

**GREEN ENERGY COALITION RESPONSE TO
CONSUMERS COUNCIL OF CANADA
INTERROGATORY #1**

QUESTION:

L.GEC.EGD.2

The evidence refers to five other jurisdictions in North America where DSM savings are greater than Enbridge has achieved to date:

- i) For each of the jurisdictions listed please provide more detail on the type of programs (residential, commercial and industrial), program designs and program budgets relative to EGD's historical experience. How do these compare to EGD's portfolios?;
- ii) To what extent could the results have been impacted by higher gas prices relative to today's prices?

RESPONSE:

- i) Please see the tables below which provide costs and savings at the program level for the most recent year for which data were available for EFG's testimony for the referenced energy efficiency portfolios.
- ii) Higher gas costs could potentially affect energy efficiency program results in two ways. The first is the effect that higher gas costs could theoretically have on consumer attitudes toward investing in efficiency. All other things being equal, the higher the price of any fuel, the easier it should be to convince customers to participate in efficiency programs. However, we are unaware of any empirical evidence to suggest that any such effects are substantial. That is because fuel prices are only one of many factors that affect a consumer's willingness to invest in efficiency – and often not the most important. Other factors include availability of information, attitudes of family and friends, availability of easily accessed energy efficiency products and services, availability and cost of financing, perceived reliability of efficient products and services, recognition of non-energy benefits (e.g. improved comfort, improved building durability, improved health and safety, improved business productivity) and so on.

It should be emphasized that the data on savings of leading utilities that we provide in our testimony support the notion that utilities can be quite successful in acquiring significant levels of savings – substantially higher than those being acquired by Enbridge – even in an environment of low gas prices. Of the four utilities for which we provided savings data for

2011 and 2012 (when gas prices were lower than in previous years), all four had their highest or second highest annual savings levels in one of those years. Indeed, Xcel Energy in Minnesota saved essentially as much in 2012 (1.09% of sales) as in 2007 (1.12% of sales) even though Minnesota gas prices fell by 28% for residential customers, 37% for commercial customers and 44% for industrial customers over that period.¹ Similarly, Interstate Power and Light doubled its savings between 2008 (0.71% of sales) and 2011 (1.42% of sales) despite the fact that natural gas prices declined by 20% for residential customers, 26% for commercial customers and 38% for industrial customers over the same period.²

The second way that gas costs affect program participation is through the impact that commodity costs have on gas avoided costs used in program level cost-effectiveness screening. Lower avoided costs could render some efficiency measures no longer cost-effective. If a utility was pursuing all cost-effective efficiency, the magnitude of savings that it could acquire would be reduced, at least somewhat. However, Enbridge has never attempted to capture all cost-effective savings – not even close. It has always been budget-constrained rather than cost-effectiveness constrained. Most of the efficiency measures that Enbridge currently promotes and has promoted in the past are very cost-effective. Indeed, the Company itself has estimated that its 2013-2014 DSM plan – which is being implemented in a time with low gas costs – has a very robust benefit-cost ratio of approximately 4 to 1. Finally, it must be emphasized that the benefit-cost ratio which Enbridge estimated for its current DSM plan does not include the potential benefits of deferring the need for infrastructure investments associated with its currently proposed pipeline project.

¹ Minnesota gas prices from: http://www.eia.gov/dnav/ng/ng_pri_sum_dcu_SMN_a.htm

² Iowa gas prices from http://www.eia.gov/dnav/ng/ng_pri_sum_dcu_SIA_a.htm.

