NON-CONFIDENTIAL

Request IR-1:

With respect to page 10, line 23, please describe how ENSC modified its program to allow more low- and modest-income homeowners to receive free direct installs.

Response IR-1:

Direct install was newly offered beginning in 2011 as a stand-alone service, reaching homeowners who may not have benefitted from other services, such as building envelope upgrades, in the Low Income program.

NON-CONFIDENTIAL

Request IR-2:

With respect to the first bullet on page 15, is it ENSC's intention that where there are discrepancies not caused by deliberate ENSC decisions (to reallocate resources among programs, for example), the management discussion and analysis would also include any appropriate corrective steps to be taken.

Response IR-2:

Yes.

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Request IR-3:

With respect to the 75% on Line 6, page 15, please indicate whether any corrective action plan would be included in the report that identified that savings to date were below the 75% trigger.

Response IR-3:

A corrective action plan would be included in the annual progress report if savings to date were below the 75% trigger.

NON-CONFIDENTIAL

Request IR-4:

With respect to page 15, line 30, on what basis will programs be selected for full scale evaluation? Is there a minimum number that will be selected each year?

Response IR-4:

ENSC has not yet defined its 2013-2015 evaluation plan, but intends to do so in the coming year and submit both its schedule and scope in the context of its first annual progress report, to be filed in 2013, before the Plan's evaluation cycle begins. Selection criteria for a full scale evaluation could include, for example:

- the size of a program's energy savings
- the degree of maturity of a program
- the scope of recent program changes
- the level of satisfaction of program participants such as energy users and partners (e.g. trade allies, energy auditors , retailers)
- the scope of issues raised in past impact and/or process evaluations
- the level of anticipated program free ridership based on past impact evaluations and/or the ongoing, "rapid-fire" free ridership surveys

Prior to its inclusion in the annual progress report, stakeholders and the UARB will be consulted on the proposed evaluation schedule and scope through the existing consultation mechanisms.

CONFIDENTIAL (Attachment 2)

Request IR-5:

With respect to Figure 4.2 on page 18,

a) Please describe the process used to develop this Figure.

b) Please identify one component of the Efficient Products program and provide the derivation of the TRC for that component.

c) Please provide the correspondence from NSPI which provided the avoided costs estimate of $135/MWh used in the preparation of this Figure.

d) Please discuss the significance of TRC's =1.0 for some programs.

e) What sensitivities have been done and what is their significance?

Response IR-5:

a) Following is a description of the process used to develop Figure 4.2 on page 19 of the Evidence.

Investments for each year are a summation of the ENSC administrative costs by measure within a Program, plus the summation of the ENSC incentive costs by measure within a program.

Lifetime Benefits is a summation of the avoided energy costs and avoided capacity costs by measure within a program.

Incremental Annual Net Energy Savings at Generator (GWh) is a summation of the energy impacts at the generator by measure within a program.

Incremental Annual Net Demand Savings at Generator (MW) is a summation of the winter peak demand impacts at the generator by measure within a program.

TRC Test = (Energy Avoided Costs + Demand Avoided Costs) * Net-to-Gross / (Technology Cost * Net-to-Gross + Admin Cost + (1 – Net-to-Gross) * Incentive Cost)

PAC Test = (Energy Avoided Costs + Demand Avoided Costs) * Net-to-Gross / (Admin Cost + Incentive Cost)

b) Following is an example of the derivation of the TRC for one component of the Efficient Products program – Compact Fluorescent Lamp.

