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Wellington North Power Inc.

Market Participant Number - 105222

Conservation Plan 2015-2020

Submitted to:

Independent Electricity System Operator

April 30, 2015

Wellington North Power Inc.

2015-2020 Conservation Planning

Contents

1.0 Introduction

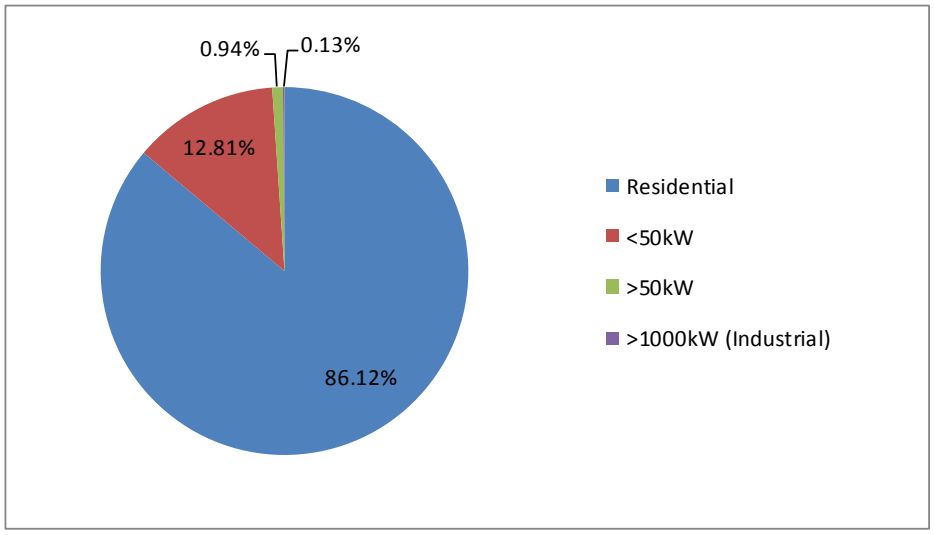
Wellington North Power Inc. is an electricity distribution company located in the most northern part of Wellington County with Ontario Energy Board license (ED-2002-0511).

Since 2006 Conservation and Demand Management has been an important part of Wellington North Power's day to day activities. We strive to keep our customers informed of in market programs and incentives, to assist them with saving energy.

The company has a customer base of 3,713 customers, of which eighty-six percent is in the residential class.

Table 1: Customer Base End of 2014

Classification	Customers	Percentage
Residential	3213	86.12%
<50kW	478	12.81%
>50kW	35	0.94%
>1000kW (Industrial)	5	0.13%
Total Customer	3731	



2.0 Historical Performance Information

Table 2 to table 5 below illustrates the energy savings achieved by the company, as reported by the Ontario Power Authority (OPA), over the past nine years:

Table 2: Summary of Net Energy Savings 2006 to 2014

Program Years	kWh Savings
2006 - 2009	1,517,000
2010	305,000
2011 - 2014	3,267,811
Total	**5,089,811**

Since 2006 Wellington North Power Inc. has been credited with a total of 5,089,811 kWh of energy savings through various provincial programs.

Table 3: Net Energy Savings 2006-2009 Report (MWh)

#	Program Year	Results Status	2006	2007	2008	2009
1	2006 Programs	Final	239	239	239	239
2	2007 Programs	Final	0	157	120	116
3	2008 Programs	Final	0	0	455	434
4	2009 Programs	Final	0	0	0	728
Total			**239**	**397**	**814**	**1,517**

*The total amount of net energy savings for Wellington North Power during the 2006 to 2009 period is **1,517,000** kWh (1,517 MWh), as verified by OPA reports*.

