

ALLIANCE INTERROGATORY 1

QUESTION

Issue #1

Strategic Objective #1

Reference Exhibit B, Tab 1, Schedule 1, Page 2 of 10

1. Please file the consultation plan for development of the 2nd IPSP indicating timelines, expected participation, locations and the matters open to consultation. Please indicate why it is referred to as the 2nd IPSP when the first one was never approved.

RESPONSE

Please see the response to GEC Interrogatory 1, at Exhibit I-2-1. This will be the second IPSP prepared by the OPA and submitted to the OEB for approval.

ALLIANCE INTERROGATORY 2

QUESTION

Issue #1

Strategic Objective #1

Reference Exhibit B, Tab 1, Schedule 1, Page 2 of 10

2. Please explain the differences between a load forecast scenario that integrates conservation and one that does not. Is this different than the approach used for the 1st IPSP?

RESPONSE

A load forecast scenario that integrates conservation is one that reflects not only naturally occurring conservation, but also projected electricity savings from conservation measures such as codes and standards, conservation programs and other conservation activities.

A load forecast scenario that does not integrate conservation is one that may reflect naturally occurring conservation, but does not reflect electricity savings from conservation measures such as codes and standards, conservation programs and other conservation activities.

Conservation was integrated into load forecasts used for the first IPSP and will be integrated into load forecasts used for the second IPSP.

ALLIANCE INTERROGATORY 3

QUESTION

Issue #1

Strategic Objective #1

Reference Exhibit B, Tab 1, Schedule 1, Page 2 of 10

3. Please indicate how the 2nd IPSP will account for conservation from policy actions such as codes, standard and time of use rates (and meters) and how the OPA intends to avoid double counting these impacts with those resulting from OPA Programs or Board Approved LDC programs.

RESPONSE

The OPA estimates CDM resources that may be achieved through building codes and equipment standards using analytical models. The key assumptions include: a) implementation date for the new code or standard; b) efficiency level of the new code/standard; c) baseline efficiency of existing stock of equipment/buildings when the code/standard is implemented; and d) rate of existing stock turnover after code/standard is in place.

The OPA estimates CDM resources that may be achieved through time of use ("TOU") rates using analytical models. The analysis estimates how the load profiles can be changed due to factors such as TOU schedule, TOU rates, and elasticity.

The primary purpose of CDM programs is to acquire CDM resources by offering incentives, information or other services which drive the market penetration of efficient products and practices. OPA programs are designed based on best available information, including an understanding of policy actions which are currently or anticipated to be in effect during the program period. Programs only include incentives for energy efficient products which exceed the regulated minimum energy performance standards ("MEPS").

ALLIANCE INTERROGATORY 4

QUESTION

Issue #1

Strategic Objective #1

Reference Exhibit B, Tab 1, Schedule 1, Page 2 of 10

4. Please file the inputs and assumptions for the avoided cost estimates used to evaluate the cost effectiveness of conservation potential for the 2nd IPSP. Illustrate what changes to these inputs and assumptions have taken place since the first IPSP and how the planning assumptions compare to those used in the cost effectiveness analyses for the 2011 OPA Programs.

RESPONSE

The information requested in this interrogatory relates to the Integrated Power System Plan that the OPA plans to submit to the Board for approval later this year. While the OPA believes that questions in this regard should be raised in the IPSP proceeding, it will provide a response to the interrogatory in an effort to be of assistance to parties. The fact that the OPA has provided an answer to the interrogatory should not be taken as any indication that the OPA considers these areas of enquiry to be appropriate for the revenue requirement proceeding.

Avoided supply costs associated with conservation resources are due to the reduction in the cost of energy production from supply resources and the reduction or delay of capital expenditures on new generation, transmission and distribution facilities. In the first IPSP (EB-2007-0707, Exhibit D-4-1, Attachment 3), the incremental cost estimation method was used for the TRC test of each conservation category.

The incremental cost of electricity supply is estimated as the increment in energy and capacity costs associated with operating and building the generation, transmission and distribution facilities needed to meet an increment in demand. The OPA uses analytical models to simulate the marginal energy costs for every hour. The incremental capacity cost is based on a single cycle gas turbine ("SCGT") plant.

The incremental avoided generation capacity costs were adjusted in 2009 to reflect a change in the way that conservation resources are valued. The avoided incremental generation capacity is assumed to consist of a combination of additional SCGT, distributed generation ("DG") and combined-cycle gas turbine ("CCGT") resources that would be needed in the absence of the conservation resources. The updated avoided costs are used in the cost-effectiveness analyses for the 2011 OPA-Contracted Province-Wide CDM

- 1 Programs. The avoided costs of non-electricity resources, such as water and natural gas,
- 2 are also included in program cost-effectiveness analyses where applicable.
- 3 Avoided cost calculations are performed on an on-going basis to reflect updated planning
- 4 data and information. Work in this regard will continue in 2011.

ALLIANCE INTERROGATORY 5

QUESTION

Issue #1

Strategic Objective #1

5. Please file the long term conservation plan(s) that formed the basis of the 2011 OPA Programs.

RESPONSE

The 2011-2014 OPA-Contracted Province-Wide CDM Programs were developed collaboratively between the OPA and LDCs. These programs were developed based on various inputs including relevant program design and delivery experience in Ontario and other jurisdictions, stakeholder feedback and market intelligence and other research.

ALLIANCE INTERROGATORY 6

QUESTION

Issue #1

Strategic Objective #1

Reference Exhibit B, Tab 1, Schedule 1, Page 6/7 of 10

6. None of the milestones associated with Strategic Objective #1 address conservation with the exception of providing advice to policy makers. How will OPA management assess the performance of the Power System Planning Division with respect to conservation given that accounts for 14% of the resource mix for 2030?

RESPONSE

In the exhibit and pages referenced in the question, the term "conservation" is specifically mentioned in the context of the general heading "Provided planning context to public policy development, stakeholder discussions and regulatory proceedings". Although not specifically mentioned in the context of other general headings on the referenced pages, conservation is indeed an element of some of them. For example, conservation is an element of the forthcoming Integrated Power System Plan. Similarly, conservation is an element of the regional plan development process.

