan, ON, L4H 0A9

Dear Mr. Bolkovic:

On behalf of the OPA, I would like to thank you and your conservation staff for your effort and commitment as we have worked together to implement the suite of OPA-Contracted Province-Wide CDM programs ("Province-Wide Programs"). The collaboration between LDCs, including PowerStream, and the OPA has been a critical factor in achieving savings with an average cost of 3¢/kWh. The strength of our partnership is an important factor in setting us on the path to exceed the energy saving targets mandated by the OEB.

In your letter dated January 31, 2013, you requested that the OPA provide an analysis of whether the proposed Board-Approved CDM program ("Board-Approved Program") is duplicative of Province-Wide Programs. This letter provides that analysis. This letter includes a description of PowerStream's proposed Board-Approved Program, a summary of relevant Province-Wide Programs, and an analysis of potential duplication.

Proposed PowerStream Board-Approved Program

PowerStream has applied to the Ontario Energy Board ("the Board") for approval of a small commercial refrigeration direct installation program. This program would target opportunities in commercial facilities with product refrigeration, such as grocers, convenience stores and restaurants. These small businesses are electricity-intensive, and refrigeration typically accounts for approximately two-thirds of their total consumption. The goal of the program is to reduce refrigeration load in freezers and coolers. The proposed products and services are direct installation of controls and curtains, LED lights in display cases, cleaning of condenser coils, and ECM fan motors. The incentive offered to the customer is 100% coverage of the cost of the audit and installation of measures, plus 100% coverage of the cost of the measures up to a cap of \$2,500. Customers would have non-residential, general service accounts with an average demand of less than 250 kW.

OPA-Contracted Province-Wide CDM Programs

The Province-Wide portfolio includes four programs: residential, commercial & institutional, industrial and low-income. Each of these programs includes a number of initiatives. The program most relevant to PowerStream's application is the commercial & institutional ("C&I") program.

The C&I program includes nine initiatives, four of which are relevant to the customers targeted by PowerStream:

- Small Business Lighting provides free installation of up to \$1,500 in lighting-related conservation measures for general-service customers with an average demand of <50kW.
- Equipment Replacement Incentive Initiative (ERII) provides incentives for prescriptive, engineered and custom program measures. Incentives are calculated for each measure on the prescriptive or engineered lists. Incentives for custom measures are based on the electricity and/or demand savings. In no case can the incentive exceed 50% of the total project costs. Customers are responsible for installation and, in the case of custom projects, M&V plans.
- Existing Building Commissioning provides incentives for chilled water systems older than 3 years old that cool areas more than 50,000 ft², have not been refurbished or retrofitted within the last 3 years, and are not scheduled for replacement within the next two years. The project requires a certified Commissioning Agent and customers must be GS > 50 kW.
- Audit Funding provides funding for an audit and analysis of a building's energy consumption. The incentive amount is calculated on a per square foot basis, or a maximum of 50% of the total costs.

Analysis

The Board's Conservation and Demand Management Code for Electricity Distributors ("CDM Code") states in section 2.3.3 that a Board-Approved Program will not be approved if it duplicates a Province-wide program. Duplication is further defined in sub-sections (a) through (e). The Board's provides additional direction in section 4 of the Guidelines for Electricity Distributor Conservation and Demand Management ("Conservation Guidelines").

The OPA is of the opinion that the question of duplication with respect to the proposed program does not have a clear answer.

Incentives for the products and services offered in the proposed PowerStream program could be accessed through the ERII initiative, mainly as custom measures. PowerStream's program provides a different incentive level and marketing approach compared to ERII for the same products. Based on section 2.3.3 (a) and (d) of the CDM Code, this could be considered a duplication.

However, according to section 4 of the Conservation Guidelines, non-duplicative programs may include market-specific considerations which would require novel approaches. According to

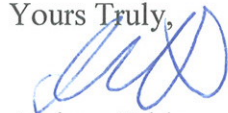
PowerStream its small commercial customers are under-represented in the ERII program, particularly for refrigeration measures. While ERII has penetrated approximately 14% of PowerStream's General Service (GS) >50kW accounts, less than 1% of GS <50kW customers have participated in ERII. Of all PowerStream ERII participants, only 2% have included refrigeration measures. The low participation of small commercial customers in ERII may be a result of barriers including lack of time, expertise and capital for energy efficiency upgrades. A full service direct install approach is one approach for overcoming such barriers.

The OPA sees potential for rolling out this program province wide. The OPA fully supports PowerStream leading the way in implementing this program and looks forward to leveraging

PowerStream's results and lessons learned in order to build the business case for a provincial roll out. The proposed program complements the existing portfolio of province wide program initiatives and the OPA recommends that it be approved as a Board approved program. In the meantime, the OPA intends to work with LDCs to include this program idea into the Province-Wide portfolio of programs.

The OPA is supportive of innovative conservation and demand management (CDM) initiatives that contribute to meeting targets and foster a culture of conservation in Ontario. PowerStream is to be commended for seeking to identify new opportunities to advance conservation in Ontario. Such efforts will increase Ontario's overall CDM results and provide opportunities for learning that will inform the development of future programs for Ontario.