Table 4: Net Energy Savings 2010 Report

Program	Initiative	Activity Unit	Wellington North Power Inc.				
			Activity Level	Net Summer Peak Demand Savings (MW)	Net Energy Savings (MWh)	Gross Summer Peak Demand Savings (MW)	Gross Energy Savings (MWh)
Consumer	Cool Savings Rebate	Rebates	43	0.01	10	0.01	23
Consumer	Every Kilowatt Counts Power Savings Event	Products purchased	382	0.00	12	0.00	26
Consumer	Great Refrigerator Roundup	Appliances	70	0.01	41	0.01	78
Consumer	***peaksaver®***	Devices installed	0	0.00	0	0.00	0
Business	Toronto Comprehensive	Projects	0	0.00	0	0.00	0
Business	Electricity Retrofit Incentive Program	Projects	0	0.00	0	0.00	0
Business	High Performance New Construction*	Projects	0	0.01	27	0.02	38
Business	Hydro Ottawa ***peaksaver®*** Small Commercial Pilot	Devices installed	0	0.00	0	0.00	0
Business	Multifamily Energy Efficiency Rebates	Projects	0	0.00	2	0.00	3
Business	***peaksaver®***	Devices installed	0	0.00	0	0.00	0
Business	Power Savings Blitz	Projects	31	0.03	82	0.03	82
Business, Industrial	Demand Response 3	Facilities	0	0.23	4	0.23	4
Business, Industrial	Loblaw & York Region Demand Response*	Facilities	0	0.03	0	0.03	0
Industrial	Demand Response 2	Facilities	0	0.11	127	0.11	127
Total				**0.4**	**305**	**0.4**	**381**

*The total amount of net energy savings for Wellington North Power during the 2010 period is **305,000** kWh (305 MWh).*

Table 5: Q4 2014 Preliminary Results

#	Initiative	Unit	Incremental Activity (new program activity occurring within the specified reporting period)				Net Incremental Peak Demand Savings (kW) (new peak demand savings from activity within the specified reporting period)				Net Incremental Energy Savings (kWh) (new energy savings from activity within the specified reporting period)				Program-to-Date Unverified Progress to Target (excludes DR)	
			2011 Adj.*	2012 Adj.*	2013	2014	2011	2012	2013	2014	2011	2012	2013	2014	2014 Net Annual Peak Demand Savings (kW) 2014	2011-2014 Net Cumulative Energy Savings (kWh) 2014
Consumer Program																
1	Appliance Retirement	Appliances	59	94	43	50	3	5	3	3	24,852	38,126	18,331	20,980	15	271,431
2	Appliance Exchange	Appliances	2	15	-	1	0	2	-	0	350	4,034	-	193	3	13,646
3	HVAC Incentives	Equipment	27	31	25	23	10	9	6	6	20,522	16,329	11,502	9,929	30	164,010
4	Conservation Instant Coupon Booklet	Measures	319	20	219	389	1	0	0	1	11,756	884	4,875	8,882	2	68,306
5	Bi-Annual Retailer Event	Measures	602	671	598	3,067	1	1	1	4	18,586	16,938	10,865	63,319	7	210,208
6	Retailer Co-op	Items	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	Residential Demand Response (switch/pstat)†	Devices	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Residential Demand Response (IHD)†	Devices	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	Residential New Construction	Homes	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Consumer Program Total							**15**	**17**	**10**	**14**	**76,066**	**76,312**	**45,573**	**103,303**	**56**	**727,601**
Business Program																
10	Retrofit	Projects	1	7	5	5	1	91	13	29	2,232	306,398	67,697	113,467	133	1,174,626
11	Direct Install Lighting	Projects	31	39	9	17	29	26	7	24	74,943	106,963	24,281	90,170	79	736,187
12	Building Commissioning	Buildings	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	New Construction	Buildings	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	Energy Audit	Audits	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	Small Commercial Demand Response (switch/pstat)†	Devices	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	Small Commercial Demand Response (IHD)†	Devices	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	Demand Response 3†	Facilities	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Business Program Total							**29**	**117**	**21**	**53**	**77,175**	**413,362**	**91,978**	**203,637**	**211**	**1,910,813**
Industrial Program																
18	Process & System Upgrades	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	Monitoring & Targeting	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	Energy Manager	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	Retrofit	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	Demand Response 3†	Facilities	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Industrial Program Total							**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Home Assistance Program																
23	Home Assistance Program	Homes	-	6	57	1	-	1	5	0	-	9,813	55,484	631	6	139,953
Home Assistance Program Total							**-**	**1**	**5**	**-**	**-**	**9,813**	**55,484**	**631**	**6**	**139,953**
Aboriginal Program																
24	Aboriginal Program	Homes	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aboriginal Program Total							**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Pre-2011 Programs completed in 2011																
25	Electricity Retrofit Incentive Program	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	High Performance New Construction	Projects	0	0	-	-	0	0	-	-	277	69	-	-	0	1,316
27	Toronto Comprehensive	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	Multifamily Energy Efficiency Rebates	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	LDC Custom Programs	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pre-2011 Programs completed in 2011 Total							**0**	**0**	**-**	**-**	**277**	**69**	**-**	**-**	**0**	**1,316**
Other																
30	Program Enabled Savings	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	Time-of-Use Savings	Homes	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Total							**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**
Adjustment to Previous Year's Verified Results							**-**	**(0)**	**26**	**-**	**-**	**1,330**	**160,936**	**-**	**26**	**488,128**
Energy Efficiency Total							**45**	**135**	**36**	**67**	**153,518**	**499,556**	**193,035**	**307,572**	**273**	**2,779,683**
Demand Response Total (Scenario 1)							**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
IESO-Contracted LDC Portfolio Total							**45**	**134**	**62**	**67**	**153,518**	**500,886**	**353,971**	**307,571**	**299**	**3,267,811**
														Full OEB Target:	**930**	**4,520,000**
														% of Full OEB Target Achieved to Date (Scenario 1):	**32%**	**72%**