TRC Test = (Energy Avoided Costs + Demand Avoided Costs) * Net-to-Gross / (Technology Cost * Net-to-Gross + Admininstrative Cost + (1 – Net-to-Gross) * Incentive Cost)

Measure: Screw-In (<=15W) Efficient Products, Replace on Burnout, Retail Markdown

Measure Life = 7 years

NTG = 0.53

2013 Participants = 6,179 units

At Generator Impact/unit = 45.42 kWh and 5.61 watts

Installed Measure (Technology) Cost = $2.84/unit

ENSC Administrative Cost = $0.175/kWh

ENSC Measure Incentive = $1.02/unit

Net Present Value (NPV) of Energy Avoided Costs for Measure Life of 7 years = $0.555/kWh

CONFIDENTIAL (Attachment 2)

NPV of Demand Avoided Costs for Measure Life of 19 years = $0.00/kW (Note: Capacity Avoided Costs are zero for 2013 through 2019 – 7 years)

2013 Measure Energy Savings = 6179 units * 45.42 kWh * 0.53 (NTG) = 148,744.6 kWh
2013 Measure Demand Savings = 6179 units * 5.61 watts * 0.53 (NTG) = 18,372 watts = 18.37 kW

Avoided Costs = (148744.6 kWh * $0.555/kWh + 5.61 kW * $0.00/kW) * 0.53 (NTG) = $43,753.22

Technology Cost = $2.84 (per bulb) * 0.53 (NTG) * 6179 (bulbs) * 0.53 NTG = $4,929.33

Administrative Costs = $0.175/kWh * 148744.6 kWh = $26,030.31

Portion of Incentive for Free Riders Included = 6,179 (bulbs) / 0.53 (NTG) * ($1.02/$2.84) (Incentive %) * (1 – 0.53 (NTG)) = $1,569.97

TRC = $43,753.22 (Avoided Costs) / {$26,030.31 (Admin Cost) + $4,929.23 (Tech Cost) + $1,569.97 (Portion of Incentive)} = 1.35

c) Please refer to Attachment 1. In addition to the letter of February 21, 2012 from NSPI with attached table (Comparison of Avoided Costs of DSM) found in Attachment 1, NSPI also provided 2 additional tables of data marked "Confidential and Commercially Sensitive". Please refer to Confidential Attachment 2.

d) Based on the inputs and assumptions in the spreadsheet analysis tool, the following programs exhibited a TRC ratio of 1.0:

- 2013 and 2014 – Existing Residential, New Residential, and Home Energy Report.
- 2015 – New Residential

The significance of a TRC equal to 1.0 for a program indicates that the projected benefits and costs overall are equivalent. Therefore, a change to inputs or assumptions that can

significantly alter the projected program benefits and/or costs could result in a significant change in the TRC.

The Existing Residential program TRCs are equal to or above 1.0, notwithstanding sizable negative lifetime benefits projected for solar water heating.

The New Residential program assumes a savings baseline based on the residential energy code and a relatively high level of free ridership, both of which reduce the potential for energy savings. The New Residential program TRCs are equal to or above 1.0, notwithstanding sizable negative lifetime benefits projected for solar water heating.

For the 2013-2015 DSM Plan Filing, a measure life of 1 year was used for the Home Energy Report program. Program evaluation will inform whether this is an appropriate or conservative assumption. A program with a 1 year measure life is highly sensitive to a single set of annual avoided energy costs and avoided capacity costs. TRCs for the Home Report Program are projected to increase starting in 2015 due to higher avoided costs.

e) ENSC considered sensitivities around avoided costs. Prior to receiving the updated avoided costs from NSPI, ENSC used a set of avoided costs which were on average higher. The higher set of avoided costs resulted in all program TRCs greater than 1.0, with the lowest program TRC equal to 1.3.

Nova Scotia POWER
An Emera Company

PO Box 910 • Halifax, Nova Scotia • Canada • B3J 2W5

February 21, 2012

By email: acrandlemire@efficiencyns.ca
Allan Crandlemire, CEO
Efficiency Nova Scotia
230 Brownlow Avenue, Suite 300
Dartmouth, Nova Scotia, B3B 0G5

Re: Avoided Cost of DSM 2012

Dear Mr. Crandlemire:

Nova Scotia Power has completed the calculation of the 2012 avoided costs of DSM. The avoided costs of DSM were revised due to uncertainty regarding the future operations of NSPI's largest customers and the significant effect these operations have on the load assumptions used in the 2009 IRP.