Yours Truly,



Andrew Pride
VP, Conservation

Cc: Julia McNally, Director, Market Transformation, Ontario Power Authority
Raegan Bond, Vice President, Conservation & Demand Management, PowerStream

Ontario Power Authority

Appendix C – Comparison with OPA-Contracted Province Wide Program Initiatives

	Direct Install Refrigeration Program (DIR)	Small Business Lighting Initiative (SBL)	Electricity Retrofit Incentive Initiative (ERII)
PROGRAM DESIGN			
Program objective	<ul style="list-style-type: none"> Achieve electricity savings and peak demand reductions Increase customers' understanding of their electricity use, how it compares to other similar facilities and how they can efficiently manage it 	Achieve electricity savings and peak demand reductions	Achieve electricity savings and peak demand reductions
Targeted customer segment(s)	Commercial & Institutional	Commercial & Institutional	<ul style="list-style-type: none"> Commercial & Institutional Industrial
Targeted sub-segment	Small commercial and institutional facilities	Small commercial and institutional facilities	none
Targeted electricity end-use	Refrigeration	Lighting	none
Eligible participants	General Service (GS) Customers <250 kW average demand with commercial refrigeration	General Service Customers <50kW average demand	All General Service Customers
Technology/measures used or implemented	<ul style="list-style-type: none"> Anti-sweat heater controls Strip curtains Night curtains on cases Cleaning condenser coils Electrically Commutated Motor (ECM) LED display case lighting 	<ul style="list-style-type: none"> 64 prescriptive lighting measures 6 prescriptive water heating measures 	<ul style="list-style-type: none"> 193 prescriptive lighting, space cooling, ventilation, and other measures, including one prescriptive measure for refrigeration (LED display case lighting) 7 engineered measures worksheets

<p>Incentives provided/ Offer to customer</p>	<ul style="list-style-type: none"> Free electricity audit and assessment Up to \$2,500 of free eligible refrigeration measures installed 	<p>Up to \$1,500 of free lighting products installed (note: in December 2012, the program offer was increased from \$1,000 to \$1,500).</p>	<p>Incentives available to customers differ according to the project 'track' (prescriptive, engineered or custom) as well as by the type of measure (lighting versus non-lighting), as follows:</p> <ul style="list-style-type: none"> Prescriptive Projects (lighting and non-lighting) – flat \$ per unit installed (see appendix) Engineered & Custom Projects – lighting: The greater of either \$400/kW of demand savings or \$0.05/kWh of first year electricity savings, up to 50% of the total cost of the project. Engineered & Custom Projects – non-lighting: The greater of either \$800/kW or \$0.10/kWh of first year electricity savings, up to 50% of the total cost of the project
<p>PROGRAM DELIVERY</p>	<p>Potential direct marketing tactics include direct mail; follow up door to door community blitz; and direct calling</p>	<ul style="list-style-type: none"> Mass Marketing (OPA & PowerStream) PowerStream Direct Marketing: Door to Door; Direct calling; and Direct Mail (planned for 2013) 	<ul style="list-style-type: none"> Mass Marketing (OPA & PowerStream) PowerStream Direct Mail PowerStream in-house sales team Trade allies/channel partners
<p>Audit/ identification of energy savings opportunities (How? By whom?)</p>	<ul style="list-style-type: none"> The electricity audit and assessment includes the following: Customer profile (type of business and behaviours); Historical consumption analysis & self-benchmarking (kWh/ft2/yr); Walk through audit (load inventory, square footage, operational details etc.); Comprehensive user friendly report (electronic) with recommendations to direct install phase of the DIR and cross marketing all other province wide programs 	<p>Free walk-through lighting assessment (equipment inventory) provided to participant by a PowerStream representative.</p>	<p>ERII does not include an audit – energy savings opportunities are typically identified by customers themselves or by channel partners promoting a specific technology such as lighting manufacturers/distributors.</p> <p>The Commercial and Institutional Program includes a separate Energy Audit Initiative wherein participants can apply for an incentive to cover up to 50% of the cost of an energy audit. The auditor is selected and hired by the customer. The audit is generally equipment</p>

				specific and does not include an analysis of the customer's historical electricity consumption.
Participation process – key steps	<ol style="list-style-type: none"> 1. Promotion uptake by customer 2. LDC confirms customer eligibility 3. Customer agrees to assessment 4. PowerStream schedules Assessment 5. LDC conducts assessment 6. LDC recommends eligible measures 7. Customer signs work order. Agreeing to the installation of eligible measures 8. LDC schedules installation 9. LDC installs measures 	<ol style="list-style-type: none"> 1. Customer develops and submits application in iCon (online application system) 2. LDC/OPA review and Pre-approve project 3. Customer prepares M&V plan and submits to LDC for approval (Custom track only) 4. Customer undertakes retrofit work themselves or hires a contractor 5. Customer notifies LDC of project completion 6. LDC/OPA Review and final approvals 7. LDC issues incentive payment to customer 		
Average timeline (from application to completion)	Approximately 3-6 weeks			Average timeline across all tracks (custom, prescriptive and engineered) is about 6 months
Average project size	Program design estimate: <ul style="list-style-type: none"> • 2.8 kW net demand savings per participant • 12,823 kWh net first year energy savings per participant 	Average actual project size in 2011-12: <ul style="list-style-type: none"> • 1.1 kW net demand savings • 4,713 kWh net first year energy savings 	Average actual project size in 2011-12: <ul style="list-style-type: none"> • 8.5 kW net demand savings • 54,726 kWh net first year energy savings 	
Average incentive per participant	Program design estimate: \$2,094	Average actual in 2011-12: \$877		Average actual incentive in 2011-12: \$9,273

Appendix D – Projected energy and demand savings by year

Implementation Year	Lifetime Demand Savings, MW															
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
2013	1.0	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.1	0.1	0.1	-
		2.4	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	0.3	0.3	0.3
Total	1.0	3.3	2.9	2.9	2.9	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.1	0.4	0.4	0.3

Implementation Year	Lifetime Energy Savings, GWh																
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
2013	4.9	3.3	3.3	3.3	3.3	3.1	3.1	3.1	3.1	3.1	3.1	3.1	1.4	1.4	1.4	-	44.1
2014		11.4	7.7	7.7	7.7	7.7	7.3	7.3	7.3	7.3	7.3	7.3	7.3	3.3	3.3	3.3	102.8
Total	4.9	14.7	11.0	11.0	11.0	10.8	10.4	10.4	10.4	10.4	10.4	10.4	8.7	4.7	4.7	3.3	146.9

SEC INTERROGATORY #2

Issue 1.1 Is the Operating Budget for \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

1.1-SEC-2

[B1-1-1/p.18] Please complete the following table.