†Activity and savings for Demand Response resources for each year and quarter represent the savings from all active facilities or devices contracted since January 1, 2011.

The IHD line item on the 2013 annual report has been left blank pending a results update from evaluations; results will be updated once sufficient information is made available.

*Includes adjustments after Final Reports were issued

*The total amount of net energy savings for Wellington North Power during the 2011 to 2014 period is **3,267,811** kWh (3,267 MWh).*

3.0 Regions

The Independent Electricity System Operator's regional map of the province was used to allocate LDCs to specific regions across the province. Wellington North Power falls under the Southwestern regional.

4.0 Target

Under the New Conservation Framework the energy savings target assigned to Wellington North Power Inc. is 5.89 million kWh.

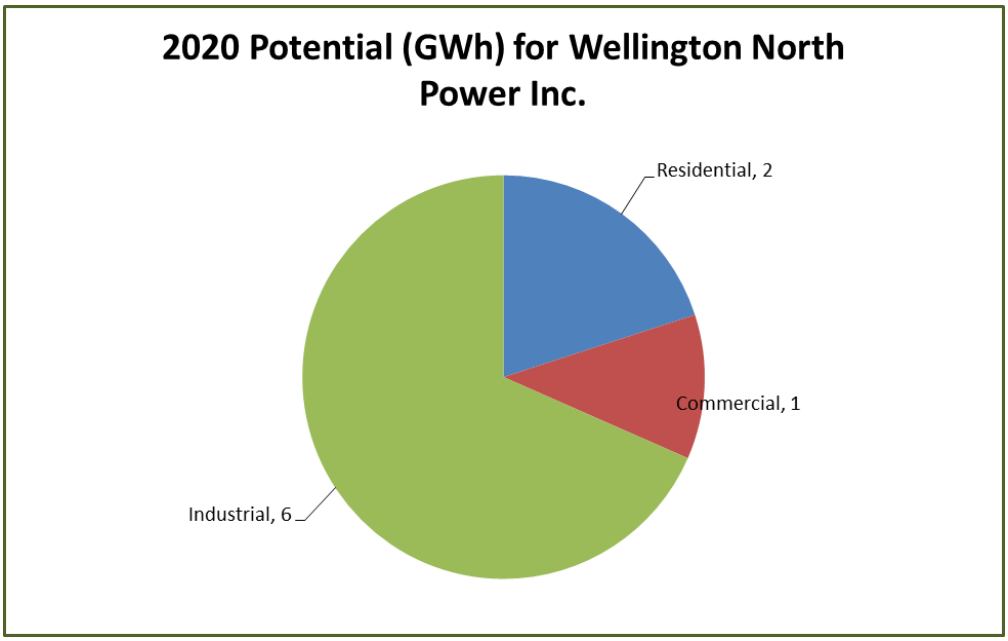
It should be noted that under the New Conservation Framework methodology, the persistence of kWh energy saving are not applied as in previous CDM programs.

