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November 1, 2010

Mr. John Pickernell  
Assistant Board Secretary  
Ontario Energy Board  
PO Box 2319  
27<sup>th</sup> Floor  
2300 Yonge Street  
Toronto ON M4P 1E4

Via – Electronic Filing

Dear Mr. Pickernell

**RE: Conservation and Demand Management Strategy  
EB-2010-0215**

Please find attached the CDM Strategy 2011-2014 for Ottawa River Power Corporation as required by the CDM Code.

If we can provide any further information kindly contact us.

Yours truly,

*Original signed by*

Douglas Fee, P.Eng.  
President

*“A Proud Locally Owned Municipal Utility”*



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## Ottawa River Power Corporation

### Conservation and Demand Management Strategy 2011 to 2014

November 1, 2010

*Preamble - This strategy is prepared and submitted to the Ontario Energy Board on November 1, 2010 as a requirement of LDC Licence as set forth in the Conservation and Demand Management Code for Electricity Distributors issued September 16, 2010.*

#### 1. Distributor

Ottawa River Power Corporation, LDC licence ED-2003-0033. Ottawa River Power Corporation (ORPC) is an electrical distribution company serving 10,500 customers in the communities of: City of Pembroke, Township of Whitewater Region, Township of Killaloe, Hagarty and Richards and the Town of Mississippi Mills.

#### 2. Demand Target

Preliminary target established by OPA in June 21, 2010 Draft Advise to OEB: 0.12% of Provincial Target of 1330 MW or **2 MW** (rounded) for 2014 summer peak demand savings.

#### 3. Energy Target

Preliminary target established by OPA in June 21, 2010 Draft Advise to OEB: 0.15% of Provincial Target of 1600 GWh or **9 GWh** for total energy reduction for the period January 1, 2011 to December 31, 2014.

#### 4. CDM Strategy

##### 4.1. Background Considerations

The service area consists of four communities. Determining the CD&M strategy for the utility requires the consideration of the nature of the load. The following are factors:

- a) The utility is winter peaking. In 2009-2010 period the winter peak was 36,925 kW, the summer peak was 29,961 kW.
- b) The customer mix is 8909 residential, 1532 commercial/industrial and no large users over 5MW.

- c) Pembroke and Almonte were historically industrial centres. Pembroke was built on a large lumbering industry. Now, the lumber industry is virtually gone. The economy of the area is based on service industry, government (schools, hospitals, County Administration). The largest area employers are Atomic Energy of Canada Limited (AECL) and CFB Petawawa, but they are not located within the service area. The Town of Almonte was an industrial mill town. The industries have been closed and the Town now provides services to the surrounding area as well as being a bedroom community to Ottawa. The two smaller villages in the service area were centres for the local farming area (Beachburg) and the forestry industry (Killaloe). While forestry and farming are not as strong as in the past, they continue to be service centres for their areas.
- d) There are no large users (> 5MW) within the service area. The largest customers are:

Customer Type	Peak Demand	Annual Energy GW-hrs
Industry	1400	83,500
Institution	1140	41,200
Industry	840	39,500
Institution	760	4,100
Institution	520	20,752
Commercial	390	9,600
Commercial	380	22,000
Institution	490	11,250
Institution	310	18,137

- e) Past OPA delivered programs have included GRRP, Power Savings Blitz and ERIP. They have been delivered using ORPC resources and contractor assistance.
- f) Being older communities, the housing stock age is older than provincial averages.
- g) Natural gas has been available relatively recently (still not in Killaloe) which means the housing stock still has proportionally higher amounts of electric and oil space heating and water heating. All new housing is gas.
- h) New housing starts are low. About 50 homes are added annually in the service area. The majority of growth is in Almonte (people moving out of the City looking for the amenities provided by a small town) and Pembroke (expansion due to CFB Petawawa and AECL).
- i) Demand side management is a known concept in the Pembroke service area. The predecessor utility, Pembroke Electric Light and Pembroke Hydro, operated a water tank/electric furnace peak control system, originally frequency controlled and later radio controlled, for over 50 years before the year 2000. It was a popular program offering \$1/month per kW controlled.

#### 4.2. Overview of C&DM Strategy

ORPC plans to meet the assigned target for the most part through the use of provincial wide OPA programs. In the past, ORPC has delivered three contracted programs: ERIP, Power Saving Blitz and GRRP. Along with the continuation of these programs or their related enhanced programs, ORPC will deliver the Peaksaver Program.