Major Cost Category	2011 Board Approved	2011 Actual	2012 Actual	2013 Actual	2014 Budget
Compensation & Benefits					
Professional & Consulting Fees					
Conservation/Technology Funds					
Operation and Administration Expenses					
Total Operation Costs Before Allocation					
Shared Services Allocation Expenses					
Total Operating Costs After Allocation					

RESPONSE

The table, as requested for the Conservation division, is as follows:

Goal 1 (Conservation)
2011 Board-approved Budget, 2011 Actual, 2012 Actual, 2013 Actual and 2014 Budget
(\$'000)

Major Cost Category	2011 Budget Board-approved	2011 Actual	2012 Actual	2013 Actual	2014 Budget
Compensation & Benefits	8,182	7,929	7,586	7,285	6,700
Professional & Consulting Fees	3,602	2,572	1,902	2,616	3,046
Conservation/Technology Funds	3,866	1,914	728	405	311
Operating & Administration Expenses	771	1,352	731	1,216	531
Total Operating Costs Before Allocation	16,421	13,766	10,947	11,522	10,588
Shared Services Allocated Expenses	11,728	12,572	13,989	12,236	11,810
Total Operating Costs After Allocation	28,149	26,339	24,936	23,758	22,398

VECC INTERROGATORY #1

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

1.1-VECC-1

Reference: Exhibit A-2-1, pg. 20

- a) Please explain what a “staff touchpoint” is, how it is measured and how it is used to plan staffing.

RESPONSE

This part of the Business Plan pertains to the Electricity Resources division operating budget. A “staff touchpoint” is a part of the process that requires a direct staff member’s involvement and interaction with the process. While many of the processes for the FIT program have been automated (e.g. an on-line electronic application form), staff are still required to manually process hardcopy submissions and fees, request clarifications, review and approve applications, answer proponent questions submitted via an on-line ticketing system, and perform other tasks such as these.

Staff touchpoints can be measured by the volume associated with each particular activity. For example, the number of FIT applications received has an impact on the amount of work required, just as the number of FIT contracts issued also has an impact on the amount of work required by staff. Similarly, the volume of tickets (proponent questions) that are received and tracked, and that require responses, impacts the amount of work by staff members. Appropriate staffing levels are, in part, determined by the trends discerned from the number of applications received, contracts issued, and the volumes of proponent inquiries (via the call centre or ticket system).

1 **VECC INTERROGATORY #2**

2 **Issue 1.1** Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

3 **INTERROGATORY**

4 1.1-VECC-2

5 Reference: B/T1/S1/pg.1

6 a) Please explain what the “new six year framework is” - who is providing it and what
7 is meant by “variability around resource requirements.”
8

9 **RESPONSE**

10 Please see the response to BOMA Interrogatory 11, at Exhibit I, Tab 1, Schedule 2.11.

VECC INTERROGATORY #3

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

1.1-VECC-3

Reference: B1/T1/S1/pg.8

- a) Please provide the cost reduction expected due to streamlining LDC oversight of programs.

RESPONSE

- a) As described in Exhibit B-1-1, Page 8, the streamlining of LDC oversight is anticipated to provide a number of benefits in 2014, including:

- Reducing OPA performance reporting requirements that in-turn allow LDCs more time to focus on program delivery;
- Expediting the project application process, allowing for faster processing of project approvals and incentive payments;
- Improving the Change Management Process to ensure all required program amendments are quickly implemented; and,
- Standardizing of the incentive process associated with unitary air conditioners to eliminate an identified barrier.

Cost reductions associated with this streamlining are unknown.

VECC INTERROGATORY #4

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

1.1-VECC-4

Reference: B1/T1/S1/pg.14

- a) Please provide the 2014 budget for the market research discussed at this reference.

RESPONSE

The 2014 budget for the market research discussed is \$480,000.

VECC INTERROGATORY #5

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

1.1-VECC-5

Reference: B1/T1/S1

Pre-amble: The evidence states that the Conservation division has 5 groups. A table is provided which gives each group's roles and responsibilities. The subsequent evidence on strategic initiatives and operations (like call center or CDM program delivery) is not attributed to any of the groups specifically.

- a) Does OPA do internal budgeting for each division (i.e. Conservation)?
- b) Please provide a revised table for 2014 as per page 2 showing for each functional group:
 - a. FTEs allocated by functional group
 - b. Budget by cost category (as shown at page 18) by functional group
 - c. Strategic issue responsibility by functional group
 - d. Operational responsibilities (CDM contracting, evaluation and reporting, conservation planning, call center, etc.) by functional group.
- c) If internal budgeting of the type requested above is not done then please explain how the Conservation Group budget is developed.

RESPONSE

a) The OPA does internal budgeting for each division: Conservation, Electricity Resources, Power System Planning, the Corporate Support Groups and Communications.

b) parts a. and b.