Questar (UT)				
Year	Rate Class	Program	Savings (11 months actual + 1 month projection)	Cost (11 months actual + 1 month projection)
			m ³	USD\$
2009	Residential	Appliance Rebates	4,621,164	\$ 6,156,238
		Builder Rebates	1,479,620	\$ 2,502,438
		Home Energy Audits	230,529	\$ 692,441
		Weatherization Rebates	15,792,476	\$ 31,486,168
		Multi-family	1,656,091	\$ 4,137,150
		Market	-	\$ 1,186,448
		Low Income Weatherization	-	\$ 500,000
	Commercial & Industrial	Business Rebates	674,001	\$ 607,260
		Business Custom Rebates	33,131	\$ 97,378
	Savings/sales	0.98%	24,487,012	\$ 47,365,521

Interstate Power and Light (IA)				
Year	Rate Class	Program	Savings	Costs
			m ³	USD\$
2011	Residential	Prescriptive Rebate	3,479,783	\$ 3,455,400
		Home Energy Audits	1,474,483	\$ 2,507,576
		New Home Construction	166,566	\$ 190,179
		Home Performance with Energy Star	1,869	\$ 39,518
		LI weatherization	503,737	\$ 2,973,514
		LI MF and Institutional	-	\$ 22,825
		LI Education	92,237	\$ 10,873
		LI Targeted Residential	12,958	\$ 40,387
	Commercial & Industrial	Non-RES prescriptive rebates	3,090,217	\$ 2,516,193
		Custom Rebates	1,227,947	\$ 451,169
		Performance Contracting	516,375	\$ 294,869
		New Construction	35,274	\$ 163,841
		Agriculture	208,549	\$ 10,466
	Other	School based Energy Education	307,681	\$ 101,250
		Trees	18,213	\$ 176,142
		Other costs	-	\$ 530,533
	Savings/sales	1.42%	10,049,797	\$ 13,484,735

Vermont Gas Systems (VT)				
Year	Rate Class	Program	Savings	Costs
			m ³	USD\$
2012		Equipment rebates	384,092	\$ 614,193
		New Construction	333,234	\$ 228,504
		Retrofit	227,329	\$ 609,359
	Residential			
		Equipment rebates	145,181	\$ 108,103
		New Construction	711,408	\$ 176,750
		Retrofit	311,629	\$ 260,767
	Commercial & Industrial			
	Savings/sales	0.91%	2,112,873	\$ 1,997,676

Xcel				
Year	Rate Class	Program	Savings	Costs
			m ³	USD\$
2012	Residential	Showerheads	1,246,373	\$ 358,336
		Energy Star Homes	1,179,460	\$ 663,371
		Heating Systems	2,075,976	\$ 1,694,629
		Home Performance	282,292	\$ 354,681
		Insulation Rebates	830,934	\$ 428,337
		Home Energy Squad	724,321	\$ 908,842
		School Education Kits	477,906	\$ 447,994
		Water Heating Rebates	126,605	\$ 230,773
		LI Home Energy Squad	282,037	\$ 361,248
		LI Weatherization	523,355	\$ 1,115,770
		Energy Feedback Pilot	699,147	\$ 142,455
	Commercial & Industrial	Heating Efficiency	2,933,839	\$ 996,864
		Custom Efficiency	1,054,299	\$ 450,555
		Controls	690,623	\$ 228,018
		Design Assistance- New Construction	1,265,600	\$ 455,265
		New Construction	555,523	\$ 155,475
		Food Service	17,528	\$ 8,117
		Furnace Efficiency	64,025	\$ 47,274
		Process Efficiency	6,154,530	\$ 933,549
		Recommissioning	536,494	\$ 282,040
	Other	RES Education and Audits and Business Education		\$ 769,773
		Planning		\$ 950,905
		EM&V and R&D		\$ 344,011
		Misc Other		\$ 713,008
	Savings/sales	1.09%	21,720,866	\$ 13,041,290

National Grid (MA)				
Year	Rate Class	Program	Savings	Costs
			m ³	USD\$
2012	Residential	New Construction and major renovation	675,644	\$ 3,549,281
		Heating and Water Heating	6,237,963	\$ 17,582,574
		MassSAVE	-	\$ 4,573,792
		Weatherization	5,658,388	\$ 15,727,425
		MF Retrofit	678,263	\$ 2,505,996
		Behavior/Feedback	12,113,520	\$ 2,743,016
		Residential- other expenses	-	902,831
		LI Single Family retrofit	1,365,041	\$ 9,669,335
		LI MF retrofit	2,010,657	\$ 13,380,884
		LI - other expenses		\$ 155,343
	Commercial & Industrial	New Construction and major renovation	2,855,928	\$ 5,470,056
		Retrofit	10,752,888	\$ 8,464,382
		Direct Install	384,916	\$ 120,146
		C&I- other expenses		\$ 671,670
Savings/sales		1.29%	42,733,207	85,516,731