Due to the load uncertainty, it was determined that a range of avoided costs would be calculated. The avoided costs were calculated for two cases: a "high bookend" end value that includes Bowater and the Port Hawkesbury Paper Mill PM2 load (PM1 assumed off) and a "low bookend" with the Port Hawkesbury Paper Mill and Bowater load removed. The high bookend load is generally consistent with the 2009 IRP's Plan E (High Load).

In addition, ENSC provided revised projections for the future DSM savings to use in refreshing the avoided cost calculations and this revised projection was used in both bookends.

The 2012 avoided costs were developed using the same methodology as those from the 2009 IRP Update with a sub-set of the assumptions revised to reflect more recent information including:

- Load Forecast
- DSM savings profile
- Fuel Price Forecast
- Emission Constraints

energy everywhere.

- Renewable energy standard (RES) targets
- USD Exchange rate
- Port Hawkesbury Biomass project
- Community Feed-in tariff
- Some supply-side alternatives not included (e.g. Biomass co-fire at coal units)
- Large purchase (RES compliant) included

The all-in avoided cost of DSM (combined capacity and energy on a levelized $/MWh basis) for the high bookend is **$135/MWh**. The all-in avoided cost of DSM (combined capacity and energy on a levelized $/MWh basis) for the low bookend is **$121/MWh**.

The avoided cost based on the 2009 IRP Update assumptions was **$176/MWh** (combined capacity and energy on a levelized $/MWh basis). The avoided costs in 2012 are lower due to the combined effects of the revised assumptions. Please see the attachment for a summary of the 2012 avoided costs compared to the values from the 2009 IRP Update.

Yours truly,

Anne-Marie Curtis

Anne-Marie Curtis
Director Retail Operations

Cc: Mike Sampson, Director Planning and Performance

Comparison of Avoided Costs of DSM

	Low Bookend	High Bookend
Avoided Cost of DSM (2009 IRP Update Assumptions)	**2012 Avoided Cost of DSM (Revised Sub-set of 2009 IRP Update Assumptions) - Bowater and Port Hawkesbury Mill Load Removed**	**2012 Avoided Cost of DSM (Revised Sub-set of 2009 IRP Update Assumptions) - Bowater & Port Hawkesbury Mill PM2 Load (PM1 assumed off)**
All-in (combined energy and capacity on a $/MWh basis) Levelized 2010- 2032 **$176/MWh**	All-in (combined energy and capacity on a $/MWh basis) Levelized 2012- 2032 **$121/MWh** (Value is lower due to reduced load level in the No NPB Load Case and combined effects of revised assumptions)	All-in (combined energy and capacity on a $/MWh basis) Levelized 2012- 2032 **$135/MWh** (Value is lower due to combined effects of revised assumptions)
Avoided Cost of Capacity Levelized 2010- 2032 **$79/kW** (Includes incremental 20% for reserve margin - for every 1 MW of peak demand savings, 1.2 MW of capacity is avoided) (Based on avoiding natural gas units in the No DSM Plan starting in 2018)	Avoided Cost of Capacity Levelized 2012- 2032 **$52/kW** (Includes incremental 20% for reserve margin - for every 1 MW of peak demand savings, 1.2 MW of capacity is avoided) (Based on avoiding natural gas units in the No DSM Plan starting in 2022. Value is lower because capacity is not avoided until 2022 vs. 2018)	Avoided Cost of Capacity Levelized 2012- 2032 **$55/kW** (Includes incremental 20% for reserve margin - for every 1 MW of peak demand savings, 1.2 MW of capacity is avoided) (Based on avoiding natural gas units in the No DSM Plan in 2022. Value is lower because capacity is not avoided until 2022 vs. 2018)
Avoided Cost of Energy (avoided energy portion of All-in cost) Levelized 2010- 2032 **$166/MWh**	Avoided Cost of Energy (avoided energy portion of All-in cost) Levelized 2012- 2032 **$111/MWh**	Avoided Cost of Energy (avoided energy portion of All-in cost) Levelized 2012- 2032 **$122/MWh**

CONFIDENTIAL (Attachment 2)

Attachment 2 is filed Confidentially, and must be accessed through the UARB Confidential Repository.

