

LIEN INTERROGATORY 1

QUESTION

**A. REGARDING DIRECTIVE DATED OCTOBER 6, 2005 – CDM INITIATIVES FOR
RESIDENTS OF LOW-INCOME AND SOCIAL HOUSING – REFERRED TO IN
EXHIBIT A-5-1, PAGE 5 OF 6**

1. Please provide a complete copy of the above low-income Directive.

RESPONSE

Please find the October 6, 2005 directive filed as Attachment 1 to this exhibit. All directives to the OPA may be found on its website at <http://www.powerauthority.on.ca/about-us/directives-opa-minister-energy-and-infrastructure>.

LIEN INTERROGATORY 2

QUESTION

A. REGARDING DIRECTIVE DATED OCTOBER 6, 2005 – CDM INITIATIVES FOR RESIDENTS OF LOW-INCOME AND SOCIAL HOUSING – REFERRED TO IN EXHIBIT A-5-1, PAGE 5 OF 6

2. Please provide:

2a) the provincial socio-economic profile the OPA relied on as the basis for understanding the low-income market for the period of October 2005 to December 31, 2010;

2b) the geographic distribution of low-income customers that OPA relied upon, if not part of the socio-economic profile;

2c) the socio-economic profile by LDC;

2d) the following information by Ontario low-income market segment – low-income homeowners, low-income renters in the private rental market, and low-income renters in assisted and social housing - for the period of October 6, 2005 to December 31, 2010 by year, and in total, starting in 2005 to 2010:

- number of potential OPA CDM program participants
- number of actual OPA CDM program participants
- average electricity savings (kW and kWh) achieved/participant
- average dollars OPA spent directly to achieve energy savings only per participant
- total program dollars spent per participant;

2e) a description of each of the OPA low-income programs that OPA offered by year from 2005 to the end of December 31, 2010 that includes:

- total OPA program budget
- OPA full-time equivalents ("FTE's") allocated to the program and a description of where these positions are in the OPA organization
- total number of program participants
- type of measures included (technologies/equipment, services, capability building)
- total energy savings achieved (kW and kWh)
- any evaluations (process, impact, market, or some combination, or other) that OPA performed internally or that were performed by consultants retained by OPA, of which we request copies

- cost of each of the above evaluations
- an explanation of the value gained for the money spent on each of the above evaluations;

2f) a provincial picture of the success of the OPA low-income programs in aggregate from 2005 to the end of December 31, 2010, including:

- the OPA management process in place to track and report on progress on fulfilling the direction in the Directive, internally within OPA, to the OPA Board, and to the Minister/Ministry
- progress made toward achieving the Directive target of saving a total of 100 MW in low-income, assisted and social housing
- a description of remaining market barriers
- market penetration achieved
- lessons learned
- opportunities to increase market penetration and electricity savings for the period of January 1, 2011 to December 31, 2014.

RESPONSE

The OPA is providing the information requested in order to allow parties to assess the activity underlying its operating budget. The OPA considers that the details of its program design are beyond the scope of this proceeding.

- a) The provincial socio-economic profile the OPA relied on as the basis for understanding the low-income market for the period of October 2005 – December 31, 2011 was 750,000 low-income households in Ontario based upon 2001 Statistics census data. (250,000 single family homes and First Nations; 250,000 Social Housing; 250,000 multi-residential private rentals).
- b) The geographic distribution of low-income consumers was not available.
- c) There is no data available.
- d) The OPA delivered 3 low-income specific programs over the 2005-2010 period. The program data requested is not available based on the segments identified in the question, as the targeted program participants do not align exactly with the requested segments. For example, the EEHP pilot targeted all low income households living in single family homes and did not differentiate based on ownership (rental vs owner-occupied).

	Energy Efficiency Assistance for Houses pilot Program (EEAHP)	Social Housing Pilot	Affordable Housing Pilot
Number of potential OPA CDM program participants	250,000	250,000	15,000 housing units
Number of actual OPA CDM program participants	544 houses	12,901 housing units	890 housing units
Average electricity savings (kW and kWh) achieved per participant	.92 kW Net Incremental (first year) Summer Peak Demand Savings 4,228 kWh Net Incremental (first year) Energy Savings	0.11 kW Net Incremental (first year) Summer Peak Demand Savings 922 kWh Net Incremental (first year) Energy Savings	0.35 kW Net Incremental (first year) Summer Peak Demand Savings 4,779 kWh Net Incremental (first year) Energy Savings
Average incentive cost (i.e. capital and installation cost of retrofits) per participant	\$914	\$33	\$120
Average program costs per participant	\$1014	\$50	\$64

e) The OPA delivered 3 low-income programs specifically geared to low income households over the 2005-2010 period, as summarized below. Activities for this initiative were undertaken by Conservation Division staff, supported by staff from other divisions as required. Please see the response to Board Staff Interrogatory 1, at Exhibit I-1-1.