The performance of the Power System Planning division with respect to conservation will be considered by OPA management within the context of its integrated planning work, including its work related to the IPSP, to regional planning or to providing context to public policy development, stakeholder discussions and regulatory proceedings.

1 **ALLIANCE INTERROGATORY 7**

2 **QUESTION**

3 **Issue #1**

4 **Strategic Objective #1**

5 **Reference Exhibit B, Tab 1, Schedule 1, Page 9 of 10**

6 7. Please file the planning report that describes the status and outlook for electricity
7 demand, conservation, generation and transmission.

8 **RESPONSE**

9 Please see the response to Board Staff Interrogatory 2, at Exhibit I-1-2.

ALLIANCE INTERROGATORY 8

QUESTION

Issue #2

Strategic Objective #2

8. For each Ministerial directive to the OPA with respect to conservation, demand management, demand response and combined heat and power, please provide a description of the management processes to keep the OPA Board, the Ministry of Energy and the Minister of Energy apprised of progress with respect to delivering on these directives. Please provide copies of all reports that tracked progress with respect to delivering on these directives. If there are no management processes and/or no reports, what assurances did the Ontario government have that its directives were being followed?

RESPONSE

Ministerial Conservation and Demand Management ("CDM") and Combined Heat and Power ("CHP") directives provide procurement authority to the OPA, however all CDM programs and CHP procurement processes must also be approved by the OPA Board of Directors. Program specific budgets and targets and procurement process outcomes are brought forward to the OPA Board for approval.

The OPA manages, tracks and reports on the effectiveness and impacts of its conservation programs based on these program-specific OPA-Board approved budgets and targets. The OPA Board, the Ministry of Energy and the Minister of Energy (through the Ministry) are kept apprised of OPA CDM program results. Summary reports on portfolio results are made publicly available. The OPA is currently working with the Ministry of Energy to define a process for reporting on the 2011-2014 CDM Programs funded through the OPA. With respect to CHP, the contracts that have been awarded under the directives thus far have been announced and the OPA recently announced information regarding how it intends to procure additional generation under the November 23, 2011 CHP directive.

The OPA also monitors its program and portfolio results in the context of Ministerial directives, in order to ensure that it is not exceeding its procurement authority. For comparison of conservation results to date against directives, please see the response to Alliance Interrogatory 9, at Exhibit I-7-9.

ALLIANCE INTERROGATORY 9

QUESTION

Issue #2

Strategic Objective #2

9. Given that any Ministerial directives that were provided in advance of the Green Energy and Green Economy Act, were enabling objectives, i.e., that they enabled the Ontario Power Authority to recover the charges associated with such initiatives, please provide the OPA results with respect to achieving the MW of conservation, etc, identified in the directives to from the date of the directive to the end of 2010. Where such MW results were less than directed, please provide a variance explanation for the shortfall. Where such MWs were greater than directed please provide a variance explanation of over achievement.

RESPONSE

Contrary to the premise of the question, the Ministerial directives on conservation (with the exception of the directives issued with respect to the IPSP) that were issued prior to the *Green Energy and Green Economy Act, 2009* did not set conservation targets. Rather these directives authorized the OPA to recover charges for amounts paid to procure conservation resources up to a certain limit. This was usually expressed as up to a certain number of MWs but in the case of the July 13, 2006 LDC CDM Directive the limit was set as no more than \$400 million in funding over three years. As MW targets were not directed, there is no variance from targets to explain.

Directives 1, 2, 3, 5 and 6 are not time-bound. The table below reflects progress to date in procuring conservation resources under these directives.

The directives are not mutually exclusive. For example, a CDM program that promotes lighting retrofits in low income households in Toronto could contribute to directives 2, 3 and 4 below. In order to avoid any possible double counting, the OPA has mapped each CDM initiative to a single directive. In doing so, initiatives which could be allocated to multiple directives were mapped to the time-bound directives first.

MW-Related Directives:

All MW savings are net 2010 demand savings at the generator level (i.e. including avoided distribution system and transmission system losses).

1

	Directive	Directive Date	MW Procured*
1	DSM/DR across Ontario	June 15 2005 Feb 9 2006	459**
2	Residential low income/social housing DSM	October 6 2005	3
3	Appliance/Lighting	October 20 2005	25
4	Toronto	February 10 2006	215
5	Electrically heated/ other residential DSM	March 10 2006	87
6	Commercial/MUSH DSM	March 10 2006	29
7	LDC CDM funding	July 13 2006	265
<p>2006 program activities were counted under each of the procurement Directives in rows (1) through (6). Following receipt of the LDC CDM funding Directive, much of this program activity began to be counted under that Directive. Due to the more comprehensive nature of the LDC CDM funding Directive, MW procured under each of the Directives in rows (1) through (6) should not be interpreted as exhaustive.</p> <p>The directives are not mutually exclusive. For example, a CDM program that promotes lighting retrofits in low income households in Toronto could contribute to Directives 2, 3 and 4 above. In order to avoid any possible double counting, the OPA has mapped each CDM initiative to a single directive. In this doing so, initiatives which could be allocated to multiple directives were mapped to the time-bound directives first. As such, it is important to recognize that while the table above shows, for example, only 29 MW procured under the Commercial/MUSH Directive, this does not mean that only 29 MW of savings have been achieved in the Commercial/MUSH sector. CDM programs targeting this sector that have been delivered by LDCs over the past 3 years, including the Electricity Retrofit Incentive Program and the Power Savings Blitz, have been attributed to the LDC CDM funding directive. With the issuance of the LDC CDM funding Directive, savings for programs that were funded through the LDCs were counted towards this Directive. This had the effect of lowering the savings that otherwise would have been attributable to the other directives.</p> <p>*Based on: final results from OPA funded CDM programs implemented in 2006-2009 and an outlook for 2010 programs that the OPA developed in July 2010</p> <p>**Demand Response results are based on contracted MW capacity as of the end of 2010</p>			

ALLIANCE INTERROGATORY 10

QUESTION

Issue #2

Strategic Objective #2

Reference Exhibit B, Tab 2, Schedule 1, Page 1 of 20

10. Please indicate whom the OPA considers to be its “partners” with respect to this Strategic Objective. How does the OPA engage these partners and what is the nature of the partnership arrangement(s)?