CONFIDENTIAL (Attachment 3)

Request IR-6:

With respect to NSPI's avoided costs, as provided by NSPI in February:

a) Please describe the method used to estimate these avoided costs.

b) If the method in a) is not based on adjusting load in all years by a fixed increment or decrement, please provide the load forecasts adjustments that were made.

c) Please provide the generation plans (including additions, modifications or retirements) from which the avoided costs were calculated.

d) Please provide the fuel prices forecasted for each of NSPI's major fuels for each year of the planning period used to calculate the avoided costs.

Response IR-6:

a) The 2012 avoided costs of DSM were developed using the same methodology as those from the 2009 IRP Update. The avoided cost calculation compares the annual costs of a plan that does not include DSM (the "No DSM" plan) with the annual costs of a plan which includes the DSM profile. The difference in costs each year are divided by the annual DSM energy savings to give the estimated annual avoided costs (combined energy and capacity) on a $ per MWh basis.

A portion of the combined energy and capacity avoided cost is attributed to avoided capacity based on a combined cycle natural gas unit added in the No DSM Plan. Please refer to part (c). The avoided capacity cost includes an incremental 20 percent for reserve margin requirements. For every 1 MW of peak demand savings, 1.2 MW of capacity is avoided. The remainder of the combined energy and capacity avoided cost is energy related.

CONFIDENTIAL (Attachment 3)

Due to load uncertainty, avoided costs were calculated for two cases to provide a range of values. A "high bookend" value that included Bowater and the Port Hawkesbury Paper Mill PM2 load (PM1 assumed off) and a "low bookend" value with the Bowater and Port Hawkesbury Paper Mill load removed.

b) The method to determine the avoided costs of DSM is based on a profile of annual cumulative energy and demand DSM savings provided by ENSC. Please refer to Attachment 1.

c) The No DSM and the With DSM Plans are shown in Attachment 2. These long term generation plans were developed from resource optimizations in the generation planning software Strategist and included Bowater and Port Hawkesbury Paper Mill PM2 load.

d) Please refer to Confidential Attachment 3.

Multeese IR-6b
Attachment 1

	ENSC Projection of Cumulative Energy Savings GWh	ENSC Projection of Cumulative Demand Savings MW
2012	135	26
2013	260	49
2014	394	75
2015	528	100
2016	677	129
2017	816	155
2018	960	182
2019	1,104	210
2020	1,263	240
2021	1,412	268
2022	1,556	296
2023	1,700	323
2024	1,845	351
2025	1,980	376
2026	2,110	401
2027	2,240	426
2028	2,375	451
2029	2,500	475
2030	2,620	498
2031	2,740	521
2032	2,865	544

Multeese IR-6c Attachment 2

Resource Plans - 2012 Avoided Cost of DSM - Case with Bowater and Port Hawkesbury Paper Mill PM2

Year	(Bowater and PM2) (With DSM Plan)	(Bowater and PM2) (No DSM Plan)	
2012			
2013	NPPH Biomass Project Apr/2013 Community FIT (100MW, phased-in by 2017)	NPPH Biomass Project Apr/2013 Community FIT (100MW, phased-in by 2017)	
2014	Wind (100MW nameplate) (for RES) *	Wind (100MW nameplate) (for RES) *	
2015		Wind (100MW nameplate) (for RES) *	
2016			
2017	Marshall Hydro (4.2MW)	Marshall Hydro (4.2MW) Wind (100MW nameplate) (for RES) *	
2018	Large Import (~155MW; RES Compliant) Wind (100MW nameplate) (for RES)*	Large Import (~155MW; RES Compliant) Wind (100MW nameplate) (for RES) *	
2019			
2020			
2021			
2022		Combined Cycle Gas (280 MW) **	
2023	Biomass PPA (15 MW) (for RES) **	Wind (100MW nameplate) (for RES) *	
2024			
2025		Biomass PPA (15 MW) (for RES) **	
2026	Combined Cycle Gas (280 MW) **	Combined Cycle Gas (150 MW) **	
2027		Combined Cycle Gas (150 MW) **	
2028			
2029			
2030			
2031		Combined Cycle Gas (280 MW) **	
2032			
			Delta Planning NPV:
NPV 2012-2032 (M$)	**$10,052.361**	**$11,830.556**	$1,778.195

* Wind blocks include back-up adder cost of $10/MWh USD and required transmission.