5.0 Budget

Under the New Conservation Framework the budget allocated to Wellington North Power Inc. is:

Conservation Funding Budget	**$1,493,412 ($0.25/kWh)**

Table 5: IESO Achievable Potential



6.0 Strategy

As a result of the Minister of Energy Directive to the former Ontario Power Authority, now merged with the Independent Electricity System Operator, Wellington North Power Inc. has been mandated a target of 5.89 million kWh in energy savings between January 1, 2015 and December 31, 2020.

Wellington North Power signed and returned the required Energy Conservation Agreement in December 2014 and received confirmation of receipt from the OPA.

Under the new conservation framework, Wellington North Power will be working with the Independent Electricity System Operator (IESO) in an effort to meet its target and within the budget provided.

Wellington North Power Inc. meets regularly with the Southwestern Regional Group. The general mandate is to share ideas, obtain information on programs through various guest speakers from both the IESO and Working Groups, and look for cost savings through collaboration including but not limited to marketing and project review.

In addition, Wellington North Power is a member of Cornerstone Hydro Electric Concepts (CHEC), a group of thirteen LDC's that work collaboratively in sharing information as well as planning models which were used to develop the CDM plan. This group meets on a regular basis and also collaborates on creating RFPs for third party vendors, shared advertising, marketing materials and training as well as the shared service of a Roving Energy Manager.

6.1 Plan Development and Assumptions

In preparing the CDM Plan, Wellington North Power has made several assumptions that are outlined in detail in this document. These assumptions will be reviewed and monitored based on performance of the CDM Plan. The CDM Plan will be adjusted when and as required to follow market trends, program uptake as well as addition of much needed new programs as they become available. Included in the documentation is a variation of the CHEC planning tooling which is further described below.

CHEC created a planning tool that Wellington North Power, together with other LDC members, has reviewed, modified and utilized. Outlined below are the modifications that have been applied to CHEC's Planning model by Wellington North Power:

CHEC Planning Model (Modified):

The Planning Model is formed of a number of tabs with information captured to inform the development of the CDM Plan. Capturing the data and assumptions in the Planning Model allows for review of these assumptions and evaluation of actual versus assumptions moving forward.

The tabs of the Planning Model and the information contained are:

Tab 1: Potential by End Use:
This tab contains the output of the Achievable Potential Calculator. The Planning Model expresses the output of the Achievable Potential Calculator to three decimal places and is summed to determine the potential over the six year period. The contributions to residential, commercial and industrial customer classes are outlined. The commercial and industrial are later summed together to provide an indication of the "business" potential. The output of the Achievable Calculator is utilized to determine focus of future proposed programs and to ensure that targets set for either residential or business sectors does not exceed the Achievable Potential.

Tab 2: 2011-2014 Results:
The verified results for the 2011, 2012 and 2013 as well as preliminary 2014 are included to provide an indication of past performance and to inform predictions for future performance of programs or sectors.

Tab 3: 2015-2020 Forecast:
This tab is the working sheet where the parameters associated with the CDM Plan are outlined and modified to develop estimates for a draft CDM Plan. The Cost Effectiveness Model is populated from these parameters to ensure the cost effectiveness.

The sections below will outline the assumptions as they apply to the Working Model and the CDM Plan.

Tab 4: Pipeline Projects 2015:
Wellington North Power Inc. evaluated the current projects in the pipeline to determine projects that will be completed in 2015. The kWh associated with these projects is utilized for the pipeline contribution in the CDM Plan. These projects are identified with a "PL" prefix in the Cost Effectiveness Tool.

Tab 5: Potential Projects 2016 to 2020:
Wellington North Power Inc. has developed a list of known potential projects. This list is for information and to assist in follow-up calls.

In addition, Wellington North Power included a Township Street Lighting program for 2020 which is identified with a "SP" prefix in the Cost Effectiveness Tool.

6.2 Transition to Conservation First Framework:

The CDM Plan has been developed based on a transition to the Conservation First Framework of January 1, 2016. The Retrofit Program will be monitored to determine if a transition earlier will be required. Other programs are not anticipated to move from the January 1st date. If the Retrofit Program is required to be transitioned to the Conservation First Framework earlier than January 1, 2016 it is our understanding that a revised CDM Plan will be required to be submitted.