1. Energy Efficiency Assistance Program for Houses (Pilot)

Years: 2006-2007

OPA Budget (charges): \$2.2M

Actual number of participants: 544 households

Type of measures included: The Program participant received a basic audit that included an educational component. Basic measures consisted of the following: ENERGY STAR® qualified CFLs, pipe wrap for domestic hot water heater, insulation blanket for domestic hot water heater, low flow aerator and low flow showerhead. Extended measures included: ENERGY STAR qualified refrigerator, domestic hot water heater fuel switch, domestic hot water heater heat recovery, attic insulation, basement insulation, wall insulation, draft proofing, clothes drying rack, cold-water detergent, programmable thermostat, solar film, electric kettle timer, lighting controls, upright fan, furnace filter, domestic hot water heater tank repair, air conditioning upright fan and power-bar.

Total energy and demand savings achieved: 0.5 MW Net Incremental Summer Peak Demand Savings and 2.3 GWh Net Incremental Energy Savings.

Evaluations: There were no OPA administered third party evaluations on the Energy Efficiency Assistance Program for Houses (Pilot).

2. Social Housing Pilot

Years: 2006-2007

OPA Budget (charges): \$9.25M

Actual number of participants: 12,901 housing units

Type of measures included: energy efficient lighting, building automation control systems and refrigerators.

Total energy and demand savings achieved: 1.4 MW Net Incremental Summer Peak Demand Savings and 11.9 GWh Net Incremental Energy Savings.

Evaluations: There were no OPA-administered third party evaluations done on the Social Housing Pilot.

3. Affordable Housing Energy Efficiency Pilot Program

Years: 2007

OPA Budget (charges): \$2.5M

Actual number of participants: 890 housing units

Type of measures included: ENERGY STAR® qualified compact fluorescent light bulbs, motion sensor, ENERGY STAR qualified refrigerator, ENERGY STAR qualified hardwired light fixture, low flow toilet, kitchen bathroom aerators and low flow showerheads.

Total energy and demand savings achieved: 0.3 MW Net Incremental Summer Peak Demand Savings and 4.3 GWh Net Incremental Energy Savings.

There were no OPA-administered third party evaluations done on the Affordable Housing Energy Efficiency Pilot Program.

f) Some of the key learnings from the 2005 - 2010 period included the following, as broken out by program area:

Program Area	Lessons Learned
Outreach	<p>Broader eligibility criteria would increase number of potential participants and reduce refusals; need to balance broader eligibility with service capacity</p> <p>Need to prioritize segments for program participation and ramp-up eligibility over time (e.g. start with social housing and low-income customers in arrears)</p> <p>Program should be multi-fuel to ease marketing and recruitment, enable collaboration with gas utilities and ensure all income-eligible households can participate</p> <p>Need a strategy to include tenant households that do not pay utility bills directly</p>
Eligibility / Screening	<p>Need to determine if there is a way to identify households that are highest energy consumers and income eligible (e.g. cross-reference income-eligibility list with utility consumption info) that does not create privacy concerns</p> <p>Need a strategy that makes income verification quick and easy</p> <p>Referral partnerships may be effective, but need to find a way to ensure that partners are fully engaged (unclear how important funding, top-down direction to social service providers, and other factors would be in success of these relationships)</p>
Measures	<p>Where feasible, offering a variety of products may increase uptake (e.g. offer handheld and standard showerheads, a broader array of lighting retrofits)</p> <p>Explore the cost-effectiveness and desirability of including measures for plug load, air conditioning and chest freezer replacement (possibly in combination with an upgraded refrigerator) for future programs</p>
Audit	<p>Consider revising audit to include “smart protocols” to reduce audit costs: protocols which would help auditors make measure installation decisions based on cost-effectiveness thresholds (utility bill data can be used to verify savings) OR</p> <p>Only carry out full audit in homes with highest energy efficiency potential (i.e. high energy consuming homes that compare poorly to a benchmark – as identified by LDC/gas utility)</p> <p>In a future program, some provision should be made to address minor health and safety repairs that must be made prior to energy efficiency measures</p>
Resident	<p>Further information is needed to determine impact of resident education (follow-up phone survey found 4 of 10 residents not already setting back thermostat</p>

Program Area	Lessons Learned
Education	<p>were doing so as a result of education provided during audit)</p> <p>Future iteration of program should follow-up with residents to find out what aspects of education are working and which are not</p>
Staff Training and Supply Chain	<p>All program staff (auditors, managers, installation contractors) should be provided some training on program objectives and basic program concepts (and how to describe these to potential participants)</p> <p>Upfront supply chain planning, management and training for all involved actors are essential</p>
Marketing	<p>Different marketing and recruitment strategies are required for each segment (tenants, landlords, homeowners) and sub-segment (e.g. social housing providers and private landlords)</p> <p>Future marketing strategies should prioritize segment recruitment based on financial need and energy efficiency potential</p> <p>Eligibility needs to be clearly laid out in marketing materials</p> <p>A multi-fuel program would ensure that all income-eligible households have access to conservation and avoid confusion and refusals; would also allow LDCs/gas utilities to minimize program delivery costs by combining resources for marketing, recruitment and program delivery</p>
Learning: Future Consideration	<p>Market segments should be prioritized for participation according to conservation potential and financial need; this approach would allow for program expansion over time</p> <p>Pilot provides valuable lessons for program elements that may be optimally provided by a centralized program manager (e.g. marketing material development, product procurement, training material development, program administrative tools – i.e. management and auditing software) and those that may be handled locally (e.g. service contracts)</p> <p>Any subsequent program should be multi-fuel to ensure equitable access to all low-income ratepayers and to avoid confusion amongst delivery partners</p>

- 1 For a description of OPA management process in place to track and report on progress on
- 2 Ministerial directives, please see the response to Alliance Interrogatory 8, at Exhibit I-7-8.
- 3 For update on the progress against the 100 MW Low Income Directive, please see the
- 4 response to Alliance Interrogatory 9, at Exhibit I-7-9.