**GREEN ENERGY COALITION RESPONSE TO
CONSUMERS COUNCIL OF CANADA
INTERROGATORY #2**

QUESTION:

L.GEC.EGD.2

EGD is proposing an in-service date for Segment B of December 2014. Given DSM programs for 2014 have been, planned, agreed to by stakeholders and budgeted for, please explain, in detail, the process EGD is proposing to plan, review, approve (Board approval), and actually implement additional programs sufficient to defer Segment B.

RESPONSE:

The Board Decision in the EGDI 2012-14 DSM Update case explicitly held open the possibility of added DSM efforts in 2014 arising in the context of this proceeding:

This panel will not create any barriers, perceived or otherwise, to which these issues are explored in the EB-2012-0451 proceeding. The potential for DSM as an alternative to avoid or defer, all or part, of the GTA reinforcement project is being considered in EB-2012-0451, and not here. To that extent, the acceptance of 2013 and 2014 DSM budgets in this proceeding is acceptance of a conventional DSM program....

To the extent there are changes to the 2014 budget, those changes would be incremental; the budget will not be reduced....

THE BOARD ORDERS THAT:

- 1. The Board accepts the filed Settlement Agreement and its rate consequences on an interim basis (i.e.: the rates arising from this Decision will be interim).*
- 2. The proceeding will reconvene for a final determination of rates after the conclusion of the EB-2012-0451 proceeding.¹*

As part of any approval in this proceeding the Board should order EGD to develop a greatly expanded energy efficiency plan through an expedited, consultative process. EGD should then submit it to the Board for approval in a subsequent phase of the EB-2012-14 DSM Update proceeding or this docket.

¹ Decision & Order, EBRO-2012-0394, July 4, 2013.

As we noted in our testimony, most of the efficiency measures Enbridge would be expected to promote as part of an expanded effort are measures that they are already promoting. In many cases, many aspects of the programs promoting those measures would not need to change – participation could simply be increased by increasing financial incentive levels and/or marketing. In other words, the Company could hit the ground running. To be sure, there are some programs – particularly the residential retrofit program – that would likely need to be redesigned. However, experience in other jurisdictions suggest that is eminently doable in relatively compressed timeframes.

It should also be noted that the level of increase in efficiency savings that we suggested would be possible in 2014 (i.e. an increase on the order of a quarter of one percent of sales) is well within the range of increase accomplished from one year to the next by other utilities we cite in our testimony.

**GREEN ENERGY COALITION RESPONSE TO
CONSUMERS COUNCIL OF CANADA
INTERROGATORY #3**

QUESTION:

L.GEC.EGD.2

Pp. 9-10 – For each of the examples noted regarding residential retrofit programs please provide the cost of the programs and the specific program designs implemented over the periods referred to. Generally what whole house retrofit program design represents the most cost-effective approach from the perspective of EFG?

RESPONSE:

Specifics for each program referenced are as follows:

- **EcoENERGY:** According to NRCAN, the average federal rebate provided to Ontario participants ranged from about \$1000 to about \$1500, depending on the year. It is our understanding that the Provincial government matched the federal rebate starting in 2007. Please see Attachment A for details on the program.
- **United Kingdom:** Under the Carbon Emissions Reductions Program (CERT), each retail energy supplier in the UK was required to achieve certain levels of annual carbon emission reductions through investments in efficiency measures such as insulation upgrades. A significant portion of the savings were required to be achieved from low income customers. Data on the costs incurred by energy suppliers in meeting their targets are not readily available. For more detail on the program see the following report from the British regulator:
http://www.ofgem.gov.uk/Sustainability/Environment/EnergyEff/Documents1/CERT_FinalReport2013_300413.pdf
- **Questar:** The 2009 program cost was provided in response to CCC Interrogatory #1. Program design details are provided in response to EGD Interrogatory #13.
- **MassSAVE:** the National Grid gas component of statewide program costs is provided in response to CCC Interrogatory #1. Program design details are provided in response to EGD Interrogatory #13.
- **Efficiency Maine:** Total program expenditures over two years were \$11 million, of which \$8.4 million was spent on financial incentives. Details on the program can be found in the reference to the program evaluation provided in our testimony and provided as an attachment to GEC's response at M.GEC.EGD.13.