RESPONSE

The OPA considers Ontario Local Distribution Companies (“LDCs”) to be its primary partners with respect to Strategic Objective 2. The nature of the partnership between the OPA and the LDCs is founded on the principle of collaboration. The OPA and LDCs are engaged through contractual agreements.

The OPA also works closely with other organizations to support the Strategic Objective to plan, procure and support the development of verified conservation/energy efficiency resources as identified in the integrated power system plan. These organizations include the Ministry of Energy and other Ministries and/or agencies of the Government of Ontario; electricity sector organizations such as the Independent Electricity System Operator, the Ontario Energy Board and Hydro One; natural gas utilities; municipalities; Aboriginal communities; industry associations; channel partners such as retailers and contractors; energy services companies; non-governmental organizations, and other stakeholders.

ALLIANCE INTERROGATORY 11

QUESTION

Issue #2

Strategic Objective #2

Reference Exhibit B, Tab 2, Schedule 1, Page 1 of 20

11. The Minister's Directive of March 31, 2010 assigned a target of 1330 MW of demand savings and 6000 GWh of energy savings to be achieved from 2011 to 2014. What are the anticipated savings from policy actions such as codes, standards and time of use rates (and meters) and the Ministry's own programs as well as any OPA conservation programs including its First Nations and Métis programs and the Industrial Accelerator Program other than those delivered by LDCs during the same timeframe? What will be the total impact of conservation from all initiatives including what is commonly referred to as "natural conservation"? How will conservation results from other levels of government programs be accounted for by the OPA, e.g., federal and municipal government programs.

RESPONSE

The total forecasted impact from codes and standards, smart meters/time of use rates, and government programs, for 2011 onwards, is being developed as part of the Integrated Power System Plan ("IPSP") process.

The following tables present forecasts for OPA programs implemented in 2011 to 2014, except for OPA-Contracted Province-Wide CDM Programs. These programs are: the Industrial Accelerator and the suite of Demand Response Programs that are available to transmission-system-connected customers. The OPA is also currently in the process of developing projections for the Aboriginal Conservation Program and these projections are not available at this time.

All savings are net and at the generator level (i.e., including avoided transmission losses).

For the purpose of these tables, 2011 is considered the base year.

Projected Incremental Demand Savings (MW)	2011	2012	2013	2014
Transmission-Connected Industrial Accelerator Program	1	20	51	88

OPA-Delivered suite of Demand Response Programs**	561	608	648	652
Projected Annual Demand Savings (MW)*	2011	2012	2013	2014
Transmission-Connected Industrial Accelerator Program	1	22	73	161
OPA-Delivered suite of Demand Response Programs**	561	608	648	652

1

Projected Incremental Energy Savings (GWh)	2011	2012	2013	2014
Transmission-Connected Industrial Accelerator Program	12	163	407	698
OPA-Delivered suite of Demand Response Programs**	4	5	5	5

Projected Annual Energy Savings (GWh)*	2011	2012	2013	2014
Transmission-Connected Industrial Accelerator Program	12	174	581	1279
OPA-Delivered suite of Demand Response Programs**	4	5	5	5

2 * Annual savings consist of new incremental savings in a given year plus any savings that persist from programs
 3 implemented since the base year onwards.

4 ** Demand Response forecasts are based on contracted MW capacity at the end of each year, with an assumed
 5 persistence of one year.

1 **ALLIANCE INTERROGATORY 12**

2 **QUESTION**

3 **Issue #2**

4 **Strategic Objective #2**

5 **Reference Exhibit B, Tab 2, Schedule 1, Page 1 of 20**

6 12. Ministerial conservation-related directives since the passage of the Green Energy and
7 Green Economy Act to both the OPA and the Board have ensured that LDC targets
8 include both peak reductions and energy reductions. How has this impacted both the
9 design and selection of OPA programs, particularly with respect to programs and
10 budgets allocated to demand response programs which deliver no energy saving
11 results. Please provide a comparison of the cost effectiveness of conservation
12 programs and demand response programs using the full range of cost effectiveness
13 test, including the participant cost test and the program administrators cost test as well
14 as the total resources cost test.

15 **RESPONSE**

16 The OPA, in collaboration with LDCs, designed a portfolio of OPA-Contracted Province-
17 Wide CDM Programs to support LDCs in meeting their CDM Targets for both peak
18 reduction and energy savings. Having two separate CDM Targets impacted the type and
19 relative composition of programs to be included in the portfolio. Programs were created
20 with both an energy efficiency component which contributes to energy and peak demand
21 reductions and demand response components which largely contribute to peak reductions
22 with some energy savings. Both components are needed to support the achievement of
23 provincial targets. As these programs were designed and will be delivered in a
24 comprehensive manner, integrating both conservation and demand response, cost
25 effectiveness assessment was done at a total program-level. Therefore, information on the
26 cost effectiveness of the program's components is not available.

ALLIANCE INTERROGATORY 13

QUESTION

Issue #2

Strategic Objective #2

Reference Exhibit B, Tab 2, Schedule 1, Page 1 of 20

13. What process was followed to develop the 2011 Ontario Power Authority ("OPA")- Contracted Province-Wide Conservation and Demand Management Programs (OPA Programs)? Please respond commenting on the following aspects of the process and provide descriptions of the resulting program designs:

- i. Please indicate what resources, access to information, particularly respect to the proposed program designs, projected program budgets, cost/benefit analysis of plans, programs and specific measures as well as estimated targets were provided to the Working Groups and/or to all LDCs. Please file all copies of such documents provided by the OPA and include the dates that such documents were made available.
- ii. What evaluations of earlier OPA programs were provided to the Working Groups and/or the rest of the LDCs? Please file copies of all evaluations of previous and current OPA programs.
- iii. What market research completed by the OPA or contracted for by the OPA was shared with the Working Groups and/or the rest of the LDCs? Please file copies of all market research reports used to support the development of the 2011 OPA programs.
- iv. Did the Working Groups have access to the results of pilot programs funded under the Conservation Fund? What role did the reports and lessons learned have in the selection and development of the programs included in the OPA programs? Please provide copies of any related documents provided by the OPA to the Working Groups and/or the rest of the LDCs.
- v. The OEB's CDM Code requires each LDC to file a CDM Strategy and provides a template for doing so. Did the OPA provide similar documentation to the Working Groups and/or the other LDCs? If so please file any shared OPA documents that would approximate what is included in the OEB template requirements.