LIEN INTERROGATORY 3

QUESTION

**B. REGARDING DIRECTIVE DATED JULY 5, 2010 – CDM PROGRAM UNDER THE
GEA CONSERVATION FRAMEWORK: LOW-INCOME CONSERVATION INITIATIVE
– REFERRED TO IN EXHIBIT A-5-1, PAGE 1 OF 6**

3. Please provide a complete copy of the above low-income Directive.

RESPONSE

Please see the evidence filed at Exhibit A-5-2, pages 16 and 17.

LIEN INTERROGATORY 4

QUESTION

**B. REGARDING DIRECTIVE DATED JULY 5, 2010 – CDM PROGRAM UNDER THE
GEA CONSERVATION FRAMEWORK: LOW-INCOME CONSERVATION INITIATIVE
– REFERRED TO IN EXHIBIT A-5-1, PAGE 1 OF 6**

4. Please provide:

4a) the provincial socio-economic profile the OPA is relying on as the basis for understanding the low-income market for the development of the low-income OPA-Contracted Province-Wide CDM Programs and low-income program components in non-low-income OPA-Contracted Province-Wide Programs for the 2011-2014 period;

4b) the geographic distribution of low-income customers that OPA is relying upon, if not part of the socio-economic profile;

4c) the socio-economic profile by LDC;

4d) the following information by Ontario low-income market segment - low-income homeowners, low-income renters in the private rental market, and low-income renters in assisted and social housing -forecasted for the 2011-2014 period by year, and in total:

- number of potential OPA CDM low-income program participants
- number of actual OPA CDM low-income program participants
- average electricity savings (kW and kWh) achieved/participant
- average dollars spent/participant directly to achieve energy savings only
- total program dollars spent/ participant;

4e) the following information by institutional and commercial consumers that own/operate/manage multi-family buildings with low-income residents, including assisted and social housing forecasted for the 2011-2014 period by year, and in total:

- number of potential OPA CDM program participants
- number of expected OPA CDM program participants
- average electricity savings (kW and kWh) achieved/building (excluding dwelling units)
- average dollars spent/building (excluding dwelling units) directly to achieve energy savings only

- total program dollars spent/building (excluding dwelling units);

4f) a description of each of the low-income OPA-Contracted Province-Wide CDM Programs and low-income program components in non-low-income OPA-Contracted Province-Wide Programs for the 2011-2014 period that OPA expects to offer;

4g) for each low-income OPA-Contracted Province-Wide Program and program component of a non-low income OPA-Contracted Province-Wide Program for each year of the 2011-2014 period:

- the total forecasted (actual for 2011 if available) budget
- the allocated FTE's and their organizational location
- a table showing the forecasted budget and electricity savings (kW and kWh) allocations by LDC, assuming all LDCs offer the OPA-Contracted Province-Wide related programs and components
- a description of the proposed monitoring, verification, and reporting process and metrics that will be reported by LDCs to the OPA and the OPA to the public on 2011 results, and for the 2011-2014 period;

4h) for each low-income OPA-Contracted Province-Wide Program and for each component of each non-low-income OPA-Contracted Province-Wide Program, when does the OPA expect:

- the program Schedule to the master agreement to be available for LDC registration, or latest draft Schedule if the final Schedule is not available
- the registered LDCs to launch the programs and program components;

4i) an explanation as to how each of the low-income OPA-Contracted Province-Wide Programs and program components of other non-low-income OPA-Contracted Province-Wide Programs will fulfill the direction during in 2011 and for the 2011-2014 period, for the OPA to emphasize deep measures such as thermal envelope and appliance replacement;

4j) OPA's overall strategy, plan and timetable for achieving this integration and the transition strategy for 2011 that will set the course for full and robust integration, given that OPA's Directive indicates that 2011 is a transition year regarding the development of a robust and integrated gas and electricity low-income strategy; and

4k) the OPA management process in place to track and report on progress in fulfilling the direction in the Directive, internally within OPA, to the OPA Board, and to the Minister/Ministry.

RESPONSE

The OPA is providing the information requested in order to allow parties to assess the activity underlying its operating budget. The OPA considers that the details of its program design are beyond the scope of this proceeding.

a) The OPA is using data from Statistic Canada's 2006 Census, which identifies the numbers of households (broken out by dwelling type) that have annual incomes below the before-tax low income cut-offs ("LICOs") established by Statistics Canada.

