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July 10, 2015

VIA RESS, EMAIL and COURIER

Kirsten Walli
Board Secretary
Ontario Energy Board
2300 Yonge Street
Suite 2700
Toronto, ON M4P 1E4

Dear Ms. Walli

Re: Enbridge Gas Distribution Inc. (the "Company" or "Enbridge")
Ontario Energy Board (the "Board") File: EB-2015-0049
Multi-Year Demand Side Management Plan (2015 to 2020)
Undertaking Responses

Enclosed please find the following undertaking responses:

- JT1.1
- JT1.3 and 4
- JT1.7 to 14
- JT1.18
- JT1.27 and 28
- JT1.32
- JT1.36
- JT1.39 and 40
- JT1.42 and 43

The submission has been filed through the Board's Regulatory Electronic Submission System ("RESS") and will be available on the Company's website under the "Other Regulatory Proceedings" tab at www.enbridgegas.com/ratecase.

If you require further information, please contact the undersigned.

Yours truly,

(Original Signed)

Bonnie Jean Adams
Regulatory Coordinator

cc: Mr. Dennis O'Leary, Aird &Berlis
EB-2015-0049 Intervenors

UNDERTAKING JT1.1

UNDERTAKING

Technical Conference TR, page 5

Enbridge to provide a written response to LIEN Technical Conference Questions 2, 3, and 4 under the Enbridge heading.

RESPONSE

LIEN Technical Conference Question #2

Further to Enbridge's responses to LIEN Interrogatory #1, why does Enbridge have "N/A" under each of the 125% and 150% budget increase columns for the Residential Rate 1 Allocation table and the Residential Average Monthly Bill Impact table in 2019 and 2020?

Enbridge provides the following response:

Enbridge did not complete sensitivity analyses in response to LIEN Interrogatory #1 found at Exhibit I.T13.EGDI.LIEN.1 or in its pre-filed evidence for the following reason, as provided in Exhibit B, Tab 1, Schedule 5, page 9:

In the Company's view, appropriate budgets for 2019 and 2020 will ultimately be a subject of the mid-term review and will be well informed by DSM activities in the early years of the 2015 to 2020 Multi-Year DSM Plan. For this purpose Enbridge has not provided sensitivity analyses for the final 2 years of its DSM Plan.

Witnesses: M. Lister
E. Lontoc
J. Paris

LIEN Technical Conference Question #3

Further to Enbridge's responses to LIEN Interrogatory #2:

a) For single family dwellings (Part 9):

i. How many low-income homes Part 9 are there in Enbridge's service territory?
ii. How many homes have participated in Enbridge's Home Weatherization/Home Winterproofing program between the inception of the program and the end of 2014?
iii. What % of the total number of Part 9 low-income homes in Enbridge's service territory is forecast to participate in the Enbridge's Home Winterproofing program by the end of 2020?
iv. What is the anticipated geographic roll-out of the Home Winterproofing program in each year of 2015, 2016, 2017, 2018, 2019, 2020?

b) For Multi-Residential (Part 3 - Social Housing):

i. How many Part 3 Social Housing buildings are there in Enbridge's service territory?
ii. How many have participated in Enbridge's multi-residential offering between program inception and the end of 2014?
iii. What % of the total Part 3 social housing buildings in Enbridge's service territory is forecast to participate by the end of 2020?

c) For Multi-Residential - Private Market:

i. How many Part 3 Private Market buildings are in Enbridge's service territory?
ii. How many have participated in 2014 and what % is that of the total number of Part 3 Private Market buildings?
iii. What % of the total Part 3 Private Market buildings is forecast to participate by the end of 2020?
iv. What is the anticipated geographic roll-out in each year from 2015 to 2020?

Enbridge provides the following response:

a) i. There are approximately 134,000 Part 9 low income homes in the Enbridge service area.
ii. 5,483 homes have participated in the program since inception in 2007 to the end of 2014.
iii. Enbridge forecasts 14.25% of low income homes will have participated in HWP by the end of 2020.

Witnesses: M. Lister
E. Lontoc
J. Paris

iv. HWP is currently available across the entire service area of Enbridge. The Company expects regional participation throughout the 6 year period to be 45%, 25%, and 30% in the Greater Toronto Area, Greater Ottawa Area, and Durham/Peterborough/Niagara/Simcoe areas respectively.

b) i. Enbridge estimates that there are approximately 1,100 multi-residential social housing buildings in the Enbridge service area.
ii. 581 buildings have participated in an Enbridge social housing multi-residential offering.
iii. Enbridge is targeting to have 80% of Part 3 social housing buildings in Enbridge's service area participate in an Enbridge DSM offer by 2020.

c) i. Enbridge estimates that there are approximately 950 low income private multi-residential buildings in the Enbridge service area.
ii. 57 private market buildings participated in the 2014 offering. This represents approximately 6% of the total low income private buildings estimated.
iii. The Company is targeting to have 50% participation from low income private buildings by the end of 2020.
iv. Enbridge anticipates to roll out the offering in the Ottawa Region in 2016; Peel, Niagara, Durham and York Regions in 2017; and the remainder of the Enbridge service area by 2018. Enbridge's ability to expand the program offering outside of Toronto will depend on collaborative discussions with the Low Income intervenor stakeholder group regarding building eligibility based on available municipal data.

LIEN Technical Conference Question #4

Further to Enbridge's responses to LIEN Interrogatory #3 (about furnace replacement):

a) Please identify any existing programs/funding available (public or private) that are available to low-income families to assist with the purchase of replacement furnaces.

   Apart from Ontario Renovates, the Company is not aware of any other funding assistance programs for furnace replacements.

b) Will Enbridge, during 2015 to 2020, track actual number of single family dwellings that are deemed ineligible during screening due to a particular health and safety issue and the specific issue(s) leading to the ineligibility? If not, is Enbridge willing to do so and report on this type of tracking during 2015 to 2020?

Enbridge provides the following response:

a) The Ontario Renovates component is one of four components under the Federal-Ontario Investment in Affordable Housing Program ("IAH"). IAH is delivered by provincial municipal service managers ("SMs"). SMs are at liberty to allocate their IAH funding towards the four components as per their housing needs and plans.

   Ontario Renovates replaces Canada Mortgage and Housing Corp.'s ("CMHC") Residential Rehabilitation Assistance Program ("RRAP"). As in RRAP, furnace replacement is an "eligible project" under Ontario Renovates; funding is provided as a "forgivable loan".

b) Enbridge will work towards tracking and reporting of actual number of single family dwellings that are deemed ineligible during screening due to a particular health and safety issue and the specific issue(s) leading to the ineligibility for 2016 to 2020.

   Because program delivery contracts including reporting requirements with external delivery agents are now in place for program year 2015, the Company will work on best-efforts basis to capture this moving forward.

Witnesses: M. Lister
E. Lontoc
J. Paris

UNDERTAKING JT1.3

UNDERTAKING

Technical Conference TR, page 9

Enbridge to research on a best-efforts basis and advise why LIC Residential new construction project submission was unsuccessful in securing funding support from NRCAN.

RESPONSE

Based on the information shared by the lead project proponent, the response letter from NRCan indicated that the proposal, while deemed innovative, was not ranked as high as other projects.

Witnesses: M. Lister
E. Lontoc
J. Paris

UNDERTAKING JT1.4

UNDERTAKING

Technical Conference TR, page 15

Enbridge to provide the forecast for the 2016-2020 period, with overtime as a percentage of the overhead budget and what the forecast is in actual numbers for overtime.

RESPONSE

DSM staff are all salaried employees and as such overtime is not paid.

Witnesses: M. Lister
F. Oliver-Glasford
J. Paris

UNDERTAKING JT1.7

UNDERTAKING

Technical Conference TR, page 29

Enbridge to provide on a best-efforts basis a response to Topic 13, GEC 1, pdf pages 811, question 1(E).

RESPONSE

GEC has withdrawn the request.

Witnesses: F. Oliver-Glasford
B. Ott

UNDERTAKING JT1.8

UNDERTAKING

Technical Conference TR, page 30

Enbridge to provide on a best-efforts basis a response to Topic 13, GEC 1, pdf pages 811, question 1(G).

RESPONSE

Further to Enbridge's original response to GEC Interrogatory #1 part (g) found at Exhibit I.T13.EGDI.GEC.1 (g) which contained only distribution costs (fixed charges included), the following includes the average rate for gas, including distribution costs, commodity costs and any other costs as of December 2014[(1)]:

Bundled Services:

Rate Class	Distribution (¢/m^3)[(2)]	Gas Supply Transportation (¢/m^3)	Gas Supply Load Balancing (¢/m^3)	System Sales Gas Supply Charge (¢/m^3)
1	15.92	5.00	0.76	14.62
6	7.19	5.00	0.63	14.65
9	13.94	5.00	0.02	14.58
100	0.00	5.00	0.63	14.65
110	2.02	5.00	0.09	14.58
115	1.14	5.00	0.04	14.58
135	1.62	5.00	(0.84)	14.62
145	2.11	5.00	(0.36)	14.74
170	0.84	5.00	(1.11)	14.58
200	2.46	5.00	0.29	14.58

Witnesses: F. Oliver-Glasford
B. Ott

Unbundled Services:

Rate Class	Distribution (¢/m^3)	Gas Supply Transportation (¢/m^3)	Gas Supply Load Balancing (¢/m^3)	System Sales Gas Supply Charge (¢/m^3)
125	8.09 (3)	N/A	N/A	N/A
300	24.48 (4)	N/A	N/A	N/A

(1) Source: EB-2014-0191, Exhibit Q4-3, Tab 4, Schedule 1, Page 2

(2) Please note that customers are not billed based on an average distribution rate. Customers are billed on a combination of monthly customer charge, blocked delivery charge and contract demand charge (if applicable).

(3) Contract demand charge from EB-2014-0191, Exhibit Q4-3, Tab 4, Schedule 5, Page 5, Line 1, Col. 6

(4) Contract demand charge from EB-2014-0191, Exhibit Q4-3, Tab 4, Schedule 5, Page 7, Col. 6

UNDERTAKING JT1.9

UNDERTAKING

Technical Conference TR, page 38

With reference to topic 3, GEC question 12, page 293 of the pdf,
Enbridge to provide on a best efforts basis, in the resource acquisition, the historic breakouts

RESPONSE

Below please find a breakdown of historical Resource Acquisition spending, inclusive of a breakdown between small and large Commercial and Industrial customers. These numbers represent the Company's best efforts to estimate the budgets directed towards these customer size segments from 2012 to 2014.

Resource Acquisition Offers	2014	2013	2012	Comments
Large C/I Customers	$6,898,062	$7,988,646	$8,865,818	Historical spending for Large Commercial and Industrial is provided
Small C/I Customers	$1,076,916	$1,072,503	$1,713,701	Historical spending for Small Commercial and Industrial is provided
Home Energy Conservation	$8,605,657	$2,650,017	$816,709	2013 and 2012 spending excludes TAPS
Run It Right	$1,488,705	$1,596,309	$0	No expenditures for RIR in 2012 because program was still being launched
Adaptable Thermostats	---	---	---	This is a new program offering. No historical data available.
Comprehensive Energy Management	---	---	---	This is a new program offering. No historical data available.

Witnesses: M. Lister
K. Mark
F. Oliver-Glasford
B. Ott
J. Paris

UNDERTAKING JT1.10

UNDERTAKING

Technical Conference TR, page 40

Enbridge to clarify the answer to GEC 15, Part (A), Sub (IV)

RESPONSE

The Undertaking was to provide clarity for the reference in Exhibit I.T2.EGDI.GEC.15, part a) sub-part iv) in which the response directed the reader to the response at Exhibit I.T2.EGDI.EP.19. The correct reference should have sent the reader to Exhibit I.T2.EGDI.EP.20, part b). The response there is provided below for easy reference:

Exhibit I.T2.EGDI.EP 20

b) The offer has enjoyed a high penetration rate in social housing for single family homes in the past three years. The proposed targets for the plan period are aggressive and will require a determined effort to realize the remainder of the potential in social housing and in pursuing the private low income sector. The targets and increased budgets reflect the difficulty and challenges in securing private single family home savings from 2017 and beyond.

Witnesses: M. Lister
E. Lontoc
F. Oliver-Glasford
B. Ott
J. Paris

UNDERTAKING JT1.11

UNDERTAKING

Technical Conference TR, page 41

Enbridge to make best efforts to provide further information on the market size as stated in the answer to GEC 15, part (C), sub (IV) and (V)

RESPONSE

Please see Enbridge's response to Energy Probe Interrogatory #21, filed as Exhibit I.T5.EGDI.EP.21 e) for the requested information. For convenience, this response has been included below.

> In the past three years, approximately 2,500 housing units were created in Ontario under the IAH Program. Neither MMAH nor CMHC is able to provide a report that provides a breakdown by region, number of project applications, nor the square footage of the units.
>
> Based on stakeholder feedback, Enbridge is assuming that the pace of new construction creation for the next five years will be similar to that of the past three years. For budgetary purposes, the Company has used 50 units per housing project.
>
> Enbridge's market projections are based on the today's economic and political conditions. The pilot offer to be rolled out in 2015 in addition to updated external reports will solidify the Company's assumptions and better inform the 2016 and beyond program offering.

Witnesses: M. Lister
E. Lontoc
J. Paris

UNDERTAKING JT1.12

UNDERTAKING

Technical Conference TR, page 47

To look at source documents to see if the answer in part (e) in the table can be disaggregated by the number of projects and average square feet, perhaps, for those projects that meet the criteria of 50,000 square feet or more.

RESPONSE

GEC Interrogatory #16 found at Exhibit 1.T2.EGDI.GEC.16 e) i. indicates the potential size of the eligible market and has been updated with projects greater than 50,000 sq. ft.

Year 2014	*# of Projects*	*Average Sq.*	*# >= 50,000 sq. ft.*	*Average Square feet of >= 50,000 sq. ft. subset*
Residential	206	62,604	82	124,148
Civil	9	25,811	2	62,500
Commercial	76	119,837	24	212,595
Community	48	36,640	8	155,000
Educational	63	36,618	15	83,326
Government	32	18,238	2	126,000
Industrial	31	31,699	7	86,190
Medical	25	64,870	4	335,375
Military	5	69,853	2	155,000
Retail	143	23,800	19	109,163
University	5	256,350	5	256,350
**Taken from Reeds report*				

It is important to note that this report from 2014 represents projects currently underway, and as a result, few may be eligible for the Savings by Design program as they are likely past the pre-design phase of a project. The Enbridge Sales team leverages every opportunity to engage builders, developers and designers to influence and actively enroll them into the program.

Witnesses: S. Bertuzzi
M. Lister

UNDERTAKING JT1.13

UNDERTAKING

Technical Conference TR, page 59

To speak with Navigant to see if they could provide anything further on the size of the market and the base line market share.

RESPONSE

Market size is calculated using a number of input parameters, each of which is provided in detail in the accompanying file entitled “Appendix C (LONG FORM) - Measure Characterization 2015-07-07.”

Values for parameters related to total market size, technical suitability, and saturation of efficient and baseline measures can be found in columns Q through T of the attached document.