6.3 Achievable Potential:

The Achievable Potential Tool provided an indication of the amount of kWh in each sector and the type of loads which present conservation opportunities. The Achievable Potential output was utilized to ensure that the potential conservation from any one sector (Residential or Business) did not exceed the results of the Achievable Potential Calculator.

Table 6: IESO Achievable Potential vs Planned

Sector	Achievable Potential	Planned
Residential	1,732,000	369,000
Commercial & Industrial	6,922,000	5,521,000
Totals	8,654,000	5,890,000

Data in kWh

While the CDM Plan does not exceed the Achievable Potential in either section it is recognized that the actual performance will depend completely on program uptake along with the number of new programs developed over the next six years of the plan.

6.4 Program Costs and Variable Costs:

For the purpose of the CDM Plan current program costings were utilized as estimates of the "go forward" costs. It is clear that the majority of current programs far exceed Wellington North Power's budget of $0.25 per kWh. To be clear, if only existing programs were utilized and the lighting retrofit programs achieve 100% of the potential (assuming the study is correct), Wellington North Power would pay out approximately $2M in incentives alone.

Therefore, Wellington North Power has assumed the continuation of some programs as well as the development of new programs including an incentive adjustment to Street Lighting.

It is anticipated that RFPs on a collaborative basis by CHEC Members will be utilized to ensure cost effective pricing. The budget numbers allows a baseline for comparison and tracking of plan costing.

6.5 Historical Performance:

The historical performance of existing programs was reviewed to determine the general level of participation. These levels of participation to some degree were utilized on a go forward basis to estimate the continued performance of the programs. In some instances some growth has been anticipated in order to meet targets.

6.6 Current Projects in the Pipeline:

The projects currently active in the pipeline have been evaluated to determine expected completion. Projects have been included in the Cost Effectiveness Tool and are identified with a "PL" Suffix. Net to Gross ratios match existing programs.

New Programs:

In order to achieve a balanced budget new programs are required. Several assumptions were made regarding new programs and their implementation as described below:

New Program Timing:

For the purpose of the CDM Plan new programs are anticipated to enter the market in 2017. This timing also allows for pilots to be completed across the industry and potentially new provincial programs developed which can be implemented on that timing. Accordingly there are two new Proposed Programs contained in the CDM Plan. These are meant to act as placeholders for the unassigned target identified as the CDM Plan was developed.

Initial program delivery will focus on the Provincial Programs.

Proposed Programs:

The CDM Plan contains two proposed programs: Residential Proposed ("Res New Program") and Business Proposed ("IC New Program"). These programs address the un-accounted for target along with associated budgets. The kWh savings for the new programs were estimated based on existing IESO Archetypes.

The budget for the un-accounted target was determined based on meeting a balanced budget. For Industrial Commercial we assumed a new Non-lighting Retrofit Program with slightly higher cost than existing lighting programs but below our budget at $0.18 per kWh. For Residential we assumed a cost of $0.21 per kWh.

Net to Gross Utilized for Proposed Programs:

A net to gross ratio of 1 was utilized for the purpose of planning on the proposed residential and business programs (except for the pipeline project as previously indicated). The 100% net to gross was utilized as the KWh savings were based on existing IESO Archetypes.

6.7 Roving Energy Manager:

CHEC Members were successful in their application to the former Ontario Power authority in securing a Roving Energy Manager (REM) under the 2011-2014 funding framework.

6.8 Non-Incented Savings:

It is anticipated that over the CDM Plan lifetime there will be opportunity to achieve non-incented savings. Non-incented savings will most likely occur in existing programs (such as retrofit). These savings have not been accounted for in the CDM Plan as we have no historical performance to base an estimate.

6.9 Inflationary Impacts over Lifetime of CDM Plan:

Wellington North Power has not included for any inflationary costs. Inflationary costs will be monitored and the plan adjusted as required. Third party costs have been maintained at historical levels. It is believed that RFPs for services and program management can be utilized to control these costs. Collaborative purchases of marketing material, placement of advertising etc. will also be utilized to manage marketing and associated costs.