Dwelling type	Number of households below LICO
Single family homes (including single-detached, semi-detached, rowhouses, apartment duplexes, other single-attached houses and movable dwellings)	336,330
Low-rise apartments (less than 5 storeys)	159,220
High-rise apartments (five or more storeys)	237,330
Total	732,880

b) The OPA has purchased a breakdown of the data described in response 4a) by LDC service territory, from Statistics Canada. OPA's license agreement with Statistics Canada does not permit us to share this information.

c) Please see the response to b), above.

d) The Low Income Province-Wide Program targets low income households single family homes as well as social housing dwelling units as defined under Part 9 of the Ontario Building Code. The Low Income Province-Wide Program also targets low income households living in private multi-family units as defined under Part 3 of the Ontario Building Code. Multifamily buildings (including social and assisted housing) are targeted as part of the Business (Commercial & Institutional) Program described in response e), below.

The forecasted participation in the Low Income Province-Wide Program is 89,900 households over 2011-2014 period, as follows: 16,400 in 2011; 20,400 in 2012; 24,500 in 2013; and 28,600 in 2014. The OPA does not have forecasted participation broken out by tenure (i.e. private rental versus owner-occupied).

The forecasted average incremental demand savings is 0.012 kW and 144 KWh energy savings per participant in 2011. The forecasted average incentive cost per participant is \$625 and the forecasted average program cost per participant is \$221.

1 The Program is not yet in market and as such there is no data on "actual" participants or
2 actual spending to report.

- 3 e) The 2011-2014 Province-Wide Business Program targets all commercial and
4 institutional facilities in Ontario, including multi-family buildings (including social and
5 assisted housing). Program forecasts (including costs, participation numbers and
6 resource savings) for multifamily buildings are not further broken out by buildings with
7 low income residents, including social/assisted housing.

8 The OPA estimates that the number of potentially eligible multi-family buildings is
9 approximately 30,000.

10 The forecasted participation of multi-family buildings in the Business Program is 2,700
11 over the 2011-2014 period, as follows: 450 in 2011; 600 in 2012; 750 in 2013; and 900
12 in 2014. The forecasted average incremental electricity savings per multi-family
13 participating building is 33.7 kW and 144 MWh. The forecasted average incentive cost
14 per multi-family building is approximately \$22,000.

15 f) Low Income Province-Wide Program

16 The Low Income Program is a direct install CDM Program targeting low income
17 households in single family homes as well as social housing units as defined under Part
18 9 of the Ontario Building Code. The Low Income Province-Wide Program also targets
19 low income households living in private multi-family units as defined under Part 3 of the
20 Ontario Building Code which will be delivered by the Local Distribution Companies. The
21 Program has four basic components: outreach, in-home audits; measure installation
22 and quality assurance that will be available to all participants.

23 LDCs will have the flexibility to use the multi-channel outreach strategy to best meet the
24 needs of their market; however, where province-wide outreach partners have been
25 established by the LDC/OPA Low Income Working Group, LDCs will work with local
26 branches of these partners wherever possible. It is also anticipated that LDCs will use
27 the same screening/intake partners for the Low Income Program, gas DSM programs
28 and OEB emergency financial assistance programs wherever possible to realize
29 delivery cost efficiencies.

30 In-home energy audits will be offered free to every participant to determine all of the
31 energy efficiency opportunities within each home and to assist auditors in prioritizing
32 and selecting measures for installation.

33 A comprehensive package of measures will be offered through the program to address
34 a broad range of energy-uses targeting those with the highest energy and demand
35 savings potential. All measures will be directly installed at no cost to participants.
36 Measures may include: ENERGY STAR® qualified compact fluorescent light bulbs
37 ("CFLs"), faucet aerators, ENERGY STAR qualified refrigerator and freezer
38 replacements, weatherization measures (e.g. attic insulation, draft-proofing) and others.
39 Measures also include an in-home education session, which will be provided to each

1 participant in order to educate consumers on issues such as home energy management
2 with respect to time-of-use rates and conservation behaviours.

3 All participants will receive a follow-up call or visit to ensure that measures have been
4 properly installed, to confirm savings for evaluation, monitoring and verification ("EMV")
5 purposes.

6 The program will be supported by a series of enabling initiatives, including training,
7 capability building and marketing materials to support outreach efforts. These initiatives
8 will drive participation and deeper savings in the program by ensuring that delivery
9 partners have the capability and capacity to deliver the program in a consistent high
10 quality manner throughout the province.

11 Province-Wide Consumer Program

12 The Province-Wide Consumer Program is available to all residential customers in
13 Ontario, including low income customers. The initiatives within the Province-Wide
14 Consumer Program include the Fridge & Freezer Pickup, Heating & Cooling Incentive,
15 Coupon Booklets, Bi-Annual Retail Events, Appliance Exchange Events and Residential
16 New Construction. The enabling initiatives available to customers include the Home
17 Energy Assessment Tool and the online tips and insights. A residential demand
18 response initiative will also be offered to customers once available, expected in summer
19 2011. There are also two midstream initiatives targeting efficient consumer electronics
20 and efficient pool equipment. The Province-Wide Low Income Program has integrated
21 elements of many of the initiatives above to overcome cost barriers and participants in
22 this program will not be precluded from accessing any of the elements of the Consumer
23 Program assuming eligibility criteria has been met.