Witnesses: F. Oliver-Glasford
B. Ott
C. Welch

Unique Measure Name	Measure Description	Baseline Assumption	End Use Category	Sector	Customer Segment	Replacement Type	Unit Basis	Base Measure Lifetime	Efficient Measure Lifetime	Incremental Measure Cost	Cost Source(s)	Gas Savings	Electric Savings	Water Savings	Savings Source(s)	Total Measure Density (Base + EE)	Technical Suitability	Baseline Initial Saturation	EE Measure Initial Saturation	Heating Fuel Type Applicability Multiplier	DHW Fuel Type Applicability Multiplier	Competition Group	Density/ Applicability Source(s)	NTG Factor (1-FreeRiders)
TEXT (< ~30 characters)	TEXT	TEXT	Dropdown List	Dropdown List	Dropdown List	Dropdown List	TEXT (units used for savings and cost inputs)	Years	Years	$/ unit basis	TEXT	m^3/ year/ unit basis	kWh/ year/ unit basis	Liters/ year/ unit basis	TEXT	Unit Basis/ Scaling Basis	Fraction	Fraction	Fraction	Dropdown List	Dropdown List	TEXT	TEXT	Fraction
Com | Air Curtains	Air Curtains - Shipping & Receiving	No air curtains (10x10 door)	Space Heating/Ventilation	Commercial	C_Food Service	ROB and NEW	Shipping door	15.0	15.0	10,170	OEB Approved Measures Inputs	20605.00	-936.0	0.0	OEB Approved Measures Inputs	3.06E-06	0.80	0.75	0.25	Space Heat - Gas Only	100% Applicable	NA	OEB Measures List	0.95
Com | Air Curtains	Air Curtains - Shipping & Receiving	No air curtains (10x10 door)	Space Heating/Ventilation	Commercial	C_Colleges & Universities	ROB and NEW	Shipping door	15.0	15.0	10,170	OEB Approved Measures Inputs	20605.00	-936.0	0.0	OEB Approved Measures Inputs	2.27E-07	0.80	0.75	0.25	Space Heat - Gas Only	100% Applicable	NA	OEB Measures List	0.95
Com | Air Curtains	Air Curtains - Shipping & Receiving	No air curtains (10x10 door)	Space Heating/Ventilation	Commercial	C_Com - Other	ROB and NEW	Shipping door	15.0	15.0	10,170	OEB Approved Measures Inputs	20605.00	-936.0	0.0	OEB Approved Measures Inputs	7.88E-07	0.80	0.75	0.25	Space Heat - Gas Only	100% Applicable	NA	OEB Measures List	0.95
Com | Air Curtains	Air Curtains - Shipping & Receiving	No air curtains (10x10 door)	Space Heating/Ventilation	Commercial	C_Office - Large	ROB and NEW	Shipping door	15.0	15.0	10,170	OEB Approved Measures Inputs	20605.00	-936.0	0.0	OEB Approved Measures Inputs	3.60E-08	0.80	0.75	0.25	Space Heat - Gas Only	100% Applicable	NA	OEB Measures List	0.95
Com | Air Curtains	Air Curtains - Shipping & Receiving	No air curtains (10x10 door)	Space Heating/Ventilation	Commercial	C_Retail - Small	ROB and NEW	Shipping door	15.0	15.0	10,170	OEB Approved Measures Inputs	20605.00	-936.0	0.0	OEB Approved Measures Inputs	1.61E-06	0.80	0.75	0.25	Space Heat - Gas Only	100% Applicable	NA	OEB Measures List	0.95
Com | Air Curtains	Air Curtains - Shipping & Receiving	No air curtains (10x10 door)	Space Heating/Ventilation	Commercial	C_Hospital	ROB and NEW	Shipping door	15.0	15.0	10,170	OEB Approved Measures Inputs	20605.00	-936.0	0.0	OEB Approved Measures Inputs	1.11E-07	0.80	0.75	0.25	Space Heat - Gas Only	100% Applicable	NA	OEB Measures List	0.95
Com | Air Curtains	Air Curtains - Shipping & Receiving	No air curtains (10x10 door)	Space Heating/Ventilation	Commercial	C_Long Term Care	ROB and NEW	Shipping door	15.0	15.0	10,170	OEB Approved Measures Inputs	20605.00	-936.0	0.0	OEB Approved Measures Inputs	1.76E-07	0.80	0.75	0.25	Space Heat - Gas Only	100% Applicable	NA	OEB Measures List	0.95
Com | Air Curtains	Air Curtains - Shipping & Receiving	No air curtains (10x10 door)	Space Heating/Ventilation	Commercial	C_Schools	ROB and NEW	Shipping door	15.0	15.0	10,170	OEB Approved Measures Inputs	20605.00	-936.0	0.0	OEB Approved Measures Inputs	3.15E-07	0.80	0.75	0.25	Space Heat - Gas Only	100% Applicable	NA	OEB Measures List	0.95
Com | Air Curtains	Air Curtains - Shipping & Receiving	No air curtains (10x10 door)	Space Heating/Ventilation	Commercial	C_Logistics & Warehouses	ROB and NEW	Shipping door	15.0	15.0	10,170	OEB Approved Measures Inputs	20605.00	-936.0	0.0	OEB Approved Measures Inputs	4.95E-06	0.80	0.75	0.25	Space Heat - Gas Only	100% Applicable	NA	OEB Measures List	0.95
Com | Air Sealing	Air Sealing	High-rise office building with a poor envelope	Space Heating/Ventilation	Commercial	All Commercial	RET Only	Floor area (1000m2)	6.0	6.0	0.084	2009, Marbek, Natural Gas EE Potential (Commercial Sector)	0.05	0.0	0.0	Marbek Nat Gas EE Potential (Commercial) 2009	1.00E+00	1.00	1.00	0.00	Space Heat - Gas Only	100% Applicable	NA	Marbek Nat Gas EE Potential (Commercial) 2009	0.84
Com | Building Controls and Automation Systems	Building Controls and Automation Systems	Manual controls	Space Heating/Ventilation	Commercial	All Commercial	RET Only	Customer Segment Consumption (m^3/year)	11.0	11.0	0.131	2009, Marbek, Natural Gas EE Potential (Commercial Sector)	10%	0.0	0.0	Marbek Nat Gas EE Potential (Commercial) 2009	1.00E+00	0.80	0.64	0.36	Space Heat - Gas Only	100% Applicable	NA	Marbek Nat Gas EE Potential (Commercial) 2009	0.84
Com | Condensing Boiler | Near Cond Baseline	Condensing Boiler	Near Condensing Boiler	Space Heating/Ventilation	Commercial	All Commercial	NEW Only	End Use Consumption (m^3/year)	25.0	25.0	0.218	2009, Marbek, Natural Gas EE Potential (Commercial Sector)	6%	0.0	0.0	Marbek Nat Gas EE Potential (Commercial) 2009	7.00E-01	1.00	0.90	0.11	Space Heat - Gas Only	100% Applicable	Com|Boiler| Std	Marbek Boiler Study	0.84
Com | Condensing Boiler | Std Baseline	Condensing Boiler	Standard boiler	Space Heating/Ventilation	Commercial	All Commercial	ROB and NEW	End Use Consumption (m^3/year)	25.0	25.0	0.333	2009, Marbek, Natural Gas EE Potential (Commercial Sector)	14%	0.0	0.0	Marbek Nat Gas EE Potential (Commercial) 2009	7.00E-01	1.00	0.90	0.50	Space Heat - Gas Only	100% Applicable	Com|Boiler| Std	Marbek Boiler Study	0.84
Com | Condensing DOAS	Condensing Dedicated Outdoor Air System(> 14,000 CFM)	Non Condensing DOAS	Space Heating/Ventilation	Commercial	C_Retail - Large	ROB and NEW	Customer Segment Consumption (m^3/year)	15.0	15.0	0.065	2013 GTI Pilot	6%	0.0	0.0	2013 GTI Pilot Project	1.00E+00	0.89	0.95	0.05	Space Heat - Gas Only	100% Applicable	NA	Enbridge Estimate	0.88
Com | Condensing Unit Heaters	Condensing Unit Heater	Conventional Unit Heater	Space Heating/Ventilation	Commercial	C_Logistics & Warehouses	ROB and NEW	End Use Consumption (m^3/year)	20.0	20.0	0.120	2009, Marbek, Natural Gas EE Potential (Commercial Sector)	11%	0.0	0.0	2009, Marbek, Natural Gas EE Potential (Commercial Sector)	9.00E-01	1.00	0.20	0.10	Space Heat - Gas Only	100% Applicable	Com | Unit Heater	Navigant estimate	1.00
Com | Condensing Water Heaters	Condensing Water Heaters	Standard water heater (80% thermal/70% seasonal efficiency)	Water Heating	Commercial	All Commercial	ROB and NEW	End Use Consumption (m^3/year)	18.0	13.0	0.157	OEB Measures List	11%	0.0	0.0	OEB Approved Measures Inputs	8.00E-02	0.90	0.90	0.75	100% Applicable	DHW - Gas Only	Com | Water	Res Market Survey and CIBEUS	0.95
Com | Demand Control Kitchen Ventilation	Demand Control Kitchen Ventilation	Constant volume ventilation system	Space Heating/Ventilation	Commercial	C_Food Service	ROB and NEW	per building	15.0	15.0	15,000	OEB Approved Measures Inputs	11486.00	30,901.0	0.0	OEB Approved Measures Inputs	3.06E-03	1.00	0.86	0.14	Space Heat - Gas Only	100% Applicable	NA	Assumes avg of one 5-10k cfm system/cust	0.95
Com | Demand Control Kitchen Ventilation	Demand Control Kitchen Ventilation	Constant volume ventilation system	Space Heating/Ventilation	Commercial	C_Hospital	ROB and NEW	per building	15.0	15.0	15,000	OEB Approved Measures Inputs	11486.00	30,901.0	0.0	OEB Approved Measures Inputs	1.11E-04	1.00	0.86	0.14	Space Heat - Gas Only	100% Applicable	NA	Assumes avg of one 5-10k cfm system/cust	0.95
Com | Demand Control Kitchen Ventilation	Demand Control Kitchen Ventilation	Constant volume ventilation system	Space Heating/Ventilation	Commercial	C_Long Term Care	ROB and NEW	per building	15.0	15.0	15,000	OEB Approved Measures Inputs	11486.00	30,901.0	0.0	OEB Approved Measures Inputs	1.76E-04	1.00	0.86	0.14	Space Heat - Gas Only	100% Applicable	NA	Assumes avg of one 5-10k cfm system/cust	0.95
Com | Demand Control Kitchen Ventilation	Demand Control Kitchen Ventilation	Constant volume ventilation system	Space Heating/Ventilation	Commercial	C_Accommodation	ROB and NEW	per building	15.0	15.0	15,000	OEB Approved Measures Inputs	11486.00	30,901.0	0.0	OEB Approved Measures Inputs	2.30E-04	1.00	0.86	0.14	Space Heat - Gas Only	100% Applicable	NA	Assumes avg of one 5-10k cfm system/cust	0.95
Com | Demand Control Kitchen Ventilation	Demand Control Kitchen Ventilation	Constant volume ventilation system	Space Heating/Ventilation	Commercial	C_Schools	ROB and NEW	per building	15.0	15.0	15,000	OEB Approved Measures Inputs	11486.00	30,901.0	0.0	OEB Approved Measures Inputs	3.15E-04	1.00	0.86	0.14	Space Heat - Gas Only	100% Applicable	NA	Assumes avg of one 5-10k cfm system/cust	0.95
Com | Demand Control Ventilation	Demand Control Ventilation	Constant volume/no heat recovery	Space Heating/Ventilation	Commercial	C_Office - Large	RET Only	Customer Segment Consumption (m^3/year)	15.0	15.0	0.058	2013 DARTS - Office Only	19%	0.0	0.0	2013 SRM Results -Large Offices as % of Consumption	7.00E-01	0.60	0.90	0.60	Space Heat - Gas Only	100% Applicable	COM/Ventilation	Enbridge Estimate	0.88
Com | Demand Control Ventilation	Demand Control Ventilation	Constant volume/no heat recovery	Space Heating/Ventilation	Commercial	C_Retail - Large	RET Only	Customer Segment Consumption (m^3/year)	15.0	15.0	0.058	2013 DARTS - Use Large office as proxy	19%	0.0	0.0	2013 SRM Results - Large Office as a proxy	7.00E-01	0.60	0.90	0.60	Space Heat - Gas Only	100% Applicable	COM/Ventilation	Enbridge Estimate	0.88
Com | Demand Control Ventilation	Demand Control Ventilation	Constant volume ventilation system	Space Heating/Ventilation	Commercial	C_Office - Small	RET Only	Customer Segment Consumption (m^3/year)	15.0	15.0	0.058	2013 DARTS - Use Small Retail as proxy	16%	0.0	0.0	2013 SRM Results - Retail as % of Consumption	1.00E+00	0.33	0.85	0.15	Space Heat - Gas Only	100% Applicable	NA	Enbridge Estimate	0.88
Com | Demand Control Ventilation	Demand Control Ventilation	Constant volume ventilation system	Space Heating/Ventilation	Commercial	C_Retail - Small	RET Only	Customer Segment Consumption (m^3/year)	15.0	15.0	0.058	2013 DARTS - Retail Only	16%	0.0	0.0	2013 SRM Results - Retail as % of Consumption	1.00E+00	0.33	0.85	0.15	Space Heat - Gas Only	100% Applicable	NA	Enbridge Estimate	0.88
Com | Destratification	Destratification Fan	No Destratification	Space Heating/Ventilation	Commercial	C_Logistics & Warehouses	RET Only	Customer Segment Consumption (m^3/year)	15.0	15.0	0.107	2013 DARTS	16%	0.0	0.0	2013 SRM Results	1.00E+00	0.65	0.70	0.30	Space Heat - Gas Only	100% Applicable	NA	Enbridge Estimate	0.88
Com | Destratification	Destratification Fan	No Destratification	Space Heating/Ventilation	Commercial	C_Retail - Large	RET Only	Customer Segment Consumption (m^3/year)	15.0	15.0	0.126	2013 DARTS	18%	0.0	0.0	2013 SRM Results	1.00E+00	0.20	0.70	0.30	Space Heat - Gas Only	100% Applicable	NA	Enbridge Estimate	0.88
Com | Efficient Gas Broilers	Efficient Gas Broilers	Std 85 MJ/hr gas broiler	Appliances/Other	Commercial	C_Food Service	ROB and NEW	Equipment	10.0	12.0	1,270	OEB Measures List	1677.00	0.0	0.0	OEB Approved Measures Inputs	3.06E-03	0.80	0.85	0.15	100% Applicable	100% Applicable	NA	Unpublished baseline for neighbouring jurisdiction	0.80
Com | Efficient Gas Broilers	Efficient Gas Broilers	Std 85 MJ/hr gas broiler	Appliances/Other	Commercial	C_Hospital	ROB and NEW	Equipment	10.0	12.0	1,270	OEB Measures List	1677.00	0.0	0.0	OEB Approved Measures Inputs	1.11E-04	0.80	0.85	0.15	100% Applicable	100% Applicable	NA	Unpublished baseline for neighbouring jurisdiction	0.80
Com | Efficient Gas Broilers	Efficient Gas Broilers	Std 85 MJ/hr gas broiler	Appliances/Other	Commercial	C_Long Term Care	ROB and NEW	Equipment	10.0	12.0	1,270	OEB Measures List	1677.00	0.0	0.0	OEB Approved Measures Inputs	1.76E-04	0.80	0.85	0.15	100% Applicable	100% Applicable	NA	Unpublished baseline for neighbouring jurisdiction	0.80
Com | Efficient Gas Griddles	Efficient Gas Griddles	Std 32% efficient griddle	Appliances/Other	Commercial	C_Food Service	ROB and NEW	Equipment	10.0	10.0	1,150	2009, Marbek, Natural Gas EE Potential (Commercial Sector)	2692.78	0.0	0.0	Marbek Nat Gas EE Potential (Commercial) 2009	3.06E-03	0.90	0.85	0.15	100% Applicable	100% Applicable	NA	Unpublished baseline for neighbouring jurisdiction	0.80
Com | Efficient Gas Griddles	Efficient Gas Griddles	Std 32% efficient griddle	Appliances/Other	Commercial	C_Hospital	ROB and NEW	Equipment	10.0	10.0	1,150	2009, Marbek, Natural Gas EE Potential (Commercial Sector)	2692.78	0.0	0.0	Marbek Nat Gas EE Potential (Commercial) 2009	1.11E-04	0.90	0.85	0.15	100% Applicable	100% Applicable	NA	Unpublished baseline for neighbouring jurisdiction	0.80
Com | Efficient Gas Griddles	Efficient Gas Griddles	Std 32% efficient griddle	Appliances/Other	Commercial	C_Long Term Care	ROB and NEW	Equipment	10.0	10.0	1,150	2009, Marbek, Natural Gas EE Potential (Commercial Sector)	2692.78	0.0	0.0	Marbek Nat Gas EE Potential (Commercial) 2009	1.76E-04	0.90	0.85	0.15	100% Applicable	100% Applicable	NA	Unpublished baseline for neighbouring jurisdiction	0.80
Com | Efficient Gas Ovens	Energy Star Convection Oven	Std 35% efficient gas oven	Appliances/Other	Commercial	C_Food Service	ROB and NEW	Equipment	12.0	12.0	875	OEB Measures List	847.00	1.0	0.0	OEB Approved Measures Inputs	1.53E-03	0.90	0.69	0.31	100% Applicable	100% Applicable	NA	Unpublished baseline for neighbouring jurisdiction	0.80
Com | Efficient Gas Ovens	Energy Star Convection Oven	Std 35% efficient gas oven	Appliances/Other	Commercial	C_Hospital	ROB and NEW	Equipment	12.0	12.0	875	OEB Measures List	847.00	1.0	0.0	OEB Approved Measures Inputs	1.11E-04	0.90	0.69	0.31	100% Applicable	100% Applicable	NA	Unpublished baseline for neighbouring jurisdiction	0.80
Com | Efficient Gas Ovens	Energy Star Convection Oven	Std 35% efficient gas oven	Appliances/Other	Commercial	C_Long Term Care	ROB and NEW	Equipment	12.0	12.0	875	OEB Measures List	847.00	1.0	0.0	OEB Approved Measures Inputs	1.76E-04	0.90	0.69	0.31	100% Applicable	100% Applicable	NA	Unpublished baseline for neighbouring jurisdiction	0.80
Com | Efficient Gas Range Tops	Efficient Gas Range Tops	Conventional (25-30% E)range	Appliances/Other	Commercial	C_Food Service	ROB and NEW	Equipment	10.0	10.0	800	2009, Marbek, Natural Gas EE Potential (Commercial Sector)	908.24	0.0	0.0	Marbek Nat Gas EE Potential (Commercial) 2009	3.06E-03	0.80	0.85	0.15	100% Applicable	100% Applicable	NA	Unpublished baseline for neighbouring jurisdiction	0.80
Com | Efficient Gas Range Tops	Efficient Gas Range Tops	Conventional (25-30% E)range	Appliances/Other	Commercial	C_Hospital	ROB and NEW	Equipment	10.0	10.0	800	2009, Marbek, Natural Gas EE Potential (Commercial Sector)	908.24	0.0	0.0	Marbek Nat Gas EE Potential (Commercial) 2009	1.11E-04	0.80	0.85	0.15	100% Applicable	100% Applicable	NA	Unpublished baseline for neighbouring jurisdiction	0.80
Com | Efficient Gas Range Tops	Efficient Gas Range Tops	Conventional (25-30% E)range	Appliances/Other	Commercial	C_Long Term Care	ROB and NEW	Equipment	10.0	10.0	800	2009, Marbek, Natural Gas EE Potential (Commercial Sector)	908.24	0.0	0.0	Marbek Nat Gas EE Potential (Commercial) 2009	1.76E-04	0.80	0.85	0.15	100% Applicable	100% Applicable	NA	Unpublished baseline for neighbouring jurisdiction	0.80
Com | Energy Star Gas Fryers	Energy Star Gas Fryers	Standard 35% efficiency fryer	Appliances/Other	Commercial	C_Food Service	ROB and NEW	Equipment	12.0	12.0	1,028	OEB Measures List	1083.00	17.0	0.0	OEB Approved Measures Inputs	3.06E-03	0.90	0.66	0.34	100% Applicable	100% Applicable	NA	Unpublished baseline for neighbouring jurisdiction	0.80
Com | Energy Star Gas Fryers	Energy Star Gas Fryers	Standard 35% efficiency fryer	Appliances/Other	Commercial	C_Hospital	ROB and NEW	Equipment	12.0	12.0	1,028	OEB Measures List	1083.00	17.0	0.0	OEB Approved Measures Inputs	1.11E-04	0.90	0.66	0.34	100% Applicable	100% Applicable	NA	Unpublished baseline for neighbouring jurisdiction	0.80
Com | Energy Star Gas Fryers	Energy Star Gas Fryers	Standard 35% efficiency fryer	Appliances/Other	Commercial	C_Long Term Care	ROB and NEW	Equipment	12.0	12.0	1,028	OEB Measures List	1083.00	17.0	0.0	OEB Approved Measures Inputs	1.76E-04	0.90	0.66	0.34	100% Applicable	100% Applicable	NA	Unpublished baseline for neighbouring jurisdiction	0.80
Com | Heat Reflector Panels	Heat Reflector Panels	No reflector behind radiator	Space Heating/Ventilation	Commercial	All Commercial	RET Only	End Use Consumption (m^3/year)	18.0	18.0	0.046	2009, Marbek, Natural Gas EE Potential (Commercial Sector)	3%	0.0	0.0	Marbek Nat Gas EE Potential (Commercial) 2009	7.00E-01	0.80	0.20	0.80	Space Heat - Gas Only	100% Applicable	NA	Marbek Nat Gas EE Potential (Commercial) 2010	0.80
Com | Heat/Energy Recovery Ventilation	Heat/Energy Recovery Ventilation	Constant volume/no heat recovery	Space Heating/Ventilation	Commercial	C_Office - Large	RET Only	Customer Segment Consumption (m^3/year)	15.0	15.0	0.137	2009, Marbek, Natural Gas EE Potential (Commercial Sector)	12%	0.0	0.0	Marbek Nat Gas EE Potential (Commercial) 2009	7.00E-01	0.60	0.90	0.40	Space Heat - Gas Only	100% Applicable	COM/Ventilation	Marbek Nat Gas EE Potential (Commercial) 2009	0.95
Com | Heat/Energy Recovery Ventilation	Heat/Energy Recovery Ventilation	Constant volume/no heat recovery	Space Heating/Ventilation	Commercial	C_Retail - Large	RET Only	Customer Segment Consumption (m^3/year)	15.0	15.0	0.191	2009, Marbek, Natural Gas EE Potential (Commercial Sector)	14%	0.0	0.0	Marbek Nat Gas EE Potential (Commercial) 2009	7.00E-01	0.60	0.90	0.40	Space Heat - Gas Only	100% Applicable	COM/Ventilation	Marbek Nat Gas EE Potential (Commercial) 2009	0.95
Com | Heat/Energy Recovery Ventilation	Heat/Energy Recovery Ventilation	Constant volume/no heat recovery	Space Heating/Ventilation	Commercial	C_Accommodation	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.228	2009, Marbek, Natural Gas EE Potential (Commercial Sector)	15%	0.0	0.0	Marbek Nat Gas EE Potential (Commercial) 2009	7.00E-01	0.60	0.86	0.14	Space Heat - Gas Only	100% Applicable	NA	Marbek Nat Gas EE Potential (Commercial) 2009	0.95
Com | Heat/Energy Recovery Ventilation	Heat/Energy Recovery Ventilation	Constant volume/no heat recovery	Space Heating/Ventilation	Commercial	C_Office - Small	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.228	2009, Marbek, Natural Gas EE Potential (Commercial Sector)	15%	0.0	0.0	Marbek Nat Gas EE Potential (Commercial) 2009	7.00E-01	0.60	0.86	0.14	Space Heat - Gas Only	100% Applicable	NA	Marbek Nat Gas EE Potential (Commercial) 2009	0.95
Com | Heat/Energy Recovery Ventilation	Heat/Energy Recovery Ventilation	Constant volume/no heat recovery	Space Heating/Ventilation	Commercial	C_Retail - Small	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.228	2009, Marbek, Natural Gas EE Potential (Commercial Sector)	15%	0.0	0.0	Marbek Nat Gas EE Potential (Commercial) 2009	7.00E-01	0.60	0.86	0.14	Space Heat - Gas Only	100% Applicable	NA	Marbek Nat Gas EE Potential (Commercial) 2009	0.95
Com | Heat/Energy Recovery Ventilation	Heat/Energy Recovery Ventilation	Constant volume/no heat recovery	Space Heating/Ventilation	Commercial	C_Schools	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.228	2009, Marbek, Natural Gas EE Potential (Commercial Sector)	15%	0.0	0.0	Marbek Nat Gas EE Potential (Commercial) 2009	7.00E-01	0.60	0.86	0.14	Space Heat - Gas Only	100% Applicable	NA	Marbek Nat Gas EE Potential (Commercial) 2009	0.95
Com | Heat/Energy Recovery Ventilation	Heat/Energy Recovery Ventilation	Constant volume/no heat recovery	Space Heating/Ventilation	Commercial	C_Multi-Residential	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.228	2009, Marbek, Natural Gas EE Potential (Commercial Sector)	15%	0.0	0.0	Marbek Nat Gas EE Potential (Commercial) 2009	7.00E-01	0.60	0.86	0.14	Space Heat - Gas Only	100% Applicable	NA	Marbek Nat Gas EE Potential (Commercial) 2009	0.95
Com | Heat/Energy Recovery Ventilation	Heat/Energy Recovery Ventilation	Constant volume/no heat recovery	Space Heating/Ventilation	Commercial	C_Colleges & Universities	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.228	2009, Marbek, Natural Gas EE Potential (Commercial Sector)	15%	0.0	0.0	Marbek Nat Gas EE Potential (Commercial) 2009	7.00E-01	0.60	0.86	0.14	Space Heat - Gas Only	100% Applicable	NA	Marbek Nat Gas EE Potential (Commercial) 2009	0.95
Com | Heat/Energy Recovery Ventilation	Heat/Energy Recovery Ventilation	Constant volume/no heat recovery	Space Heating/Ventilation	Commercial	C_Com - Other	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.228	2009, Marbek, Natural Gas EE Potential (Commercial Sector)	15%	0.0	0.0	Marbek Nat Gas EE Potential (Commercial) 2009	7.00E-01	0.60	0.86	0.14	Space Heat - Gas Only	100% Applicable	NA	Marbek Nat Gas EE Potential (Commercial) 2009	0.95
Com | Heat/Energy Recovery Ventilation	Heat/Energy Recovery Ventilation	Constant volume/no heat recovery	Space Heating/Ventilation	Commercial	C_Food Service	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.228	2009, Marbek, Natural Gas EE Potential (Commercial Sector)	15%	0.0	0.0	Marbek Nat Gas EE Potential (Commercial) 2009	7.00E-01	0.60	0.86	0.14	Space Heat - Gas Only	100% Applicable	NA	Marbek Nat Gas EE Potential (Commercial) 2009	0.95
Com | Heat/Energy Recovery Ventilation	Heat/Energy Recovery Ventilation	Constant volume/no heat recovery	Space Heating/Ventilation	Commercial	C_Hospital	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.228	2009, Marbek, Natural Gas EE Potential (Commercial Sector)	15%	0.0	0.0	Marbek Nat Gas EE Potential (Commercial) 2009	7.00E-01	0.60	0.86	0.14	Space Heat - Gas Only	100% Applicable	NA	Marbek Nat Gas EE Potential (Commercial) 2009	0.95
Com | Heat/Energy Recovery Ventilation	Heat/Energy Recovery Ventilation	Constant volume/no heat recovery	Space Heating/Ventilation	Commercial	C_Logistics & Warehouses	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.228	2009, Marbek, Natural Gas EE Potential (Commercial Sector)	15%	0.0	0.0	Marbek Nat Gas EE Potential (Commercial) 2009	7.00E-01	0.60	0.86	0.14	Space Heat - Gas Only	100% Applicable	NA	Marbek Nat Gas EE Potential (Commercial) 2009	0.95
Com | Heat/Energy Recovery Ventilation	Heat/Energy Recovery Ventilation	Constant volume/no heat recovery	Space Heating/Ventilation	Commercial	C_Long Term Care	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.228	2009, Marbek, Natural Gas EE Potential (Commercial Sector)	15%	0.0	0.0	Marbek Nat Gas EE Potential (Commercial) 2009	7.00E-01	0.60	0.86	0.14	Space Heat - Gas Only	100% Applicable	NA	Marbek Nat Gas EE Potential (Commercial) 2009	0.95
Com | High Extraction Washer	High Extraction Washer	Low Extraction Washer	Appliances/Other	Commercial	C_Multi-Residential	ROB and NEW	Customer Segment Consumption (m^3/year)	10.0	10.0	0.005	2013 DARTS	1%	0.0	0.0	2013 SRM Results	1.00E+00	0.90	0.80	0.20	100% Applicable	100% Applicable	NA	Enbridge Estimate	0.80
Com | High Extraction Washer	High Extraction Washer	Low Extraction Washer	Appliances/Other	Commercial	C_Long Term Care	ROB and NEW	Customer Segment Consumption (m^3/year)	10.0	10.0	0.007	2013 DARTS	2%	0.0	0.0	2013 SRM Results	1.00E+00	1.00	0.75	0.25	100% Applicable	100% Applicable	NA	Enbridge Estimate	0.88
Com | High perf.glazings | New	High performance glazings	Standard double-glazed window with overall U-value of 0.46 Btu/hr.ft	Space Heating/Ventilation	Commercial	All Commercial	NEW Only	End Use Consumption (m^3/year)	30.0	30.0	0.254	2009, Marbek, Natural Gas EE Potential (Commercial Sector)	10%	0.0	0.0	Marbek Nat Gas EE Potential (Commercial) 2010	2.50E-01	1.00	1.00	0.30	Space Heat - Gas Only	100% Applicable	Windows New	Assumes all windows can be upgraded.	0.84
Com | High perf.glazings | Retro	High performance glazings	Standard double-glazed window with overall U-value of 0.46 Btu/hr.ft	Space Heating/Ventilation	Commercial	All Commercial	RET Only	End Use Consumption (m^3/year)	30.0	30.0	0.363	2009, Marbek, Natural Gas EE Potential (Commercial Sector)	10%	0.0	0.0	Marbek Nat Gas EE Potential (Commercial) 2009	2.50E-01	1.00	1.00	0.40	Space Heat - Gas Only	100% Applicable	Windows Retro	Assumes all windows can be upgraded.	0.84
Com | Infrared Heaters	Infrared Heaters	Conventional Unit Heater	Space Heating/Ventilation	Commercial	C_Logistics & Warehouses	ROB and NEW	End Use Consumption (m^3/year)	20.0	20.0	0.067	OEB Approved Measures Inputs	3%	0.0	0.0	Marbek Nat Gas EE Potential (Commercial) 2009	3.00E-01	0.50	0.20	0.90	Space Heat - Gas Only	100% Applicable	Com | Unit Heater	Navigant Estimate	0.67
Com | Low flow Showerheads | New	Low flow Showerheads (1.25 gpm)	Standard 2.5 gpm showerhead	Water Heating	Commercial	C_Multi-Residential	NEW Only	Showerheads	10.0	10.0	12.50	OEB Measures List	36.00	0.0	11,587.0	OEB Approved Measures Inputs	9.57E-01	1.00	0.40	0.65	100% Applicable	DHW - Gas Only	NA	Navigant report on OEB Substantiation Sheets	0.90
Com | Low flow Showerheads| Retro	Low flow Showerheads (1.5 gpm)	Avg stock (2.8 gpm)	Water Heating	Commercial	C_Multi-Residential	RET Only	Showerheads	10.0	10.0	12.50	OEB Measures List	40.00	0.0	10,036.0	OEB Approved Measures Inputs	9.57E-01	1.00	0.40	0.65	100% Applicable	DHW - Gas Only	NA	Navigant report on OEB Substantiation Sheets	0.90
Com | Near Condensing Boiler| Std Baseline	Near Condensing Boiler	Standard boiler	Space Heating/Ventilation	Commercial	All Commercial	ROB and NEW	End Use Consumption (m^3/year)	25.0	25.0	0.068	2009, Marbek, Natural Gas EE Potential (Commercial Sector)	8%	0.0	0.0	Marbek Nat Gas EE Potential (Commercial) 2009	7.00E-01	1.00	0.90	0.50	Space Heat - Gas Only	100% Applicable	Com|Boiler| Std	Marbek Boiler Study	0.84
Com | Operational Improvement	Operational Improvements	Existing Operation	Cross Cutting/Behavioural	Commercial	All Commercial	RET Only	Customer Segment Consumption (m^3/year)	5.0	5.0	0.025	Enbridge experience	5%	0.0	0.0	2013 SRM Results	1.00E+00	1.00	0.90	0.10	Space Heat - Gas Only	DHW - Gas Only	NA	Enbridge Estimate	0.84
Com | Ozone Laundry	Ozone Laundry	Conventional System w/o Ozone	Water Heating	Commercial	C_Long Term Care	RET Only	Customer Segment Consumption (m^3/year)	15.0	15.0	0.054	2013 DARTS	11%	0.0	0.0	2013 SRM Results	1.00E+00	0.95	0.70	0.30	100% Applicable	D