RESPONSE

i) In December 2009, the OPA and Electricity Distributors Association ("EDA") established 4 LDC-OPA Work Groups ("WGs") for design of the programs: Consumer Program WG, Industrial Program WG, Business (Commercial and Institutional) Program WG and a Small Commercial and Residential Demand Response ("DR") WG (which would inform DR elements of both the Consumer and Business Programs). A Low Income Program WG was established in May 2010. A Marketing WG was established in the summer of 2010.

The LDC-OPA WGs had access to materials to facilitate this collaborative design effort. Materials varied by workgroup, but in general included historical results, past evaluations, jurisdictional reviews, cost-benefit assessments, pilot results and draft business case documents.

The broader LDC community (including any LDCs not directly involved with Program Design Work Groups) was provided with regular updates on the development of the Province Wide Programs via communication from the EDA, as well as through OPA coordinated communications which included: webinars, symposiums, program summary documents and spreadsheet based Resource Planning Tools to support LDCs in making resource savings projections at the local level.

ii) The Work Groups were provided with evaluation reports from past programs dated as early as 2007. Reports from third party evaluations of previous OPA-funded programs are anticipated to be available on the OPA website in Q1 2011.

iii) The Work Groups had access to market research data that was compiled and analyzed for the program business case development. This market research covered segmentation data, program results and market data regarding measures.

Individual Working Groups were provided with the following market research:

Business (Commercial & Institutional) Program Working Group: a summary of OPA-funded market research on program participation motivations and barriers for small, medium and large commercial organizations. That report is filed as Attachment 1 to this exhibit.

Consumer Program Working Group: LDC-service-territory level reports summarizing housing and population characteristics. The source is the 2006 census as well as several large market research databases. The information was provided to all LDCs. The OPA's agreement with the service provider prohibits our filing this market research. Also provided to the WG were two market research reports: one on Overcoming Barriers to Building In Energy Efficiency in New homes (see Attachment 2 to this exhibit), and a second on the ENERGY STAR for New Homes Pilot evaluation, filed as Attachment 3 to this exhibit.

1 Low Income Working Group: An estimate of the low-income population by LDC service
2 territory. The source is Statistics Canada. The OPA's agreement with Statistics
3 Canada prohibits our filing this market research. Also provided to the WG was market
4 research done to inform the marketing of a Low Income program. Two reports were
5 provided. One reported the results of surveys done in 2007 and in 2008 to learn the
6 attitudes towards electricity conservation and sector stakeholders and the electricity
7 conservation behaviours of social housing residents. That report is filed as
8 Attachment 4 to this exhibit.

9 The second study, conducted in 2009, used interviews and focus groups with residents
10 and tenants of private low income single family homes. These interviews and focus
11 groups involved 58 participants and provided insights into the attitudes, awareness and
12 behaviour of these consumers towards energy conservation. Many of these findings
13 are consistent with lessons learned during the OPA Energy Efficiency Assistance for
14 Houses pilot program in 2006-2007. That report is filed as Attachment 5 to this exhibit.

15 Industrial Working Group: The Industrial working group was provided the Advancing
16 Opportunities in Energy Management in Ontario Industrial and Manufacturing Sector
17 report prepared by the Canadian Manufacturers & Exporters ("CME"). The document is
18 available at: <http://on.cme-mec.ca/download.php?file=gc95me9a.pdf>

19 Marketing Working Group: address-level detail for all commercial, industrial,
20 institutional, agricultural and multi-unit residential buildings in Ontario. The source is the
21 Municipal Property Assessment Corporation. The information was used to enhance the
22 understanding of LDC service territories. The information was made available to all
23 LDCs. The contract between MPAC and the OPA prohibits filing this market research.

24 iv) The Work Groups were provided with available information from pilot projects funded
25 through the Conservation Fund to help inform the program designs. For more
26 information please see the response to Alliance Interrogatory 21, at Exhibit I-7-21.

27 v) The OPA did not provide LDCs with a template for developing their CDM Strategy
28 Filings. The OPA provided the same information to the working groups and all LDCs in
29 the form of information and tools to support LDCs in the development of their CDM
30 Strategies. These included:

31 Program Summary Guides - provided an overview of each program including key
32 changes from existing initiatives and roles and responsibilities of LDCs and the OPA

33 Resource Planning Tool and Modeling Framework - provided LDCs with a spreadsheet-
34 based resource planning tool and modeling framework to assist LDCs in developing
35 LDC-specific resource savings projections for the OPA Contracted Province Wide
36 programs.

ALLIANCE INTERROGATORY 14

QUESTION

Issue #2

Strategic Objective #2

Reference Exhibit B, Tab 2, Schedule 1, Page 3 of 20

14. Given that the "the OPA anticipates allocating significant resources in 2011 to working directly with LDCs to coordinate and facilitate the successful implementation of the OPA-Contracted Province-Wide CDM Programs", and that "the OPA's primary role in managing the implementation of the OPA-Contracted Province- Wide CDM Programs in 2011 will be to provide LDCs with appropriate, sufficient and effective support to facilitate LDCs in delivering the programs and meeting their individual CDM Targets", what metrics will it use to determine if the allocated resources are appropriate and if the support is sufficient and effective?