24 Business (Commercial & Institutional) Program

25 The Province-Wide Business Program is targeted at all commercial and institutional
26 facilities in Ontario, including multifamily buildings (including social and assisted
27 housing). The Program offers incentives for pre-project assessments, building
28 commissioning and upgrading primary end-use measures, namely: lighting, space
29 cooling and ventilation, auxiliary plug load, and space and water heating, demand
30 response initiatives. There are also specific incentives for in-suite appliances targeted
31 at the multi-family sector as well as support for tenant education activities. There is also
32 funding available to 'top-up' incentives specifically for social housing providers.

- 33 g) The total forecasted budget for the Low Income Province-Wide Program for 2011 is
34 \$16 million dollars.

35 Activities under this initiative are undertaken by Conservation division staff, supported
36 where required by staff from other divisions. Please see the response to Board Staff

Interrogatory 1, at Exhibit I-1-1. The allocation of funding for LDCs is currently being finalized and is therefore not available at this time.

The Low Income Program is currently finalizing the EM&V plan and further details will be available over the next few months. The EM&V will be robust and evaluate all major elements of the program design.

All residential customers are eligible to participate in the Province-Wide Consumer Program. Forecasts (participants, savings etc.) and any related EM&V activities have not been prepared separately for low income participants within the Province-Wide Consumer Program.

Program forecasts (participants, savings etc) for the Business Program have been developed based on building type (office, multi-family etc) and have not been developed specifically for low income participants within the multi-family building segment.

h) The Master CDM Program Agreement and all Schedules for the Province-Wide Consumer Program were made available to the LDCs on January 26, 2011. The Agreement is filed as an attachment to the response to GEC Interrogatory 4, at Exhibit I-2-4. In addition, the following Schedules for the Business (Commercial & Institutional) Program were made available to LDCs on January 26, 2011:

- Energy Audit Initiative
- Efficiency: Equipment Replacement Incentive Initiative
- Direct Install Lighting and Water Heating Initiative

It is anticipated that the remaining schedules under the Business Program will be available to LDCs for registration by the end of February

It is anticipated that the Low Income Program Schedule will be available to LDCs for registration in March 2011. The LISFH Program is anticipated to launch May 2011.

Requirements regarding timing of LDC implementation of program components are set out in the individual initiative schedules.

i) The Low Income Province-Wide Program will fulfill the Minister's direction for the program to have "an emphasis on deep or extended measures, such as thermal envelope improvements and appliance replacement". The program is forecasting to install more than 85,000 extended measures and weatherization measures over the four years of the program. All participants will be screened for eligibility to receive these extended and weatherization measures.

j) OPA, Enbridge and Union Gas are currently negotiating a Memorandum of Understanding (MOU) regarding the development of an integrated gas and electric low-income strategy. The MOU will be referenced in the OPA/LDC Low Income Program Schedule. The purpose of the MOU is to provide a framework for gas and electric

- 1 coordination of low income CDM, where possible, at the local level. The anticipated
- 2 date of MOU finalization is Q1 2011.
- 3 k) Please see the response to Alliance Interrogatory 8, at Exhibit I-7-8.

LIEN INTERROGATORY 5

QUESTION

**C. REGARDING DIRECTIVE DATED APRIL 23, 2010 – CONSERVATION AND
DEMAND MANAGEMENT INITIATIVES UNDER THE GEA CONSERVATION
FRAMEWORK– REFERRED TO IN EXHIBIT A-5-1, PAGE 1 OF 6**

5. Please provide a complete copy of the above low-income Directive.

RESPONSE

Please see the evidence filed at Exhibit A-5-2, pages 12 to 15.

LIEN INTERROGATORY 6

QUESTION

C. REGARDING DIRECTIVE DATED APRIL 23, 2010 – CONSERVATION AND DEMAND MANAGEMENT INITIATIVES UNDER THE GEA CONSERVATION FRAMEWORK– REFERRED TO IN EXHIBIT A-5-1, PAGE 1 OF 6

6. Please provide:

6a) the provincial socio-economic profile the OPA relied on as the basis for understanding the First Nations and Métis communities for the period prior to this Directive;

6b) the geographic distribution of these communities that OPA relied upon, if not part of the socio-economic profile;

6c) the socio-economic profile by LDC, where applicable;

6d) a program description of each of the OPA CDM program offerings for these communities that were available by year prior to this Directive, including:

- total program budget
- program measures (technologies/equipment, services, capability building, other)
- OPA FTE's assigned to the program and their location in the organization
- number of potential OPA CDM program participants
- number of actual OPA CDM program participants
- average electricity savings (kW and kWh) achieved/participant
- median energy savings (kW and kWh) achieved/participant
- internal program evaluations or program evaluations (process, impact, market, combination or other) that OPA performed internally or that were performed by consultants retained by OPA, of which we request copies
- cost of the above evaluations
- an explanation of the value gained for the money spent on each of the above evaluations;

6e) a provincial picture of the success of the above programs to the end of December 2010, including:

- a description of remaining market barriers

- market penetration achieved
- lessons learned
- opportunities to increase market penetration
- electricity savings for the 2011-2014 period;

6f) for each First Nations and Métis community's OPA energy efficiency and demand response program for each year of the 2011-2014 period:

- the total forecasted (actual for 2011 if available) budget
- the allocated FTE's and their organizational location for each 2011 offering
- a table showing the forecasted budget and electricity savings (kW and kWh)
- a description of the proposed monitoring, verification, and reporting process and metrics that OPA will employ; and

6g) the date when the OPA expects each First Nation and Metis community's OPA energy efficiency and demand response program to launch.