Unique Measure Name	Measure Description	Baseline Assumption	End Use Category	Sector	Customer Segment	Replacement Type	Unit Basis	Base Measure Lifetime	Efficient Measure Lifetime	Incremental Measure Cost	Cost Source(s)	Gas Savings	Electric Savings	Water Savings	Savings Source(s)	Total Measure Density (Base + EE)	Technical Suitability	Baseline Initial Saturation	EE Measure Initial Saturation	Heating Fuel Type Applicability Multiplier	DHW Fuel Type Applicability Multiplier	Competition Group	Density/ Applicability Source(s)	NTG Factor (1-FreeRiders)
TEXT (< ~30 characters)	TEXT	TEXT	Dropdown List	Dropdown List	Dropdown List	Dropdown List	TEXT (units used for savings and cost inputs)	Years	Years	$/ unit basis	TEXT	m^3/ year/ unit basis	kWh/ year/ unit basis	Liters/ year/ unit basis	TEXT	Unit Basis/ Scaling Basis	Fraction	Fraction	Fraction	Dropdown List	Dropdown List	TEXT	TEXT	Fraction
Com | Super High Perf Glazing |Retro	Super High Performance Glazing	Standard double glazing with overall U-value of 0.46 Btu/hr.ft	Space Heating/Ventilation	Commercial	All Commercial	RET Only	End Use Consumption (m^3/year)	30.0	30.0	1.14	2009, Marbek, Natural Gas EE Potential (Commercial Sector)	15%	0.0	0.0	Marbek Nat Gas EE Potential (Commercial) 2009	2.50E-01	1.00	1.00	0.60	Space Heat - Gas Only	100% Applicable	Windows Retro	Assumes all windows can be upgraded.	0.95
Com | Tankless Water Heaters	Tankless Water Heaters	Standard water heater (80% thermal//70% seasonal efficiency)	Water Heating	Commercial	All Commercial	ROB and NEW	End Use Consumption (m^3/year)	18.0	18.0	0.846	OEB Measures List	16%	0.0	0.0	OEB Approved Measures Inputs	8.00E-02	0.90	0.90	0.25	100% Applicable	DHW - Gas Only	Com | Water	Res Market Survey and CIBEUS	0.98
Com | VFD	Variable Frequency Drive (Air)	Fixed Speed Make Up Air (24 hrs)	Space Heating/Ventilation	Commercial	C_Hospital	RET Only	Customer Segment Consumption (m^3/year)	15.0	15.0	0.020	2013 DARTS	14%	0.4	0.0	2013 SRM Results	1.00E+00	1.00	0.25	0.75	Space Heat - Gas Only	100% Applicable	NA	Enbridge Estimate	0.88
Com | VFD	Variable Frequency Drive (Air)	Fixed Speed Make Up Air (16 hrs)	Space Heating/Ventilation	Commercial	C_Office - Large	RET Only	Customer Segment Consumption (m^3/year)	15.0	15.0	0.032	2013 DARTS	7%	0.1	0.0	2013 SRM Results	1.00E+00	1.00	0.60	0.40	Space Heat - Gas Only	100% Applicable	NA	Enbridge Estimate	0.88
Com | VFD	Variable Frequency Drive (Air)	Fixed Speed Make Up Air (24 hrs)	Space Heating/Ventilation	Commercial	C_Multi-Residential	RET Only	Customer Segment Consumption (m^3/year)	15.0	15.0	0.073	2013 DARTS	15%	0.2	0.0	2013 SRM Results	1.00E+00	1.00	0.40	0.60	Space Heat - Gas Only	100% Applicable	NA	Enbridge Estimate	0.80
Com | Wall Insulation Upgrade	Wall Insulation Upgrade	Upgrade wall insulation to R-24	Space Heating/Ventilation	Commercial	All Commercial	RET Only	Floor area (1000m2)	20.0	20.0	1.24	2009, Marbek, Natural Gas EE Potential (Commercial Sector)	0.09	0.0	0.0	Marbek Nat Gas EE Potential (Commercial) 2009	1.00E+00	1.00	1.00	0.00	Space Heat - Gas Only	100% Applicable	NA	Marbek Nat Gas EE Potential (Commercial) 2009	0.95
Com | Waste Water Heat Recovery | Retro	Waste Water Heat Recovery	No heat recovery	Water Heating	Commercial	C_Colleges & Universities	RET Only	Meal per day	25.0	25.0	6.26	OEB Measures List	11.60	0.0	0.0	Marbek Nat Gas EE Potential (Commercial) 2009	1.44E+00	0.80	0.90	0.10	100% Applicable	DHW - Gas Only	NA	Navigant Estimate	0.95
Com | Waste Water Heat Recovery | Retro	Waste Water Heat Recovery	No heat recovery	Water Heating	Commercial	C_Long Term Care	RET Only	Bed	25.0	25.0	25.33	OEB Measures List	12.00	0.0	0.0	Marbek Nat Gas EE Potential (Commercial) 2009	2.12E-02	0.80	0.90	0.10	100% Applicable	DHW - Gas Only	NA	Navigant Estimate	0.95
Com | Waste Water Heat Recovery | Retro	Waste Water Heat Recovery	No heat recovery	Water Heating	Commercial	C_Hospital	RET Only	Bed	25.0	25.0	292	OEB Measures List	264.00	0.0	0.0	Marbek Nat Gas EE Potential (Commercial) 2009	2.28E-02	0.80	0.90	0.10	100% Applicable	DHW - Gas Only	NA	Navigant Estimate	0.95
Com | Waste Water Heat Recovery |New	Waste Water Heat Recovery	No heat recovery	Water Heating	Commercial	C_Colleges & Universities	NEW Only	Meal per day	25.0	25.0	3.41	OEB Measures List	4.60	0.0	0.0	Marbek Nat Gas EE Potential (Commercial) 2009	1.44E+00	0.80	0.90	0.10	100% Applicable	DHW - Gas Only	NA	Navigant Estimate	0.95
Com | Waste Water Heat Recovery |New	Waste Water Heat Recovery	No heat recovery	Water Heating	Commercial	C_Long Term Care	NEW Only	Bed	25.0	25.0	16.54	OEB Measures List	307.00	0.0	0.0	Marbek Nat Gas EE Potential (Commercial) 2009	2.12E-02	0.80	0.90	0.10	100% Applicable	DHW - Gas Only	NA	Navigant Estimate	0.95
Com | Waste Water Heat Recovery |New	Waste Water Heat Recovery	No heat recovery	Water Heating	Commercial	C_Hospital	NEW Only	Bed	25.0	25.0	262	OEB Measures List	307.00	0.0	0.0	Marbek Nat Gas EE Potential (Commercial) 2009	2.28E-02	0.80	0.90	0.10	100% Applicable	DHW - Gas Only	NA	Navigant Estimate	0.95
Ind | Advanced boiler controls including air/fuel mix control	Advanced boiler controls including air/fuel mix control	No Controls	Process - Boiler/Steam	Industrial	I_Asphalt	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	7.00E-01	0.70	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Advanced boiler controls including air/fuel mix control	Advanced boiler controls including air/fuel mix control	No Controls	Process - Boiler/Steam	Industrial	I_Chemicals / Pharmaceutical	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	7.00E-01	0.70	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Advanced boiler controls including air/fuel mix control	Advanced boiler controls including air/fuel mix control	No Controls	Process - Boiler/Steam	Industrial	I_Food & Beverage	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	7.00E-01	0.70	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Advanced boiler controls including air/fuel mix control	Advanced boiler controls including air/fuel mix control	No Controls	Process - Boiler/Steam	Industrial	I_Green House / Agriculture	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	7.00E-01	0.70	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.60
Ind | Advanced boiler controls including air/fuel mix control	Advanced boiler controls including air/fuel mix control	No Controls	Process - Boiler/Steam	Industrial	I_Other Manufacturing >0.5 million m3/year	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	7.00E-01	0.70	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Advanced boiler controls including air/fuel mix control	Advanced boiler controls including air/fuel mix control	No Controls	Process - Boiler/Steam	Industrial	I_Pulp & Paper	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	7.00E-01	0.70	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Advanced boiler controls including air/fuel mix control	Advanced boiler controls including air/fuel mix control	No Controls	Process - Boiler/Steam	Industrial	I_Other Manufacturing <0.5 million m3/year	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	7.00E-01	0.70	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Advanced boiler controls including air/fuel mix control | New	Advanced boiler controls including air/fuel mix control	No Controls	Process - Boiler/Steam	Industrial	I_Asphalt	NEW Only	End Use Consumption (m^3/year)	15.0	15.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	7.00E-01	0.70	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Advanced boiler controls including air/fuel mix control | New	Advanced boiler controls including air/fuel mix control	No Controls	Process - Boiler/Steam	Industrial	I_Chemicals / Pharmaceutical	NEW Only	End Use Consumption (m^3/year)	15.0	15.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	7.00E-01	0.70	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Advanced boiler controls including air/fuel mix control | New	Advanced boiler controls including air/fuel mix control	No Controls	Process - Boiler/Steam	Industrial	I_Food & Beverage	NEW Only	End Use Consumption (m^3/year)	15.0	15.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	7.00E-01	0.70	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Advanced boiler controls including air/fuel mix control | New	Advanced boiler controls including air/fuel mix control	No Controls	Process - Boiler/Steam	Industrial	I_Green House / Agriculture	NEW Only	End Use Consumption (m^3/year)	15.0	15.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	7.00E-01	0.70	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.60
Ind | Advanced boiler controls including air/fuel mix control | New	Advanced boiler controls including air/fuel mix control	No Controls	Process - Boiler/Steam	Industrial	I_Other Manufacturing >0.5 million m3/year	NEW Only	End Use Consumption (m^3/year)	15.0	15.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	7.00E-01	0.70	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Advanced boiler controls including air/fuel mix control | New	Advanced boiler controls including air/fuel mix control	No Controls	Process - Boiler/Steam	Industrial	I_Pulp & Paper	NEW Only	End Use Consumption (m^3/year)	15.0	15.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	7.00E-01	0.70	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Advanced boiler controls including air/fuel mix control | New	Advanced boiler controls including air/fuel mix control	No Controls	Process - Boiler/Steam	Industrial	I_Other Manufacturing <0.5 million m3/year	NEW Only	End Use Consumption (m^3/year)	15.0	15.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	7.00E-01	0.70	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Advanced heating and process control	Advanced heating and process control	Conventional controls	Process Heat	Industrial	All Industrial	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.060	2009, Marbek, N,Gas EE Potential (Industrial)	13%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	7.00E-01	0.80	0.80	0.20	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Advanced heating and process control | New	Advanced heating and process control	Conventional controls	Process Heat	Industrial	All Industrial	NEW Only	End Use Consumption (m^3/year)	15.0	15.0	0.060	2009, Marbek, N,Gas EE Potential (Industrial)	13%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	7.00E-01	0.80	0.80	0.20	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Air compressor heat recovery	Air compressor heat recovery	No heat recovery	Space Heating/Ventilation	Industrial	All Industrial	RET Only	End Use Consumption (m^3/year)	25.0	25.0	0.314	2009, Marbek, N,Gas EE Potential (Industrial)	21%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	6.00E-01	0.60	0.90	0.10	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Air compressor heat recovery | New	Air compressor heat recovery	No heat recovery	Space Heating/Ventilation	Industrial	All Industrial	NEW Only	End Use Consumption (m^3/year)	25.0	25.0	0.314	2009, Marbek, N,Gas EE Potential (Industrial)	21%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	6.00E-01	0.60	0.90	0.10	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Air curtains	Air curtains	No air curtains	Space Heating/Ventilation	Industrial	All Industrial	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.147	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.90	0.90	0.10	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Air curtains | New	Air curtains	No air curtains	Space Heating/Ventilation	Industrial	All Industrial	NEW Only	End Use Consumption (m^3/year)	15.0	15.0	0.147	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.90	0.90	0.10	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Automated temperature control	Automated temperature control	Manual temperature control	Space Heating/Ventilation	Industrial	All Industrial	RET Only	End Use Consumption (m^3/year)	25.0	25.0	0.224	2009, Marbek, N,Gas EE Potential (Industrial)	7%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	1.00	0.75	0.25	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Automated temperature control | New	Automated temperature control	Manual temperature control	Space Heating/Ventilation	Industrial	All Industrial	NEW Only	End Use Consumption (m^3/year)	25.0	25.0	0.224	2009, Marbek, N,Gas EE Potential (Industrial)	7%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	1.00	0.75	0.25	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Blow down heat recovery and control	Blow down heat recovery and control	No heat recovery and control	Process - Boiler/Steam	Industrial	I_Asphalt	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	2%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.90	0.70	0.05	100% Applicable	100% Applicable	NA	2009, Marbek, Natural Gas EE Potential Industrial Sector)	0.50
Ind | Blow down heat recovery and control	Blow down heat recovery and control	No heat recovery and control	Process - Boiler/Steam	Industrial	I_Chemicals / Pharmaceutical	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	2%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.90	0.70	0.05	100% Applicable	100% Applicable	NA	2009, Marbek, Natural Gas EE Potential Industrial Sector)	0.50
Ind | Blow down heat recovery and control	Blow down heat recovery and control	No heat recovery and control	Process - Boiler/Steam	Industrial	I_Food & Beverage	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	2%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.90	0.70	0.05	100% Applicable	100% Applicable	NA	2009, Marbek, Natural Gas EE Potential Industrial Sector)	0.50
Ind | Blow down heat recovery and control	Blow down heat recovery and control	No heat recovery and control	Process - Boiler/Steam	Industrial	I_Green House / Agriculture	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	2%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.90	0.70	0.05	100% Applicable	100% Applicable	NA	2009, Marbek, Natural Gas EE Potential Industrial Sector)	0.60
Ind | Blow down heat recovery and control	Blow down heat recovery and control	No heat recovery and control	Process - Boiler/Steam	Industrial	I_Other Manufacturing >0.5 million m3/year	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	2%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.90	0.70	0.05	100% Applicable	100% Applicable	NA	2009, Marbek, Natural Gas EE Potential Industrial Sector)	0.50
Ind | Blow down heat recovery and control	Blow down heat recovery and control	No heat recovery and control	Process - Boiler/Steam	Industrial	I_Pulp & Paper	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	2%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.90	0.70	0.05	100% Applicable	100% Applicable	NA	2009, Marbek, Natural Gas EE Potential Industrial Sector)	0.50
Ind | Blow down heat recovery and control | New	Blow down heat recovery and control	No heat recovery and control	Process - Boiler/Steam	Industrial	I_Asphalt	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	2%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.90	0.70	0.05	100% Applicable	100% Applicable	NA	2009, Marbek, Natural Gas EE Potential Industrial Sector)	0.50
Ind | Blow down heat recovery and control | New	Blow down heat recovery and control	No heat recovery and control	Process - Boiler/Steam	Industrial	I_Chemicals / Pharmaceutical	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	2%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.90	0.70	0.05	100% Applicable	100% Applicable	NA	2009, Marbek, Natural Gas EE Potential Industrial Sector)	0.50
Ind | Blow down heat recovery and control | New	Blow down heat recovery and control	No heat recovery and control	Process - Boiler/Steam	Industrial	I_Food & Beverage	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	2%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.90	0.70	0.05	100% Applicable	100% Applicable	NA	2009, Marbek, Natural Gas EE Potential Industrial Sector)	0.50
Ind | Blow down heat recovery and control | New	Blow down heat recovery and control	No heat recovery and control	Process - Boiler/Steam	Industrial	I_Green House / Agriculture	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	2%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.90	0.70	0.05	100% Applicable	100% Applicable	NA	2009, Marbek, Natural Gas EE Potential Industrial Sector)	0.60
Ind | Blow down heat recovery and control | New	Blow down heat recovery and control	No heat recovery and control	Process - Boiler/Steam	Industrial	I_Other Manufacturing >0.5 million m3/year	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	2%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.90	0.70	0.05	100% Applicable	100% Applicable	NA	2009, Marbek, Natural Gas EE Potential Industrial Sector)	0.50
Ind | Blow down heat recovery and control | New	Blow down heat recovery and control	No heat recovery and control	Process - Boiler/Steam	Industrial	I_Pulp & Paper	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	2%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.90	0.70	0.05	100% Applicable	100% Applicable	NA	2009, Marbek, Natural Gas EE Potential Industrial Sector)	0.50
Ind | Boiler combustion air preheat	Boiler combustion air preheat	No preheat	Process - Boiler/Steam	Industrial	I_Asphalt	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.030	2009, Marbek, N,Gas EE Potential (Industrial)	2%	1.5	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.90	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Boiler combustion air preheat	Boiler combustion air preheat	No preheat	Process - Boiler/Steam	Industrial	I_Chemicals / Pharmaceutical	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.030	2009, Marbek, N,Gas EE Potential (Industrial)	2%	1.5	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.90	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Boiler combustion air preheat	Boiler combustion air preheat	No preheat	Process - Boiler/Steam	Industrial	I_Food & Beverage	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.030	2009, Marbek, N,Gas EE Potential (Industrial)	2%	1.5	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.90	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Boiler combustion air preheat	Boiler combustion air preheat	No preheat	Process - Boiler/Steam	Industrial	I_Green House / Agriculture	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.030	2009, Marbek, N,Gas EE Potential (Industrial)	2%	1.5	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.90	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.60
Ind | Boiler combustion air preheat	Boiler combustion air preheat	No preheat	Process - Boiler/Steam	Industrial	I_Other Manufacturing >0.5 million m3/year	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.030	2009, Marbek, N,Gas EE Potential (Industrial)	2%	1.5	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.90	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Boiler combustion air preheat	Boiler combustion air preheat	No preheat	Process - Boiler/Steam	Industrial	I_Pulp & Paper	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.030	2009, Marbek, N,Gas EE Potential (Industrial)	2%	1.5	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.90	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Boiler combustion air preheat | New	Boiler combustion air preheat	No preheat	Process - Boiler/Steam	Industrial	I_Asphalt	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.030	2009, Marbek, N,Gas EE Potential (Industrial)	2%	1.5	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.90	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Boiler combustion air preheat | New	Boiler combustion air preheat	No preheat	Process - Boiler/Steam	Industrial	I_Chemicals / Pharmaceutical	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.030	2009, Marbek, N,Gas EE Potential (Industrial)	2%	1.5	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.90	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Boiler combustion air preheat | New	Boiler combustion air preheat	No preheat	Process - Boiler/Steam	Industrial	I_Food & Beverage	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.030	2009, Marbek, N,Gas EE Potential (Industrial)	2%	1.5	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.90	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Boiler combustion air preheat | New	Boiler combustion air preheat	No preheat	Process - Boiler/Steam	Industrial	I_Green House / Agriculture	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.030	2009, Marbek, N,Gas EE Potential (Industrial)	2%	1.5	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.90	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.60
Ind | Boiler combustion air preheat | New	Boiler combustion air preheat	No preheat	Process - Boiler/Steam	Industrial	I_Other Manufacturing >0.5 million m3/year	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.030	2009, Marbek, N,Gas EE Potential (Industrial)	2%	1.5	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.90	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Boiler combustion air preheat | New	Boiler combustion air preheat	No preheat	Process - Boiler/Steam	Industrial	I_Pulp & Paper	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.030	2009, Marbek, N,Gas EE Potential (Industrial)	2%	1.5	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.90	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Boiler right sizing and load management	Boiler right sizing and load management	Oversized boiler	Process - Boiler/Steam	Industrial	I_Asphalt	ROB and NEW	End Use Consumption (m^3/year)	25.0	25.0	0.000	2009, Marbek, N,Gas EE Potential (Industrial)	10%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.70	0.75	0.25	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Boiler right sizing and load management	Boiler right sizing and load management	Oversized boiler	Process - Boiler/Steam	Industrial	I_Chemicals / Pharmaceutical	ROB and NEW	End Use Consumption (m^3/year)	25.0	25.0	0.000	2009, Marbek, N,Gas EE Potential (Industrial)	10%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.70	0.75	0.25	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Boiler right sizing and load management	Boiler right sizing and load management	Oversized boiler	Process - Boiler/Steam	Industrial	I_Food & Beverage	ROB and NEW	End Use Consumption (m^3/year)	25.0	25.0	0.000	2009, Marbek, N,Gas EE Potential (Industrial)	10%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.70	0.75	0.25	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Boiler right sizing and load management	Boiler right sizing and load management	Oversized boiler	Process - Boiler/Steam	Industrial	I_Green House / Agriculture	ROB and NEW	End Use Consumption (m^3/year)	25.0	25.0	0.000	2009, Marbek, N,Gas EE Potential (Industrial)	10%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.70	0.75	0.25	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.60
Ind | Boiler right sizing and load management	Boiler right sizing and load management	Oversized boiler	Process - Boiler/Steam	Industrial	I_Other Manufacturing >0.5 million m3/year	ROB and NEW	End Use Consumption (m^3/year)	25.0

Unique Measure Name	Measure Description	Baseline Assumption	End Use Category	Sector	Customer Segment	Replacement Type	Unit Basis	Base Measure Lifetime	Efficient Measure Lifetime	Incremental Measure Cost	Cost Source(s)	Gas Savings	Electric Savings	Water Savings	Savings Source(s)	Total Measure Density (Base + EE)	Technical Suitability	Baseline Initial Saturation	EE Measure Initial Saturation	Heating Fuel Type Applicability Multiplier	DHW Fuel Type Applicability Multiplier	Competition Group	Density/ Applicability Source(s)	NTG Factor (1-FreeRiders)
TEXT (< ~30 characters)	TEXT	TEXT	Dropdown List	Dropdown List	Dropdown List	Dropdown List	TEXT (units used for savings and cost inputs)	Years	Years	$/ unit basis	TEXT	m^3/ year/ unit basis	kWh/ year/ unit basis	Liters/ year/ unit basis	TEXT	Unit Basis/ Scaling Basis	Fraction	Fraction	Fraction	Dropdown List	Dropdown List	TEXT	TEXT	Fraction
Ind | Condensate return | New	Condensate return	No Condensate return	Process - Boiler/Steam	Industrial	I_Food & Beverage	NEW Only	End Use Consumption (m^3/year)	25.0	25.0	0.042	2009, Marbek, N,Gas EE Potential (Industrial)	2%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	8.00E-01	1.00	0.95	0.05	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Condensate return | New	Condensate return	No Condensate return	Process - Boiler/Steam	Industrial	I_Green House / Agriculture	NEW Only	End Use Consumption (m^3/year)	25.0	25.0	0.042	2009, Marbek, N,Gas EE Potential (Industrial)	2%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	8.00E-01	1.00	0.95	0.05	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.60
Ind | Condensate return | New	Condensate return	No Condensate return	Process - Boiler/Steam	Industrial	I_Other Manufacturing >0.5 million m3/year	NEW Only	End Use Consumption (m^3/year)	25.0	25.0	0.042	2009, Marbek, N,Gas EE Potential (Industrial)	2%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	8.00E-01	1.00	0.95	0.05	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Condensate return | New	Condensate return	No Condensate return	Process - Boiler/Steam	Industrial	I_Pulp & Paper	NEW Only	End Use Consumption (m^3/year)	25.0	25.0	0.042	2009, Marbek, N,Gas EE Potential (Industrial)	2%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	8.00E-01	1.00	0.95	0.05	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Condensing boiler	Condensing boiler	Conventional Boiler	Process - Boiler/Steam	Industrial	I_Asphalt	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.096	2009, Marbek, N,Gas EE Potential (Industrial)	10%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.40	0.85	0.15	100% Applicable	100% Applicable	NA	Marbek Boiler Study	0.50
Ind | Condensing boiler	Condensing boiler	Conventional Boiler	Process - Boiler/Steam	Industrial	I_Chemicals / Pharmaceutical	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.096	2009, Marbek, N,Gas EE Potential (Industrial)	10%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.40	0.85	0.15	100% Applicable	100% Applicable	NA	Marbek Boiler Study	0.50
Ind | Condensing boiler	Condensing boiler	Conventional Boiler	Process - Boiler/Steam	Industrial	I_Food & Beverage	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.096	2009, Marbek, N,Gas EE Potential (Industrial)	10%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.40	0.85	0.15	100% Applicable	100% Applicable	NA	Marbek Boiler Study	0.50
Ind | Condensing boiler	Condensing boiler	Conventional Boiler	Process - Boiler/Steam	Industrial	I_Green House / Agriculture	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.096	2009, Marbek, N,Gas EE Potential (Industrial)	10%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.40	0.85	0.15	100% Applicable	100% Applicable	NA	Marbek Boiler Study	0.60
Ind | Condensing boiler	Condensing boiler	Conventional Boiler	Process - Boiler/Steam	Industrial	I_Other Manufacturing >0.5 million m3/year	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.096	2009, Marbek, N,Gas EE Potential (Industrial)	10%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.40	0.85	0.15	100% Applicable	100% Applicable	NA	Marbek Boiler Study	0.50
Ind | Condensing boiler	Condensing boiler	Conventional Boiler	Process - Boiler/Steam	Industrial	I_Other Manufacturing <0.5 million m3/year	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.096	2009, Marbek, N,Gas EE Potential (Industrial)	10%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.40	0.85	0.15	100% Applicable	100% Applicable	NA	Marbek Boiler Study	0.50
Ind | Condensing boiler	Condensing boiler	Conventional Boiler	Process - Boiler/Steam	Industrial	I_Pulp & Paper	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.096	2009, Marbek, N,Gas EE Potential (Industrial)	10%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.40	0.85	0.15	100% Applicable	100% Applicable	NA	Marbek Boiler Study	0.50
Ind | Condensing boiler | New	Condensing boiler	Conventional Boiler	Process - Boiler/Steam	Industrial	I_Asphalt	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.096	2009, Marbek, N,Gas EE Potential (Industrial)	10%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.40	0.85	0.15	100% Applicable	100% Applicable	NA	Marbek Boiler Study	0.50
Ind | Condensing boiler | New	Condensing boiler	Conventional Boiler	Process - Boiler/Steam	Industrial	I_Chemicals / Pharmaceutical	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.096	2009, Marbek, N,Gas EE Potential (Industrial)	10%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.40	0.85	0.15	100% Applicable	100% Applicable	NA	Marbek Boiler Study	0.50
Ind | Condensing boiler | New	Condensing boiler	Conventional Boiler	Process - Boiler/Steam	Industrial	I_Food & Beverage	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.096	2009, Marbek, N,Gas EE Potential (Industrial)	10%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.40	0.85	0.15	100% Applicable	100% Applicable	NA	Marbek Boiler Study	0.50
Ind | Condensing boiler | New	Condensing boiler	Conventional Boiler	Process - Boiler/Steam	Industrial	I_Green House / Agriculture	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.096	2009, Marbek, N,Gas EE Potential (Industrial)	10%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.40	0.85	0.15	100% Applicable	100% Applicable	NA	Marbek Boiler Study	0.60
Ind | Condensing boiler | New	Condensing boiler	Conventional Boiler	Process - Boiler/Steam	Industrial	I_Other Manufacturing >0.5 million m3/year	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.096	2009, Marbek, N,Gas EE Potential (Industrial)	10%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.40	0.85	0.15	100% Applicable	100% Applicable	NA	Marbek Boiler Study	0.50
Ind | Condensing boiler | New	Condensing boiler	Conventional Boiler	Process - Boiler/Steam	Industrial	I_Other Manufacturing <0.5 million m3/year	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.096	2009, Marbek, N,Gas EE Potential (Industrial)	10%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.40	0.85	0.15	100% Applicable	100% Applicable	NA	Marbek Boiler Study	0.50
Ind | Condensing boiler | New	Condensing boiler	Conventional Boiler	Process - Boiler/Steam	Industrial	I_Pulp & Paper	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.096	2009, Marbek, N,Gas EE Potential (Industrial)	10%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.40	0.85	0.15	100% Applicable	100% Applicable	NA	Marbek Boiler Study	0.50
Ind | Condensing Economizer	Condensing Economizers	No Condensing Economizers	Process - Boiler/Steam	Industrial	I_Pulp & Paper	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.069	Customer Projects + Manufacturers Cost Data	10%	0.0	0.0	US DOE Steam Tip Sheet # 26 + Customer Projects + Manufacturer Cost Data	1.00E+00	0.30	0.90	0.20	100% Applicable	100% Applicable	NA	EGD Knowledge of Customer Base	0.50
Ind | Condensing Economizer	Condensing Economizers	No Condensing Economizers	Process - Boiler/Steam	Industrial	I_Asphalt	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.069	Customer Projects + Manufacturers Cost Data	10%	0.0	0.0	US DOE Steam Tip Sheet # 26 + Customer Projects + Manufacturer Cost Data	1.00E+00	0.30	0.90	0.20	100% Applicable	100% Applicable	NA	EGD Knowledge of Customer Base	0.50
Ind | Condensing Economizer	Condensing Economizers	No Condensing Economizers	Process - Boiler/Steam	Industrial	I_Chemicals / Pharmaceutical	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.069	Customer Projects + Manufacturers Cost Data	10%	0.0	0.0	US DOE Steam Tip Sheet # 26 + Customer Projects + Manufacturer Cost Data	1.00E+00	0.30	0.90	0.30	100% Applicable	100% Applicable	NA	EGD Knowledge of Customer Base	0.50
Ind | Condensing Economizer	Condensing Economizers	No Condensing Economizers	Process - Boiler/Steam	Industrial	I_Food & Beverage	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.069	Customer Projects + Manufacturers Cost Data	10%	0.0	0.0	US DOE Steam Tip Sheet # 26 + Customer Projects + Manufacturer Cost Data	1.00E+00	0.30	0.90	0.20	100% Applicable	100% Applicable	NA	EGD Knowledge of Customer Base	0.50
Ind | Condensing Economizer	Condensing Economizers	No Condensing Economizers	Process - Boiler/Steam	Industrial	I_Green House / Agriculture	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.069	Customer Projects + Manufacturers Cost Data	10%	0.0	0.0	US DOE Steam Tip Sheet # 26 + Customer Projects + Manufacturer Cost Data	1.00E+00	0.30	0.90	0.30	100% Applicable	100% Applicable	NA	EGD Knowledge of Customer Base	0.60
Ind | Condensing Economizer	Condensing Economizers	No Condensing Economizers	Process - Boiler/Steam	Industrial	I_Other Manufacturing >0.5 million m3/year	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.069	Customer Projects + Manufacturers Cost Data	10%	0.0	0.0	US DOE Steam Tip Sheet # 26 + Customer Projects + Manufacturer Cost Data	1.00E+00	0.30	0.90	0.20	100% Applicable	100% Applicable	NA	EGD Knowledge of Customer Base	0.50
Ind | Condensing Economizer	Condensing Economizers	No Condensing Economizers	Process - Boiler/Steam	Industrial	I_Petroleum Refining	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.069	Customer Projects + Manufacturers Cost Data	10%	0.0	0.0	US DOE Steam Tip Sheet # 26 + Customer Projects + Manufacturer Cost Data	1.00E+00	0.30	0.90	0.20	100% Applicable	100% Applicable	NA	EGD Knowledge of Customer Base	0.50
Ind | Condensing Economizer | New	Condensing Economizers	No Condensing Economizers	Process - Boiler/Steam	Industrial	I_Pulp & Paper	NEW Only	End Use Consumption (m^3/year)	15.0	15.0	0.069	Customer Projects + Manufacturers Cost Data	10%	0.0	0.0	US DOE Steam Tip Sheet # 26 + Customer Projects + Manufacturer Cost Data	1.00E+00	0.30	0.90	0.20	100% Applicable	100% Applicable	NA	EGD Knowledge of Customer Base	0.50
Ind | Condensing Economizer | New	Condensing Economizers	No Condensing Economizers	Process - Boiler/Steam	Industrial	I_Asphalt	NEW Only	End Use Consumption (m^3/year)	15.0	15.0	0.069	Customer Projects + Manufacturers Cost Data	10%	0.0	0.0	US DOE Steam Tip Sheet # 26 + Customer Projects + Manufacturer Cost Data	1.00E+00	0.30	0.90	0.20	100% Applicable	100% Applicable	NA	EGD Knowledge of Customer Base	0.50
Ind | Condensing Economizer | New	Condensing Economizers	No Condensing Economizers	Process - Boiler/Steam	Industrial	I_Chemicals / Pharmaceutical	NEW Only	End Use Consumption (m^3/year)	15.0	15.0	0.069	Customer Projects + Manufacturers Cost Data	10%	0.0	0.0	US DOE Steam Tip Sheet # 26 + Customer Projects + Manufacturer Cost Data	1.00E+00	0.30	0.90	0.30	100% Applicable	100% Applicable	NA	EGD Knowledge of Customer Base	0.50
Ind | Condensing Economizer | New	Condensing Economizers	No Condensing Economizers	Process - Boiler/Steam	Industrial	I_Food & Beverage	NEW Only	End Use Consumption (m^3/year)	15.0	15.0	0.069	Customer Projects + Manufacturers Cost Data	10%	0.0	0.0	US DOE Steam Tip Sheet # 26 + Customer Projects + Manufacturer Cost Data	1.00E+00	0.30	0.90	0.20	100% Applicable	100% Applicable	NA	EGD Knowledge of Customer Base	0.50
Ind | Condensing Economizer | New	Condensing Economizers	No Condensing Economizers	Process - Boiler/Steam	Industrial	I_Green House / Agriculture	NEW Only	End Use Consumption (m^3/year)	15.0	15.0	0.069	Customer Projects + Manufacturers Cost Data	10%	0.0	0.0	US DOE Steam Tip Sheet # 26 + Customer Projects + Manufacturer Cost Data	1.00E+00	0.30	0.90	0.30	100% Applicable	100% Applicable	NA	EGD Knowledge of Customer Base	0.60
Ind | Condensing Economizer | New	Condensing Economizers	No Condensing Economizers	Process - Boiler/Steam	Industrial	I_Other Manufacturing >0.5 million m3/year	NEW Only	End Use Consumption (m^3/year)	15.0	15.0	0.069	Customer Projects + Manufacturers Cost Data	10%	0.0	0.0	US DOE Steam Tip Sheet # 26 + Customer Projects + Manufacturer Cost Data	1.00E+00	0.30	0.90	0.20	100% Applicable	100% Applicable	NA	EGD Knowledge of Customer Base	0.50
Ind | Condensing Economizer | New	Condensing Economizers	No Condensing Economizers	Process - Boiler/Steam	Industrial	I_Petroleum Refining	NEW Only	End Use Consumption (m^3/year)	15.0	15.0	0.069	Customer Projects + Manufacturers Cost Data	10%	0.0	0.0	US DOE Steam Tip Sheet # 26 + Customer Projects + Manufacturer Cost Data	1.00E+00	0.30	0.90	0.20	100% Applicable	100% Applicable	NA	EGD Knowledge of Customer Base	0.50
Ind | De-stratification fans	De-stratification fans	No de-stratification fans	Space Heating/Ventilation	Industrial	All Industrial	RET Only	End Use Consumption (m^3/year)	25.0	25.0	0.211	2009, Marbek, N,Gas EE Potential (Industrial)	8%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.60	0.80	0.20	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | De-stratification fans | New	De-stratification fans	No de-stratification fans	Space Heating/Ventilation	Industrial	All Industrial	NEW Only	End Use Consumption (m^3/year)	25.0	25.0	0.211	2009, Marbek, N,Gas EE Potential (Industrial)	8%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.60	0.80	0.20	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Digester Gas	Burn digester gas in boilers	Digester gas is being flared	Process - Boiler/Steam	Industrial	I_Food & Beverage	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.078	Customer Projects	30%	0.0	0.0	Customer Projects	1.00E+00	0.15	0.80	0.20	100% Applicable	100% Applicable	NA	EGD Knowledge of Customer Base	0.50
Ind | Digester Gas	Burn digester gas in boilers	Digester gas is being flared	Process - Boiler/Steam	Industrial	I_Green House / Agriculture	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.078	Customer Projects	30%	0.0	0.0	Customer Projects	1.00E+00	0.25	0.80	0.20	100% Applicable	100% Applicable	NA	EGD Knowledge of Customer Base	0.60
Ind | Digester Gas	Burn digester gas in boilers	Digester gas is being flared	Process - Boiler/Steam	Industrial	I_Other Manufacturing >0.5 million m3/year	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.078	Customer Projects	30%	0.0	0.0	Customer Projects	1.00E+00	0.10	0.80	0.20	100% Applicable	100% Applicable	NA	EGD Knowledge of Customer Base	0.50
Ind | Digester Gas | New	Burn digester gas in boilers	Digester gas is being flared	Process - Boiler/Steam	Industrial	I_Food & Beverage	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.078	Customer Projects	30%	0.0	0.0	Customer Projects	1.00E+00	0.15	0.80	0.20	100% Applicable	100% Applicable	NA	EGD Knowledge of Customer Base	0.50
Ind | Digester Gas | New	Burn digester gas in boilers	Digester gas is being flared	Process - Boiler/Steam	Industrial	I_Green House / Agriculture	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.078	Customer Projects	30%	0.0	0.0	Customer Projects	1.00E+00	0.25	0.80	0.20	100% Applicable	100% Applicable	NA	EGD Knowledge of Customer Base	0.60
Ind | Digester Gas | New	Burn digester gas in boilers	Digester gas is being flared	Process - Boiler/Steam	Industrial	I_Other Manufacturing >0.5 million m3/year	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.078	Customer Projects	30%	0.0	0.0	Customer Projects	1.00E+00	0.10	0.80	0.20	100% Applicable	100% Applicable	NA	EGD Knowledge of Customer Base	0.50
Ind | Direct contact hot water heaters	Direct contact hot water heaters	Conventional water heater	Process - Boiler/Steam	Industrial	I_Asphalt	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.040	2009, Marbek, N,Gas EE Potential (Industrial)	15%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	4.00E-01	0.60	0.80	0.20	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Direct contact hot water heaters	Direct contact hot water heaters	Conventional water heater	Process - Boiler/Steam	Industrial	I_Chemicals / Pharmaceutical	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.040	2009, Marbek, N,Gas EE Potential (Industrial)	15%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	4.00E-01	0.60	0.80	0.20	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Direct contact hot water heaters	Direct contact hot water heaters	Conventional water heater	Process - Boiler/Steam	Industrial	I_Food & Beverage	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.040	2009, Marbek, N,Gas EE Potential (Industrial)	15%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	4.00E-01	0.60	0.80	0.20	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Direct contact hot water heaters	Direct contact hot water heaters	Conventional water heater	Process - Boiler/Steam	Industrial	I_Green House / Agriculture	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.040	2009, Marbek, N,Gas EE Potential (Industrial)	15%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	4.00E-01	0.60	0.80	0.20	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.60
Ind | Direct contact hot water heaters	Direct contact hot water heaters	Conventional water heater	Process - Boiler/Steam	Industrial	I_Other Manufacturing >0.5 million m3/year	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.040	2009, Marbek, N,Gas EE Potential (Industrial)	15%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	4.00E-01	0.60	0.80	0.20	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Direct contact hot water heaters	Direct contact hot water heaters	Conventional water heater	Process - Boiler/Steam	Industrial	I_Pulp & Paper	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.040	2009, Marbek, N,Gas EE Potential (Industrial)	15%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	4.00E-01	0.60	0.80	0.20	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Direct contact hot water heaters	Direct contact hot water heaters	Conventional water heater	Process - Boiler/Steam	Industrial	I_Other Manufacturing <0.5 million m3/year	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.040	2009, Marbek, N,Gas EE Potential (Industrial)	15%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	4.00E-01	0.60	0.80	0.20	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Direct contact hot water heaters | New	Direct contact hot water heaters	Conventional water heater	Process - Boiler/Steam	Industrial	I_Asphalt	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.040	2009, Marbek, N,Gas EE Potential (Industrial)	15%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	4.00E-01	0.60	0.80	0.20	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Direct contact hot water heaters | New	Direct contact hot water heaters	Conventional water heater	Process - Boiler/Steam	Industrial	I_Chemicals / Pharmaceutical	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.040	2009, Marbek, N,Gas EE Potential (Industrial)	15%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	4.00E-01	0.60	0.80	0.20	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Direct contact hot water heaters | New	Direct contact hot water heaters	Conventional water heater	Process - Boiler/Steam	Industrial	I_Food & Beverage	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.040	2009, Marbek, N,Gas EE Potential (Industrial)	15%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	4.00E-01	0.60	0.80	0.20	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Direct contact hot water heaters | New	Direct contact hot water heaters	Conventional water heater	Process - Boiler/Steam	Industrial	I_Green House / Agriculture	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.040	2009, Marbek, N,Gas EE Potential (Industrial)	15%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	4.00E-01	0.60	0.80	0.20	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.60
Ind | Direct contact hot water heaters | New	Direct contact hot water heaters	Conventional water heater	Process - Boiler/Steam	Industrial	I_Other Manufacturing >0.5 million m3/year	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.040	2009, Marbek, N,Gas EE Potential (Industrial)	15%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	4.00E-01	0.60	0.80	0.20	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Direct contact hot water heaters | New	Direct contact hot water heaters	Conventional water heater	Process - Boiler/Steam	Industrial	I_Pulp & Paper	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.040	2009, Marbek, N,Gas EE Potential (Industrial)	15%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	4.00E-01	0.60	0.80	0.20	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Direct contact hot water heaters | New	Direct contact hot water heaters	Conventional water heater	Process - Boiler/Steam	Industrial	I_Other Manufacturing <0.5 million m3/year	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.040	2009, Marbek, N,Gas EE Potential (Industrial)	15%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	4.00E-01	0.60	0.80	0.20	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Energy Management and Process Improvement	Energy Management and Process Improvements	As found operation with no EMIS System	Cross Cutting/Behavioural	Industrial	All Industrial	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.070	Customer Projects + Manufacturers Cost Data	10%	0.0	0.0	Customer Projects + US DOE + ACEEE	1.00E+00	1.00	0.95	0.05	100% Applicable	100% Applicable	NA	EGD Knowledge of Customer Base	0.50
Ind | Energy Management and Process Improvement | New	Energy Management and Process Improvements	As found operation with no EMIS System	Cross Cutting/Behavioural	Industrial	All Industrial	NEW Only	End Use Consumption (m^3/year)	15.0	15.0	0.070	Customer Projects + Manufacturers Cost Data	10%	0.0	0.0	Customer Projects + US DOE + ACEEE	1.00E+00	1.00	0.95	0.05	100% Applicable	100% Applicable	NA	EGD Knowledge of Customer Base	0.50
Ind | Exhaust gas heat recovery	Exhaust gas heat recovery	No heat recovery	Process Heat	Industrial	All Industrial	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.084	2009, Marbek, N,Gas EE Potential (Industrial)	18%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.80	0.70	0.45	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Exhaust gas heat recovery | New	Exhaust gas heat recovery	No heat recovery	Process Heat	Industrial	All Industrial	NEW Only	End Use Consumption (m^3/year)	15.0	15.0	0.084	2009, Marbek, N,Gas EE Potential (Industrial)	18%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.80	0.70	0.45	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Feedwater Economizers	Feedwater Economizers	No Economizer	Process - Boiler/Steam	Industrial	I_Asphalt	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.051	2009, Marbek, N,Gas EE Potential (Industrial)	4%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.90	0.50	0.10	100% Applicable	100% Applicable	NA	2009, Marbek, Natural Gas EE Potential Industrial Sector)	0.50
Ind | Feedwater Economizers	Feedwater Economizers	No Economizer	Process - Boiler/Steam	Industrial	I_Chemicals / Pharmaceutical	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.051	2009, Marbek, N,Gas EE Potential (Industrial)	4%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.90	0.50	0.10	100% Applicable	100% Applicable	NA	2009, Marbek, Natural Gas EE Potential Industrial Sector)	0.50
Ind | Feedwater Economizers	Feedwater Economizers	No Economizer	Process - Boiler/Steam	Industrial	I_Food & Beverage	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.051	2009, Marbek, N,Gas EE Potential (Industrial)	4%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.90	0.50	0.10	100% Applicable	100% Applicable	NA	2009, Marbek, Natural Gas EE Potential Industrial Sector)	0.50
Ind | Feedwater Economizers	Feedwater Economizers	No Economizer	Process - Boiler/Steam	Industrial	I_Green House / Agriculture	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.051	2009, Marbek, N,Gas EE Potential (Industrial)	4%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.90	0.50	0.10	100% Applicable	100% Applicable	NA	2009, Marbek, Natural Gas EE Potential Industrial Sector)	0.60
Ind | Feedwater Economizers	Feedwater Economizers	No Economizer	Process - Boiler/Steam	Industrial	I_Other Manufacturing >0.5 million m3/year	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.051	2009, Marbek, N,Gas EE Potential (Industrial)	4%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.90	0.50	0.10	100% Applicable	100% Applicable	NA	2009, Marbek, Natural Gas EE Potential Industrial Sector)	0.50
Ind | Feedwater Economizers	Feedwater Economizers	No Economizer	Process - Boiler/Steam	Industrial	I_Other Manufacturing <0.5 million m3/year	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.051	2009, Marbek, N,Gas EE Potential (Industrial)	4%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.90	0.50	0.10	100% Applicable	100% Applicable	NA	2009, Marbek, Natural Gas EE Potential Industrial Sector)	0.50
Ind | Feedwater Economizers	Feedwater Economizers	No Economizer	Process - Boiler/Steam	Industrial	I_Pulp & Paper	RET Only	End Use Consumption (m^3/year)	20.0	20