The OPA programs are fully described in the following OPA documents issued October 2010 to LDC's:

- 2011 -2014 OPA-Contracted Province Wide CDM Programs - Consumer Program Summary Guide
- 2011 -2014 OPA-Contracted Province Wide CDM Programs - Commercial and Industrial Program Summary Guide
- 2011 -2014 OPA-Contracted Province Wide CDM Programs - Industrial Program Summary Guide

The targets were set using the OPA Modelling Framework for Developing LDC-Specific Resource Saving Projections of OPA Contracted Province-Wide CDM Programs issued in October 2010 and the related spreadsheet models. Further information including past performance historical update on OPA programs in our LDC, LDC demographics, building information and local knowledge was used to establish the projections.

The impact of TOU metering energy and demand reductions are not known at this time and were not used in the target projections.

OPA is currently developing programs for low income and social housing. Realizing the contribution that low income programs could potentially create in CDM target savings and, furthermore, provide important financial savings for our customers, ORPC will critically assess the viability and benefit of these programs, once they are made available to the LDCs. We have included an estimate for savings in this area.

The summary of programs and annual targets is shown in Table 1.

## 5. OPA - Contracted Province-Wide Programs

The following table provides a summary of the OPA programs that will be used to reach the conservation targets.

<b>Program</b>	<b>Time Frame</b>	<b>Description</b>	<b>Target Customer Group</b>	<b>Target Demand kW</b>	<b>Target Energy MW-hr</b>
Appliance Retirement	2011-2014	Fridges, freezers or inefficient appliances	Consumer	30	515
Demand Response	2011-2014	Thermostat controls	Consumer	290	994
Instant Discounts	2011-2014	Store coupons and sale promotions	Consumer	20	1046
HVAC Discounts	2011-2014	HVAC higher efficiency units	Consumer	80	321
Midstream Incentives	2011-2014	Television and top box electronics component upgrades	Consumer	0	142
New Construction	2011-2014	Incentives for new construction	Consumer	20	127
Direct Install Lighting	2011-2014	Small business lighting upgrades	Commercial	30	938
Equipment Replacement Incentive	2011-2014	Upgrading of commercial equipment	Commercial and Industrial	270	1962
Demand Response	2011-2014	Small commercial thermostat program	Commercial	10	17
Retrofit and Commissioning	2011-2014	Enhancement of the former ERIP	Commercial and Industrial	530	1926
Demand Response		Commercial and industrial demand response DR1 and DR3	Commercial and Industrial	756	32
Social & low income housing	TBD	Additional Incentives for social and low income housing (program development being done by OPA)	Low Income	40	180
<b>Total</b>				<b>2076</b>	<b>8201</b>

## 6. Potential Board- Approved CDM Programs

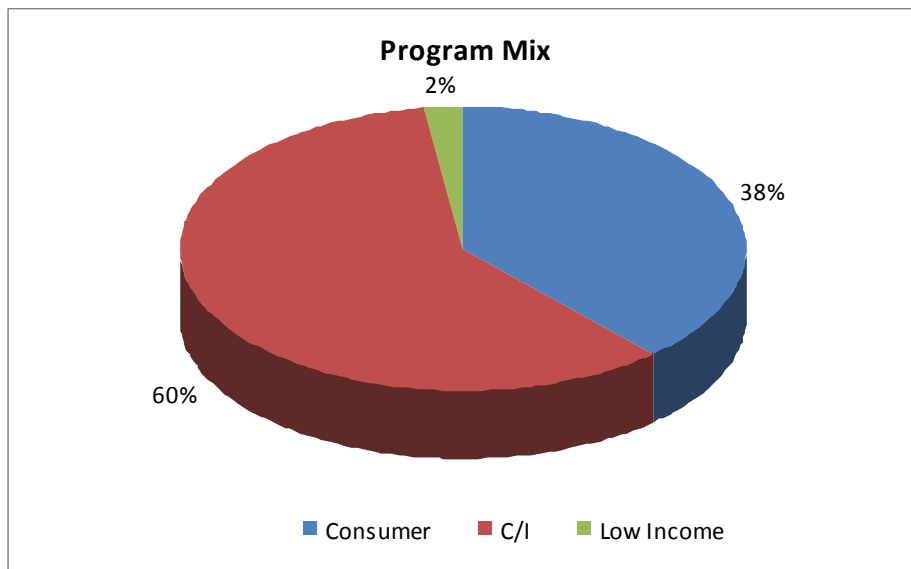
While it is expected that most of the CDM target can be accomplished through the OPA programs, the shortfall from the energy target will have to be made up through Board approved programs.