See table below for budget by cost category and FTEs allocated by functional group:

2014 Budget	Conservation Division - VP's Office	Conservation Performance Department	Conservation Business Development Department	Conservation Market Transformation Department	Conservation Operations Department	CONS
Compensation & Benefits	\$6,699					\$6,699
Professional & Consulting Fees		851	180	1,513	502	\$3,046
Conservation Funds				311		\$311
Operating & Administration	132	61	267	37	34	\$531
Total Budget	\$6,831	\$912	\$447	\$1,861	\$536	\$10,588
Total FTE	4	14	16	11	14	59

b) part c. The strategic issue responsibility by functional group is as follows:

- Business Development –Encouraging conservation
- Operations – Ensuring fiscally responsible program delivery
- Conservation Performance – Validating the value of conservation
- Market Transformation – Preparing for the future of conservation
- Office of the VP – Collaboration and integration

b) part d. The operational responsibilities by functional group is as follows:

Business Development: Encouraging conservation	<ul style="list-style-type: none"> • Engage the marketplace and manage relationships • Training and grow capability • Communicate the vision • Provide strategic guidance for sector based marketing and awareness outreach
Operations: Ensuring fiscally responsible program delivery	<ul style="list-style-type: none"> • Demonstrate the value proposition • Procure and manage all conservation contracts • Manage risk and partner audits
Conservation Performance: Validating the value of conservation	<ul style="list-style-type: none"> • Provide industry leading technical review and support • Credible and rigorous evaluations of conservation efforts • Consistently and accurately report quantitative results
Market Transformation: Preparing for the future of conservation	<ul style="list-style-type: none"> • Fund innovation • Investigate industry trends • Uncover new opportunities for the future • Regulatory work and planning
Office of VP: Collaboration and integration	<ul style="list-style-type: none"> • Strategic and business planning • Integrate and coordinate efforts between departments

c) See above response to b) above.

VECC INTERROGATORY #6

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

1.1-VECC-6

Reference: B1/T1/S1/pg.18 & D/T2/S1

- a) Please explain the increase in Professional and Consulting fees as between 2013 actuals and 2014 (proposed).
- b) Please list all proposed consulting /professional projects and the forecast cost for the 2014 budget. If these are not available please explain how the 2014 consulting budget forecast was derived.
- c) Please provide the consulting and professional fees for 2012.

RESPONSE

- a) The Professional & Consulting fees are \$430 thousand higher in the 2014 budget than the 2013 actual spending. This is primarily due to support of the development of the next generation of conservation programs.
- b) The list of all proposed consulting /professional projects and the forecast cost for the 2014 budget are:

	<u>Thousand (\$)</u>
Demand Response	\$234
Market Research	\$480
Conservation Fund	\$83
Evaluation Framework and Protocols Development	\$135
EM&V Innovative Research	\$100
Engineering Support	\$50
Codes & Standards	\$200
Integrated Energy Solutions	\$370
Contribution Agreements	\$180
Next Generation Solutions	\$401
Channel Development	\$100
Non-Project Conservation	\$714
	<u>\$3,046</u>

- c) The consulting and professional fees for 2012 was \$1,902 thousand.

VECC INTERROGATORY #7

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

1.1-VECC-7

Reference: B1/T1/S1 & C/T2/S1/pg.5

Please provide the 2011 2012, 2013 and 2014 FTEs allocated to this division.

RESPONSE

The 2011-2014 FTEs allocated to the Conservation division are as follows:

Conservation Division FTE by year				
	2011 Actual	2012 Actual	2013 Actual	2014 Budget
FTE	64	62	55	59

VECC INTERROGATORY #8

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

1.1-VECC-8

Reference: A-4-1 Updated

- a) Please provide the total compensation costs of this division for the executive positions (i.e. those Directors reporting to and including VP Conservation) and as shown in Exhibit A-4-1 Updated.
- b) Please provide the number of FTEs reporting to each of the 5 Directors.

RESPONSE

- a) Please note that the OPA defines executive positions as the CEO and Vice Presidents.

The total compensation cost in the 2014 budget for the Directors and the VP Conservation is \$1,121 thousand.

- b) The number of FTEs reporting to each of the 5 Directors is as follows:

2014 Budget	Conservation Division - VP's Office	Conservation Performance Department	Conservation Business Development Department	Conservation Market Transformation Department	Conservation Operations Department	CONS
Total FTE	4	14	16	11	14	59

Please note that Directors have been included in the totals provided above. As well, the VP's office has been provided for completeness.

ENERGY PROBE INTERROGATORY #1

Issue: General

INTERROGATORY

General-Energy Probe-1

Ref: 2014-2016 Business Plan

Preamble:

2014-2016 Goals

The Ontario Power Authority's 2014-2016 Business Plan is based on five goals:

1. Sustain Ontario's leadership in energy efficiency while promoting a culture of conservation through innovation, cost-effective customer-focused solutions and verified resources.
 2. Develop integrated and regional power system plans and communicate with stakeholders.
 3. Ensure Ontario ratepayers benefit from environmentally sustainable electricity generation through cost-effective procurement and contracts with effective risk sharing.
 4. Develop and maintain organizational capacity and be recognized as a partner in achieving the 2014-2016 goals.
 5. Engage with stakeholders, ratepayers, government and business partners to shape and support the activities that help the OPA to fulfill its mandate.
- a) Please provide a chart that links the Operating Resources for 2014 to the 5 goals. This should include Operating Expenses broken out by each major category e.g. Compensation and Benefits (indicate FTEs) Professional and Consulting fees, conservation/technology, other OM&A expenses Allocation of shared services. Ensure this reconciles to the total operating Budget.
 - b) Please provide a chart that shows the Revenues for each of the 5 goals.
 - c) Please provide a Revenue Requirement Calculation for each of the 5 goals.

RESPONSE

See chart below that shows the Operating Resources for 2014 for the 5 goals; Revenues for each of the 5 goals, and the corresponding Revenue Requirement Calculation for each of the 5 goals.