Unique Measure Name	Measure Description	Baseline Assumption	End Use Category	Sector	Customer Segment	Replacement Type	Unit Basis	Base Measure Lifetime	Efficient Measure Lifetime	Incremental Measure Cost	Cost Source(s)	Gas Savings	Electric Savings	Water Savings	Savings Source(s)	Total Measure Density (Base + EE)	Technical Suitability	Baseline Initial Saturation	EE Measure Initial Saturation	Heating Fuel Type Applicability Multiplier	DHW Fuel Type Applicability Multiplier	Competition Group	Density/ Applicability Source(s)	NTG Factor (1-FreeRiders)
TEXT (< ~30 characters)	TEXT	TEXT	Dropdown List	Dropdown List	Dropdown List	Dropdown List	TEXT (units used for savings and cost inputs)	Years	Years	$/ unit basis	TEXT	m^3/ year/ unit basis	kWh/ year/ unit basis	Liters/ year/ unit basis	TEXT	Unit Basis/ Scaling Basis	Fraction	Fraction	Fraction	Dropdown List	Dropdown List	TEXT	TEXT	Fraction
Ind | Heat recovery to preheat make-up water	Heat recovery to preheat make-up water	No heat recovery & preheat	Process - Boiler/Steam	Industrial	I_Chemicals / Pharmaceutical	RET Only	End Use Consumption (m^3/year)	25.0	25.0	0.061	2009, Marbek, N,Gas EE Potential (Industrial)	6%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.70	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Heat recovery to preheat make-up water	Heat recovery to preheat make-up water	No heat recovery & preheat	Process - Boiler/Steam	Industrial	I_Food & Beverage	RET Only	End Use Consumption (m^3/year)	25.0	25.0	0.061	2009, Marbek, N,Gas EE Potential (Industrial)	6%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.70	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Heat recovery to preheat make-up water	Heat recovery to preheat make-up water	No heat recovery & preheat	Process - Boiler/Steam	Industrial	I_Green House / Agriculture	RET Only	End Use Consumption (m^3/year)	25.0	25.0	0.061	2009, Marbek, N,Gas EE Potential (Industrial)	6%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.70	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.60
Ind | Heat recovery to preheat make-up water	Heat recovery to preheat make-up water	No heat recovery & preheat	Process - Boiler/Steam	Industrial	I_Other Manufacturing >0.5 million m3/year	RET Only	End Use Consumption (m^3/year)	25.0	25.0	0.061	2009, Marbek, N,Gas EE Potential (Industrial)	6%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.70	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Heat recovery to preheat make-up water	Heat recovery to preheat make-up water	No heat recovery & preheat	Process - Boiler/Steam	Industrial	I_Pulp & Paper	RET Only	End Use Consumption (m^3/year)	25.0	25.0	0.061	2009, Marbek, N,Gas EE Potential (Industrial)	6%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.70	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Heat recovery to preheat make-up water | New	Heat recovery to preheat make-up water	No heat recovery & preheat	Process - Boiler/Steam	Industrial	I_Asphalt	NEW Only	End Use Consumption (m^3/year)	25.0	25.0	0.061	2009, Marbek, N,Gas EE Potential (Industrial)	6%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.70	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Heat recovery to preheat make-up water | New	Heat recovery to preheat make-up water	No heat recovery & preheat	Process - Boiler/Steam	Industrial	I_Chemicals / Pharmaceutical	NEW Only	End Use Consumption (m^3/year)	25.0	25.0	0.061	2009, Marbek, N,Gas EE Potential (Industrial)	6%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.70	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Heat recovery to preheat make-up water | New	Heat recovery to preheat make-up water	No heat recovery & preheat	Process - Boiler/Steam	Industrial	I_Food & Beverage	NEW Only	End Use Consumption (m^3/year)	25.0	25.0	0.061	2009, Marbek, N,Gas EE Potential (Industrial)	6%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.70	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Heat recovery to preheat make-up water | New	Heat recovery to preheat make-up water	No heat recovery & preheat	Process - Boiler/Steam	Industrial	I_Green House / Agriculture	NEW Only	End Use Consumption (m^3/year)	25.0	25.0	0.061	2009, Marbek, N,Gas EE Potential (Industrial)	6%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.70	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.60
Ind | Heat recovery to preheat make-up water | New	Heat recovery to preheat make-up water	No heat recovery & preheat	Process - Boiler/Steam	Industrial	I_Other Manufacturing >0.5 million m3/year	NEW Only	End Use Consumption (m^3/year)	25.0	25.0	0.061	2009, Marbek, N,Gas EE Potential (Industrial)	6%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.70	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Heat recovery to preheat make-up water | New	Heat recovery to preheat make-up water	No heat recovery & preheat	Process - Boiler/Steam	Industrial	I_Pulp & Paper	NEW Only	End Use Consumption (m^3/year)	25.0	25.0	0.061	2009, Marbek, N,Gas EE Potential (Industrial)	6%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.70	0.90	0.10	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | High-efficiency burner	High-efficiency burner	Conventional burner	Process - Boiler/Steam	Industrial	I_Asphalt	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.060	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	8.00E-01	0.30	0.85	0.15	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | High-efficiency burner	High-efficiency burner	Conventional burner	Process - Boiler/Steam	Industrial	I_Chemicals / Pharmaceutical	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.060	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	8.00E-01	0.30	0.85	0.15	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | High-efficiency burner	High-efficiency burner	Conventional burner	Process - Boiler/Steam	Industrial	I_Food & Beverage	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.060	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	8.00E-01	0.30	0.85	0.15	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | High-efficiency burner	High-efficiency burner	Conventional burner	Process - Boiler/Steam	Industrial	I_Green House / Agriculture	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.060	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	8.00E-01	0.30	0.85	0.15	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.60
Ind | High-efficiency burner	High-efficiency burner	Conventional burner	Process - Boiler/Steam	Industrial	I_Other Manufacturing >0.5 million m3/year	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.060	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	8.00E-01	0.30	0.85	0.15	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | High-efficiency burner	High-efficiency burner	Conventional burner	Process - Boiler/Steam	Industrial	I_Pulp & Paper	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.060	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	8.00E-01	0.30	0.85	0.15	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | High-efficiency burner	High-efficiency burner	Conventional burner	Process - Boiler/Steam	Industrial	I_Other Manufacturing <0.5 million m3/year	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.060	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	8.00E-01	0.30	0.85	0.15	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | High-efficiency burner | New	High-efficiency burner	Conventional burner	Process - Boiler/Steam	Industrial	I_Asphalt	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.060	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	8.00E-01	0.30	0.85	0.15	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | High-efficiency burner | New	High-efficiency burner	Conventional burner	Process - Boiler/Steam	Industrial	I_Chemicals / Pharmaceutical	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.060	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	8.00E-01	0.30	0.85	0.15	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | High-efficiency burner | New	High-efficiency burner	Conventional burner	Process - Boiler/Steam	Industrial	I_Food & Beverage	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.060	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	8.00E-01	0.30	0.85	0.15	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | High-efficiency burner | New	High-efficiency burner	Conventional burner	Process - Boiler/Steam	Industrial	I_Green House / Agriculture	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.060	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	8.00E-01	0.30	0.85	0.15	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.60
Ind | High-efficiency burner | New	High-efficiency burner	Conventional burner	Process - Boiler/Steam	Industrial	I_Other Manufacturing >0.5 million m3/year	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.060	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	8.00E-01	0.30	0.85	0.15	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | High-efficiency burner | New	High-efficiency burner	Conventional burner	Process - Boiler/Steam	Industrial	I_Pulp & Paper	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.060	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	8.00E-01	0.30	0.85	0.15	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | High-efficiency burner | New	High-efficiency burner	Conventional burner	Process - Boiler/Steam	Industrial	I_Other Manufacturing <0.5 million m3/year	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.060	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	8.00E-01	0.30	0.85	0.15	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | High-efficiency burners	High-efficiency burners	Conventional burners	Process Heat	Industrial	All Industrial	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.069	2009, Marbek, N,Gas EE Potential (Industrial)	20%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	8.00E-01	0.30	0.70	0.45	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | High-efficiency burners | New	High-efficiency burners	Conventional burners	Process Heat	Industrial	All Industrial	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.069	2009, Marbek, N,Gas EE Potential (Industrial)	20%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	8.00E-01	0.30	0.70	0.45	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | High-efficiency furnaces	High-efficiency furnaces	Conventional furnaces	Process Heat	Industrial	I_Other (including mining, construction, etc.)	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.160	2009, Marbek, N,Gas EE Potential (Industrial)	20%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.40	0.80	0.20	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | High-efficiency furnaces	High-efficiency furnaces	Conventional furnaces	Process Heat	Industrial	I_Other Manufacturing <0.5 million m3/year	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.160	2009, Marbek, N,Gas EE Potential (Industrial)	20%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.40	0.80	0.20	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | High-efficiency furnaces	High-efficiency furnaces	Conventional furnaces	Process Heat	Industrial	I_Other Manufacturing >0.5 million m3/year	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.160	2009, Marbek, N,Gas EE Potential (Industrial)	20%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.40	0.80	0.20	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | High-efficiency furnaces	High-efficiency furnaces	Conventional furnaces	Process Heat	Industrial	I_Primary Metals	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.160	2009, Marbek, N,Gas EE Potential (Industrial)	20%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.40	0.80	0.20	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | High-efficiency furnaces | New	High-efficiency furnaces	Conventional furnaces	Process Heat	Industrial	I_Other (including mining, construction, etc.)	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.160	2009, Marbek, N,Gas EE Potential (Industrial)	20%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.40	0.80	0.20	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | High-efficiency furnaces | New	High-efficiency furnaces	Conventional furnaces	Process Heat	Industrial	I_Other Manufacturing <0.5 million m3/year	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.160	2009, Marbek, N,Gas EE Potential (Industrial)	20%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.40	0.80	0.20	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | High-efficiency furnaces | New	High-efficiency furnaces	Conventional furnaces	Process Heat	Industrial	I_Other Manufacturing >0.5 million m3/year	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.160	2009, Marbek, N,Gas EE Potential (Industrial)	20%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.40	0.80	0.20	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | High-efficiency furnaces | New	High-efficiency furnaces	Conventional furnaces	Process Heat	Industrial	I_Primary Metals	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.160	2009, Marbek, N,Gas EE Potential (Industrial)	20%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.40	0.80	0.20	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | High-efficiency ovens & dryers	High-efficiency ovens & dryers	Conventional ovens/dryers	Process Heat	Industrial	I_Other Manufacturing <0.5 million m3/year	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.112	2009, Marbek, N,Gas EE Potential (Industrial)	12%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	7.00E-01	1.00	0.80	0.20	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | High-efficiency ovens & dryers	High-efficiency ovens & dryers	Conventional ovens/dryers	Process Heat	Industrial	I_Other Manufacturing >0.5 million m3/year	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.112	2009, Marbek, N,Gas EE Potential (Industrial)	12%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	7.00E-01	1.00	0.80	0.20	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | High-efficiency ovens & dryers	High-efficiency ovens & dryers	Conventional ovens/dryers	Process Heat	Industrial	I_Pulp & Paper	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.112	2009, Marbek, N,Gas EE Potential (Industrial)	12%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	7.00E-01	1.00	0.80	0.20	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | High-efficiency ovens & dryers | New	High-efficiency ovens & dryers	Conventional ovens/dryers	Process Heat	Industrial	I_Other (including mining, construction, etc.)	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.112	2009, Marbek, N,Gas EE Potential (Industrial)	12%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	7.00E-01	1.00	0.80	0.20	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | High-efficiency ovens & dryers | New	High-efficiency ovens & dryers	Conventional ovens/dryers	Process Heat	Industrial	I_Other Manufacturing <0.5 million m3/year	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.112	2009, Marbek, N,Gas EE Potential (Industrial)	12%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	7.00E-01	1.00	0.80	0.20	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | High-efficiency ovens & dryers | New	High-efficiency ovens & dryers	Conventional ovens/dryers	Process Heat	Industrial	I_Other Manufacturing >0.5 million m3/year	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.112	2009, Marbek, N,Gas EE Potential (Industrial)	12%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	7.00E-01	1.00	0.80	0.20	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | High-efficiency ovens & dryers | New	High-efficiency ovens & dryers	Conventional ovens/dryers	Process Heat	Industrial	I_Pulp & Paper	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.112	2009, Marbek, N,Gas EE Potential (Industrial)	12%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	7.00E-01	1.00	0.80	0.20	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Insulation	Insulation	No Insulation	Process Heat	Industrial	All Industrial	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.024	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	8.00E-01	0.90	0.35	0.65	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Insulation	Insulation	No Insulation	Process - Boiler/Steam	Industrial	I_Asphalt	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.024	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.80	0.65	0.35	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Insulation	Insulation	No Insulation	Process - Boiler/Steam	Industrial	I_Chemicals / Pharmaceutical	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.024	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.80	0.65	0.35	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Insulation	Insulation	No Insulation	Process - Boiler/Steam	Industrial	I_Food & Beverage	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.024	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.80	0.65	0.35	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Insulation	Insulation	No Insulation	Process - Boiler/Steam	Industrial	I_Green House / Agriculture	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.024	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.80	0.65	0.35	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.60
Ind | Insulation	Insulation	No Insulation	Process - Boiler/Steam	Industrial	I_Other Manufacturing >0.5 million m3/year	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.024	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.80	0.65	0.35	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Insulation	Insulation	No Insulation	Process - Boiler/Steam	Industrial	I_Pulp & Paper	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.024	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.80	0.65	0.35	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Insulation	Insulation	No Insulation	Process - Boiler/Steam	Industrial	I_Other Manufacturing <0.5 million m3/year	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.024	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.80	0.65	0.35	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Insulation | New	Insulation	No Insulation	Process Heat	Industrial	All Industrial	NEW Only	End Use Consumption (m^3/year)	15.0	15.0	0.024	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	8.00E-01	0.90	0.35	0.65	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Insulation | New	Insulation	No Insulation	Process - Boiler/Steam	Industrial	I_Asphalt	NEW Only	End Use Consumption (m^3/year)	15.0	15.0	0.024	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.80	0.65	0.35	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Insulation | New	Insulation	No Insulation	Process - Boiler/Steam	Industrial	I_Chemicals / Pharmaceutical	NEW Only	End Use Consumption (m^3/year)	15.0	15.0	0.024	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.80	0.65	0.35	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Insulation | New	Insulation	No Insulation	Process - Boiler/Steam	Industrial	I_Food & Beverage	NEW Only	End Use Consumption (m^3/year)	15.0	15.0	0.024	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.80	0.65	0.35	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Insulation | New	Insulation	No Insulation	Process - Boiler/Steam	Industrial	I_Green House / Agriculture	NEW Only	End Use Consumption (m^3/year)	15.0	15.0	0.024	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.80	0.65	0.35	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.60
Ind | Insulation | New	Insulation	No Insulation	Process - Boiler/Steam	Industrial	I_Other Manufacturing >0.5 million m3/year	NEW Only	End Use Consumption (m^3/year)	15.0	15.0	0.024	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.80	0.65	0.35	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Insulation | New	Insulation	No Insulation	Process - Boiler/Steam	Industrial	I_Pulp & Paper	NEW Only	End Use Consumption (m^3/year)	15.0	15.0	0.024	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.80	0.65	0.35	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Insulation | New	Insulation	No Insulation	Process - Boiler/Steam	Industrial	I_Other Manufacturing <0.5 million m3/year	NEW Only	End Use Consumption (m^3/year)	15.0	15.0	0.024	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.80	0.65	0.35	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Optimize Combustion	Tune burners + Level II control for reheat furnace	High excess O2, Level I control for reheat furnace	Process Heat	Industrial	I_Primary Metals	RET Only	End Use Consumption (m^3/year)	7.0	7.0	0.022	Customer Projects + Estimate	5%	0.0	0.0	Customer Project + Assessment Studies	1.00E+00	0.70	0.80	0.20	100% Applicable	100% Applicable	NA	EGD Knowledge of Customer Base	0.50
Ind | Optimize Combustion	Tune burners + Level II control for reheat furnace	High excess O2, Level I control for reheat furnace	Process Heat	Industrial	I_Other Manufacturing >0.5 million m3/year	RET Only	End Use Consumption (m^3/year)	7.0	7.0	0.022	Customer Projects + Estimate	5%	0.0	0.0	Customer Project + Assessment Studies	1.00E+00	0.70	0.80	0.10	100% Applicable	100% Applicable	NA	EGD Knowledge of Customer Base	0.50
Ind | Optimize Combustion | New	Tune burners + Level II control for reheat furnace	High excess O2, Level I control for reheat furnace	Process Heat	Industrial	I_Primary Metals	NEW Only	End Use Consumption (m^3/year)	7.0	7.0	0.022	Customer Projects + Estimate	5%	0.0	0.0	Customer Project + Assessment Studies	1.00E+00	0.70	0.80	0.20	100% Applicable	100% Applicable	NA	EGD Knowledge of Customer Base	0.50
Ind | Optimize Combustion | New	Tune burners + Level II control for reheat furnace	High excess O2, Level I control for reheat furnace	Process Heat	Industrial	I_Other Manufacturing >0.5 million m3/year	NEW Only	End Use Consumption (m^3/year)	7.0	7.0	0.022	Customer Projects + Estimate	5%	0.0	0.0	Customer Project + Assessment Studies	1.00E+00	0.70	0.80	0.10	100% Applicable	100% Applicable	NA	EGD Knowledge of Customer Base	0.50
Ind | Preheat Charge	Preheat Charge in Melting and Reheat Furnaces	Cold charging of metal	Process Heat	Industrial	I_Primary Metals	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.109	Customer Project + Energy Solution Center's Preheat Charge Calculator	9%	0.0	0.0	Customer Project + Energy Solution Center's Preheat Charge Calculator	1.00E+00	0.60	0.80	0.20	100% Applicable	100% Applicable	NA	EGD Knowledge of Customer Base	0.50
Ind | Preheat Charge | New	Preheat Charge in Melting and Reheat Furnaces	Cold charging of metal	Process Heat	Indust