RESPONSE

The OPA will use various quantitative and qualitative metrics to determine whether the resources that have been allocated are appropriate, sufficient and effective, including the following:

- a) Results from surveys and other forms of feedback from all LDCs with regard to the OPA's LDC support and communications activities;
- b) Number of LDCs that contract with the OPA to deliver Province-Wide CDM Programs;
- c) Performance of OPA-Contracted Province-Wide CDM Programs in relation to targets;
- d) Compliance with the Master CDM Program Agreement, including: timeliness of payment processing, the provision of quarterly reports, and the provision of EM&V results; and
- e) Number of workshops, webinars and technical symposiums, presentations to EDA district meetings and CDM Caucus that the OPA delivers to the LDC community in support of LDC conservation efforts and the feedback that the OPA receives from LDCs on those activities.

ALLIANCE INTERROGATORY 15

QUESTION

Issue #2

Strategic Objective #2

Reference Exhibit B, Tab 2, Schedule 1, Page 3 of 20

15. The OPA-Contracted Province-Wide CDM Programs consist of a Consumer Program, Low Income Program, Business (Commercial and Institutional) Program and Industrial Program. Please file detailed descriptions of these programs including, but not limited to market research reports supporting the program design, cost benefit analysis including inputs and assumptions, evaluations of previous programs which informed program changes and refinements.

RESPONSE

Program summary guides for the Consumer program, Commercial and Institutional program, and Industrial program are filed as Attachments 1, 2 and 3 respectively to this exhibit. Please note that these guides were prepared in October 2010 and provided to LDCs to support development of their CDM Strategies for submission to the OEB on November 1, 2010. The programs have continued to evolve since the guides were prepared and as such they may not reflect the final program designs.

For information on market research which informed the program design process, please see the response to Alliance Interrogatory 13, at Exhibit I-7-13.

Reports from third party evaluations of previous OPA-funded programs are anticipated to be available on the OPA website in Q1 2011.

ALLIANCE INTERROGATORY 16

QUESTION

Issue #2

Strategic Objective #2

Reference Exhibit B, Tab 2, Schedule 1, Page 3 of 20

16. Most of these programs focus on providing incentives to replace less efficient equipment with more efficient equipment and using engineering estimates of the savings to calculate the program savings. Recent advances in conservation approaches suggest that performance based programs in which real data is used to both achieve and determine the savings is more effective. What changes has the OPA made in its programs to address the lessons learned and cited here? .In its comments submitted in EB-2008-0346, the Ontario Sustainable Energy Association cited and attached a recent REALpac that indicated the problems associated with the tradition product specific incentives: According to a commercial property manager, the following concern was expressed: "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. (poor performance) Now we know we have to redesign, not just replace fixtures," said a CaGBC Pilot Project Participant upon discovering that his building was on the far right after a retrofit paid for by a conservation program that added electricity load. Had he not just changed technology but specified a reduced wattage per square foot, he would have seen savings. Not only did the conservation program administrator pay an incentive was three times greater than necessary, the building manager paid for more lights that was needed and will pay higher energy bills." In its submission in EB-2010-0215, Toronto Region Conservation Authority shared the its lessons learned from performance based conservation that avoids these problems:

- i. performance based conservation delivers far greater energy savings than previous approaches to energy (and water) conservation,
- ii. the larger part of the savings is found in low/no cost improvements,
- iii. successful and sustainable conservation has more to do with good management than with technology,
- iv. conservation programs have to support building managers with information, tools and resources so that they can recognize the unique set of conservation opportunities in their facilities,

v. benchmarking can identify buildings with high conservation potential, inform target setting and point to where savings are to be found in each building, and

vi. monthly savings reporting flags variances in predicted savings, identifies measures which do not perform as intended, verifies savings which have been achieved and guides continuous improvement

RESPONSE

The OPA-Contracted Province-Wide Programs for 2011-2014 were designed in collaboration with LDCs and with input from a public stakeholder session in April 2010 on the draft programs designs which was attended by more than 200 organizations.

In addition to incentives for the replacement of less efficient equipment with more efficient equipment, all of the new OPA-Contracted Province-Wide Programs also include a number of enabling and capability building initiatives which address the lessons learned and which complement the performance based approach cited in the question. Examples of these elements within each program are provided in the table below.

The Industrial Province-Wide Program also includes a performance-based capital incentive for facilities to improve the energy efficiency of equipment and production processes. This initiative includes full measurement and verification of process energy savings and contractual obligations, with financial off-set implications, to ensure that those savings materialize.

Program	Examples of enabling and capability building initiatives
Consumer	<ul style="list-style-type: none"> - Online home energy assessment tool and education materials to inform consumers and empower them with information to manage their consumption and to undertake efficiency actions - HVAC quality installation training for contractors - Training targeted at the residential construction industry - In home displays and/or home energy interfaces
Low Income Consumer	<ul style="list-style-type: none"> - Education module to empower customers to maintain energy efficiency improvements undertaken through the program and to make behavioural changes - Funding for up to 2 energy efficiency services providers (performance-based)
Business	<ul style="list-style-type: none"> - Incentives for pre-project energy audits to identify electricity savings opportunities - Incentives for building commissioning studies to drive take-up of low/no cost options (including monitoring, behavioral and operational changes), additional incentives for longer payback projects - Incentives for certification of commissioning agents in support of the building

	<p>commissioning initiative</p> <ul style="list-style-type: none"> -Incentives for training integrated energy efficiency design facilitators - Building operator training - Funding and training for LDC key account managers - Energy manager training (facilities over an aggregate of 50,000 sq.ft) - Funding for up to 11 energy efficiency services providers (performance-based)
Industrial	<ul style="list-style-type: none"> - Incentives for engineering studies - Funding for key account managers, energy managers and roving energy managers - Funding for monitoring and targeting systems - Metering and instrumentation lending library - Energy manager training - 'Next Generation' energy manager training (post secondary)

ALLIANCE INTERROGATORY 17

QUESTION

Issue #2

Strategic Objective #2

Reference Exhibit B, Tab 2, Schedule 1, Page 4 of 20

17. With respect to the OPA's centralized conservation information system (iCon), please provide a status update of the additional functionalities developed in 2010. Please indicate the budget allocated to iCon in 2011 to 2013 and identify the previous costs incurred in the development of the system. What metrics are used to determine the effectiveness and efficiency of this initiative? What contractual arrangements does the OPA have, with third parties, if any, for the development and implementation of this program?