2014 Budget	Goal 1	Goal 2	Goal 3	Goal 4	Goal 5	OPA
Compensation & Benefits	\$6,699	\$4,972	\$7,911	\$8,730	\$2,655	\$30,967
Professional & Consulting Fees	3,046	385	6,849	5,486	1,193	16,959
Conservation Funds	311					311
Operating & Administration	531	393	268	10,361	550	12,103
Total Budget	\$10,588	\$5,749	\$15,028	\$24,577	\$4,398	\$60,340
Total FTE	59	36	81	63	21	260
Revenue	0	0	0	0	0	0
Revenue Requirement	\$10,588	\$5,749	\$15,028	\$24,577	\$4,398	\$60,340

ENERGY PROBE INTERROGATORY #2

Issue: General

INTERROGATORY

General-Energy Probe-2

Ref: Exhibit A, Tab 2, Schedule 1, Pages 37-40, 2014-16 Business Plan

- (a) Please confirm the external consultants' report indicated is the CEA report filed at Exhibit C Tab 4 Schedule 1.
- (b) Where applicable, for each goal please provide the relationship of 2014 Operating Expenses and FTE to program spend and contribution to energy targets set out in the 2013 LTEP.

RESPONSE

- a) Yes, the external consultant's report referred to on page 37 is the same report as that provided at Exhibit C-1-4, that is, the Concentric Energy Advisors' report of December 2013.
- b) The OPA is not able to provide the metric information as requested as it does not track Operating Expenses and FTEs to program spend and their relationship to energy targets as set out in the 2013 LTEP. Please see the response to Energy Probe Interrogatory 10, at Exhibit I, Tab 3, Schedule 6.10 for an explanation when comparing OPA data and the LTEP.

ENERGY PROBE INTERROGATORY #3

Issue: General

INTERROGATORY

General-Energy Probe-3

Ref: Exhibit A, Tab 1, Schedule 2

Preamble:

In 2014, the OPA has a planned operating budget of \$60.3 million. This is a reduction of nearly 6% compared to the OPA's Board-approved 2011 operating budget. This reduction has been achieved through a combination of administrative and process efficiencies, carried out while the OPA's mandate has expanded and it addresses a growing volume and complexity of work. As well, pursuant to the April 23, 2010 directive, new grants under the Conservation Fund are being recovered through the OPA's program spending rather than through fees.

- (a) Please provide a schedule that shows the breakout, by major category, of the administrative efficiencies relative to the 2011 operating budget.
- (b) Please provide appropriate notes and explanations.

RESPONSE

a) and b)

Please see the response to Board Staff Interrogatory 1, at Exhibit I, Tab 1, Schedule 1.01.

ENERGY PROBE INTERROGATORY #4

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

1.1-Energy Probe-4

Ref: Exhibit B, Tab1, Schedule 1, Appendices A-D

- (a) In the context of 2013 LTEP Targets, please provide OPA estimates of the 2014 CDM Savings, Cost effectiveness, TRC PAC and LDC projections.
- (b) Please compare to 2012 results and, if available, 2013 preliminary results/estimates.

RESPONSE

- a) The savings target for OPA Funded Conservation programs can be found in the evidence at Exhibit C-1-1, Page 7, Lines 2.1 and 2.2. The OPA does not disclose business forecasts for TRC and PAC due to commercial sensitivity, however 2013 information will be available in the 2013 Conservation Results Report. LDC specific forecasts are not available for distribution without the prior written consent of LDCs.
- b) Please refer to the evidence at Exhibit C-1-1, Page 7, Table 1 for 2012 and 2013 results.

ENERGY PROBE INTERROGATORY #5

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

1.1-Energy Probe-5

Ref: Exhibit C, Tab1, Schedule 1, Page 7

- (a) Please apply the cost effectiveness tests to the procurement and operations categories in Table 1. How does the 2014 line 2.1 relate to the LTEP target?
- (b) Please explain or provide the basis of the allocation of shared services to Conservation.
- (c) Please explain why 2014 delivery cost per kwh will go down. Is this due to changes in incremental savings in 2014 or other factors?

RESPONSE

(a) Cost effectiveness testing cannot be applied to individual components of the OPA's activities. These tests incorporate several variables in their calculation and as such assessing performance against only one variable compromises the integrity and meaning of results.

(b) Discussion of the tests is presented in Appendix D of the Conservation Results Report at Exhibit B-1-1, Appendix C. The portfolio-level cost effectiveness test results are presented in Appendix B of the Conservation Results Report.

Line 2.1 represents the achievement of OPA and LDC programs only. The LTEP target is inclusive of savings from non-OPA programs – such as those from natural gas programs and codes and standards. Savings from these non-OPA programs are not reflected in line 2.1.

As indicated in Exhibit D-1-2, Pages 1 and 2, the OPA's methodology to allocate its shared services expenses by initiative was based on analysis by the directors in the shared services divisions (Business Strategies and Solutions; Communications; and Legal, Aboriginal and Regulatory Affairs). For example, in some cases, allocations were based on the estimated time spent by divisional staff on projects in the three operating divisions, including Conservation. In other cases, the volume of transactions processed was tracked among the three operating divisions, including Conservation.

1 In the case of the Executive team (divisional VPs), their daily work involves
2 collaboration at the organizational level on projects whose impact spans across
3 divisions. For the Executive team, including the CEO and his staff (CEO Office), the
4 Corporate Governance/Secretary, and Corporate Communications functions,
5 organizational oversight, collaboration and risk management are key priorities
6 resulting in equal division of time across divisions.

7 At the time of developing the shared services allocation methodology, various
8 options including a weighted average method were considered. The OPA
9 determined that the "1/3 allocation method" is the most appropriate basis for
10 estimating the allocation.

- 11 c) In the final year of the 2011-2014 CDM Framework, the OPA forecasts that costs
12 associated with delivering conservation programs will decrease from previous years
13 as the market place capitalizes on previously made investments in infrastructure and
14 LDCs further increase their delivery efficiencies.