Unique Measure Name	Measure Description	Baseline Assumption	End Use Category	Sector	Customer Segment	Replacement Type	Unit Basis	Base Measure Lifetime	Efficient Measure Lifetime	Incremental Measure Cost	Cost Source(s)	Gas Savings	Electric Savings	Water Savings	Savings Source(s)	Total Measure Density (Base + EE)	Technical Suitability	Baseline Initial Saturation	EE Measure Initial Saturation	Heating Fuel Type Applicability Multiplier	DHW Fuel Type Applicability Multiplier	Competition Group	Density/ Applicability Source(s)	NTG Factor (1-FreeRiders)
TEXT (< ~30 characters)	TEXT	TEXT	Dropdown List	Dropdown List	Dropdown List	Dropdown List	TEXT (units used for savings and cost inputs)	Years	Years	$/ unit basis	TEXT	m^3/ year/ unit basis	kWh/ year/ unit basis	Liters/ year/ unit basis	TEXT	Unit Basis/ Scaling Basis	Fraction	Fraction	Fraction	Dropdown List	Dropdown List	TEXT	TEXT	Fraction
Ind | Reduce Steam Pressure	Reduce boiler steam pressure	Higher steam pressure	Process - Boiler/Steam	Industrial	I_Pulp & Paper	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.003	Estimate	3%	0.0	0.0	US DOE Technical Paper: Steam Pressure Reduction	1.00E+00	0.40	0.90	0.10	100% Applicable	100% Applicable	NA	EGD Knowledge of Customer Base	0.50
Ind | Reduce Steam Pressure | New	Reduce boiler steam pressure	Higher steam pressure	Process - Boiler/Steam	Industrial	I_Chemicals / Pharmaceutical	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.003	Estimate	3%	0.0	0.0	US DOE Technical Paper: Steam Pressure Reduction	1.00E+00	0.40	0.90	0.10	100% Applicable	100% Applicable	NA	EGD Knowledge of Customer Base	0.50
Ind | Reduce Steam Pressure | New	Reduce boiler steam pressure	Higher steam pressure	Process - Boiler/Steam	Industrial	I_Food & Beverage	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.003	Estimate	3%	0.0	0.0	US DOE Technical Paper: Steam Pressure Reduction	1.00E+00	0.40	0.90	0.10	100% Applicable	100% Applicable	NA	EGD Knowledge of Customer Base	0.50
Ind | Reduce Steam Pressure | New	Reduce boiler steam pressure	Higher steam pressure	Process - Boiler/Steam	Industrial	I_Other Manufacturing >0.5 million m3/year	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.003	Estimate	3%	0.0	0.0	US DOE Technical Paper: Steam Pressure Reduction	1.00E+00	0.40	0.90	0.10	100% Applicable	100% Applicable	NA	EGD Knowledge of Customer Base	0.50
Ind | Reduce Steam Pressure | New	Reduce boiler steam pressure	Higher steam pressure	Process - Boiler/Steam	Industrial	I_Petroleum Refining	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.003	Estimate	3%	0.0	0.0	US DOE Technical Paper: Steam Pressure Reduction	1.00E+00	0.20	0.90	0.10	100% Applicable	100% Applicable	NA	EGD Knowledge of Customer Base	0.50
Ind | Reduce Steam Pressure | New	Reduce boiler steam pressure	Higher steam pressure	Process - Boiler/Steam	Industrial	I_Pulp & Paper	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.003	Estimate	3%	0.0	0.0	US DOE Technical Paper: Steam Pressure Reduction	1.00E+00	0.40	0.90	0.10	100% Applicable	100% Applicable	NA	EGD Knowledge of Customer Base	0.50
Ind | Regenerative Thermal Oxidizers	Regenerative Thermal Oxidizers (RTO)	No RTO	Process Heat	Industrial	I_Other Manufacturing >0.5 million m3/year	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.090	Customer Projects	28%	0.0	0.0	Customer Project	1.00E+00	0.25	0.50	0.50	100% Applicable	100% Applicable	NA	EGD Knowledge of Customer Base	0.50
Ind | Regenerative Thermal Oxidizers | New	Regenerative Thermal Oxidizers (RTO)	No RTO	Process Heat	Industrial	I_Other Manufacturing >0.5 million m3/year	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.090	Customer Projects	28%	0.0	0.0	Customer Project	1.00E+00	0.25	0.50	0.50	100% Applicable	100% Applicable	NA	EGD Knowledge of Customer Base	0.50
Ind | Steam trap survey and repair	Steam trap survey and repair	Steam traps not repaired	Process - Boiler/Steam	Industrial	I_Asphalt	RET Only	End Use Consumption (m^3/year)	3.0	3.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	4%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	8.00E-01	1.00	0.75	0.25	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Steam trap survey and repair	Steam trap survey and repair	Steam traps not repaired	Process - Boiler/Steam	Industrial	I_Chemicals / Pharmaceutical	RET Only	End Use Consumption (m^3/year)	3.0	3.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	4%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	8.00E-01	1.00	0.75	0.25	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Steam trap survey and repair	Steam trap survey and repair	Steam traps not repaired	Process - Boiler/Steam	Industrial	I_Food & Beverage	RET Only	End Use Consumption (m^3/year)	3.0	3.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	4%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	8.00E-01	1.00	0.75	0.25	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Steam trap survey and repair	Steam trap survey and repair	Steam traps not repaired	Process - Boiler/Steam	Industrial	I_Green House / Agriculture	RET Only	End Use Consumption (m^3/year)	3.0	3.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	4%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	8.00E-01	1.00	0.75	0.25	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.60
Ind | Steam trap survey and repair	Steam trap survey and repair	Steam traps not repaired	Process - Boiler/Steam	Industrial	I_Other Manufacturing >0.5 million m3/year	RET Only	End Use Consumption (m^3/year)	3.0	3.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	4%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	8.00E-01	1.00	0.75	0.25	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Steam trap survey and repair	Steam trap survey and repair	Steam traps not repaired	Process - Boiler/Steam	Industrial	I_Pulp & Paper	RET Only	End Use Consumption (m^3/year)	3.0	3.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	4%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	8.00E-01	1.00	0.75	0.25	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Steam trap survey and repair | New	Steam trap survey and repair	Steam traps not repaired	Process - Boiler/Steam	Industrial	I_Asphalt	NEW Only	End Use Consumption (m^3/year)	3.0	3.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	4%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	8.00E-01	1.00	0.75	0.25	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Steam trap survey and repair | New	Steam trap survey and repair	Steam traps not repaired	Process - Boiler/Steam	Industrial	I_Chemicals / Pharmaceutical	NEW Only	End Use Consumption (m^3/year)	3.0	3.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	4%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	8.00E-01	1.00	0.75	0.25	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Steam trap survey and repair | New	Steam trap survey and repair	Steam traps not repaired	Process - Boiler/Steam	Industrial	I_Food & Beverage	NEW Only	End Use Consumption (m^3/year)	3.0	3.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	4%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	8.00E-01	1.00	0.75	0.25	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Steam trap survey and repair | New	Steam trap survey and repair	Steam traps not repaired	Process - Boiler/Steam	Industrial	I_Green House / Agriculture	NEW Only	End Use Consumption (m^3/year)	3.0	3.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	4%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	8.00E-01	1.00	0.75	0.25	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.60
Ind | Steam trap survey and repair | New	Steam trap survey and repair	Steam traps not repaired	Process - Boiler/Steam	Industrial	I_Other Manufacturing >0.5 million m3/year	NEW Only	End Use Consumption (m^3/year)	3.0	3.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	4%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	8.00E-01	1.00	0.75	0.25	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Steam trap survey and repair | New	Steam trap survey and repair	Steam traps not repaired	Process - Boiler/Steam	Industrial	I_Pulp & Paper	NEW Only	End Use Consumption (m^3/year)	3.0	3.0	0.031	2009, Marbek, N,Gas EE Potential (Industrial)	4%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	8.00E-01	1.00	0.75	0.25	100% Applicable	100% Applicable	NA	US EIA Manufacturing Energy Consumption Survey	0.50
Ind | Ventilation heat recovery	Ventilation heat recovery	No heat recovery	Space Heating/Ventilation	Industrial	All Industrial	RET Only	End Use Consumption (m^3/year)	20.0	20.0	0.112	2009, Marbek, N,Gas EE Potential (Industrial)	15%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	7.00E-01	0.70	0.85	0.15	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Ventilation heat recovery | New	Ventilation heat recovery	No heat recovery	Space Heating/Ventilation	Industrial	All Industrial	NEW Only	End Use Consumption (m^3/year)	20.0	20.0	0.112	2009, Marbek, N,Gas EE Potential (Industrial)	15%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	7.00E-01	0.70	0.85	0.15	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Ventilation optimization	Ventilation optimization	Conventional ventilation	Space Heating/Ventilation	Industrial	All Industrial	RET Only	End Use Consumption (m^3/year)	15.0	15.0	0.240	2009, Marbek, N,Gas EE Potential (Industrial)	20%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	5.00E-01	0.80	0.90	0.10	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Ventilation optimization | New	Ventilation optimization	Conventional ventilation	Space Heating/Ventilation	Industrial	All Industrial	NEW Only	End Use Consumption (m^3/year)	15.0	15.0	0.240	2009, Marbek, N,Gas EE Potential (Industrial)	20%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	5.00E-01	0.80	0.90	0.10	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Warehouse loading dock seals	Warehouse loading dock seals	No dock seals	Space Heating/Ventilation	Industrial	All Industrial	RET Only	End Use Consumption (m^3/year)	10.0	10.0	0.151	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.70	0.65	0.35	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
Ind | Warehouse loading dock seals | New	Warehouse loading dock seals	No dock seals	Space Heating/Ventilation	Industrial	All Industrial	NEW Only	End Use Consumption (m^3/year)	10.0	10.0	0.151	2009, Marbek, N,Gas EE Potential (Industrial)	5%	0.0	0.0	2009, Marbek, Natural Gas EE Potential Industrial Sector)	1.00E+00	0.70	0.65	0.35	100% Applicable	100% Applicable	NA	Navigant Estimate/based on payback	0.50
LI | 90 AFUE Furnace Early Replcmnt. BA 60% AFUE	90% AFUE Furnace	65% AFUE Furnace	Space Heating/Ventilation	Low Income	All Low Income	RET Only	Furnace	3.0	3.0	518	OEB Approved Measures Inputs	623.50	0.0	0.0	OEB Approved Measures Inputs	1.00E+00	0.90	0.07	0.93	Space Heat - Gas Only	100% Applicable	NA	Enbridge Resl Market Survey 2013, OEE Comprehensive Energy Database 2014.	1.00
LI | Above Grade Wall Insulation	Above Grade Wall Insulation	No Wall Insulation	Space Heating/Ventilation	Low Income	R_Low IncomeTownhomes & Semi-detached	RET Only	Residential Households	25.0	25.0	1,200	Marbek Natural Gas Energy Efficiency Potential	196.51	126.0	0.0	Marbek Res Potential Study, CBEEDAC /NRCan, THESL	1.00E+00	0.98	0.36	0.64	Space Heat - Gas Only	100% Applicable	NA	Statistics Canada, Review of OBC	1.00
LI | Above Grade Wall Insulation	Above Grade Wall Insulation	No Wall Insulation	Space Heating/Ventilation	Low Income	R_Low Income Detached	RET Only	Residential Households	25.0	25.0	1,600	Marbek Natural Gas Energy Efficiency Potential	261.83	126.0	0.0	Marbek Res Potential Study, CBEEDAC /NRCan, THESL	1.00E+00	0.98	0.36	0.64	Space Heat - Gas Only	100% Applicable	NA	Statistics Canada, Review of OBC	1.00
LI | Air Sealing | Retro	1 can Spray Foam, 1 tube Caulk tube, 30 ft Foam Tape, and 4 Energy Saver Gasket with 2 child safety inserts	No Draft Proofing Kit	Space Heating/Ventilation	Low Income	R_Low Income Detached	RET Only	Residential Households	1.0	1.0	20.00	OEB Approved Measures Inputs	236.00	27.0	0.0	OEB Approved Measures Inputs	1.00E+00	1.00	0.40	0.60	Space Heat - Gas Only	100% Applicable	NA	ssume 50% of homes would provide level of savings estimated by OEB.	1.00
LI | Air Sealing | Retro	1 can Spray Foam, 1 tube Caulk tube, 30 ft Foam Tape, and 4 Energy Saver Gasket with 2 child safety inserts	No Draft Proofing Kit	Space Heating/Ventilation	Low Income	R_Low IncomeTownhomes & Semi-detached	RET Only	Residential Households	1.0	1.0	20.00	OEB Approved Measures Inputs	236.00	27.0	0.0	OEB Approved Measures Inputs	1.00E+00	1.00	0.40	0.60	Space Heat - Gas Only	100% Applicable	NA	ssume 50% of homes would provide level of savings estimated by OEB.	1.00
LI | Attic Insulation	Upgrade to R-40	R-10 Attic Insulation	Space Heating/Ventilation	Low Income	R_Low IncomeTownhomes & Semi-detached	RET Only	Residential Households	25.0	25.0	580	OEB Approved Measures Inputs	205.00	105.0	0.0	OEB Approved Measures Inputs	1.00E+00	0.90	0.15	0.85	Space Heat - Gas Only	100% Applicable	NA	Statistics Canada, Review of OBC	1.00
LI | Attic Insulation	Upgrade to R-40	R-10 Attic Insulation	Space Heating/Ventilation	Low Income	R_Low Income Detached	RET Only	Residential Households	25.0	25.0	580	OEB Approved Measures Inputs	205.00	105.0	0.0	OEB Approved Measures Inputs	1.00E+00	0.90	0.15	0.85	Space Heat - Gas Only	100% Applicable	NA	Statistics Canada, Review of OBC	1.00
LI | Basement Insulation	Upgrade to R-12	R-1 Basement Wall Insulation	Space Heating/Ventilation	Low Income	R_Low IncomeTownhomes & Semi-detached	RET Only	Residential Households	25.0	25.0	1,654	OEB Approved Measures Inputs	514.00	145.0	0.0	OEB Approved Measures Inputs	9.50E-01	0.75	0.36	0.64	Space Heat - Gas Only	100% Applicable	NA	Statistics Canada, Review of OBC	1.00
LI | Basement Insulation	Upgrade to R-12	R-1 Basement Wall Insulation	Space Heating/Ventilation	Low Income	R_Low Income Detached	RET Only	Residential Households	25.0	25.0	1,654	OEB Approved Measures Inputs	541.00	145.0	0.0	OEB Approved Measures Inputs	9.50E-01	0.75	0.36	0.64	Space Heat - Gas Only	100% Applicable	NA	Statistics Canada, Review of OBC	1.00
LI | Behavioural Mailed Reports	Behavioural – Cognition Program	Average % reduction in gas consumption per household in treatment group.	Cross Cutting/Behavioural	Low Income	All Low Income	ROB and NEW	Residential Households	3.0	3.0	7.75	Scott Hicks Enbridge Marketing lead advised program has fixed costs of $115k spread over 150k customers (add 25k per year for 6 years) = 0.75 per customer for fixed costs. Scott further advised that cost for 3 reports is $7.00. Therefore the total cost is $7.75 per customer	18.31	0.0	0.0	Discussed with Scott Hicks Enbridge Marketing lead. We agreed to assume a 3 year measure life with 1st year projected savings for the program of 1.5% of the average annual household consumption per year or 2,460 m3/yr. Therefore the first year savings are 2,460*.015 = 37 m3/yr. We further agreed to assume based on Opower presentation that these saving decline by 25% per year, resulting in 2nd year savings of 28 m3/yr and 3rd year savings of 21 m3/yr. We are using the 3 year average savings of 30 m3/yr in the templates.	1.00E+00	1.00	1.00	0.00	100% Applicable	100% Applicable	NA	Enbridge Estimate.	1.00
LI | Combination Space Water Heating	Combination Space Water Heating System	Base Water Heating EF 0.67	Water Heating	Low Income	All Low Income	ROB and NEW	Residence	18.0	20.0	680	LEEP Ottawa 2014 Information Package	126.90	1,068.0	0.0	LEEP Ottawa 2014 Information Package	8.80E-01	0.20	0.94	0.30	100% Applicable	100% Applicable	LI |Water Heater	EGD Res Market Survey 2013	1.00
LI | Drain Water Heat Recovery | New	Drain Water Heat Recovery	No DW Heat Recovery	Water Heating	Low Income	R_Low IncomeTownhomes & Semi-detached	NEW Only	DHW tank	20.0	20.0	700	Marbek Natural Gas Energy Efficiency Potential	82.88	0.0	0.0	Marbek NGas EE Potential 2008	1.00E+00	0.90	0.98	0.02	100% Applicable	DHW - Gas Only	NA	Estimate based on literature/internet search	1.00
LI | Drain Water Heat Recovery | New	Drain Water Heat Recovery	No DW Heat Recovery	Water Heating	Low Income	R_Low Income Detached	NEW Only	DHW tank	20.0	20.0	700	Marbek Natural Gas Energy Efficiency Potential	110.43	0.0	0.0	Marbek NGas EE Potential 2008	1.00E+00	0.90	0.98	0.02	100% Applicable	DHW - Gas Only	NA	Estimate based on literature/internet search	1.00
LI | Drain Water Heat Recovery | Retro	Drain Water Heat Recovery	No DW Heat Recovery	Water Heating	Low Income	R_Low IncomeTownhomes & Semi-detached	RET Only	DHW tank	20.0	20.0	900	Marbek Natural Gas Energy Efficiency Potential	82.88	0.0	0.0	Marbek NGas EE Potential 2008	1.00E+00	0.90	0.98	0.02	100% Applicable	DHW - Gas Only	NA	Estimate based on literature/internet search	1.00
LI | Drain Water Heat Recovery | Retro	Drain Water Heat Recovery	No DW Heat Recovery	Water Heating	Low Income	R_Low Income Detached	RET Only	DHW tank	20.0	20.0	900	Marbek Natural Gas Energy Efficiency Potential	110.43	0.0	0.0	Marbek NGas EE Potential 2008	1.00E+00	0.90	0.98	0.02	100% Applicable	DHW - Gas Only	NA	Estimate based on literature/internet search	1.00
LI | Energy Star Home | New	Energy Star Home	Home built to OBC 2006	Space Heating/Ventilation	Low Income	R_Low IncomeTownhomes & Semi-detached	NEW Only	Residential Households	25.0	25.0	3,200	OEB Approved Measures Inputs	1018.00	1,450.0	0.0	OEB Approved Measures Inputs	1.00E+00	0.00	0.00	1.00	Space Heat - Gas Only	100% Applicable	NA	Ontario Home Builders (indicates 2013 OBC requires EnergyStar /Energuide 80	1.00
LI | Energy Star Home | New	Energy Star Home	Home built to OBC 2006	Space Heating/Ventilation	Low Income	R_Low Income Detached	NEW Only	Residential Households	25.0	25.0	3,200	OEB Approved Measures Inputs	1018.00	1,450.0	0.0	OEB Approved Measures Inputs	1.00E+00	0.00	0.00	1.00	Space Heat - Gas Only	100% Applicable	NA	Ontario Home Builders (indicates 2013 OBC requires EnergyStar /Energuide 80	1.00
LI | HE Condensing Furnace	High Efficiency Condensing Furnace	AFUE 90 Furnace	Space Heating/Ventilation	Low Income	R_Low Income Detached	ROB Only	Furnace	18.0	18.0	1,767	OEB Approved Measures Inputs	129.00	0.0	0.0	OEB Approved Measures Inputs	1.00E+00	0.90	0.62	0.38	Space Heat - Gas Only	100% Applicable	NA	EGD Res Market Survey 2013	1.00
LI | HE Condensing Furnace	High Efficiency Condensing Furnace	AFUE 90 Furnace	Space Heating/Ventilation	Low Income	R_Low IncomeTownhomes & Semi-detached	ROB Only	Furnace	18.0	18.0	1,767	OEB Approved Measures Inputs	129.00	0.0	0.0	OEB Approved Measures Inputs	1.00E+00	0.90	0.62	0.38	Space Heat - Gas Only	100% Applicable	NA	EGD Res Market Survey 2013	1.00
LI | HE Storage Water Heating	High Efficiency Storage Water Heating	Base Water Heating EF 0.67	Water Heating	Low Income	All Low Income	ROB and NEW	Water heater	18.0	16.0	540	Internal Sub-doc	68.30	0.0	0.0	Internal sub-doc	8.80E-01	0.90	0.94	0.30	100% Applicable	100% Applicable	LI | Water Heater	EGD Res Market Survey 2013	1.00
LI | HVAC Zone Control	Residential HVAC Zone Control	Non-zoned (single stage, single zone)	Space Heating/Ventilation	Low Income	All Low Income	RET Only	Residence	20.0	20.0	1,000	ASE anectdotal	149.00	168.0	0.0	2011 study by McMaster U and CanmetENERGY	1.00E+00	0.50	0.95	0.05	100% Applicable	100% Applicable	NA	Enbridge Estimate	1.00
LI | Low Flow Showerhead | New	1.25 GPM (per household)	2.5 gpm showerhead	Water Heating	Low Income	All Low Income	NEW Only	Showers	10.0	10.0	16.76	OEB Approved Measures Inputs	53.00	0.0	17,187.0	OEB Approved Measures Inputs	1.90E+00	0.90	0.35	0.65	100% Applicable	DHW - Gas Only	NA	EGD Res Market Survey 2013	1.00
LI | Low Flow Showerhead | Retro	1.25 GPM (per household)	Average existing stock 2.5 GPM)	Water Heating	Low Income	All Low Income	RET Only	Showers	10.0	10.0	16.76	OEB Approved Measures Inputs	50.00	0.0	16,631.0	OEB Approved Measures Inputs	1.90E+00	0.90	0.16	0.65	100% Applicable	DHW - Gas Only	NA	EGD Res Market Survey 2013	1.00
LI | Programmable Thermostat - NEW	Programmable Thermostat (Adaptive & WiFi) - NEW	Non-programmable Thermostat	Space Heating/Ventilation	Low Income	All Low Income	NEW Only	Thermostat	15.0	15.0	200	Sept 2012, Cadmus Group evaluation report	118.00	341.0	0.0	Internal sub-doc for wifi adaptive thermostats	1.00E+00	1.00	0.48	0.52	100% Applicable	100% Applicable	NA	EGD Res Market Survey - slide 41	1.00
LI | Programmable Thermostat - RET	Programmable Thermostat (Adaptive & WiFi) - RET	Non-programmable Thermostat	Space Heating/Ventilation	Low Income	All Low Income	RET Only	Thermostat	15.0	15.0	300	Sept 2012, Cadmus Group evaluation report	182.00	309.0	0.0	Internal sub-doc for wifi adaptive thermostats	1.00E+00	1.00	0.33	0.67	100% Applicable	100% Applicable	NA	EGD Resident Market Survey 2009 - slide 4 & 40	1.00
LI | Tankless Water Heater	Tankless water heater 82% efficient	Base Water Heating EF 0.67	Water Heating	Low Income	All Low Income	ROB and NEW	DHW tank	18.0	18.0	750	OEB Approved Measures Inputs	142.00	0.0	0.0	OEB Approved Measures Inputs	8.80E-01	0.90	0.94	0.40	100% Applicable	100% Applicable	LI |Water Heater	EGD Res Market Survey 2013	1.00
LI | Triple Glazed Low-E Argon Windows | New	High Perf (TG, low-e, argon) Windows	Double Glazed (low-e, argon) Windows	Space Heating/Ventilation	Low Income	R_Low Income Detached	NEW Only	Residential Households	30.0	30.0	498	LEEP Ottawa 2014 Information Package, Marbek 2008 Potential Report	311.32	-255.3	0.0	LEEP Ottawa 2014 Info Pkg, 2013 Res Market Survey, Marbek 2008	1.00E+00	1.00	0.68	0.00	Space Heat - Gas Only	100% Applicable	NA	EGD Res Market Survey 2013	1.00
LI | Triple Glazed Low-E Argon Windows | New	High Perf (TG, low-e, argon) Windows	Double Glazed (low-e, argon) Windows	Space Heating/Ventilation	Low Income	R_Low IncomeTownhomes & Semi-detached	NEW Only	Residential Households	30.0	30.0	755	LEEP Ottawa 2014 Information Package	214.81	-255.3	0.0	LEEP Ottawa 2014 Information Package	1.00E+00	1.00	0.68	0.33	Space Heat - Gas Only	100% Applicable	NA	EGD Res Market Survey 2013	1.00
LI | Triple Glazed Low-E Argon Windows | ROB	High Perf (TG, low-e, argon) Windows	Double Glazed (low-e, argon) Windows	Space Heating/Ventilation	Low Income	R_Low Income Detached	ROB Only	Residential Households	30.0	30.0	996	LEEP Ottawa 2014 Information Package, Marbek 2008 Potential Report	214.81	-255.3	0.0	LEEP Ottawa 2014 Info Pkg, 2013 Res Market Survey, Marbek 2008	1.00E+00	1.00	0.68	0.33	Space Heat - Gas Only	100% Applicable	NA	EGD Res Market Survey 2013	1.00
LI | Triple Glazed Low-E Argon Windows | ROB	High Perf (TG, low-e, argon) Windows	Double Glazed (low-e, argon) Windows	Space Heating/Ventilation	Low Income	R_Low IncomeTownhomes & Semi-detached	ROB Only	Residential Households	30.0	30.0	1,510	LEEP Ottawa 2014 Information Package	214.81	-255.3	0.0	LEEP Ottawa 2014 Information Package	1.00E+00	1.00	0.68	0.33	Space Heat - Gas Only	100% Applicable	NA	EGD Res Market Survey 2013	1.00
Res | 90 AFUE Furnace Early Replcmnt. BA 60% AFUE	90% AFUE Furnace	65% AFUE Furnace	Space Heating/Ventilation	Residential	All Residential	RET Only	Furnace	3.0	3.0	518	OEB Approved Measures Inputs	623.50	0.0	0.0	OEB Approved Measures Inputs	1.00E+00	0.90	0.07	0.93	Space Heat - Gas Only	100% Applicable	NA	Enbridge Resl Market Survey 2013, OEE Comprehensive Energy Database 2014.	0.85
Res | Above Grade Wall Insulation	Above Grade Wall Insulation	No Wall Insulation	Space Heating/Ventilation	Residential	R_Townhomes & Semi-detached	RET Only	Residential Households	25.0	25.0	1,200	Marbek Natural Gas Energy Efficiency Potential	196.51	126.0	0.0	Marbek Res Potential Study, CBEEDAC /NRCan, THESL	1.00E+00	0.98	0.36	0.64	Space Heat - Gas Only	100% Applicable	NA	Statistics Canada, Review of OBC	0.85
Res | Above Grade Wall Insulation	Above Grade Wall Insulation	No Wall Insulation	Space Heating/Ventilation	Residential	R_Detached	RET Only	Residential Households	25.0	25.0	1,600	Marbek Natural Gas Energy Efficiency Potential	261.83	126.0	0.0	Marbek Res Potential Study, CBEEDAC /NRCan, THESL	1.00E+00	0.98	0.36	0.64	Space Heat - Gas Only	100% Applicable	NA	Statistics Canada, Review of OBC	0.85
Res | Air Sealing | Retro	1 can Spray Foam, 1 tube Caulk tube, 30 ft Foam Tape, and 4 Energy Saver Gasket with 2 child safety inserts	No Draft Proofing Kit	Space Heating/Ventilation	Residential	R_Detached	RET Only	Residential Households	1.0	1.0	20.00	OEB Approved Measures Inputs	236.00	27.0	0.0	OEB Approved Measures Inputs	1.00E+00	1.00	0.40	0.60	Space Heat - Gas Only	100% Applicable	NA	ssume 50% of homes would provide level of savings estimated by OEB.	0.85
Res | Air Sealing | Retro	1 can Spray Foam, 1 tube Caulk tube, 30 ft Foam Tape, and 4 Energy Saver Gasket with 2 child safety inserts	No Draft Proofing Kit	Space Heating/Ventilation	Residential	R_Townhomes & Semi-detached	RET Only	Residential Households	1.0	1.0	20.00	OEB Approved Measures Inputs	236.00	27.0	0.0	OEB Approved Measures Inputs	1.00E+00	1.00	0.40	0.60	Space Heat - Gas Only	100% Applicable	NA	ssume 50% of homes would provide level of savings estimated by OEB.	0.85
Res | Attic Insulation	Upgrade to R-40	R-10 Attic Insulation	Space Heating/Ventilation	Residential	R_Townhomes & Semi-detached	RET Only	Residential Households	25.0	25.0	580	OEB Approved Measures Inputs	205.00	105.0	0.0	OEB Approved Measures Inputs	1.00E+00	0.90	0.15	0.85	Space Heat - Gas Only	100% Applicable	NA	Statistics Canada, Review of OBC	0.85
Res | Attic Insulation	Upgrade to R-40	R-10 Attic Insulation	Space Heating/Ventilation	Residential	R_Detached	RET Only	Residential Households	25.0	25.0	580	OEB Approved Measures Inputs	205.00	105.0	0.0	OEB Approved Measures Inputs	1.00E+00	0.90	0.15	0.85	Space Heat - Gas Only	100% Applicable	NA	Statistics Canada, Review of OBC	0.85
Res | Basement Insulation	Upgrade to R-12	R-1 Basement Wall Insulation	Space Heating/Ventilation	Residential	R_Townhomes & Semi-detached	RET Only	Residential Households	25.0	25.0	1,654	OEB Approved Measures Inputs	514.00	145.0	0.0	OEB Approved Measures Inputs	9.50E-01	0.75	0.36	0.64	Space Heat - Gas Only	100% Applicable	NA	Statistics Canada, Review of OBC	0.85
Res | Bas