** Project costs include required transmission.

CONFIDENTIAL (Attachment 3)

Attachment 3 is filed Confidentially, and must be accessed through the UARB Confidential Repository.

NON-CONFIDENTIAL

Request IR-7:

With respect to Figures 4.3 and 4.4, it is noted that currency is in 2013 dollars. Are the total expenditures shown in those Figures the expenditures for which ENSC is seeking approval in this proceeding, or is there some adjustment to translate these expenditures into 2014 and 2015 dollars? If the latter, what adjustments are anticipated, and is ENSC seeking approval of those adjustments now?

Response IR-7:

ENSC is seeking approval for the total expenditures shown in Figures 4.3 and 4.4 for 2014 and 2015, which are expressed in 2013 dollars. ENSC applied an annual inflation rate of 2.01%, 1.99% and 2.26% in the analysis for 2013, 2014 and 2015, respectively. Applying this annual inflation rate to the total expenditures in Figure 4.3 for 2014 results in $44.0 million in 2014 dollars. Applying this annual inflation rate to the total expenditures in Figure 4.4 for 2015 results in $47.0 million in 2015 dollars. ENSC is seeking approval of these adjustments now.

NON-CONFIDENTIAL

Request IR-8:

With respect to Figure 4.6 on page 22, please provide the assumptions and calculations that support this Figure.

Response IR-8:

The calculation procedures and assumptions for the evaluation of the Codes and Standards energy savings were provided in response to Multeese IR-6 for the 2012 DSM Plan filing. The estimated savings from new Codes and Standards have evolved since the 2012 DSM plan filing. The following modifications are included in the updated analysis:

- Residential New Construction baseline is modified to reflect the latest baseline study.

- Non-Residential New Construction – the initial energy savings have been delayed until 2014, to reflect the now assumed timeline for provincial adoption of the National Energy Code for Buildings (NECB).

- The federal regulation on general service lighting was delayed by two years, to 2014.

- A 2011 ENSC socket study provided new baseline data for residential general service lighting.

METHODOLOGY

The first step in calculating energy savings was to determine the "potential standard energy savings" if all relevant buildings/appliances/lighting units met the new code or standard. The potential savings were then adjusted by the estimated rate of compliance to get the "gross standard energy savings". The "net standard energy savings" was then calculated based on the

naturally occurring market adoption (NOMAD) of the practices encoded in the modeled codes or standards.

This approach for each code or standard is summarized below.

RESIDENTIAL ENERGY CODE

The new energy performance requirement of the residential building code assumed new houses would achieve a rating of 80 on the EnerGuide for Houses (EGH) scale. Compliance to the building code can be met either by following a prescriptive track, or through an energy audit that achieves the EGH80 rating.

Potential standard savings

Potential savings were calculated using the following equation:

$$\text{Savings}_{\text{potential}} = \text{New starts} * \text{SHMS}_{\text{elec}} * (\text{Consumption}_{\text{EGH78}} - \text{Consumption}_{\text{EGH77}})$$

New starts: Yearly new housing starts – provided by CMHC market outlook

$\text{SHMS}_{\text{elec}}$: Electrical space heating market share for residential new construction

Based on discussions with representatives from the Ministry of Labour and Workforce Development and energy auditors having worked extensively on modelling the impact of the new energy code, the average achieved performance of new construction prior to the code implementation was estimated at an average rating of EGH77.

As discussed in ENSC's 2011 evaluation report, the energy performance baseline for new construction meeting the building code requirements is lower than originally expected, and achieves a rating of 78 on the EGH scale.