RESPONSE

For a status update on the conservation information system, please see the response to Board Staff Interrogatory 7, at Exhibit I-1-7. The budget allocation for iCon for 2011 to 2013 is approximately \$380 thousand. Previous costs incurred as at December 31, 2010 in the development of the system are approximately \$2.1 million in capital and approximately \$50 thousand in external consulting. The effectiveness of the iCon system will be determined by its ability to meet its functionality objectives, which are to:

- Provide information on new programs/initiatives to public;
- Provide consistent forms/applications and information to minimize customer confusion and enable reduction or elimination of paper-based transactions;
- Automate back office functionality so that LDCs and others can monitor the progress of work orders associated with each customer request;
- Provide an electronic reporting/tracking system that allows LDCs and others to meet their information needs (subject to privacy restrictions); and
- Facilitate integration with the OPA's financial systems.

The OPA has a contract in place with a third party provider for the delivery of the development phases initiated in 2010. The OPA is currently procuring a third party provider for the subsequent work in 2011.

1 **ALLIANCE INTERROGATORY 18**

2 **QUESTION**

3 **Issue #2**

4 **Strategic Objective #2**

5 **Reference Exhibit B, Tab 2, Schedule 1, Page 7 of 20**

6 18. With respect to its key account managers for 45 transmission-connected industrial
7 companies, what was the management rationale for creating these positions given that
8 Hydro One already has individuals responsible for its relationship with these customers
9 and both major natural gas distribution utilities have longstanding industrial
10 representatives?

11 **RESPONSE**

12 The key account manager positions were created pursuant to the March 4, 2010 Ministerial
13 Directive regarding the Industrial Transmission Connected Electricity Efficiency Program
14 which states in guideline #7:

15 "Due to the high value of the Program, the OPA shall strive to minimize administrative costs
16 by taking responsibility for: (i) key account management..."

ALLIANCE INTERROGATORY 19

QUESTION

Issue #2

Strategic Objective #2

Reference Exhibit B, Tab 2, Schedule 1, Page 9 of 20

19. Please provide full documentation on the “culture of energy conservation in Ontario” metric, including how it is defined, monitored, and measured, and show how this metric is used to assess executive and managerial performance of the OPA.

RESPONSE

The overall culture of energy conservation metric is a single number which is calculated using the numbers for seven sub-components. Market research done in 2009 and 2010 determined that a culture shift for energy conservation in Ontario depends on seven factors. Metrics are measured for each of those seven factors and then summed into the overall score. The seven factors are:

1. Leading By Example - the sense that one can and should set a good example by using energy wisely;
2. Personal Consciousness - understanding what to do to use energy in the home wisely and believing that one's actions are worthwhile;
3. Environmental Consciousness - having a level of concern for the environmental impacts of energy generation and consumption;
4. Renewable Energy - believing that producing energy from renewable sources brings economic and quality of life benefits to the people of Ontario;
5. Cost - having a level of concern over the impact of energy costs on household finances and a willingness to pay for more environmental/energy-efficient products;
6. Social Buzz - the recognition that one is hearing about and talking more about energy conservation; and
7. Ontario Consciousness - the belief that progress is being made in Ontario and in the local community to use energy wisely.

The metric has been measured, using a province-wide telephone survey of 500 Ontario adults selected to be representative of the population, quarterly since Q4 2009 to validate and fine tune the culture of conservation model. Using Q4 2009 as the baseline (100) the results are as follows:

Q4 2009	100
Q1 2010	106
Q2 2010	109
Q3 2010	107

1 **ALLIANCE INTERROGATORY 20**

2 **QUESTION**

3 **Issue #2**

4 **Strategic Objective #2**

5 **Reference Exhibit B, Tab 2, Schedule 1, Page 10 of 20**

6 20. This reference indicates that the conservation division will be “responsible for
7 generating all content of the IPSP related to conservation”. How does this reconcile
8 with the statement referenced in Exhibit B, Tab 1, Schedule 1, Page 2 of 10, which
9 indicates that the Power System Planning Division will generate load forecasts that
10 integrate conservation?

11 **RESPONSE**

12 The reference in Exhibit B-2-1 (p. 10, lines 6-8) does not indicate that the Conservation
13 division will be “responsible for generating all content of the IPSP related to conservation”.
14 Rather, the reference states that an IPSP Conservation Team will be responsible for such
15 actions. The IPSP Conservation Team is a cross-divisional team that includes
16 representatives from the Conservation division, the Power System Planning division and
17 Regulatory Affairs.

ALLIANCE INTERROGATORY 21

QUESTION

Issue #2

Strategic Objective #2

Reference Exhibit B, Tab 2, Schedule 1, Page 11 of 20

21. The evidence states that “the Conservation Fund (“Fund”) provides funding for sector specific electricity conservation pilot projects that inform future conservation programs and build marketplace capability.” Please provide a list of all projects funded in this way which have become full scale OPA programs. Please indicate how any or all of these projects have “informed” the development of the 2011 OPA programs.

RESPONSE

Lessons learned from Conservation Fund pilots provide critical research and development vehicles for the evolution of the province-wide CDM programs. Pilot project results can lead to the inclusion of a new measure, initiative, or methodology into a program, or the exclusion of options which show insufficient potential, or are otherwise inappropriate to the Ontario marketplace. In 2010, the eligibility rules for applying to the Fund were changed to allow participation by LDCs, such that the Fund can now also be used as a vehicle for the early development of Board-Approved CDM Programs.

The OPA has funded 97 projects to date through the Conservation Fund. Following is a selection of projects which demonstrate the range of influences a pilot project can have. Note that these examples are drawn from projects completed prior to the commencement of the design phase for the 2011-2014 province-wide programs. Program influences for pilots completed after late 2009 are not yet known. Other completed projects are listed on the OPA website at: <http://www.powerauthority.on.ca/cfund/funded-projects>.