Unique Measure Name	Measure Description	Baseline Assumption	End Use Category	Sector	Customer Segment	Replacement Type	Unit Basis	Base Measure Lifetime	Efficient Measure Lifetime	Incremental Measure Cost	Cost Source(s)	Gas Savings	Electric Savings	Water Savings	Savings Source(s)	Total Measure Density (Base + EE)	Technical Suitability	Baseline Initial Saturation	EE Measure Initial Saturation	Heating Fuel Type Applicability Multiplier	DHW Fuel Type Applicability Multiplier	Competition Group	Density/ Applicability Source(s)	NTG Factor (1-FreeRiders)
TEXT (< ~30 characters)	TEXT	TEXT	Dropdown List	Dropdown List	Dropdown List	Dropdown List	TEXT (units used for savings and cost inputs)	Years	Years	$/ unit basis	TEXT	m^3/ year/ unit basis	kWh/ year/ unit basis	Liters/ year/ unit basis	TEXT	Unit Basis/ Scaling Basis	Fraction	Fraction	Fraction	Dropdown List	Dropdown List	TEXT	TEXT	Fraction
Res | Drain Water Heat Recovery | New	Drain Water Heat Recovery	No DW Heat Recovery	Water Heating	Residential	R_Detached	NEW Only	DHW tank	20.0	20.0	700	Marbek Natural Gas Energy Efficiency Potential	110.43	0.0	0.0	Marbek NGas EE Potential 2008	1.00E+00	0.90	0.98	0.02	100% Applicable	DHW - Gas Only	NA	Estimate based on literature/internet search	0.85
Res | Drain Water Heat Recovery | Retro	Drain Water Heat Recovery	No DW Heat Recovery	Water Heating	Residential	R_Townhomes & Semi-detached	RET Only	DHW tank	20.0	20.0	900	Marbek Natural Gas Energy Efficiency Potential	82.88	0.0	0.0	Marbek NGas EE Potential 2008	1.00E+00	0.90	0.98	0.02	100% Applicable	DHW - Gas Only	NA	Estimate based on literature/internet search	0.85
Res | Drain Water Heat Recovery | Retro	Drain Water Heat Recovery	No DW Heat Recovery	Water Heating	Residential	R_Detached	RET Only	DHW tank	20.0	20.0	900	Marbek Natural Gas Energy Efficiency Potential	110.43	0.0	0.0	Marbek NGas EE Potential 2008	1.00E+00	0.90	0.98	0.02	100% Applicable	DHW - Gas Only	NA	Estimate based on literature/internet search	0.85
Res | Energy Star Home | New	Energy Star Home	Home built to OBC 2006	Space Heating/Ventilation	Residential	R_Townhomes & Semi-detached	NEW Only	Residential Households	25.0	25.0	3,200	OEB Approved Measures Inputs	1018.00	1,450.0	0.0	OEB Approved Measures Inputs	1.00E+00	0.00	0.00	1.00	Space Heat - Gas Only	100% Applicable	NA	Ontario Home Builders (indicates 2013 OBC requires EnergyStar /Energuide 80	0.52
Res | Energy Star Home | New	Energy Star Home	Home built to OBC 2006	Space Heating/Ventilation	Residential	R_Detached	NEW Only	Residential Households	25.0	25.0	3,200	OEB Approved Measures Inputs	1018.00	1,450.0	0.0	OEB Approved Measures Inputs	1.00E+00	0.00	0.00	1.00	Space Heat - Gas Only	100% Applicable	NA	Ontario Home Builders (indicates 2013 OBC requires EnergyStar /Energuide 80	0.52
Res | HE Condensing Furnace	High Efficiency Condensing Furnace	AFUE 90 Furnace	Space Heating/Ventilation	Residential	R_Detached	ROB Only	Furnace	18.0	18.0	1,767	OEB Approved Measures Inputs	129.00	0.0	0.0	OEB Approved Measures Inputs	1.00E+00	0.90	0.62	0.38	Space Heat - Gas Only	100% Applicable	NA	EGD Res Market Survey 2013	0.85
Res | HE Condensing Furnace	High Efficiency Condensing Furnace	AFUE 90 Furnace	Space Heating/Ventilation	Residential	R_Townhomes & Semi-detached	ROB Only	Furnace	18.0	18.0	1,767	OEB Approved Measures Inputs	129.00	0.0	0.0	OEB Approved Measures Inputs	1.00E+00	0.90	0.62	0.38	Space Heat - Gas Only	100% Applicable	NA	EGD Res Market Survey 2013	0.85
Res | HE Storage Water Heating	High Efficiency Storage Water Heating	Base Water Heating EF 0.67	Water Heating	Residential	All Residential	ROB and NEW	Water heater	18.0	16.0	540	Internal Sub-doc	68.30	0.0	0.0	Internal sub-doc	8.80E-01	0.90	0.94	0.30	100% Applicable	100% Applicable	Res|Water Heater	EGD Res Market Survey 2013	0.95
Res | HVAC Zone Control	Residential HVAC Zone Control	Non-zoned (single stage, single zone)	Space Heating/Ventilation	Residential	All Residential	RET Only	Residence	20.0	20.0	1,000	ASE anectdotal	149.00	168.0	0.0	2011 study by McMaster U and CanmetENERGY	1.00E+00	0.50	0.95	0.05	100% Applicable	100% Applicable	NA	Enbridge Estimate	1.00
Res | Insulating Pool Covers |New	Pool Covers	NG Pool Heater/no cover	Appliances/Other	Residential	R_Townhomes & Semi-detached	NEW Only	Pool	10.0	10.0	1,200	Marbek Natural Gas Energy Efficiency Potential	446.40	0.0	0.0	Marbek NGas EE Potential 2008	5.00E-02	1.00	0.35	0.10	100% Applicable	100% Applicable	NA	EGD Res Market Survey 2013	0.90
Res | Insulating Pool Covers |New	Pool Covers	NG Pool Heater/no cover	Appliances/Other	Residential	R_Detached	NEW Only	Pool	10.0	10.0	1,200	Marbek Natural Gas Energy Efficiency Potential	446.40	0.0	0.0	Marbek NGas EE Potential 2008	5.00E-02	1.00	0.35	0.10	100% Applicable	100% Applicable	NA	EGD Res Market Survey 2013	0.90
Res | Insulating Pool Covers |Retro	Pool Covers	NG Pool Heater/no cover	Appliances/Other	Residential	R_Townhomes & Semi-detached	RET Only	Pool	10.0	10.0	1,200	Marbek Natural Gas Energy Efficiency Potential	446.40	0.0	0.0	Marbek NGas EE Potential 2008	5.00E-02	1.00	0.35	0.10	100% Applicable	100% Applicable	NA	EGD Res Market Survey 2013	0.90
Res | Insulating Pool Covers |Retro	Pool Covers	NG Pool Heater/no cover	Appliances/Other	Residential	R_Detached	RET Only	Pool	10.0	10.0	1,200	Marbek Natural Gas Energy Efficiency Potential	446.40	0.0	0.0	Marbek NGas EE Potential 2008	5.00E-02	1.00	0.35	0.10	100% Applicable	100% Applicable	NA	EGD Res Market Survey 2013	0.90
Res | Low Flow Showerhead | New	1.25 GPM (per household)	2.5 gpm showerhead	Water Heating	Residential	All Residential	NEW Only	Showers	10.0	10.0	16.76	OEB Approved Measures Inputs	53.00	0.0	17,187.0	OEB Approved Measures Inputs	1.90E+00	0.90	0.35	0.65	100% Applicable	DHW - Gas Only	NA	EGD Res Market Survey 2013	0.90
Res | Low Flow Showerhead | Retro	1.25 GPM (per household)	Average existing stock 2.5 GPM)	Water Heating	Residential	All Residential	RET Only	Showers	10.0	10.0	16.76	OEB Approved Measures Inputs	50.00	0.0	16,631.0	OEB Approved Measures Inputs	1.90E+00	0.90	0.16	0.65	100% Applicable	DHW - Gas Only	NA	EGD Res Market Survey 2013	0.90
Res | Programmable Thermostat - NEW	Programmable Thermostat (Adaptive & WiFi) - NEW	Non-programmable Thermostat	Space Heating/Ventilation	Residential	All Residential	NEW Only	Thermostat	15.0	15.0	200	Sept 2012, Cadmus Group evaluation report	118.00	341.0	0.0	Internal sub-doc for wifi adaptive thermostats	1.00E+00	1.00	0.48	0.52	100% Applicable	100% Applicable	NA	EGD Res Market Survey - slide 41	0.95
Res | Programmable Thermostat - RET	Programmable Thermostat (Adaptive & WiFi) - RET	Non-programmable Thermostat	Space Heating/Ventilation	Residential	All Residential	RET Only	Thermostat	15.0	15.0	300	Sept 2012, Cadmus Group evaluation report	182.00	309.0	0.0	Internal sub-doc for wifi adaptive thermostats	1.00E+00	1.00	0.33	0.67	100% Applicable	100% Applicable	NA	EGD Resident Market Survey 2009 - slide 4 & 40	0.95
Res | Solar Pool Heater | Retro	Solar Pool Heater	NG Pool Heater	Appliances/Other	Residential	R_Townhomes & Semi-detached	RET Only	Pool Heater	20.0	20.0	1,450	OEB Approved Measures Inputs	1116.00	-57.0	0.0	OEB Approved Measures Inputs	5.00E-02	0.75	0.90	0.10	100% Applicable	100% Applicable	NA	EGD Res Market Survey, OEB Substantiation Document	0.90
Res | Solar Pool Heater | Retro	Solar Pool Heater	NG Pool Heater	Appliances/Other	Residential	R_Detached	RET Only	Pool Heater	20.0	20.0	1,450	OEB Approved Measures Inputs	1116.00	-57.0	0.0	OEB Approved Measures Inputs	5.00E-02	0.75	0.90	0.10	100% Applicable	100% Applicable	NA	EGD Res Market Survey, OEB Substantiation Document	0.90
Res | Tankless Water Heater	Tankless water heater 82% efficient	Base Water Heating EF 0.67	Water Heating	Residential	All Residential	ROB and NEW	DHW tank	18.0	18.0	750	OEB Approved Measures Inputs	142.00	0.0	0.0	OEB Approved Measures Inputs	8.80E-01	0.90	0.94	0.40	100% Applicable	100% Applicable	Res|Water Heater	EGD Res Market Survey 2013	0.98
Res | Triple Glazed Low-E Argon Windows | New	High Perf (TG, low-e, argon) Windows	Double Glazed (low-e, argon) Windows	Space Heating/Ventilation	Residential	R_Townhomes & Semi-detached	NEW Only	Residential Households	30.0	30.0	498	LEEP Ottawa 2014 Information Package, Marbek 2008 Potential Report	214.81	-255.3	0.0	LEEP Ottawa 2014 Info Pkg, 2013 Res Market Survey, Marbek 2008	1.00E+00	1.00	0.68	0.33	Space Heat - Gas Only	100% Applicable	NA	EGD Res Market Survey 2013	0.85
Res | Triple Glazed Low-E Argon Windows | New	High Perf (TG, low-e, argon) Windows	Double Glazed (low-e, argon) Windows	Space Heating/Ventilation	Residential	R_Detached	NEW Only	Residential Households	30.0	30.0	755	LEEP Ottawa 2014 Information Package	311.32	-255.3	0.0	LEEP Ottawa 2014 Information Package	1.00E+00	1.00	0.68	0.33	Space Heat - Gas Only	100% Applicable	NA	EGD Res Market Survey 2013	0.85
Res | Triple Glazed Low-E Argon Windows | ROB	High Perf (TG, low-e, argon) Windows	Double Glazed (low-e, argon) Windows	Space Heating/Ventilation	Residential	R_Townhomes & Semi-detached	ROB Only	Residential Households	30.0	30.0	996	LEEP Ottawa 2014 Information Package, Marbek 2008 Potential Report	214.81	-255.3	0.0	LEEP Ottawa 2014 Info Pkg, 2013 Res Market Survey, Marbek 2008	1.00E+00	1.00	0.68	0.33	Space Heat - Gas Only	100% Applicable	NA	EGD Res Market Survey 2013	0.85
Res | Triple Glazed Low-E Argon Windows | ROB	High Perf (TG, low-e, argon) Windows	Double Glazed (low-e, argon) Windows	Space Heating/Ventilation	Residential	R_Detached	ROB Only	Residential Households	30.0	30.0	1,510	LEEP Ottawa 2014 Information Package	311.32	-255.3	0.0	LEEP Ottawa 2014 Information Package	1.00E+00	1.00	0.68	0.33	Space Heat - Gas Only	100% Applicable	NA	EGD Res Market Survey 2013	0.85

	100% Applicable	Space Heat - Gas Only	DHW - Gas Only
Heating Fuel Type Applicability Multiplier	1	1	NA
DHW Fuel Type Applicability Multiplier	1	NA	0.88

UNDERTAKING JT1.14

UNDERTAKING

Technical Conference TR, page 66

With reference to Tab 5, GEC Question 24, part (b), to elaborate on what the challenges are and why they couldn't be overcome.

RESPONSE

For convenience, the challenges that Enbridge identified with respect to managing rebates within the upstream market (i.e. manufacturers, distributors, wholesalers, and contractors) for the Commercial / Industrial prescriptive offers identified in GEC Interrogatory #24 found at Exhibit I.T5.EGDI.GEC.24 were as follows:

- Geographic diversity of manufacturers and distributors
- Complexity of the supply chain
- Maintaining the integrity of the offer
- Less ability to provide customers with technical support

It should be noted that Enbridge has indeed made some progress along the 'upstream' path. In 2012 Enbridge introduced an initiative called the Distributor Offer, where manufacturers and distributors received an incentive from Enbridge where Enbridge is notified of a request for pricing from a contractor in advance of the equipment being sold. This provides the Company with the opportunity to encourage the contractor and customer to purse a high efficiency option that is right for them.

To elaborate on the challenges this market channel can represent, Enbridge offers the following additional commentary.

The total supply chain consists of thousands of business partners, from manufacturers, to distributors, wholesalers, and contractors. With all of these potential touch points, an 'upstream' offer may be much more administratively difficult to manage than alternative market approaches.

An upstream incentive model in a diverse market such as Ontario could also present challenges in evaluation and verification of equipment installation. Enbridge's concern is that situations could arise where the price of equipment is reduced, but then the

equipment is installed somewhere outside of the Company's franchise area. This could raise concerns that Enbridge's ratepayers were subsidizing demand reduction in another service territory. Another issue could arise if multiple claims are made for the same account and the same technology. Customers may be confused if there are 'downstream' offers that they cannot take advantage of because they are dealing with a supply chain partner involved in the 'upstream' program. This could potentially harm the reputation of Enbridge's DSM business.

Another point is that Enbridge does not wish to be perceived as picking 'winners' and 'losers' in the marketplace. Unless Enbridge's offer can be applied across all manufacturers, distributors, wholesalers, contractors, and technologies, the offer may be seen to be competitively unfair.

Ultimately, the most important concern for Enbridge is to ensure that the customer understands the offer they are receiving as they consider their options. An upstream offer may not even be seen or communicated to the customer, making the offer unknown to the customer, losing an opportunity to further a culture of conservation. The Company would not be able to control the manufacturer's, distributor's, wholesaler's, or contractor's behaviour and would want to ensure that the customer actually receives the benefit of the technology at the reduced price and that the supply chain participant does not somehow change their pricing practices as a result.

This is not to say that these challenges cannot be overcome. As explained in the response to GEC Interrogatory #24, and further in the technical conference, Enbridge remains open to exploring the 'upstream' channel further. Indeed, the Company believes that to be successful in reaching its targets, it will likely have to integrate multiple channels into its offers. Enbridge has not developed plans to tackle of all these challenges, however, the Company believes that the existing 'downstream' prescriptive offer, in addition to the direct install offer, gives customers the most value for their energy efficiency dollar, and is the best way to monitor and track the savings that accrue.

UNDERTAKING JT1.18

UNDERTAKING

Technical Conference TR, page 86

Enbridge to verify whether or not Rate 125 volumes were included with reference to Table 2 of Exhibit B, Tab 2, Schedule 4, at page 3.

RESPONSE

Please see below Enbridge's historical and forecast in-franchise throughput volumes from 1995 to 2020. Please note that in order to accommodate this data request in a timely fashion some minor assumptions were incorporated for years prior to 2003.

Witnesses: F. Oliver-Glasford
B. Ott

	In-Franchise Throughput
1995	10,225.4
1996	11,341.2
1997	11,362.1
1998	10,549.3
1999	10,827.0
2000	11,403.6
2001	11,573.0
2002	11,109.5
2003	12,479.5
2004	12,092.9
2005	12,011.9
2006	11,322.0
2007	11,899.2
2008	11,876.9
2009	11,860.3
2010	12,028.6
2011	12,587.7
2012	11,510.1
2013	12,204.6
2014	13,286.7
2015	12,184.1
2016	12,228.3
2017	12,228.3
2018	12,228.3
2019	12,228.3
2020	12,228.3

UNDERTAKING JT1.27

UNDERTAKING

Technical Conference TR, page 120

Enbridge to provide a response to GEC IR 56

RESPONSE

“N/A” is denoted in four table rows. On page 6 of 12 of Attachment 1, “N/A” is noted in each of the columns. This signifies that there were no known reinforcements in Area 80 at the time. On pages 7 and 8 of 12, “N/A” is noted in the cost column for three projects. These projects adjust pressure settings on existing facilities (no new infrastructure required as part of the project), and therefore signifies that the costs for these projects are negligible in relation to the total reinforcement forecast and were not estimated.

Witness: H. Thompson

UNDERTAKING JT1.28

UNDERTAKING

Technical Conference TR, page 120

Enbridge to clarify the response to part (c), indicating that there was an error in the data given to Navigant, in terms of the reinforcement expenditures

RESPONSE

The reinforcement expenditures for Area 10 and Appendix B were inadvertently omitted from the information provided to Navigant. In addition, an equation error was made in the spreadsheet that was used by Enbridge to provide the reinforcement expenditures to Navigant that double counted the years from 2010 to 2012.

The reinforcement projects in Area 10 are those that were listed in GEC Interrogatory #57, filed as Exhibit I.T9.EGDI.GEC.57. The reinforcement projects in Appendix B are those that can be found in the response to GEC Interrogatory #56, Attachment 1, filed as Exhibit I.T9.EGDI.GEC.56.

It is estimated that the difference would be approximately $55M, which is an approximate 27% increase in the reinforcement expenditures that were used to calculate the original Avoided Distribution costs. The average overall impact of the $55M to the Avoided Distribution cost adder component of the Avoided Gas Costs over a 30 year period, results in a marginal increase of less than 1% in the Water Heating and Industrial load profiles, and an increase of less than 2% in the Space Heating and Space and Water Heating load profiles.

On average over a 30 year time period the Avoided Distribution costs account for approximately 1.5% - 5% (dependent on load profile) of the total Avoided Gas Costs.

As mentioned in the response to GEC Interrogatory #56 (c), Enbridge plans to re-file the Updated Avoided Distribution Costs Study, with the updated Avoided Gas Costs during the Input Assumption Update in Q4 2015. It should be noted that in preparation Enbridge intends to re-evaluate the purpose, need, and timing of the reinforcement projects given that it will be at least two years since the list included as Attachment 1 to GEC Interrogatory #56 was produced. The updated reinforcement forecast will be filed as part of the Updated Avoided Distribution Costs Study.

Witnesses: S. Mills
F. Oliver-Glasford
H. Thompson

UNDERTAKING JT1.32

UNDERTAKING

Technical Conference TR, page 131

Enbridge to provide a hypothetical forecast of percentage reduction, plus or minus 10 percent, it will be able to provide if it were not able to provide part 3 low income to the private sector because the customers aren't paying their bill directly

RESPONSE

Most, if not all, low income privately owned multi-residential buildings are on central heating systems, which means that heating costs are included in a tenant's rent. Given that private multi-residential buildings account for 60% of Enbridge's Part 3 Low Income target, as outlined in response to LIEN Interrogatory #2, filed as Exhibit I.T5.EGDI.LIEN.2, the Company estimates that the proposed low income Part 3 targets for the 2016 to 2020 period would be reduced by approximately 50% if participation to in the Part 3 offering is were predicated on building residents paying their energy bills directly.

Witnesses: M. Lister
E. Lontoc
J. Paris

UNDERTAKING JT1.36

UNDERTAKING

Technical Conference TR, page 157

To provide a written response to the eight questions from Energy Probe.

RESPONSE

TCQ Energy Probe 1

Ref: BT1S3; I.T2.EGDI, Energy Probe 4; I.T3.EGDI, Energy Probe 2; I.T2.EGDI, CCC.11

Topic 2015 (Board Directed) Targets vs 2014 Achievement and 3 year average Achievement

a) Please provide the EP Excel Schedule (Tab 2) with Corrections/Updates (live Excel format)
b) Please provide for each Program with Reference to I.T2.EGDI.CCC.11, the Basis of the 2015 Targets/ Scorecards
c) For each Program provide Explanatory notes how the Targets are appropriate relative to 2014 Actual Achievements and to 2012-2014 average Achievement

Energy Probe Exhibit				**Comparison of 2015 Scorecard Metrics to 2014**												
B Tab 1 Schedule 1		**2015 (Board-Directed) Rollover Scorecard**					Ref. I.T2.EGDI.EP.4		**2014 Scorecard**				Ref. I.T3.EGDI.EP.2; I.T2.EGDI.EP.4 and I.T2.EGDI.CCC.11			
Performance Band	**Actual YTD**	**Weight**	**Lower**	**Middle**	**Upper**	**SPEND $m**	**Actual YTD**	**Weight**	**Lower**	**Middle**	**Upper**	**SPEND $m**	**Changes 2014-2015 mid per % 2014 Achieved**	**2012-14 3 year avg**		**Comments**
Resource Acquisition Total																
Resource Acquisition CCM	tbd	92%	758.9	1,011.90	1,264.90	**$ 16.64**	**664.37**	92%	744.05	992.06	1240.08	**$16.58**	**152%**	**820**		
Residential Deep Savings	tbd	8%	571	762	952		**5,213**	8%	560	747	934		**15%**	**2357**		
Commercial/Industrial Deep Savings																
Low Income Total																
Single Family - Part 9	tbd	50%	18.1	24.1	30.2	**$ 6.86**	**25.67**	50%	17.7	23.6	29.5	**$6.42**	**94%**	**27.76**		
Multi-Residential - Part 3	tbd	45%	51.6	68.7	86		**29.8**	45%	48.15	64.2	80.25		**231%**	**34.01**		
Part 3 - RIR	tbd	5%	30%	40%	50%		**74.39%**	5%	30%	40%	50%		**54%**	**79.70%**		
SBD Residential Total (MT)																
Builders Enrolled	tbd	60%	13	18	22	**$ 4.89**	**23**	60%	12	16	20	**$3.05**	**78%**	**17**		
# of Completed Units	tbd	40%	833	1,111	1,389		**1,059**	40%	750	1000	1250		**105%**	**1013**		
SBD Commercial Total (MT)																
Commercial New Construction	tbd	100%	11	18	24		**19**	100%	8	12	19		**95%**	**12**		
Home Labeling Total (MT)																
Number of Committed Realtors	tbd	50%	N/A	5,001	10,001		**40,040**	70%	0	5,001	10,001		**12%**	**42200**		
Ratings performed	tbd	50%	2,250	4,500	6,750		**662**	30%	750	1,500	2,250		**680%**	**400**		
					Subtotal	**$ 28.39**						**$ 26.05**				
					Overheads	**$ 6.60**						**$6.45**				
					Incrementa	**$ 5.25**						**0**				
					TOTAL	**$ 40.24**						**$ 32.50**				
										Residential	**$1,836,456**	**Budget**				
										Spend	**$8,605,657**	**Actual**				

Witnesses: K. Mark
F. Oliver-Glasford
B. Ott
C. Welch

Enbridge provides the following response:

a) Please see below a screenshot of the requested excel spreadsheet. An excel format inclusive of responses to questions 1, 3 and 4 in Exhibit JT1.36 will be sent to Energy Probe, copying the Board. Should any other party be interested in this excel format they may contact Enbridge directly.