A number of potential programs have been identified as follows; but, we would also look at partnering with other utilities on programs that would fit with our customer mix.

- Street lighting efficiency - Street lighting is the fifth largest customer by revenue for the utility. Recent advances in street lighting technology offer greater savings that may provide the basis for a cost effective program.
- Community Education Programs
- Re-introducing the water heater control program in view of the OPA demand response program

## 7. Program Mix

The programs identified, to date, touch all the customer groups.



## 8. CDM Coordination

Ottawa River Power will be contracting the delivery of the Direct Lighting Program to coordinate booking of calls with area electrical contractors.

It is planned that we will obtain resources from the Hydro Ottawa energy group to assist with the commercial programs.

**Ottawa River Power - 2011 to 2014 CDM Strategic Plan Targets  
Number of Units Projected**

	2011	2012	2013	2014	Units of	Project Basis
<u>Consumer Programs</u>						
<b>Appliance Retirement</b>	146	138	124	111	Fridges, Freezers, etc	% Prov
<b>Demand Response</b>	116	185	232	239	Thermostats, Switches	%Prov
Instant Discounts	4272	2338	2338	2338	OPA Coupon/Discounts	% Prov
HVAC Discounts	170	178	186	196	A/C units	%Prov
Midstream Incentives	274	274	274	274		
New Construction	65	76	91	115	Various	%Prov
<u>Commercial &amp; Institutional</u>						
<b>Direct Install Lighting</b>						
<b>Direct Serviced Space Cooling</b>						
<b>Equipment Replacement Incentive</b>						
<b>Demand Response</b>						
Retrofit/Commissioning (ERIP)						
i. Pre-project Assessments						
ii. Equipment Replacement (ERIP)						
iii. Commissioning						
iv. Demand Response 1						

Low Income/Social Housing

**Bold >> OPA Contracted Programs**



**Table 1**

	Demand Savings (kW)				Energy Savings (MW-hr)			
	2011	2012	2013	2014	2011	2012	2013	2014
<u>Consumer Programs</u>								
Appliance Retirement	10	20	20	30	80	175	329	515
Demand Response	40	110	200	290	49	215	529	994
Instant Discounts	10	10	10	20	137	356	659	1046
HVAC Rebates	20	40	60	80	31	93	190	321
Midstream Incentives	0	0	0	0	14	43	85	142
New Construction	10	20	20	20	11	34	71	127
<u>Commercial &amp; Institutional</u>								
Direct Install Lighting	20	40	40	30	152	457	725	938
Equipment Replacement Incentive	50	120	190	270	186	591	1185	1962
Demand Response	0	0	10	10	1	4	9	17
Retrofit/Commissioning (ERIP)	90	220	360	530	163	542	1121	1926
i. Pre-project Assessments								
ii. Equipment Replacement (ERIP)								
iii. Commissioning								
Demand Response 1	45	101	190	291	1	1	3	6
Demand Response 3	67	162	302	465	2	6	15	27
Low Income/Social Housing	10	20	30	40	45	90	135	180
TOU Metering		Not Available				Not Available		
<b>Target Projection for Summer 2014</b>				<b>2076</b>	<b>8201</b>			
OEB Assigned Target				2000	9000			
% of Target				104%	91%			

**Ottawa River Power - 2011 to 2014 CDM Strategic Plan Targets  
Cumulative Energy Savings (MW-hr)**

	2011	2012	2013	2014
<u>Consumer Programs</u>				
<b>Appliance Retirement</b>	69	203	380	595
<b>Demand Response</b>	69	299	733	1378
Instant Discounts	137	356	659	1046
HVAC Discounts	61	187	379	642
Midstream Incentives	14	34	94	157
New Construction	11	34	71	127
<u>Commercial &amp; Institutional</u>				
<b>Direct Install Lighting</b>	152	457	725	938
<b>Direct Serviced Space Cooling</b>	0	0	0	0
<b>Equipment Replacement Incentive</b>	247	786	1590	2656
<b>Demand Response</b>	1	4	9	17
Retrofit/Commissioning (ERIP)	163	542	1121	1926
i. Pre-project Assessments				
ii. Equipment Replacement (ERIP)				
iii. Commissioning				
iv. Demand Response 1	1	2	6	11
DR3	3	11	26	48
Low Income/Social Housing	45	90	135	180
<b>Target Projection for Summer 2014</b>				<b>9721</b>
<b>OEB Assigned Target</b>				<b>9000</b>
<b>% of Target</b>				<b>108%</b>

**Bold >> OPA Contracted Programs**