RESPONSE

The OPA is providing the information requested in order to allow parties to assess the activity underlying its operating budget. The OPA considers that the details of its program design are beyond the scope of this proceeding.

- a) Socio-economic data for the Aboriginal communities was obtained from Indian and Northern Affairs Canada. Filed as Attachments 1 and 2 to this exhibit is a summary of the following data that informed the design of programs developed prior to the April 23, 2010 directive: 1) distribution of households by First Nation community; housing type, tenure and state of repair data for 74 First Nation communities; 2) population, housing and heating fuel type for a sample of First Nation communities; and 3) a summary of building assets by First Nation community. Cultural and social guidance was also provided by the Elders and Community Champions Advisory Committee, a committee of representatives from Ontario's Aboriginal communities brought together to provide input to the program design and implementation. In addition, data from the Census of Canada, 2006 Aboriginal Population Profile was referenced (source: Statistics Canada: 2006 Census of Population. Product: Aboriginal Population Profile, 2006. Census Catalogue No.: 92-594-XWE). This data is available online at <http://www12.statcan.ca>.
- b) A list of the First Nation communities used to inform program design is provided in Attachment 3 to this exhibit.
- c) Socio-economic data for First Nation communities and Métis communities was not available by LDC territory for the purpose of program development under Directives received prior to April 23, 2010.

1 d) In 2007 and 2008, the OPA administered the Energy Efficiency and Conservation
2 measures for Aboriginal Communities ("EECAC") program, a pilot program for First
3 Nation communities in Ontario. The main goal of the program was to introduce and
4 implement energy efficiency and conservation measures in all First Nations
5 communities in Ontario. The program consisted of four components: 1) two province-
6 wide conferences on energy conservation for Aboriginal communities; 2) education
7 curriculum development; 3) Energy Conservation Kits; and 4) the Energy Retrofit Pilot.

8 Two province-wide conferences on energy conservation for the Aboriginal communities
9 were held in May 2007 and September 2009. These conferences brought together
10 members of the First Nations, Métis and urban Aboriginal communities to discuss
11 energy conservation successes, challenges and opportunities in these communities.

12 As part of the program, education curriculum on energy conservation for First Nation
13 communities was developed for primary school students and pilot tested in three
14 schools in First Nation communities. The final curriculum was subsequently distributed
15 for use in 23 schools in First Nation communities.

16 The program distributed approximately 22,000 energy conservation kits to households
17 in approximately 120 First Nation communities. Each energy conservation kit included:
18 four compact fluorescent light bulbs, a fridge/freezer thermometer, pipe wrap, a faucet
19 aerator, a low-flow showerhead, a shower flow measuring bag, an outdoor heavy-duty
20 timer, electrical outlet and switch gaskets, weather stripping and storm window kits.
21 Each kit included a four-language (English, Ojibway, Cree, Oji-Cree) product guide that
22 explained how each product saves energy and how to use each product properly.

23 Comprehensive resident energy audits were undertaken in 226 homes in five First
24 Nation communities. Seventeen of these homes received energy retrofits. As part of the
25 program's capacity building initiatives, two members of each of the five communities
26 were trained to deliver the energy audits and conservation retrofits. The retrofits
27 included direct installation of all measures included in the conservation kit in addition to
28 power cost monitors, caulking and weather-stripping (where warranted).

29 In total, the conservation kits distributed through the EECAC program resulted in
30 approximately 1.0 MW of net summer peak demand reductions and 20 GWh of net
31 incremental (first year) energy savings. The average energy savings per energy
32 conservation kit were 900 kWh and the average demand reduction was 0.043 kW.
33 Energy and demand savings attributable to the direct install retrofits is unavailable. The
34 median savings per program participant is unavailable. The total cost to deliver the
35 EECAC program was approximately \$2.1 million, exclusive of costs of Conservation
36 staff, supported by staff from other divisions. Please see the response to Board Staff
37 Interrogatory 1, at Exhibit I-1-1.

1 There was not an OPA administered third party evaluation on the Energy Efficiency and
2 Conservation measures for Aboriginal Communities ("EECAC") program.

3 The OPA does not track internal staff costs on a project-by-project basis. Please see
4 the response to Board Staff Interrogatory 1.

- 5 e) Lessons learned from the EECAC Pilot Program include: conservation is generally an
6 important issue to First Nation communities and there is a lot of interest in conservation
7 at the community level; First Nation peoples are best placed to make decisions about
8 conservation in their communities; technical training and education is required; standard
9 conservation techniques are effective and products need to be appropriate to the
10 environment; the remote location of some communities can create logistical challenges
11 and add additional costs to the delivery of CDM; community commitment to and
12 assistance in program delivery is essential to program success; in some communities
13 and for some members of the First Nation, Métis and urban Aboriginal communities,
14 financial constraints pose a significant obstacle to realizing conservation opportunities.