Energy Probe Exhibit				Comparison of 2015 Scorecard Metrics to 2014											
B Tab 1 Schedule 1		2015 (Board-Directed) Rollover Scorecard					Ref. I.T2.EGDI.EP.4	2014 Scorecard					Ref. I.T3.EGDI.EP.2; I.T2.EGDI.EP.4 and I.T2.EGDI.CCC.11		
Performance Band	Actual YTD [1]	Weight	Lower	Middle	Upper	SPEND $m	Actual YTD	Weight	Lower	Middle	Upper	SPEND $m	Changes 2014-2015 mid per % 2014 Achieved	2012-14 3 year avg	Comments
Resource Acquisition Total															
Resource Acquisition CCM	89.29	92%	758.9	1,011.90	1,264.90	$ 16.64	664.37	92%	744.05	992.06	1240.08	$16.58	152%	820	
Residential Deep Savings	2,761	8%	571	762	952		5,213	8%	560	747	934		15%	2357	
Commercial/Industrial Deep Savings															
Low Income Total															
Single Family - Part 9	4.67	50%	18.1	24.1	30.2	$ 6.86	25.67	50%	17.7	23.6	29.5	$6.42	94%	27.76	
Multi-Residential - Part 3	1.54	45%	51.6	68.7	86		29.8	45%	48.15	64.2	80.25		231%	34.01	
Part 3 - RIR	N/A [2]	5%	30%	40%	50%		74.39%	5%	30%	40%	50%		54%	79.70%	
SBD Residential Total (MT)															
Builders Enrolled	12	60%	13	18	22	$ 4.89	23	60%	12	16	20	$3.05	78%	17	
# of Completed Units	227	40%	833	1,111	1,389		1,059	40%	750	1000	1250		105%	1013	
SBD Commercial Total (MT)															
Commercial New Construction	9	100%	11	18	24		19	100%	8	12	19		95%	12	
Home Labeling Total (MT)															
Number of Committed Realtors	15,000	50%	N/A	5,001	10,001		40,040	70%	0	5,001	10,001		12%	42200	
Ratings performed	100	50%	2,250	4,500	6,750		662	30%	750	1,500	2,250		680%	400	
					Subtotal	$ 28.39						$ 26.05			
					Overheads	$ 6.60						$6.45			
					Incremental	$ 5.25						0			
					TOTAL	$ 40.24						$ 32.50			
										Residential	$1,836,456	Budget			
Notes:										Spend	$8,605,657	Actual			
1. Actual YTD results provided are as of May 2015															
2. Low Income Part 3 RIR results are determined at year-end. For that reason, Actual YTD results are not available.															

b) In Enbridge's view the basis for 2015 targets is outlined in full within CCC Interrogatory #11 found at Exhibit I.T2.EGDI.CCC.11, wherein the Company cites the Board's direction to escalate targets from 2014 to 2015 in the same fashion as was done from 2013 to 2014, and subsequently provides the escalation factors used for each scorecard metric from 2013 to 2014. For convenience, the relevant portions of this response have been included below:

> Section 15.1 of the DSM Framework calls on the gas utilities to "…increase their budgets, targets and shareholder incentive amounts in the same manner as they have done throughout the current DSM Framework (i.e., 2013 updates to 2014 should now apply as 2014 updates to 2015)."

Witnesses: K. Mark
F. Oliver-Glasford
B. Ott
C. Welch

To determine Enbridge's 2014 targets in EB-2012-0394 the Board approved the following increases from the targets of 2013:

- Resource Acquisition
  - 2% for all targets
- Low Income
  - 2% for the Single-Family Part 9 target
  - 7% for the Multi-residential Part 3 target
  - No increase to the target for the percentage of Part 3 participants which enrolled in Run it Right / Utility Management
- Residential Savings by Design
  - 9% for the lower band of the Builder Enrollment target
  - 14% for the middle band of the Builder Enrollment target
  - 11% for the upper band of the Builder Enrollment target
  - 11% for all Completed Unit targets
- Commercial Savings by Design
  - 33% for the lower band target
  - 50% for the middle band target
  - 27% for the upper band target
- Home Labelling
  - No increase to the Realtor Commitment target
  - 300% increase to the Ratings Performed target

In keeping with the Board's direction in section 15.1 of the new DSM Framework and the escalation factors approved in EB-2012-0394 to increase DSM targets from 2013 to 2014, Enbridge applied the above noted escalations to its 2014 scorecard targets to establish 2015 targets.

c) Please see Enbridge's response to b).

Witnesses: K. Mark
F. Oliver-Glasford
B. Ott
C. Welch

TCQ Energy Probe 2

Ref: I.T2.EGDI, Energy Probe 4, Page 10

Topic Update re Clearance of 2014 accounts to rate Classes

Please provide an estimate in the Format of Page 10 of the IR Response and qualify this re Estimate/Unaudited etc,

Enbridge provides the following response:

Please see below an estimate of the Company's DSM accounts for the 2014 program year:

2014 Rate Allocation (Illustrative Purposes Only)

Rate Class	DSMIDA	LRAM	DSMVA	TOTAL
Rate 1**	$4,476,362	N/A**	$6,968,595	$11,444,957
Rate 6**	$2,647,166	N/A**	-$3,576,246	-$929,080
Rate 9*	$326	$0	-$93	$234
Rate 110	$228,800	-$11,825	-$307,460	-$90,486
Rate 115	$108,728	-$3,701	-$488,902	-$383,875
Rate 125*	$12,230	$0	-$3,488	$8,741
Rate 135	$23,438	$658	-$86,721	-$62,625
Rate 145	$54,091	-$30,189	-$934,532	-$910,629
Rate 170	$91,047	-$20,282	-$1,217,209	-$1,146,445
Rate 200*	$4,240	$0	-$1,209	$3,030
Rate 300*	$815	$0	-$233	$582
Total	$7,647,242	-$65,339	$352,502	$7,934,405

Rates 9, 125, 200 & 300 will not have any LRAM component included in the rate allocation since customers in these rates classes are not eligible for DSM programs. These rate classes will however, be subject to rate allocations for DSMVA and applicable DSMIDA related to the Low Income Program.

**** Rate 1 and Rate 6 are not included in the LRAM amount for clearance above as these rate classes are covered under the Average Use True-Up Variance Account (AUTUVA)**

Note: Numbers may not add up due to rounding

Note: 2014 values are provided above for illustrative purposes. 2014 results are subject to final approval through the 2014 Clearance of Accounts proceeding to be submitted to the Board

Witnesses: K. Mark
F. Oliver-Glasford
B. Ott
C. Welch

TCQ Energy Probe 3

Ref: Exhibit I.T2.EGDI, Energy Probe 4; I.T3.EGDI, Energy Probe 7; I.T3.EGDI, Energy Probe 14 c, d, e

Topic Efficiency Metrics $/CCM 2012-2014 and 2015

Enbridge provides the following response:

Please see TCQ Energy Probe 4 for Enbridge's Response.

Witnesses: K. Mark
F. Oliver-Glasford
B. Ott
C. Welch

TCQ Energy Probe 4

Ref: I.T3.EGDI, Energy Probe, 14.

Topic Efficiency Metrics $/CCM 2016-2020

The Efficiency Metrics provided in the referenced IR responses are not easily reconciled with data provided in other IR Responses:

a) Please provide a set of efficiency metrics ($/CCM) in the format provided in the Template provided in the EP Schedule. Provided in KT 1.1 subject to a copy in Excel Format, and subject to part b)
b) Please provide any qualifiers/comments as to how these metrics fit with the prefiled evidence and IR Responses,
c) Provide Reconciliations with the prefiled evidence, for example Exhibit BTab1 Schedule 2 Table 1 and IRRs e.g. I.T3.EGDI.CME.3

				or	or	or	or	or
				$/Participant	$/Participant	$/Participant	$/Participant	$/Participant
FORMAT	**I.T3.EGDI.EP.14**							
Large C&I Customers (Sum)		0.0120	?	0.0123	0.0126	0.0128	0.0130	$0.0132
Large Custom				0.0114	0.0117	0.0119	0.0121	$0.0123
Large Prescriptive				0.0195	0.0200	0.0203	0.0207	$0.0210
Small C&I Customers (Sum)		0.0111	?	0.0414	0.0417	0.0417	0.0417	$0.0417
Small Custom				0.0257	0.0259	0.0259	0.0259	$0.0259
Small Prescriptive				0.0138	0.0139	0.0139	0.0139	$0.0139
Small DI				0.0821	0.0827	0.0827	0.0827	$0.0827
Small Commercial New				N/A	0.0893	0.1335	0.1251	$0.1073
Residential Thermostats			?	0.0367	0.0320	0.0304	0.0296	$0.0294
Residential HEC (CCM)		0.0959	?	0.1184	0.1111	0.1067	0.1037	$0.1017
TOTAL				0.0330	0.0362	0.0385	0.0386	$0.0387
Low Income		0.0930	?	?	?	?	?	?
TOTAL	**I.T3.EGDI.CME.3**		0.0490	0.0630	0.0680	0.0690	0.0700	0.0700
FORMAT REQUESTED								
Resource Acquisition		**2014 $/CCM**	**2015 $/CCM**	**2016 $/CCM**	**2017 $/CCM**	**2018 $/CCM**	**2019 $/CCM**	**2020 $/CCM**
Residential								
Commercial								
Industrial								
Total Resource Acquisition								
Low Income								
Single Family - Part 9								
Multi Residential - Part 3								
Private								
Total Low Income								
TOTAL RA								

Witnesses: K. Mark
F. Oliver-Glasford
B. Ott
C. Welch

Enbridge provides the following response:

a) Below please find the $/ccm chart in the format requested. As noted above, Enbridge shall provide an excel format of the below directly to Energy Probe, copying the Board. Should any other party wish to receive this excel format they may contact Enbridge directly.

FORMAT REQUESTED									
Resource Acquisition	**2012 $/CCM [1]**	**2013 $/CCM [1]**	**2014 $/CCM [1]**	**2015 $/CCM [2]**	**2016 $/CCM [3]**	**2017 $/CCM [3]**	**2018 $/CCM [3]**	**2019 $/CCM [3]**	**2020 $/CCM [3]**
Residential	$0.154	$0.068	$0.096	$0.102	$0.103	$0.091	$0.084	$0.083	$0.081
Commercial	$0.012	$0.010	$0.011	$0.013	$0.023	$0.025	$0.026	$0.026	$0.026
Industrial	$0.009	$0.012	$0.012	$0.014	$0.020	$0.021	$0.022	$0.023	$0.023
Total Resource Acquisition	$0.012	$0.013	$0.023	$0.021	$0.033	$0.036	$0.038	$0.038	$0.038
Low Income [4]									
Single Family - Part 9	$0.233	$0.141	$0.175	$0.185	$0.199	$0.206	$0.212	$0.218	$0.225
Multi Residential - Part 3	$0.032	$0.026	$0.044	$0.041	$0.056	$0.055	$0.055	$0.054	$0.054
Private	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Low Income	$0.105	$0.089	$0.093	$0.085	$0.116	$0.118	$0.116	$0.117	$0.117
TOTAL RA & LI	$0.018	$0.019	$0.029	$0.028	$0.040	$0.043	$0.045	$0.045	$0.045

1. 2014 $/CCM, as per response to Energy Probe IR# 4
2. 2015 $/CCM Forecast as of May 2015. $/CCM calculations based on Forecasted Program Spending, not OEB Approved Budget (in EP# 7)
3. 2016-2020 C&I $/CCM calculation includes CEM, RIR, Energy Compass, and budget from Energy Leaders
4. 2016-2020 Low Income $/CCM calculation excludes LI New Construction

b) Without further context, Enbridge does not have any qualifiers/comments regarding how these metrics fit with the pre-filed evidence and Interrogatory responses.

c) Using the example provided (Exhibit B, Tab1, Schedule 2, Table 1 and CME Interrogatory #3 found at Exhibit I.T3.EGDI.CME.3), a reconciliation shows that the same evidence was presented in both the submitted plan and the interrogatory response.

Witnesses: K. Mark
F. Oliver-Glasford
B. Ott
C. Welch

TCQ Energy Probe 5

Ref: I.T2.EGDI, Energy Probe 26

Topic Declining Efficiency on RA and MTEM Scorecards

a) The IR Response indicates Declining RA Program Efficiency ($/CCM) please provide information on two (hypothetical) scenarios

   1. The target be shifted down by 25% i.e. 100% at 75% and 125%

      Please provide the scorecard for this Scenario and Show the Budget, CCM and Incentives for the Rate 1 and Rate 6.

   2. Eliminate the 150% Stretch from the Scorecard

      Please provide a revised Scorecard and show the Impacts on Budgets CCM and Shareholder Incentive allocated to Rate 1 and Rate 6

b) With regard to the Response on the MTEM Program (accepting that the MTEM Program has two goals-- CCM and MT) it appears that for the CCM portion the 150% stretch factor is showing dramatically higher costs allocated to Rates 1 and 6 and significantly lower efficiency $/CCM
   Please provide (as a hypothetical) revised Scorecard with no 150% stretch and provide the impact on CCM and shareholder Incentive

Enbridge provides the following response:

a) 1. On the following page, Enbridge has provided an illustrative 2016 Resource Acquisition scorecard and Rate 1 and 6 budget allocation under a scenario in which the total DSM budget has been reduced by 25% below proposed levels (i.e., the 75% scenario in the Company's sensitivity analysis now forms the basis for the 100% target on the scorecard).

Witnesses: K. Mark
F. Oliver-Glasford
B. Ott
C. Welch

Resource Acquisition

Component	Offers Counted	Metric	Weight	Lower	Middle	Upper
Large Volume Customers[1]	Custom, Prescriptive, Direct Install, RiR, CEM	CCM (millions)	40%	322.3	429.7	644.6
Small Volume Customers	Custom, Prescriptive, Direct Install; Small Comm. New Construction; HEC; Adaptive Thermostats	CCM (millions)	40%	159.9	213.3	319.9
TOTAL RESOURCE ACQUISITION CCM				482.2	643.0	964.4
Residential Deep Savings	HEC	Number of participants[2]	20%	4005	5340	8010

1) Large volume consumers include commercial customers with a 3 year average annual consumption of greater than 75,000m^3/year or industrial customers with a 3 year average consumption of greater than 340,000m^3/year
2) Number of participants with at least 2 major measures (average annual gas savings across all participants must be at least 15% of combined baseline space heating and water heating usage for any incentives to be earned)

	Illustrative Rate Allocation of DSM Budget & 100% Level Shareholder Incentive
Rate 1	$28,252,768
Rate 6	$20,617,685

2. Please see on the following page a revised version of the above noted illustrative 2016 Resource Acquisition scorecard in which the 150% stretch target has been reduced to a level of 125%. Enbridge's budgets have been designed to enable achievement at the 100% target level, making the 150% level of achievement a highly challenging stretch. For this reason however, elimination of the 150% stretch target has no impact, upwards or downwards, on Enbridge's proposed

Witnesses: K. Mark
F. Oliver-Glasford
B. Ott
C. Welch

DSM budgets. In regards to shareholder incentives, the above Rate Allocations for Rates 1 and 6 included the shareholder incentives available at the 100% target levels and thus are unchanged in this illustrative scenario. For clarity however, Enbridge does not believe that any adjustment of its scorecards made by the Board in this proceeding warrants a reduction in the potential shareholder incentive available to the Company, which is critical to attaining and retaining the focus of senior utility management. Thus a reduction of the target shall make the maximum potential shareholder incentive amount for Resource Acquisition available at the 125% achievement level.

Illustrative 2016 Resource Acquisition Scorecard (without 150% Stretch)

Resource Acquisition

Component	Offers Counted	Metric	Weight	Lower	Middle	Upper
Large Volume Customers[1]	Custom, Prescriptive, Direct Install, RiR, CEM	CCM (millions)	40%	322.3	429.7	537.1
Small Volume Customers	Custom, Prescriptive, Direct Install; Small Comm. New Construction; HEC; Adaptive Thermostats	CCM (millions)	40%	159.9	213.3	266.6
TOTAL RESOURCE ACQUISITION CCM				482.2	643.0	803.7
Residential Deep Savings	HEC	Number of participants[2]	20%	4005	5340	6675

1) Large volume consumers include commercial customers with a 3 year average annual consumption of greater than 75,000m^3/year or industrial customers with a 3 year average consumption of greater than 340,000m^3/year

2) Number of participants with at least 2 major measures (average annual gas savings across all participants must be at least 15% of combined baseline space heating and water heating usage for any incentives to be earned)

Witnesses: K. Mark
F. Oliver-Glasford
B. Ott
C. Welch

b) Please see below an illustrative MTEM scorecard in which the 150% stretch target has been reduced to the 125% level. As noted above, since the Company's budgets have been designed at the 100% target level and shareholder incentives allocated within rates were done so assuming the 100% achievement level, there is no impact on rate allocations for rates 1 and 6 by removing the 150% target.

Market Transformation & Energy Management

Component	Offers Counted	Metric	Weight	Lower Band	Middle Band	Upper Band
Energy Management	Opower	CCM (millions)	5%	14.6	19.5	24.4
	School's Energy Competition	School's Enrolled	5%	38	50	62.5
	RiR	Participants	20%	56	75	93.8
	CEM	Participants	20%	5	6	7.5
New Construction	Residential Savings by Design	Builder Enrolments	10%	23	30	37.5
		Homes Built	15%	1875	2501	3125
	Commercial Savings by Design	New Developments	15%	23	30	37.5
	New Construction Commissioning	Enrollments	5%	15	20	25.0
Home Rating	Home Rating	Ratings Completed	5%	447	596	745.3

Witnesses: K. Mark
F. Oliver-Glasford
B. Ott
C. Welch

TCQ Energy Probe 6

Ref: I.T3.EGDI, Energy Probe, 15; I.T8.EGDI.CCC.30

Topic Value Proposition for Residential customer paying $0.67/month in 2014 and 2.00/month in 2016 and beyond

Preamble: EGD has not accepted the Proposition in the Interrogatory-We asked EGD to provide in qualitative/quantitative terms the incremental value received by a typical Residential Customer that Paid on average $0.67/month for DSM Programs in 2014 and will now pay above 2.00/month in 2016 onward.

Referred to I.T8.EGDI.CCC.30. So EP requests a response based on that IRR.

Background
EGD Distinguishes Participants and Non Participants in the HEC RA program.

Participants
Exhibit BTab 1Schedule 4 Page 9 Table 7, shows a budget (including Overheads) of $12.5 million for HEC (and $0.88 million for Adaptive Thermostats); Table 8 shows CCM of 290.2 m3 and 7,508 Participants

Direct Benefits are cited (based onTRC?) as $23.6 million in 2016, while the incremental costs to the (participating) customer, after receiving an incentive from Enbridge, is $10.9 million. Please provide EGD's Cost/Benefit Analysis for the 7,508 HEC participants?

a) Confirm who receives Incentive
b) Provide an analysis of Direct Benefits (breakdown of the inputs/outputs of the TRC + Test?)

For Example (illustrative) :
Benefits to Participating customers: 7508 x avg. Incentive=$X million
Benefits to All Customers: TRC+ benefits =$Y million
Net Benefit (Y-X): =Z Million

Non-Participants
IRR states "The benefits to non-participants are largely societal in nature and include impacts such as environmental benefits through reduced greenhouse gas emission, societal benefits, particularly for low income consumers, and economic stimulus."

Witnesses: K. Mark
F. Oliver-Glasford
B. Ott
C. Welch

c) Please Provide a Qualitative/quantitative analysis of Cost to Non participants:
For Example (Illustrative)
Benefits:
Avoided Cost $m
GHG Reductions (monetized $)

d) Explain relevance of Societal (Low Income) benefits from a Residential RA program as opposed to Low Income program paid by other ratepayers

e) Economic Stimulus; Is this the gross capital investment times an appropriate multiplier? Does it include annual operating costs/benefits. Please provide an cost/benefit analysis.

Enbridge provides the following response:

The Company believes that its response to Environmental Defence Interrogatory#13, filed as Exhibit I.T3.EGDI.ED.13, will assist in addressing Energy Probe's inquiry. Specifically, Enbridge has provided a relevant excerpt below for convenience:

> Determining the value of savings directly attributable to the average residential is a highly challenging undertaking which the Company cannot endeavor to complete at this time. This is due to the fact that the benefits to the average customer are largely societal, as captured in the TRC Plus test. Direct benefits of Enbridge's Programs are largely attributable to participants, which is why the Company is pleased that the Board has encouraged increased participation levels in the DSM Framework.

Having said the above, Enbridge believes that DSM may create other non-energy benefits such as industrial productivity, poverty alleviation, health and well-being, local employment, disposable income with associated economic stimulus and environmental benefits. As it has always been difficult to quantify these benefits with any accuracy, these benefits may or may not be fully captured by the 15% adder applied to the avoided costs of the TRC test in order to create the TRC Plus test.

In relation to costs, Enbridge has outlined that in 2015 the monthly cost of its DSM programs to the typical residential customer will be $0.85 per month, an amount which will increase to reach $2.21 by 2020 without accounting for inflation.[1]

[1] Exhibit B, Tab 2, Schedule 4, assuming the utility claims the shareholder incentives available at 100% target achievement

Witnesses: K. Mark
F. Oliver-Glasford
B. Ott
C. Welch

TCQ Energy Probe 7

Ref: C Tab 1, Schedule 1; I.T2.EGDI, Energy Probe 34

Topic Alignment of Residential and Low Income Sector Budgets and CCM to Navigant DSM Potential Study

a) Please Clarify all references to Tables in the text of the Response and provide the specific evidentiary references
b) Confirm the Budget 2015-2020 of $302.1m includes "only non CCM" and indicate if it does/does not include Overheads. Clarify what is included/excluded at program level etc..
c) Chart Provided in IRR Part a) Figure 1 Gas Savings with Simulated Plan
Please provide a chart/graph or charts showing the Savings and Budgets 2015-2020:
Savings
Achievable Savings Potential lines –Base case and upper and lower scenarios and positioning the Plan Savings (100%) from 2015-2020.

Budgets/Spend
On the same or separate chart the Achievable Scenario Budgets Base Case Upper and Lower and Plan Budgets

Enbridge provides the following response:

a) Please see below clarification regarding the tables re-created in response to Energy Prove Interrogatory # 34 found at ExhibitI.T2.EGDI.EP.34:

- Table 1 compares Enbridge's proposed DSM budgets by sector to the DSMSim scenario budgets which were inserted into the model for the purpose of answering Energy Probe Interrogatory #34
- Table 2 presents the Gross Annual Achieveable m3 savings by sector according to Navigant's model based on the DSMSim scenario budgets.
- Figure 1 is a re-creation of Figure ES-1, located at Exhibit C, Tab 1, Schedule 1, page 13 .
- Table 3 is a re-creation of Table ES-1, located at Exhibit C, Tab 1, Schedule 1, page 13.
- Table 4 is a re-creation of Table 5-17, located at Exhibit C, Tab 1, Schedule 1, page 129.

Witnesses: K. Mark
F. Oliver-Glasford
B. Ott
C. Welch

- Table 5 is a re-creation of Table 5-18, located at Exhibit C, Tab 1, Schedule 1, page 129.
- Table 6 is a re-creation of Table 5-20, located at Exhibit C, Tab 1, Schedule 1, page 133.
- Table 7 is a re-creation of Table 5-16, located at Exhibit C, Tab 1, Schedule 1, page 128.
- Table 8 is a re-creation of Table 5-22, located at Exhibit C, Tab 1, Schedule 1, page 160.

b) The total of $302.1 million does include overheads and portfolio costs (e.g. DSM IT chargeback, evaluation, collaboration and innovation fund), however these costs were included at the portfolio level and not the sector level for the purpose of running the analysis requested. Sector level totals can be found in Table 1 of Exhibit I.T2.EGDI.EP.34. In regards to program dollars, "non-CCM" offers excluded include Low Income New Construction and Market Transformation & Energy Management ("MTEM") offers[2].

c) Enbridge interprets Energy Probe's statement as a request to compare Enbridge's proposed DSM targets against the outputs received from the DSMSim model for the purpose of answering Energy Probe Interrogatory #34.
The Company has provided this comparison in the table below, subject to the following caveats and explanations:

- For the purpose of this analysis, the Company's DSM Plan proposal has been labeled as "DSM Plan" and the outputs of the DSMSim model have been labeled as "DSMSim";
- The budgets calculated by the DSMSim model were not exact replicas of Enbridge's proposed budgets, though best efforts were made to do so and their proximity is within reason. Budgets are an output of the DSMSim model, rather than an input. Navigant calibrated the model to generate total budgets for 2016-2020 to roughly equal Enbridge's total proposed budgets between 2016-2020. Because Navigant calibrated to the five-year totals, the year-by-year budgets will differ between the DSMSim outputs and Enbridge's proposed budgets. The five-year total budget, excluding non-CCM program costs, from DSMSim was $297.9 million, while Enbridge's proposed five-year budget was $302.1 million;
- Enbridge's proposed DSM Plan includes a significant ramp-up in budget across nearly all sectors. I n contrast, the DSMSim model relies on input parameters related to market adoption to derive the market diffusion

[2] Note that the Resource Acquisition portions of the Run it Right and Comprehensive Energy Management offers was included in the analysis as these offers do generate CCM, though the MTEM portion of these budgets was not.

characteristics exhibited in its achievable potential estimates. Those input parameters come from vetted and empirically-derived values observed across multiple product types. The combination of the market adoption parameters and the unique characteristics of the market analyzed in this study led to nearly flat achievable potential estimates and nearly flat budgets over the ten-year study horizon. For this reason, a direct comparison between the DSM Plan and DSMSim scenario targets and budgets is not apples to apples, particularly in the early years of the analysis. However, a Gross m3 / $ analysis has been provided to aid in this comparison; and,

- Enbridge's proposed DSM targets are net cumulative cubic metres ("CCM"), where the outputs of the DSMSim model are Gross Annual m3. For the purpose of comparison the Company has made the assumptions which it believes are reasonable to convert its CCM targets into Gross Annual m3 within an acceptable timeframe. This analysis will thus not provide an exact representation of what Enbridge's targets would be if converted from CCM to Gross Annual m3 on a measure by measure basis.