The new requirement is assumed to apply to 50 percent of the multiple-unit starts, since high-rise apartment buildings are not subject to the residential building code.

Gross standard savings

According to the Ministry of Labour and Workforce Development, compliance with the new energy code has been significant to date. Although no data is available, we have assumed a 90% compliance to calculate gross savings.

Net standard savings

NOMAD was assumed to be five percent, as estimated by Dunsky Energy Consulting (DEC).

GENERAL SERVICE LIGHTING

The new federal requirements for general service lighting will reduce lighting energy consumption by 25 percent to 30 percent.

Potential standard savings

ENSC commissioned a socket study in 2011, in part to estimate the number of bulbs potentially affected by the new regulation.

Since the new standard does not apply to specialty-type bulbs, the assumed bulb potential was reduced by 30 percent.

The non-residential potential was not estimated, given our assumption (based on reported studies in other jurisdictions) that the number of inefficient bulbs remaining in the C&I sector is marginal compared to the residential sector.

$$\text{Potential bulbs} = \text{Total bulbs} * \text{non\_specialty ratio} - \text{CFLs}$$

Where the non-specialty ratio is assumed to be 30%.

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To evaluate the electricity savings, the bulb location (indoor or outdoor) was taken into account, as well as the space heating fuel, to account for negative interactive effect on electric space heating.

Based on a recent potential study in another jurisdiction, an average daily usage of 1.94 hours was assumed.

Gross and net standard savings

Since energy savings come from a product energy regulation, full compliance is assumed.

Evidence from other jurisdictions indicates that the market is close to saturation for CFLs, so the NOMAD is assumed to be zero.

Yearly net savings

The yearly savings coming from the general service lighting regulation is heavily dependent on the replacement rate of the bulbs, and cannot be calculated based on the average bulb savings. A distribution curve of daily operating hours was used to evaluate the replacement rate of different bulbs, and accounted for those replacement rates in the yearly savings calculations. The analysis assumed a 3-month duration between the regulation coming into effect and existing stocks of incandescent bulbs being depleted from the market.

LINEAR FLUORESCENT LIGHTING

The existing Business Prescriptive (Smart Lighting Choices) program targets the same market as the desired regulation for T12 lamps. Other Business programs with similar components include the Small Business Energy Solutions and Custom. ENSC estimates that these programs currently capture approximately 80% of the potential market for high performance T8 lighting.

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Potential savings

Since existing ENSC programs have the same impact as the proposed regulation, potential savings are based on the program results for 2011, corrected to account for a market penetration of 100 percent.

Gross and net standard savings

The new regulation may potentially lead some businesses to stockpile T12 lamps in order to postpone additional investment to replace the lighting equipments. To account for this effect, the potential savings was reduced by 25 percent.

The 2011 evaluation estimated a free-ridership of 16% for the Smart Lighting Choices program. This number is used to represent the NOMAD.

NON-RESIDENTIAL ENERGY CODE

The 2011 NECB will provide a 25 percent reduction in energy consumption of buildings compared to Canada's 1997 Model National Energy Code for Buildings (MNECB).

Potential standard savings

The potential savings are based on energy intensity, which were estimated using the Office of Energy Efficiency's (OEE) data for non-residential building in the Atlantic Region. OEE's reported data are for the complete building stock, and thus had to be corrected for recent construction trends across Canada.

$$\text{NS Intensity}_{\text{New C non-res}} = \text{Atlantic intensity}_{\text{avg}} * \frac{\text{Canada intensity}_{2000-2004}}{\text{Canada intensity}_{\text{avg}}}$$

Annual square meters of new construction in the non-residential sector was inferred from data on the value of annual building permits, using average construction costs per square meter. (ref.

Statistic Canada, table 026-0006 for building permits value, and rsmeans.com for construction costs).