ENERGY PROBE INTERROGATORY #6

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

1.1-Energy Probe-6

Ref: Exhibit C, Tab 1, Schedule 1, Page 5 of 19

Preamble:

The OPA argues that the “Culture of Conservation metric represents the collective results of the entire sector's efforts to engage people with energy conservation, and is not an informative measure of the OPA’s efficiency in delivering conservation initiatives.”

- (a) Can OPA please explain why the take up – or non-take up – of its conservation programs should not be considered an “informative measure” of its efficiency?
- (b) The OPA is proposing three new conservation metrics: residential customers’ satisfaction, business customers’ satisfaction and LDC satisfaction. Can OPA explain how those would be measured and why these are better metrics?

RESPONSE

- a) For clarity, the Culture of Conservation metric measures the impact that all media, including the OPA, municipal governments, advocacy groups and others have on driving the conservation message with Ontarians. Given this metric considers factors above and beyond the efforts of the OPA, it is not considered to be an accurate measure of the organizations’ efficiency.

Although the OPA recognizes the limitations of its organizational metrics, the OPA does consider take up - or non-take up - of its conservation programs as an informative measure of its efficiency. The OPA measures the performance of this metric through an analysis of actual vs. forecasted levels of program participation. In addition, the OPA considers program efficiency from a variety of other perspectives including, but not limited to, the following:

- Program and Portfolio Levelized Unit Energy Cost (LUEC); and
- Actual vs. Forecasted level of energy and demand savings.

- b) The change is being made in order to align divisional success metrics with Conservation's strategic and business plans which focus on relationship building and management in order to more effectively and efficiently deliver conservation in the province. Customer and partner satisfaction will be measured through quantitative surveys.

ENERGY PROBE INTERROGATORY #7

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

1.1-Energy Probe-7

Ref: Exhibit C, Tab 1, Schedule 1, Page 4 of 19

Preamble:

The OPA says that “while the megawatts contracted by the OPA are targeted to increase by nearly 30 percent between 2011 and 2014, the number of contracts the OPA manages is expected to increase by more than 130 percent for the same period.”

(a) Can the OPA provide an average cost of managing each contract?

(b) Can the OPA provide an average cost of managing each contract for each year since 2006? Has the cost of managing an average contract increased or decreased over that time?

RESPONSE

a) The effort required to manage existing contracts can be split into both staff time and expenditures. Tracking specific use of time by staff, such as through the utilization of time sheets, is prohibitively resource-intensive. Therefore, the OPA does not currently engage in detailed tracking due to the considerable demands such a process would place on existing staff. Having said this, the number of staff in the Contract Management group of the Electricity Resources division can provide an approximation of the effort required. This is the approach taken in the OPA's efficiency metrics submitted to the Board. The table below outlines these metrics, providing both the number of contracts managed by Contract Management staff as well as the expenditures of the Contract Management group per MW under contract. Additionally, we have provided Expenditures (or Budget for 2014) per contract under management.

	2011 Actual	2012 Actual	2013 Actual	2014 Estimate
Number of contracts per Contract Management FTE	256	321	386	507
Expenditures (Budget) per MW	\$590	\$446	\$603	\$503
Contract Management Expenditures per contract	\$1,026	\$597	\$641	\$483

1 b) Please see a) above for detail on expenditures per MW, the number of contracts per
2 FTE, and the contract management expenditures per contract for the period 2011 to
3 2014. These expenditures include allocated shared services to arrive at the total
4 expenditure and staff resources utilized for the period. For the period from 2006 to
5 2010, the shared services allocation is not available to arrive at a total for
6 expenditures and staff resources. Therefore, based on the information provided in
7 a), the number of contracts per Contract Management FTE shows a significant
8 increase, nearly 100 percent, over the 2011-2014 period. Similarly, the contract
9 management expenditures by contract drops significantly over this period.
10 Expenditures per MW is relatively consistent between the years, with no discernible
11 pattern.

ENERGY PROBE INTERROGATORY #8

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

1.1-Energy Probe-8

Ref: Exhibit C, Tab 1, Schedule 1, Page 10 of 19

Preamble:

The OPA states that Culture of Conservation metric measures the “public awareness of energy conservation over time. The metric shows a decline in public awareness of energy conservation over the reporting period.”

Can the OPA please explain why this has been declining?

RESPONSE

Of the seven factors that drive engagement with energy conservation, the one which has been declining most dramatically over the reporting period has been ‘social buzz’. This metric assesses the level to which Ontarians say they are talking more about and hearing more about energy conservation than in the past.

This decline is likely attributable to a reduced level of public visibility for and dialogue about energy conservation.

AMPCO INTERROGATORY #1

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

Issue 2.1 Is the Operating Budget of \$5,749 thousand allocated to Goal 2 reasonable?

Issue 3.1 Is the Operating Budget of \$15,028 thousand allocated to Goal 3 reasonable?

Issue 4.1 Is the Operating Budget of \$24,577 thousand allocated to Goal 4 reasonable?

Issue 5.1 Is the Operating Budget of \$4,398 thousand allocated to Goal 5 reasonable?

INTERROGATORY

1.0-5.0-AMPCO-1

Ref: A-1-2 Page 3

a) Page 3 – OPA references the creation of the Stakeholder's Advisory Committee (SAC). Please provide the Committee's terms of reference, budget , and discuss how the SAC contributes to the development and execution of OPA's stated 2014 goals.

RESPONSE

The terms of reference for the Stakeholder's Advisory Committee ("SAC" or "Committee") can be found at the link below:

<http://www.powerauthority.on.ca/stakeholder-engagement/stakeholder-advisory-committee>

The 2014 budget for the Committee is \$261,573.