15 Based on discussions with stakeholders and lessons learned from the EECAC pilot
16 program, the following barriers remain to the participation of members of the First
17 Nation, Métis and urban Aboriginal communities in conservation: financial constraints,
18 access to CDM training and education, geography, and availability of appropriate CDM
19 products and services.

20 Lessons learned from the EECAC pilot program indicate that market penetration can be
21 increased by implementing a program design that addresses the market barriers
22 outlined above. These barriers will be addressed in the design of the new Aboriginal
23 Conservation Program.

- 24 f) The design of the Aboriginal Conservation Program is not yet completed. As such,
25 forecasted budget and resource savings are not yet available. The evaluation,
26 monitoring, verification and reporting processes and metrics for the Aboriginal
27 Conservation Program are also still under development.

- 28 g) Pending the outcome of program-related procurement activities (currently underway), it
29 is anticipated that the program will be available in market in Q2 2011.

LIEN INTERROGATORY 7

QUESTION

**D. REGARDING STRATEGIC OBJECTIVE 2 - CONSERVATION -2.1 C - BUILDING
CAPACITY OF THE CONSERVATION SERVICES INDUSTRY, THE CUSTOMER
AND THE SUPPLY CHAIN TO ACCELERATE CONSERVATION**

7. For the purposes of this question, please use the following definitions:

- a low-income program partner is an organization that is permitted by the OPA to work with the OPA without an OPA tendering process for the work, including, but not limited to:
 - a government ministry, agency or department,
 - First Nations and Métis governments,
 - First Nations provincial-territorial organizations (PTO),
 - any organization with responsibilities for energy conferred on it by a government;
- a low-income delivery agent delivers at least a part of an OPA low-income program on behalf of the OPA, whose services are tendered through the OPA tendering process;
- a low-income channel partner is an organization that assists the OPA in low-income program delivery but is not a delivery agent, for example, a community group may help with marketing the program, but would do so because it fits within the organization's mandate, its service would not be tendered.

Please provide:

7a) a second list of the above providing and using OPA definitions of these terms;

7b) by year from 2005 to present, a list of OPA's low-income CDM program partners, a list of OPA's low-income CDM delivery agents and a list of low-income CDM channel partners;

7c) a description of the process that the OPA uses to identify low-income program partners, delivery agents and channel partners;

7d) an explanation as to how the OPA ensures that economic efficiencies are achieved in the selection and management of each of the groups mentioned in section 7c;

- 7e) a description as to the existing Ontario industry CDM capabilities and programs for serving the low-income community, by organization and need, as available, and the industry capability needs for serving the low-income community;
- 7f) a description as to the criteria that the OPA uses to determine when there is inadequate CDM industry capability for serving the low-income community, and how they are applied; and
- 7g) a description:
- of any duplication in programs that existed between industry programs (e.g. government agencies and NGO's) and any OPA low-income programs over the period of 2005 to the end of 2010
 - as to how the OPA dealt with this duplication over the period of 2005 to end of 2010
 - of any expected duplication between industry programs and any OPA low-income program in the 2011-2014 period.

RESPONSE

- a) The OPA does not agree with defining the terms "program partner", "delivery agent" and "channel partner" based on procurement processes, as set out in this question above.

The OPA does not have a single definition for these terms, as they are not necessarily mutually exclusive and are used in program- and context-specific manners.

- b) Below is a listing of organizations with whom the OPA has contracted for services associated with the delivery of CDM programs geared specifically to low income households, from 2005 to 2010:

Organization	Low Income Program	Years
Social Housing Services Corporation	Social Housing Pilot	2006-2007
Green Communities Canada	Energy Efficiency Assistance Program Homes (pilot)	2006-2007
EnviroCentre	Energy Efficiency Assistance Program Homes (pilot)	2006-2007
Ministry of Municipal Affairs and Housing	Affordable Housing Pilot	2007-2008

- 1 c) The two primary processes that the OPA uses for identifying potential service providers
2 and outreach partners are (1) public consultation and stakeholder outreach sessions;
3 and (2) competitive procurements.
- 4 d) The OPA's policy is to use competitive processes as a means of procuring CDM
5 program service providers.
- 6 e) The OPA completed a study in 2007, "Assessment of Conservation and Demand
7 Management Supply Chain Capabilities in Ontario," (London Economics International)
8 which identified a broad capability shortfall in the Ontario market with respect to CDM.
9 On the basis of this research, the OPA developed a capability building framework which
10 included consultations with industry stakeholders that led to the integration of several
11 training-related initiatives into the 2011-2014 province-wide programs.

12 There are several such capability building initiatives of relevance to the low-income
13 community which will be implemented in 2011 which include: low-income program
14 service provider training, building operator training (buildings greater than 50,000
15 square feet), building commissioning service incentives, and related building
16 commissioning service provider training incentives, and two low-income sector specific
17 Energy Efficiency Solution Providers ("EESP"). The EESP provides shared CDM-
18 related services to a specific sector.