- Integration of Air Conditioners and Dehumidifiers into Every Kilowatt Counts Program (Summerhill Group - 2008): these measures have now been included in the Consumer Province-Wide Program for 2011.
- Incentive Program Administrator (York Catholic District School Board - 2008): this concept has now been included as an element in the Province-Wide Business Program.
- Direct Install Small Business Pilot (2007 - Green\$aver): this project concept evolved into the Power Savings Blitz program, which was offered province-wide to all LDCs for delivery starting in 2008. This initiative will continue as part of the Business Province-Wide Program in 2011.

- 1 • Ontario Forest Industries Association Energy Management Program (2007 - Ontario
2 Forest Industries Association): this project developed the roving energy manager
3 concept, which has been included in the province-wide program for distribution-
4 connected industrial customers in 2011.
- 5 • Pilot Energy Program for Food Processors (2007 - Altech): this project demonstrated
6 that monitoring and targeting of energy consumption was more effective when
7 combined with other measures and incentives. On that basis, funding for monitoring
8 and targeting was included in the province-wide industrial program as a part of a
9 comprehensive offering along with other measures and incentives for 2011.

ALLIANCE INTERROGATORY 22

QUESTION

Issue #2

Strategic Objective #2

Reference Exhibit B, Tab 2, Schedule 1, Page 11 of 20

22. What was the rationale for moving the monies associated with the Conservation Fund from fees to charges? Please restate the fees budget if it had continued to include the monies associated with the Conservation Fund.

RESPONSE

Please see the response to Energy Probe Interrogatory 16 at Exhibit I-12-16. The table below restates the Conservation Fund budget to be recovered through OPA fees if it had continued to include monies associated with the Conservation Fund. Shaded cells note changed numbers.

Hypothetical Table 7					
Conservation/Technology Initiatives					
Spending in 2011					
(000's)					
Year Grant Awarded	2008	2009	2010	2011	Total
Conservation Fund	580	650	2,413	500	4,143
Technology Fund	522	577	1,442	95	2,636
Total	1,102	1,227	3,855	595	6,779

1 **ALLIANCE INTERROGATORY 23**

2 **QUESTION**

3 **Issue #2**

4 **Strategic Objective #2**

5 **Reference Exhibit B, Tab 2, Schedule 1, Page 11 of 20**

6 23. Why wasn't the same logic applied to the Technology Fund?

7 **RESPONSE**

8 Please see the response to Energy Probe Interrogatory 16 at Exhibit I-12-16. The April 23,
9 2010 Directive refers only to CDM research and innovation and does not encompass the
10 Technology Fund.

1 **ALLIANCE INTERROGATORY 24**

2 **QUESTION**

3 **Issue #2**

4 **Strategic Objective #2**

5 **Reference Exhibit B, Tab 2, Schedule 1, Page 12 of 20**

6 24. With respect to the Technology Development Fund, why has the OPA chosen to shift its
7 focus away from its historical partners, particularly those engaged in delivering on the
8 Province's broader innovation mandate?

9 **RESPONSE**

10 The Technology Development Fund has been accepting direct applications (applications
11 that do not originate from the OPA's historical partners) since 2008. Since then, the volume
12 of opportunities coming through direct intake has vastly increased and now significantly
13 outnumbers those from our partners. For example, in 2010, 12 of the 15 approved projects
14 were applications made directly to the OPA, and three were recruited through our partners.
15 The OPA continues to be open to projects from our partners which align with the OPA's
16 objectives.

1 **ALLIANCE INTERROGATORY 25**

2 **QUESTION**

3 **Issue #2**

4 **Strategic Objective #2**

5 **Reference Exhibit B, Tab 2, Schedule 1, Page 12 of 20**

6 25. For each of the 2011 milestones, demonstrate using either 2009 or 2010 data how the
7 effectiveness and efficiency of achieving milestones will be measured.

8 **RESPONSE**

9 The OPA does not feel that 2009 or 2010 data can be used to demonstrate achievement of
10 each of the 2011 milestones, as the 2011 milestones are related to specific activities that
11 will be undertaken in 2011.

12 Please see the response to GEC Interrogatory 22, at Exhibit I-2-22 for a description of how
13 the OPA plans to measure the 2011 milestones in support of Strategic Objective 2.

1 **ALLIANCE INTERROGATORY 26**

2 **QUESTION**

3 **Issue #2**

4 **Strategic Objective #2**

5 **Reference Exhibit B, Tab 2, Schedule 1, Page 15 of 20**

6 26 For example, one of the 2011 Milestones is listed as “conducted evaluations to verify
7 results for all CDM programs including results at an LDC level in support of OPA
8 Contracted Province Wide Programs”. How will it be physically possible to complete
9 these evaluations by the end of the first year of the planning period – e.g., at the end of
10 2011?

11 **RESPONSE**

12 Evaluation reports are prepared on an annual basis. The OPA expects to receive
13 completed evaluation reports containing program implementation results for the previous
14 calendar year in the fall. For example, evaluation reports for program results achieved in
15 2010 are expected in the fall of 2011, reports for results achieved in 2011 are expected in
16 the fall of 2012, and so on.

17 EM&V processes are carried out concurrently with program implementation. For example,
18 some field verification and analysis must occur before and during participant activity in a
19 program. Other elements must wait until after participation has concluded and further
20 analysis is also required, which is why the final savings results are not expected to be
21 available until the fall of the year following program implementation.

22 In 2011, the OPA will initiate 2011 program evaluations and will receive 2010 program
23 evaluations. Both of these activities will support the implementation of OPA-Contracted
24 Province-Wide Programs.

1 **ALLIANCE INTERROGATORY 27**

2 **QUESTION**

3 **Issue #2**

4 **Strategic Objective #2**

5 **Reference Exhibit B, Tab 2, Schedule 1, Page 15 of 20**

6 27. With respect to the suite of energy efficiency and demand response initiatives for
7 transmission-connected customers, why does the milestone not include the energy and
8 demand savings for the program, the cost effectiveness of the program or the value
9 delivered to the 45 customers.