The Committee contributes to the development and execution of the OPA's stated 2014 goals as it is a forum for its members to be informed of OPA activities and to provide timely policy level advice directly to the OPA Board and Executive. As per the Committee's terms of reference, this advice is on material matters relating to the design, delivery, funding and evaluation of conservation programs, the planning of the power system, the competitive procurement of generation resources and the ongoing management of these contracts, the structure of the electricity market and other issues related to the PA's mandate.

Because the first meeting of the SAC was not until January 7, 2014 the SAC did not contribute to the development of the OPA's 2014 goals.

AMPCO INTERROGATORY #2

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

Issue 2.1 Is the Operating Budget of \$5,749 thousand allocated to Goal 2 reasonable?

Issue 3.1 Is the Operating Budget of \$15,028 thousand allocated to Goal 3 reasonable?

Issue 4.1 Is the Operating Budget of \$24,577 thousand allocated to Goal 4 reasonable?

Issue 5.1 Is the Operating Budget of \$4,398 thousand allocated to Goal 5 reasonable?

INTERROGATORY

1.0-5.0-AMPCO-2

Ref: A-2-1 Page 4

Preamble: OPA states “the 2014 operating plan incorporates learnings from the 2012 merger process with the Independent Electricity System Operator, for example, reorganization of the marketing function; coordination of activities with our sister agency will continue during the planning period.”

- a) Please discuss the implications of the merger and integration activities on the 2014-2016 Business Plan.
- b) Please discuss how the OPA has incorporated the learnings from the 2012 merger process in its 2014 operating plan.
- c) Please discuss any learnings that have not been incorporated in the 2014 operating plan and why.

RESPONSE

Please see the response to Board Staff Interrogatory 2, at Exhibit I, Tab 1, Schedule 1.02.

AMPCO INTERROGATORY #3

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

Issue 2.1 Is the Operating Budget of \$5,749 thousand allocated to Goal 2 reasonable?

Issue 3.1 Is the Operating Budget of \$15,028 thousand allocated to Goal 3 reasonable?

Issue 4.1 Is the Operating Budget of \$24,577 thousand allocated to Goal 4 reasonable?

Issue 5.1 Is the Operating Budget of \$4,398 thousand allocated to Goal 5 reasonable?

INTERROGATORY

1.0-5.0-AMPCO-3

Ref: A-3-2 Page 6

Preamble: The evidence states "We also worked with our sister agency, the Independent Electricity System Operator, to plan a merger of our two organizations that would achieve benefits for Ontario's ratepayers. Although the merger was paused in October due to prorogation of the legislature before the bill to enable the merger was passed, the proposed merger identified potential reductions and efficiencies. We will continue to take steps to achieve these savings for ratepayers."

- a) Please discuss the specific potential benefits to Ontario ratepayers of merging the OPA and the IESO.
- b) Please identify the specific potential reductions and efficiencies of merging the OPA and the IESO.
- c) Please discuss the specific steps taken to achieve these savings for ratepayers in 2012 and 2013.
- d) Please discuss the specific steps to be taken in the current 2014 application to achieve these savings for ratepayers.
- e) Please discuss the future steps needed to achieve these savings for ratepayers in 2015 and beyond.

RESPONSE

- a) Preparation work for the proposed merger in 2012 included analysis and evaluation of organizational structure, activities and resources for both the OPA and the IESO to identify areas of focus for efficiencies. While the merger work was paused, both organizations took back learnings that were applicable to each on a stand-alone basis. Specific benefits on the 2014 Operating Plan as a result of 2012 merger learnings for the OPA include:

1. Rationalizing Stakeholder consultation spend level
2. Consolidating corporate marketing and conservation marketing organizations and spend
3. Discontinuing certain corporate partnerships
4. Discontinuing use of external speech writing service
5. Rationalizing travel/meetings

b) Specific potential reductions and efficiencies of merging the OPA and the IESO that would be realized in a combined organization:

1. Single organization
 - One Board of Directors
 - One Executive team
 - Reduced real estate footprint
 - Single Rate Application and reduced OEB fees
2. Consolidation of staffing in overlapping functions
 - HR
 - Legal
 - Communications
 - Finance
 - Info Tech
3. Consolidation of functions – external costs
 - HR
 - Legal
 - Communications
 - Finance
 - Info Tech

c) See a) above.

d) Areas for future consideration: Please see the response to Board Staff Interrogatory 2 at Exhibit I, Tab 1, Schedule 1.02.

e) Please see Board Staff Interrogatory 2. The OPA continues its ongoing commitment to expenditure and staffing restraints and it reviews its annual budgets for further efficiencies and reductions as part of its business planning process each year. In 2015 and beyond, the OPA anticipates receiving direction from the government and Ministry of Energy with respect to priorities and the implications of a possible merger with the IESO. The OPA expects to deliver additional ratepayer savings and efficiencies through this process.

AMPCO INTERROGATORY #4

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

Issue 2.1 Is the Operating Budget of \$5,749 thousand allocated to Goal 2 reasonable?

Issue 3.1 Is the Operating Budget of \$15,028 thousand allocated to Goal 3 reasonable?

Issue 4.1 Is the Operating Budget of \$24,577 thousand allocated to Goal 4 reasonable?

Issue 5.1 Is the Operating Budget of \$4,398 thousand allocated to Goal 5 reasonable?

INTERROGATORY

1.0-5.0-AMPCO-4

Ref: B1-1-1 to B1-5-1

Preamble: OPA's application includes 5 divisional goals and strategic initiatives that support the achievement of these goals, as well as milestones to demonstrate success.

a) Please explain the process OPA undertook to arrive at these goals, initiatives and milestones, and obtain approvals.

RESPONSE

a) Please see the response to CME Interrogatory 5, at Exhibit I, Tab 1, Schedule 3.05.