- **Vermont:** The participation levels referenced for Vermont are statewide values for the combination of efforts by Vermont Gas, Efficiency Vermont and the state's low income weatherization program. The 2012 budget for Vermont Gas' program was provided in response to CCC Interrogatory #1. Budget information for Efficiency Vermont and the state's low income weatherization program are not readily available. Information on each of programs can be found on their websites (http://www.efficiencyvermont.com/for_my_home/ways-to-save-and-rebates/energy_improvements_for_your_home/audits-heating-insulation-overview.aspx; http://www.vermontgas.com/efficiency_programs/res_programs.html#retrofit; and <http://dcf.vermont.gov/oeo/weatherization>).

As stated in GEC response to CCC Interrogatory #6, the most cost-effective program is the one that generates the greatest net benefits to society. In the context of whole house retrofits, that will likely be the program that generates the greatest levels of participation while treating as many cost-effective opportunities in each participating home as possible. See the following report for the conceptual elements to good program design:

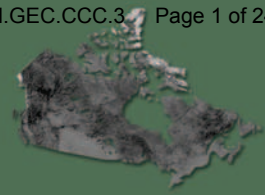
Neme, Chris et al., Residential Efficiency Retrofits: A Roadmap for the Future, published by the Regulatory Assistance Project, May 2011. It is also attached to our response in M.GEC.EGD.13.

Those concepts should be adapted to the Ontario context, particularly by leveraging the substantial infrastructure of home energy auditors and retrofit contractors developed through the federal/provincial EcoENERGY program.



Natural Resources
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ecoENERGY
an ecoACTION initiative

Grants for Residential Property Owners



Canada 

Call in the energy experts

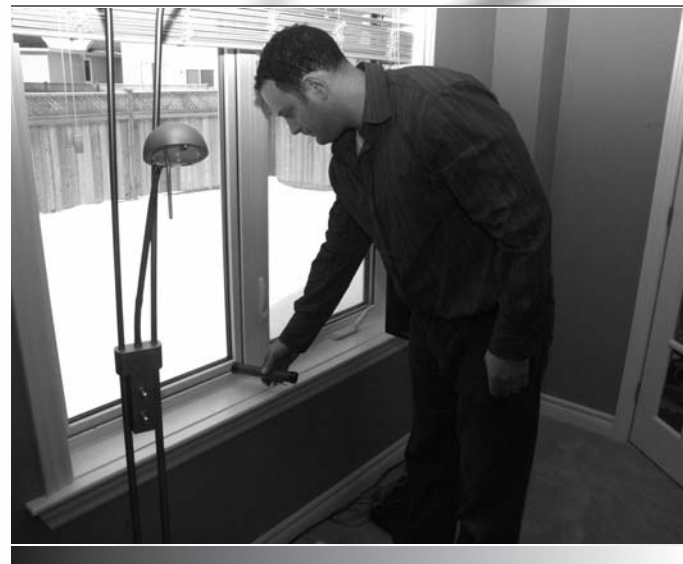
The residential energy assessment initiative has been developed by the Office of Energy Efficiency of Natural Resources Canada (NRCan) to help property owners make retrofit choices that improve the comfort and energy efficiency of their home.



Advisors will show you how to improve the comfort of your home and cut heating and cooling costs.

NRCan will ensure that only licensed and independent energy advisors will perform a residential energy assessment to identify how your home uses energy and where it is being wasted. Advisors will show you how to improve the comfort of your home and cut heating and cooling costs, while ensuring adequate ventilation for a healthy indoor environment for your family.