10 **RESPONSE**

11 The milestones were developed as activity-based, rather than outcome-based, milestones.
12 For more information on these milestones, please refer to the response to GEC
13 Interrogatory 22, at Exhibit I-2-22.

1 **ALLIANCE INTERROGATORY 28**

2 **QUESTION**

3 **Issue #2**

4 **Strategic Objective #2**

5 **Reference Exhibit A-3-1, page 7 of 56.**

6 28. Please provide evidence to back up the statement that saving 6300 MW by 2025 is “one
7 of the most ambitious conservation targets in North American and possibly the world.”

8 **RESPONSE**

9 Evidence with respect to this statement can be found in the National Action Plan for Energy
10 Efficiency - Vision for 2025: A Framework for Change through the following link:

11 <http://www.epa.gov/cleanenergy/documents/suca/vision.pdf>

12 The National Action Plan for Energy Efficiency (“NAPEE”) identifies an energy efficiency
13 goal which could meet fifty percent or more of the expected load growth in the United
14 States by the year 2025. Ontario's 6,300 MW conservation target represents a greater
15 proportion of the load growth identified in the 2007 IPSP for the year 2025. Additionally,
16 the NAPEE indicates that, as of the end of 2007, no state had completely integrated energy
17 efficiency savings goals and targets into its energy resource plan with provisions for regular
18 updates. The 6,300 MW conservation target was fully integrated into the first IPSP, which
19 must be updated every three years as prescribed by regulation.

1 **ALLIANCE INTERROGATORY 29**

2 **QUESTION**

3 **Issue #2**

4 **Strategic Objective #2**

5 **Reference Exhibit A-3-1, page 7 of 56.**

6 29. Please update the verified results of conservation programs that were expected to be
7 available in 2010. Please file the evaluation, monitoring and verification reports to
8 support the verified results. Please indicate how organizational performance measures
9 and/or the performance measurement of the OPA executive and managerial staff reflect
10 these results.

11 **RESPONSE**

12 CDM program results achieved in 2009 have been reported in Volume Two of the
13 Environmental Commissioner of Ontario's 2009 Annual Energy Conservation Progress
14 Report, "Re-thinking Energy Conservation in Ontario – Results", which was released on
15 November 30, 2010.¹

16 Reports from third party evaluations of previous OPA-funded programs are anticipated to
17 be available on the OPA website in Q1 2011. Performance against established targets for
18 OPA CDM programs are monitored and reported to the executive and the OPA Board on a
19 quarterly basis.

¹ Environmental Commissioner of Ontario. Re-thinking Energy Conservation in Ontario – Results Annual Energy Conservation Progress Report – 2009 (Volume Two). November 30, 2010.

ALLIANCE INTERROGATORY 30

QUESTION

Issue #2

Strategic Objective #2

Reference Exhibit A-3-1, page 10 of 56.

30. According to the Annual Report, the York Catholic District School Board received \$250,000 in funding in 2008 to support the initiative of hiring an incentive program advisor. Was similar funding made available to other school board? If not, please indicate the rationale for selecting this school board and provide information as to how the funds were disbursed and over what period of time. Did these monies come from fees or charges?

RESPONSE

The York Catholic District School board applied, in partnership with the Ministry of Education, to the Conservation Fund as part of a competitive process, in response to a request for expressions of interest ("RFEI"). No other school boards responded. However, a number of school boards in Ontario have benefited from this initiative to date, and the concept has been integrated into the 2011 province-wide programs. The expenses for this project are being disbursed according to contractually agreed upon milestones. The project terminates in 2011 and all expenses are recovered from fees.

ALLIANCE INTERROGATORY 31

QUESTION

Issue #2

Strategic Objective #2

Reference Exhibit A-3-1, page 10 of 56.

31. Please file the market research (polling) referred to at the bottom of the page and the top of the next. Please indicate how such information has been used to improve or change the affected programs and indicate how organizational performance measures and/or the performance measurement of the OPA executive and managerial staff reflect these results.

RESPONSE

Market research reports are: (1) 2009 Conservation Attitude & Behaviour; (2) 2009 Triple A Consumer Program Awareness, Attitude, Action; (3) Culture of Energy Conservation Q4 2009; (4) Residential and Small Commercial DR Incentive; (5) Business Great Refrigerator Roundup.

They are filed as Attachments 1 through 5 respectively to this exhibit.

The Business Great Refrigerator Roundup market research was used to identify the potential for launching the initiative and to identify priority sectors. The Residential and Small Commercial DR Incentive market research was used in modeling scenarios to identify cost-effective incentive structures and levels which motivate participation. The Triple A Consumer Program market research was used to identify opportunities to fine tune initiative marketing strategies while the campaigns were in market, to optimize their effectiveness. Results were also used as input to planning the following year's marketing strategy for each initiative.

Higher-level market research (Conservation Attitude & Behaviour and Culture of Energy Conservation) is used to inform Conservation Awareness marketing and communications strategies.

Research results are not used as direct organizational, executive or staff performance measures.

1 **ALLIANCE INTERROGATORY 32**

2 **QUESTION**

3 **Issue #2**

4 **Strategic Objective #2**

5 **ESCO Question.**

6 32. The Energy Service Companies ("ESCOs") have been doing comprehensive retrofits in
7 the commercial and institutional sectors in Ontario (and throughout Canada) since the
8 late 1970s. They include some very large companies, eg. Johnson Controls,
9 Honeywell, Siemens, and smaller boutiques, such as MCW, which have substantial
10 expertise in the implementation of energy savings projects. How has the OPA
11 collaborated with, supported, enhanced, or otherwise worked with these companies to
12 increase the penetration of energy efficiency practices and measures in the commercial
13 and institutional sectors?

14 **RESPONSE**

15 The OPA provided an opportunity for all stakeholders, including ESCOs, to provide
16 feedback and input into the draft design of the new Province-Wide Business (Commercial
17 and Institutional) Program for 2011-2014 through a public consultation process in April
18 2010.