AMPCO INTERROGATORY #5

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

1.1-AMPCO-5

Ref: A-1-2 Page 2

Preamble: The evidence states the OPA will continue to support and promote participation in these programs, and anticipates that in 2014 over 1.3 TWh of electricity savings will be achieved which is nearly double the energy savings achieved per dollar of the divisions' fees expenses that was achieved in 2011.

- a) Please provide a description and breakdown of the energy savings that make up 1.3 TWh in 2014.
- b) Please provide a description and breakdown of the total energy savings achieved in 2011, 2012 and 2013.
- c) Please provide the energy savings achieved per dollar of the divisions' fee expenses for the years 2011 to 2014.

RESPONSE

- a) The 2014 Conservation forecast is a value based on 2011-2013 trends and what the OPA has experienced in the past as the province transitions into a new framework. Participation and savings in the final year of the framework are likely to increase as LDCs are eager to capitalize on existing programs prior to the rollout of a new framework as well as push to meet their specific reregulated savings targets. Customers may also be more inclined to take advantage of programs as future funding availability is unknown.

2014 Conservation Forecast (GWh)

	2014 Forecast
OPA-Contracted Province-Wide CDM Programs	
Energy Efficiency	1,279
Demand Response	6
OPA-Delivered CDM Programs	
Industrial Accelerator Program	97
Non-LDC DR	4
Total	1,385

- 1 b) Please see the response to BOMA Interrogatory 26, at Exhibit I, Tab 1,
2 Schedule 2.26.
- 3 c) Please see Exhibit C-1-1, Page 7 of 19, Line 2.1.2.

AMPCO INTERROGATORY #6

Issue 1.1 Is the Operating Budget of \$10,588 thousand allocated to Goal 1 reasonable?

INTERROGATORY

1.1-AMPCO-6

Ref: B1-1-1

- a) Page 5 – Please discuss how OPA arrived at the target number of participants for its training activities.
- b) Page 5 – Please discuss more fully how the OPA plans to work directly with transmission-connected and multi-jurisdictional businesses to promote and support participation in conservation programs and how the OPA determined it will work with 58 of these customers in 2014.
- c) Page 9 – Please provide more information on the membership, frequency of meetings and budget for each working group.
- d) Page 9 – Please identify and explain the drivers of the need for the significant streamlining of the change management process that was undertaken in 2013. Please discuss the impact on the change management process post streamlining.
- e) Page 10 – Please discuss how the OPA and IESO will increase integration of demand response resources into IESO operations to increase the value of demand response and enable it to provide additional resources in the future.
- f) Page 13 – Please discuss how the OPA arrived at 35 LDCs expected to participate in face-to-face discussions.
- g) Page 18 – Conservation Savings - Please provide the energy savings from each OPA Contracted Province Wide Demand Response initiatives for the years 2011 to 2014.
- h) Page 20 – Please provide the MW savings of the additional 20 applications proceeding through the approval process.
- i) Page 34 – Please provide the annual budget for each of the 4 programs listed for the years 2011 to 2014.
- j) Page 36 - Please provide the annual budget for the Industrial Accelerator and Demand Response Programs.

1 RESPONSE

2 a) The targeted number of participants is based on:

- 3 • The budgets available for the various training initiatives;
- 4 • Market readiness – i.e., when the initiative will be in market; and,
- 5 • The OPA's internal experience on the market potential for the various training
- 6 initiatives.

7 b) Please see the response to BOMA Interrogatories 1 and 2 at Exhibit I, Tab 1,

8 Schedules 2.01 and 2.02 respectively.

9 c) Please see the response to BOMA Interrogatories 7 and 11(e), at Exhibit I, Tab 1,

10 Schedules 2.07 and 2.11 respectively, as well as the OPA's website at:

11 [http://www.powerauthority.on.ca/stakeholder-engagement/stakeholder-advisory-](http://www.powerauthority.on.ca/stakeholder-engagement/stakeholder-advisory-committee)

12 [committee](http://www.powerauthority.on.ca/stakeholder-engagement/stakeholder-advisory-committee) for information on the SAC.

13 d) The streamlining of the change management process was required in order to be

14 responsive to the needs of LDCs and the CDM marketplace. As a result of the

15 improved change management processes, the OPA has been able to quickly

16 overcome identified market barriers that contributed to inhibiting CDM initiative

17 participation. Please see Appendix 1 to BOMA Interrogatory 24, at Exhibit I, Tab 1,

18 Schedule 2.24 for a list of all change management activities to date.

19 e) Please see the response to BOMA Interrogatory 14, at Exhibit I, Tab 1,

20 Schedule 2.14.

21 f) The number of "over 35" is based on past participation of LDCs in similar events.

22 g) Please see the 2012 Conservation Results Report for DR energy savings found at

23 the following link:

24 [http://www.powerauthority.on.ca/sites/default/files/conservation/Conservation-](http://www.powerauthority.on.ca/sites/default/files/conservation/Conservation-Results-Report-2012.pdf)

25 [Results-Report-2012.pdf](http://www.powerauthority.on.ca/sites/default/files/conservation/Conservation-Results-Report-2012.pdf).

26 Please see the response to BOMA Interrogatory 15, at Exhibit I, Tab 1,

27 Schedule 2.15 for demand savings associated with DR initiatives.

28 h) The value of the referenced 20 applications is 37.51 MW.

29 i) The OPA believes that costs of conservation and generation programs are not in the

30 scope of this rate application as they are not included in the OPA's operating fees

31 budget.

32 While out of scope, to be helpful, the OPA has provided a link to further discussion

33 on charges budgets, which can be found in the OPA's annuals reports at

1 www.powerauthority.on.ca. Please also see the response to BOMA Interrogatory 8,
2 at Exhibit I, Tab 1, Schedule 2.08 for the annual aggregate charges budgets from
3 2006-2014.

4 j) Please see the response to part i) above.