To assess the potential savings from the NECB, the current new construction baseline needed to be assessed. A study conducted by the Natural Research Council of Canada has concluded that current building practices are in line with the 1997 MNECB for all building systems except lighting, which is in line with ASHRAE 90.1-2007 standards. This improvement in lighting practices has been taken into account in establishing a baseline.

Typical energy consumption of a 1997 MNECB-compliant building, with adjustment for lighting practices and estimated 2011 NECB savings:

MJ	MNECB	Adjusted Baseline	2011 NECB Savings Relative to Baseline
	1997	1997	
Lighting	2070	1351	23%
Equipment	1092	1092	0%
Heating	3329	3329	18%
Cooling	329	329	12%
Ancillary	1891	1891	25%
Total	8711	7992	18%

The lighting correction was calculated based on average lighting intensity data from the Atlantic region from the OEE

Finally, the fuel mix for each end-use was taken into account to calculate the average electricity savings from the new NECB, with 100 percent electricity assumed for all end-uses aside from space heating, which was estimated at 5 percent electric based on OEE data for the Atlantic region. The final electrical savings are estimated at 11.7 percent.

Gross standard savings

Similarly to the residential sector, Provincial code authorities expect strong compliance in non-residential new construction. We assumed a compliance rate starting at 75 percent in the first year and rising to 85 percent after 5 years.

Net standard savings

Federal and Provincial governments have committed to a Leadership in Energy and Environmental Design (LEED) silver rating for their new construction, and thus this sector of the market would have met or exceeded the expected energy performance improvements built into the 2011 NECB. Similarly, LEED ratings and other 'green' building certifications are becoming more popular in the non-residential market. Based on these factors, a NOMAD of 10% is assumed.

LED STREET LIGHTING

The LED (Light Emitting Diode) street lighting estimate is based on the following assumptions:

- approximately 120,000 street lights
- average savings of 88W per street light when converted to LED
- 4,000 hours of annual operation
- total potential annual energy savings of 40 GWh
- total potential peak demand savings of 10 MW
- ten year implementation of the conversion (4 GWh and 1 MW each year)

NON-CONFIDENTIAL

Request IR-9:

With respect to Appendix C Table 2 a) (Attachment 1-8), please confirm that this table is for 2014, as opposed to 2013 as included in the title.

Response IR-9:

Confirmed.

NON-CONFIDENTIAL

Request IR-10:

With respect to Appendix C, Attachment 3, the bill impacts appear to reflect only changes to the DSM Rider. Has ENSC done similar calculations including estimates of how average consumption by class might change? If so, please provide.

Response IR-10:

ENSC has not performed calculations or estimates of how average consumption by class might change.

NON-CONFIDENTIAL

Request IR-11:

With respect to Appendix E:

a) Please confirm that this program is proposed as a pilot.

b) Please provide the number of green heating systems that underlie the energy savings shown on page 9.

c) Please discuss the sensitivity of the cost effectiveness of this program with respect to the number of systems installed.

Response IR-11:

a) The green heating systems initiative is proposed as a new component to be integrated within both existing and new residential programs.

b) The figure below presents the number of green heating systems anticipated to be installed by type and year.

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Green Heating Systems: Anticipated Installations (#/yr)

	2013	2014	2015
EXISTING RESIDENTIAL			
Ductless Heat Pumps	636	910	1219
Groundsource Heat Pumps	83	116	157
Pellet Furnace/Boiler	6	9	14
Wood Stove	64	70	77
Pellet Stove	32	35	39
Solar Dometic Hot Water	282	352	440
NEW RESIDENTIAL			
Ductless Heat Pumps	213	253	292
Air Source Heat Pumps	134	172	216
Ground Source Heat Pumps	83	106	131
Pellet Furnace/Boiler	107	115	125
Pellet Stove	187	217	254
Solar Domestic Hot Water	113	141	176
Total # of Systems	**1940**	**2496**	**3140**

c) With fixed costs representing less than 10% of the total costs, a 25% increase or decrease in participation, on a weighted average basis, would increase or decrease the PAC ratio by less than 0.02 and the TRC ratio by less than 0.01.