Gross Annual m3 (millions)	2016		2017		2018		2019		2020	
	DSM Plan	DSMSim	DSM Plan	DSMSim	DSM Plan	DSMSim	DSM Plan	DSMSim	DSM Plan	DSMSim
Residential	12.14	24	17.69	23.6	23.05	23.5	24.16	23.5	25.07	23.35
Low Income	8.43	4.9	8.85	4.8	9.60	4.7	9.74	4.7	9.89	4.8
Commercial / Industrial	73.68	84.7	74.99	85.2	75.63	86.1	76.23	86.5	77.12	86.2
Total Gross Annual m3	**94.25**	**113.6**	**101.53**	**113.6**	**108.28**	**114.3**	**110.14**	**114.7**	**112.08**	**114.35**
Budget ($ millions)	**2016**		**2017**		**2018**		**2019**		**2020**	
Residential	$13.0	$18.3	$16.7	$18.2	$20.2	$18.3	$20.6	$18.4	$21.0	$18.4
Low Income	$9.0	$9.6	$9.7	$9.7	$10.2	$10.0	$10.4	$10.2	$10.7	$10.5
Commercial / Industrial	$16.5	$18.6	$18.2	$18.7	$19.4	$19.0	$19.8	$19.1	$20.2	$19.1
Total "CCM" Program Budget	**$38.6**	**$46.5**	**$44.6**	**$46.6**	**$49.8**	**$47.3**	**$50.8**	**$47.7**	**$51.8**	**$48.0**
Gross m3 / $	**2016**		**2017**		**2018**		**2019**		**2020**	
Residential	0.93	1.31	1.06	1.30	1.14	1.28	1.17	1.28	1.19	1.27
Low Income	0.93	0.51	0.92	0.49	0.94	0.47	0.93	0.46	0.93	0.46
Commercial / Industrial	4.46	4.55	4.12	4.56	3.90	4.53	3.85	4.53	3.82	4.51
Total Gross m3 / $	**2.44**	**2.44**	**2.28**	**2.44**	**2.17**	**2.42**	**2.17**	**2.40**	**2.16**	**2.38**

TCQ Energy Probe 8

Ref: C Tab 1 Schedule 1 Page 157-159 Figures E-3, E-4 and E-5; I.T2.EGDI,

Energy Probe 38; I.T13.EGDI, Energy Probe 36

Topic Benchmarking 2016 and Union Gas B/T1/S3/p. 6) T2.EGDI.CCC.11

a) Please explain why Navigant did not include Union Gas in sample
b) Please explain why it is not appropriate to position Union on the Bar Charts
c) Please explain why it is not appropriate to take the 2016 plans and position EGD and Union on the chart, assuming all other utilities stay at 2012 levels,
d) Please provide the requested information in the format of Charts E-2 and E3 based on the information filed in this combined EGD/Union hearing

Enbridge provides the following response:

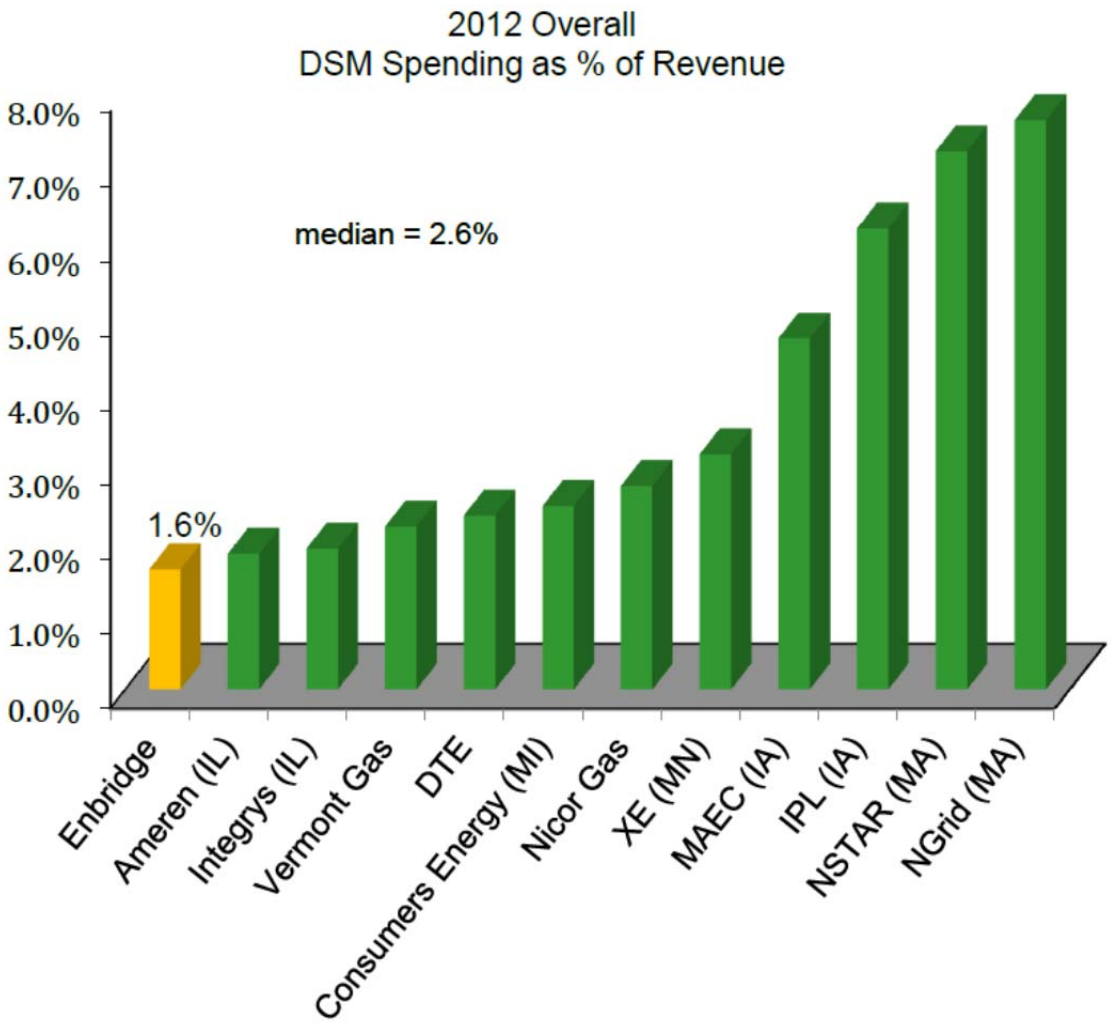
a) The Company contracted Navigant to complete a DSM Potential Study for Enbridge Gas Distribution which was to include a high-level benchmarking analysis. The Company's consultant in this matter included the utilities in this analysis for which it had data and which it found to be most appropriate.

b) In Enbridge's view, it would not be specifically inappropriate to include Union Gas in the bar charts noted (i.e. Figures E-3, E-4 and E-5 within Appendix E of Exhibit C, Tab 1, Schedule 1).

c & d) Energy Probe's original request as responded to in Exhibit I.T2.EGDI.EP.38 pointed Enbridge and its consultant to reference page 16 of Exhibit C, Tab 1, Schedule 1, resulting in a misunderstanding of the requested analysis. The Company has made best efforts to respond to the request below, albeit in an alternative format due to time constraints.

Witnesses: K. Mark
F. Oliver-Glasford
B. Ott
C. Welch

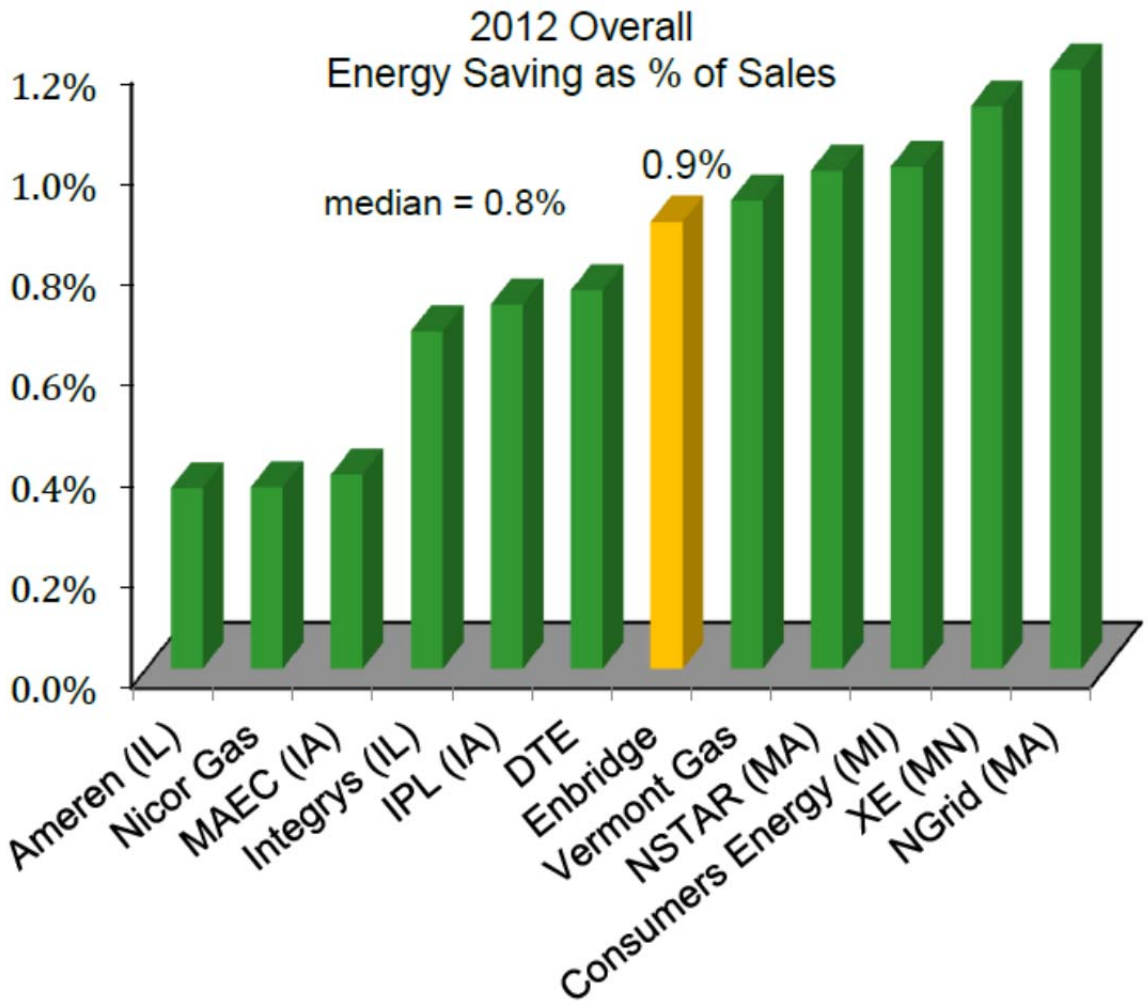
Figure E-2. 2012 DSM Spending as a Percentage of Revenue



Though Enbridge does not have a 2016 Revenue Requirement available, if compared to its 2014 Revenue Requirement as filed in Energy Probe Interrogatory 337 found at Exhibit I.T13.EGDI.EP.37 the proposed 2016 DSM Budget represents 2.7%. In Union's case based on the Revenue Requirement for 2013 filed in the same noted exhibit the proposed 2016 budget represents 3.5%. Please note that the macro-level of this analysis may not match the granularity of Navigant's original analysis as seen above.

Witnesses: K. Mark
F. Oliver-Glasford
B. Ott
C. Welch

Figure E-3. 2012 Gross Energy Savings as a Percentage of Gas Sales



Based on the Gross Annual m^3 extrapolated in response to Enbridge Probe 7 c) above, and subject to the caveats included above, Enbridge's 2016 Gross Annual m^3 saved in 2016 will represent 0.84% of anticipated throughput in 2016[3]. The Company does not have the necessary information to calculate Gross Annual m^3 as a percentage of throughput for Union Gas.

[3] As filed in Exhibit B, Tab 2, Schedule 4

Witnesses: K. Mark
F. Oliver-Glasford
B. Ott
C. Welch

UNDERTAKING JT1.39

UNDERTAKING

Technical Conference TR, page 176

To explain why each one of these figures was increased, the amount that it was and what the market barrier was that was identified that required increasing it.

RESPONSE

In Enbridge's pursuit of the Board's key principles and the desire to promote higher participation among Enbridge's customers in DSM programs and the pursuit of all cost effective DSM, Enbridge reviewed its prescriptive offers and rebates. The technologies where Enbridge chose to increase the incentive rebates are those that are typically marketed toward the typically hard to reach small Commercial and Industrial customers. For these customers, their decision criteria often relate to simple economics.

As a result, Enbridge chose to increase the incentive for these technologies such that the rebate would cover roughly 25-40% of the upfront costs for customers. The incentives for the other technologies such as Boilers, Demand Control Ventilation, and Condensing Make Up Air Units remain unchanged. These technologies are typically used in larger, more complex buildings.

Witnesses: P. Goldman
R. Kennedy
M. Lister

UNDERTAKING JT1.40

UNDERTAKING

Technical Conference TR, page 180

To provide figures for prior years, TEC plus consultative.

RESPONSE

Below is a breakdown of costs related to Technical Evaluation Committee intervenor members, the Consultative and the Enbridge Audit Committee, pursuant to the model provided by Union Gas in their response to interrogatory BOMA Interrogatory 17:

Intervenor Activities	2010	2011	2012	2013	2014
TEC*	n/a	n/a	$39,835	$58,564	$54,442
Audit Committee	$111,389**	$328,288**	$67,926	$59,447	$86,784
Consultative			$264,423	$56,856	$60,831
Total	**$111,389**	**$328,288**	**$372,184**	**$174,867**	**$202,057**

* These values reflect Enbridge's share only. These values do not include the independent members of the TEC.
** For 2010 and 2011, Audit Committee and Consultative activities were captured within the same financial reporting code.

Witnesses: F. Oliver-Glasford
R. Sigurdson

UNDERTAKING JT1.42

UNDERTAKING

Technical Conference TR, page 206

To provide the numbers for the boilers and fill in any blanks there are under the units column.

RESPONSE

Please see the table below, which includes the requested information related to boilers.

C & I Prescriptive Results 2008-2014	Units	Cumulative Cubic Metres (CCM)
2008	**24,522**	**24,299,630**
Commercial	**24,522**	**24,299,630**
Air Curtain	10	95,048
Front Load Washer	1,170	1,232,010
Furnace Replacements	109	814,433
Programmable thermostats	111	412,920
Restaurants - CKV	1	91,219
Restaurants - CKV2	11	2,400,574
Restaurants - CKV3	3	1,078,668
Restaurants - PRSV	627	2,638,730
Roof Top Unit	157	760,665
Showerheads - Condo	7,586	4,378,002
Showerheads - Rental	14,726	10,364,159
Small Commercial Boilers	0	0
Small Commercial General	0	0
Small Commercial Restaurants	0	0
Tankless Water Heaters	11	33,202

Witnesses: R. Kennedy
K. Mark
S. Moffat

2009	**44,046**	**60,832,308**
Commercial	**44,046**	**60,832,308**
Air Curtains (Double)	16	348,612
Air Curtains (Single)	24	228,114
Boiler - Hydronic Condensing**	2	476,520
Boiler - Hydronic High Efficiency**	69	30,246,062
Condo Bathroom Aerator 1.0	736	49,548
Condo Bathroom Aerator 1.5	791	19,364
Condo Kitchen Aerator 1.0	54	12,889
Condo Kitchen Aerator 1.5	1,150	112,608
Condo Showerhead 1.5 -- 2.0 - 2.5	0	0
Condo Showerhead 1.5 -- 2.6 - 3.0	532	179,071
Condo Showerhead 1.5 -- 3.1 - 3.5	0	0
Condo Showerhead 1.5 -- 3.6+	751	418,247
Condo Showerhead 2.0 -- 2.6 - 3.0	0	0
Condo Showerhead 2.0 -- 3.1 - 3.5	274	46,953
Condo Showerhead 2.0 -- 3.6+	0	0
Demand Control Kitchen Ventilation (0 - 4999 CFM)	9	615,728
Demand Control Kitchen Ventilation (10000-15000 CFM)	2	539,334
Demand Control Kitchen Ventilation (5000 - 9999 CFM)	18	2,946,159
Energy Recovery Ventilators (ERV)	37	4,196,606
Front Load Washer	453	524,710
Furnace Replacements	117	747,653
Heat Recovery Ventilator (HRV)	5	70,870
Infrared Heaters	144	4,139,796
Pre-Rinse Spray Nozzle (0.64 GPM) (Full Service)	28	176,439
Pre-Rinse Spray Nozzle (0.64 GPM) (Limited)	4	6,644
Pre-Rinse Spray Nozzle (0.64 GPM) (Other)	0	0
Pre-Rinse Spray Nozzle (1.24 GPM) (Full Service)	1,204	4,578,892
Pre-Rinse Spray Nozzle (1.24 GPM) (Limited)	297	242,220
Pre-Rinse Spray Nozzle (1.24 GPM) (Other)	428	367,429
Programmable thermostats (Multi-family, Food Service)	12	32,112
Programmable thermostats (Office, Information and Cultural, Educational Services)	129	326,628
Programmable thermostats (Retail, Hotels/Motels)	183	180,072
Programmable thermostats (Warehouse, Industrial, Recreation, Agriculture)	10	64,560
Rental Bathroom Aerator 1.0	10,024	337,408

Rental Bathroom Aerator 1.5	1,014	12,411
Rental Kitchen Aerator 1.0	10,154	2,209,713
Rental Kitchen Aerator 1.5	1,262	112,671
Rental Showerhead 1.5 -- 2.0 - 2.5	4,940	1,008,353
Rental Showerhead 1.5 -- 2.6 - 3.0	2,631	1,054,899
Rental Showerhead 1.5 -- 3.1 - 3.5	364	209,631
Rental Showerhead 1.5 -- 3.6+	1,736	1,151,645
Rental Showerhead 2.0 -- 2.6 - 3.0	1,532	44,673
Rental Showerhead 2.0 -- 3.1 - 3.5	342	69,809
Rental Showerhead 2.0 -- 3.6+	2,045	596,322
Roof Top Unit	564	2,049,435
Small Commercial Boilers	0	0
Small Commercial General	0	0
Small Commercial Restaurants	0	0
Tankless Water Heaters	30	81,497

2010	**39,395**	**116,702,898**
Commercial	**39,395**	**116,702,898**
Air Curtains (Double)	32	697,224
Air Curtains (Single)	7	66,533
Boiler - Hydronic High Efficiency**	144	51,504,081
Condensing Boiler	72	2,887,739
Condensing Unit Heater	11	191,970
Condo Bathroom Aerator 1.5	860	21,053
Condo Kitchen Aerator 1.5	601	58,850
Demand Control Kitchen Ventilation (0 - 4999 CFM)	22	1,505,114
Demand Control Kitchen Ventilation (10000-15000 CFM)	13	3,505,671
Demand Control Kitchen Ventilation (5000 - 9999 CFM)	33	5,401,292
Energy Efficient Washers	610	706,563
Energy Recovery Ventilators (ERV)	41	3,654,495
Heat Recovery Ventilator (HRV)	67	2,973,764
Infrared Heaters	723	17,548,908
Kitchen Ventilation	12	3,807,187
Multi-Res Showerheads	18,528	9,780,005
Multi-Res Showerheads Condo	976	412,145
Pre-Rinse Spray Nozzle (0.64 GPM)	356	573,756
Pre-Rinse Spray Nozzle (0.64 GPM)	383	2,413,436

Witnesses: R. Kennedy
K. Mark
S. Moffat

Pre-Rinse Spray Nozzle (1.24 GPM)	895	2,546,329
Pre-Rinse Spray Nozzle (1.24 GPM)	402	345,109
Programmable thermostats	1,990	1,289,520
Programmable thermostats	1,745	804,799
Rental Bathroom Aerator 1.0	5,568	119,267
Rental Kitchen Aerator 1.0	4,722	632,370
Rental Kitchen Aerator 1.5	253	22,588
Roof Top Unit	369	1,348,121
Small Commercial General	0	0
Small Commercial Restaurants	0	0
Tankless Water Heaters	116	315,121
Thermostat - Programmable	1	1,501,476
VFD	1	68,414

2011	**30,696**	**237,688,795**
Commercial	**30,696**	**237,688,795**
Air Curtains (Double)	44	958,683
Air Curtains 10x10	2	587,243
Air Curtains 8x10	1	134,762
Air Curtains 8x8	4	431,205
Boiler - Hydronic High Efficiency**	135	117,414,765
Condensing Boiler	59	4,239,446
Controls	1	487,016
Demand Control Kitchen Ventilation (0 - 4999 CFM)	40	2,736,570
Demand Control Kitchen Ventilation (10000-15000 CFM)	13	3,505,671
Demand Control Kitchen Ventilation (5000 - 9999 CFM)	44	7,201,722
Energy Recovery Ventilators (ERV)	31	3,465,634
Energy Star Dishwashers Under High temp	50	240,300
Energy Star Fryer	156	1,621,901
Energy Star Stationary Rack - HT	49	363,972
Energy Star Stationary Rack - LT	172	1,735,824
ES Rack Conveyor - Multi	23	1,245,146
ES Rack conveyor - Single	13	418,129
Front Load Washer	398	461,003
Heat Recovery Ventilator (HRV)	46	9,899,882
High Efficiency Under-Fired Broilers	1	16,099
Infrared Heaters	1,028	26,923,106

Multi-Res Showerheads Condo	494	208,606
Multi-Res Showerheads Rental	25,233	13,240,891
Operational Improvements	12	3,568,547
Ozone Laundry	65	12,103,207
Pre-Rinse Spray Nozzle (0.64 GPM) (Full Service)	1,781	3,813,459
Pre-Rinse Spray Nozzle (0.64 GPM) (Limited)	564	318,341
Pre-Rinse Spray Nozzle (0.64 GPM) (Other)	184	97,422
SC High Efficiency Boiler over 300 MBH (Space)	87	18,237,285
SC High Efficiency Boiler over 300 MBH (Water)	10	1,047,308
SC High Efficiency Boiler under 300 MBH (Space)	21	608,926
SC High Efficiency Boiler under 300 MBH (Water)	2	136,681
Small Commercial General	0	0
Tankless Water Heaters	81	220,041

2012	**22,213**	**105,321,509**
Commercial	**22,213**	**105,321,509**
Air Curtains (Double)	38	827,954
Air Curtains (Single)	8	76,038
Air Curtains 10x10	12	3,523,455
Air Curtains 8x10	0	0
Air Curtains 8x8	1	107,801
Boiler - Hydronic High Efficiency	86	46,598,375
Condensing Boiler	46	3,332,885
Demand Control Kitchen Ventilation (0 - 4999 CFM)	7	478,900
Demand Control Kitchen Ventilation (10000-15000 CFM)	5	1,348,335
Demand Control Kitchen Ventilation (5000 - 9999 CFM)	14	2,291,457
Energy Efficient Washers	28	32,432
Energy Recovery Ventilators (ERV)	24	2,216,073
Energy Star Dishwashers Under High temp	23	110,538
Energy Star Fryer	156	1,621,901
Energy Star Stationary Rack - HT	82	609,096
Energy Star Stationary Rack - LT	116	1,170,672
ES Rack conveyor - Single	59	1,897,664
Food Services	0	0
Heat Recovery Ventilator (HRV)	8	416,636
High Efficiency Under-Fired Broilers	1	16,099
Infrared Heaters	739	18,900,432

Ozone Laundry	72	8,277,171
SC High Efficiency Boiler under 300 MBH (Space)	3	142,548
Showerheads	20,682	11,316,898
Tankless Water Heaters	3	8,150

2013	**18,551**	**115,886,983**
Commercial	**18,551**	**115,886,983**
Air Curtain	53	2,710,421
Boiler - Hydronic Condensing	60	3,656,121
Boiler - Hydronic High Efficiency	68	28,110,786
Commercial Multi-Residential Showerheads	15,777	8,278,902
Condensing Tank Water Heater	18	215,977
Demand Control Kitchen Vent	61	8,439,876
Energy Recovery Ventilators (ERV)	55	12,763,079
Energy Star Convection Ovens	2	20,328
Energy Star Dishwasher	290	2,994,770
Energy Star Fryer	149	1,549,123
Energy Star Steam Cooker	1	25,792
Energy Star Under Fired Broilers	2	32,198
Heat Recovery Ventilator (HRV)	10	994,800
Infrared	401	13,312,954
Low Income Showerheads	1,349	738,287
Operational Improvements	9	1,307,420
Ozone Laundry	54	19,603,549
Run It Right	192	11,132,600

2014	**14,904**	**86,522,389**
Commercial	**14,904**	**86,522,389**
Air Curtain	56	6,908,477
Boiler - Hydronic Condensing	30	1,557,480
Boiler - Hydronic High Efficiency	78	20,064,159
Commercial Multi-Residential Showerheads	13,259	6,960,975
Condensing Make-up Air	4	941,242
Demand Control Kitchen Vent	98	15,417,602
Demand Control Ventilation	21	2,846,235
Energy Recovery Ventilators (ERV)	22	3,830,608
Energy Star Convection Ovens	3	24,394

Witnesses: R. Kennedy
K. Mark
S. Moffat

Energy Star Dishwasher	442	4,494,382
Energy Star Fryer	186	1,933,805
Energy Star Steam Cooker	1	25,792
Energy Star Under Fired Broilers	-	-
Heat Recovery Ventilator (HRV)	5	161,899
Infrared	682	16,033,966
Ozone Laundry	17	5,321,374
Grand Total	**194,327**	**747,254,513**

**** From 2008-2011, units for boilers refer to number of projects**

Witnesses: R. Kennedy
K. Mark
S. Moffat

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Enbridge to provide the money spent on Run It Right and CEM.

RESPONSE

The table below outlines the 2016 to 2020 Budget and CCM for the Run it Right and Comprehensive Energy Management Offers.

Budget Summary

	2016	2017	2018	2019	2020
Total Program Budget ($ Millions)	51.23	60.63	66.3	67.63	68.98
Total RiR and CEM Budget (Millions)	2.32	2.96	3.11	3.17	3.23
RiR and CEM % of Budget	4.5%	4.9%	4.7%	4.7%	4.7%

CCM Summary

	2016	2017	2018	2019	2020
Total CCM (Millions)	1001.74	1083.06	1,147.90	1165.77	1182.30
Total RiR and CEM CCM (Millions)	5.47	6.9	8.7	10.2	11.8
RiR & CEM % of CCM	0.5%	0.6%	0.8%	0.9%	1.0%

Witnesses: P. Goldman
R. Kennedy
M. Lister
D. Naden