6.10 Collaboration:

While CHEC Members will continue to collaborate with each other it is recognized that collaboration with gas companies, neighbouring LDCs, municipalities and agencies will all form a part of strengthening the outcomes of the CDM Plan. The current CDM Plan does not specifically speak to collaborative projects however opportunities to collaborate will be pursued.

6.11 Opportunities:

There are several opportunities to achieve energy savings and cost controls.

Known Potential Projects:
Our current customer base has several potential projects that have been discussed for the 2016 to 2020 time frames. Market conditions and project costs will determine if and when these projects are completed.

New Programs:
The development and implementation of new programs should assist with uptake and bring about a renewed interest in energy conservation programs. New programs need to meet the budget constraints.

Modified Programs:
It is anticipated that programs and incentive levels will be modified in the near future. The LED Street Light conversion is a good example of a program where incentive levels are simply too high for current budgets. More reasonable levels are expected. There is also an understanding of new models for the residential markets specifically with the current HVAC programs.

Collaboration:
Collaboration will form a key element in cost sharing as well as idea sharing. Wellington North Power participates with both the CHEC Group as well as the Southwest Regional Group.

New Technologies:
Energy Conservation is a global issue with a vast amount of resources working on innovation. It can be expected that in today's market place new technology will be developed and brought to the market.

6.12 Risks:

As there are opportunities there are challenges to be identified and noted.

Achievable Potential / Target
The question arises to the relevancy of the achievable potential study specific to Wellington North Power's set of circumstances. It should be noted that market participation, market saturation, and past performance to name a few are all factors.

Market participation is primarily not within control of the utility. Marketing and programs offered will certainly assist in program uptake however economic

conditions, return on investment and demographics will continue to be influencing factors.

Market saturation was recognized and discussed briefly during the IESO meeting in January 2015 held at the International Center. Program saturation is a real possibility at Wellington North Power specifically in the Retrofit program with only a total five large (>1000kw) industrial customers making up approximately 50% of the LDC's annual power consumption. Of the four industrial customers:

- Three customers have participated in energy savings programs and;
- Two customers have undertaken significant energy savings projects.

It is Wellington North Power Inc.'s opinion that another area of potential saturation are in the lighting retrofit programs.

Table 7: 2015 to 2020 IESO Achievable Potential and Customer Profile

	Theoretical Achievable Potential						
Customer	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**% of Target**
Residential	0.306	0.608	1.027	1.194	1.435	1.732	20.01%
Commercial	0.297	0.466	0.780	0.857	0.874	1.001	11.57%
Industrial	1.521	1.958	2.395	3.570	4.745	5.921	68.42%

Data in MWh

Classification	Customers	Percentage
Residential	3213	86.12%
<50kW	478	12.81%
>50kW	35	0.94%
>1000kW (Industrial)	5	0.13%
Total Customer	3731	

Wellington North Power is concerned that approximately 80% of the kWh energy savings target must be achieved by 13% of the customer base (Industrial and commercial customer classes) where significant market participation has already occurred which indicates potential risk of saturation.

The large industrial customers have achieved approximately 588,000 kWh savings at the end of 2014.

The persistence of kWh energy savings are not applied as in previous years. The result is a target that is approximately four times greater than the 2011 to 2014 targets or six times greater than what was achieved.

6.13 Budget

As previously noted, the bulk of the programs and achievable potential exist in programs that have costs far exceeding the Wellington North Power budget constraint of $0.25 per kWh. The need for new programs below the LDC's budget constraint has been identified.

In addition, an uptake in a particular program may cause budget deficits again due to the fact that the majority of programs exceed Wellington North Power's budget constraints.

7.0 Summary

Wellington North Power has presented a first plan based on the mandated targets and assumptions made. The plan will be modified as more information regarding programs is made available and as market conditions unfold.

The current plan has assumed;

i. A new residential program with IESO Archetype 400 kWh at a cost of $0.21 per kWh,
ii. A new industrial commercial program with IESO Archetype 37,580 kWh at a cost of $0.18 per kWh, and
iii. A reduction in the LED Street Lighting Retrofit to $0.16 per kWh.

As indicated, in the LDC's opinion, a review of the achievable potential is necessary based on specific and relevant conditions that exist within the service territory.