19 There are two additional initiatives which will benefit the low income community
20 indirectly, such as a training incentive aimed at integrated design facilitators who are
21 used within a design team in the construction of new buildings to maximize energy
22 efficiency in the design stage, and energy manager training which will be available to
23 energy managers of portfolios of buildings over 50,000 square feet, such as in the case
24 of municipally-owned housing providers.

25 The capability building initiatives to be included in the 2011-2014 province-wide
26 programs are new for the OPA. There will be significant learnings gleaned through this
27 period, and the OPA will welcome feedback from the low-income sector on the extent to
28 which these initiatives serve the OPA's and the sector's needs. The initiatives being
29 launched in 2011 were intended to be broad, and are generally not targeted at specific
30 sub-sectors, such as low-income. As a part of its program evaluation, the OPA will
31 examine the extent to which capability building initiatives should be tailored to specific
32 segments, and/or whether new initiatives should be considered.

- 33 f) The OPA does not have explicit criteria for determining when there is inadequate CDM
34 industry capability for serving the low-income community. Please see the answer to e),
35 above, for a description of the processes that the OPA has used to date to identify
36 province-wide CDM capability needs and to develop an initial suite of cross-sector
37 capability building initiatives.

1 g) The OPA is aware that several LDCs conducted pilot CDM programs during the same
2 time period (2005-2007) as the OPA's three low income pilot programs.

3 For the new Province-Wide Low Income CDM Program for 2011-2014, a provincial scan
4 of existing low income conservation programs was completed. The only 2011 low
5 income conservation programs that were identified at that time were the gas utilities' low
6 income DSM programs. The Province-Wide Low Income CDM program has been
7 designed to complement the low income DSM programs being delivered in Ontario.
8 The OPA/LDC Low Income Working Group and the gas utilities have been working
9 together to optimize program efficiencies through coordinated program delivery,
10 wherever possible.

LIEN INTERROGATORY 8

QUESTION

**E. REGARDING THE DIRECTIVE TO THE OPA OF OCTOBER 6, 2005 WHICH REFERS
TO THE “SOCIAL HOUSING ENERGY MANAGEMENT PILOT PROGRAM”**

8. Please provide a complete copy of the Directive.

RESPONSE

Please see the response to LIEN Interrogatory 1, at Exhibit I-5-1.

LIEN INTERROGATORY 9

QUESTION

E. REGARDING THE DIRECTIVE TO THE OPA OF OCTOBER 6, 2005 WHICH REFERS TO THE “SOCIAL HOUSING ENERGY MANAGEMENT PILOT PROGRAM”

9. The Directive refers to The "Social Housing Energy Management Pilot Program" ("SHEMPP"), which Social Housing Services Corporation was running, funded through the Ministry of Energy's Conservation Partnership Program, and which provided a comprehensive energy management strategy for social housing providers, and directed the OPA to further pursue this initiative.

Please provide:

9a) a description, by year from 2005 to end of December 2010, as to how the OPA has pursued this initiative;

9b) the role that SHSC has played in each year;

9c) an explanation as to how the OPA intends to pursue this initiative in the period of 2011-2014;

9d) a description of the role that SHSC is expected to fulfill in the period of 2011-2014; and

9e) the OPA management process in place to track and report on progress in fulfilling all the direction in the Directive, internally within the OPA, to the OPA Board and to the Minister/Ministry.

RESPONSE

a) The OPA pursued this initiative through a contract with SHSC for the delivery of the program from March 21, 2006 through December 31, 2007.

b) SHSC was the administrative agent for the SHEMPP.

c) The OPA does not intend to pursue the SHEMPP initiative during 2011–2014. Social housing will be covered through the 2011-2014 Province-Wide Business (Commercial & Institutional) and Province-Wide Low Income Programs.

d) The OPA will contract with LDCs for the delivery of the Province-Wide CDM Programs. The LDC/OPA Low Income Working Group (“LIWG”) has identified a list of potential province-wide outreach partners for LDCs to work with in the delivery of the Low Income Program. The LIWG has included SHSC on this list of potential outreach partners.

e) Please see the response to Alliance Interrogatory 8, at Exhibit I-7-8.

LIEN INTERROGATORY 10

QUESTION

E. REGARDING THE DIRECTIVE TO THE OPA OF OCTOBER 6, 2005 WHICH REFERS TO THE "SOCIAL HOUSING ENERGY MANAGEMENT PILOT PROGRAM"

10. Pursuant to the October 6, 2005 Directive, the OPA and SHSC signed a Memorandum of Understanding (MOU) to define the working relationship between the two parties, making SHSC the "designated exclusive partner of the OPA's social housing conservation and demand management programs".

Please provide:

10a) a description of each program, including:

- budget
- target audience
- measures

of the CDM programs for which the OPA partnered with SHSC for the purposes as set out in the MOU during the period in which the MOU was in effect (from December 22, 2005 to December 31, 2007);

10b) for each year that the MOU was in effect, a description of how the OPA fulfilled this MOU such that SHSC was the exclusive OPA partner on social housing related to CDM; and

10c) an explanation as to why the OPA did not renew the MOU in 2008 and beyond.

RESPONSE

The OPA is unable to see any connection between the information requested in this interrogatory and the matters at issue in the 2011 revenue requirement submission.