NRCan has contracted with organizations across Canada to make the residential energy assessment service widely available. The price of the service varies because local and provincial governments and/or private-sector partners in some regions may also contribute to the service's delivery.



Grants available for energy efficiency retrofits

The Government of Canada now provides grants to property owners who complete energy efficiency retrofits based on the energy advisors' recommendations. Owners of low-rise residential rental properties may also qualify for a grant.

The grant amount is based on carrying out energy efficiency retrofits such as increasing your attic insulation or replacing your gas furnace with a qualified ENERGY STAR® model. Only homes that have undergone a residential energy efficiency assessment by an NRCan-licensed advisor will be eligible for grants.



You can
make a difference

Today, 17 percent of all energy used in Canada goes toward running our homes. Every time we use energy from fossil fuels such as coal, oil and gas, we produce greenhouse gas emissions. By using less energy in our homes, we help reduce the production of the greenhouse gas emissions that contribute to climate change and harm our environment.

Nowadays, homes that are more than 25 years old have the potential to save an average of 35 percent of their energy use. Homes that are more than 50 years old could achieve even greater savings – an average of 38 percent.

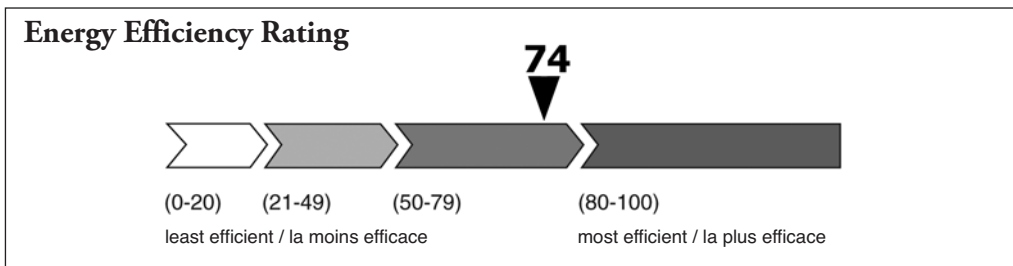
Since 1998, more than 270 000 property owners have used NRCan's energy efficiency program to help identify and solve home comfort problems and plan their energy efficiency retrofits. NRCan data show that if these property owners undertook all the retrofits recommended, they would reduce their greenhouse gas emissions by almost 4.6 tonnes per year, per house.

How does the residential energy assessment service work?

Only homes that have been evaluated using NRCan's residential energy assessment service will be eligible for a grant.

The service includes:

- a detailed energy evaluation of your home carried out by a licensed energy advisor
- a “blower door” test to find air leaks
- a report that shows where your energy dollars are being spent and what you can do to improve your home's energy efficiency
- an energy efficiency rating label that shows you how energy efficient your home is compared with others in your region



Your advisor will review your report with you, explain the details and answer your questions.

The residential energy assessment service is available across Canada through a network of licensed organizations. Simply call to make an appointment. Visit the ecoACTION Web site or call the toll-free line, both noted at the end of this brochure, to locate authorized energy advisors that serve your area.

The residential energy assessment service is not a pre-purchase home inspection – it deals specifically with energy efficiency. If you are concerned about the general condition of your home, energy advisors will recommend that you call a home inspector.

Visit the ecoACTION Web site or call our toll-free line to locate authorized energy advisors.



Your energy advisor will review your report with you, explain the details and answer your questions.

When should you use the residential energy assessment service?

Does your home have comfort problems such as drafts, cold spots and frosted windows?

Find the source of these problems and get information about repairing them.

Renovating or retrofitting?

Energy advisors use state-of-the-art evaluation practices and can advise on the best modern techniques and types of products.

Upgrading your heating and cooling system?

Energy efficiency improvements can make a difference to the size of the heating and cooling system that your home needs.

Selling your house?

After you've made energy efficiency upgrades and comfort improvements to your home, the revised energy efficiency rating label shows potential buyers how much you've improved your home's energy efficiency and how it compares to other homes in your area.



The benefits of the residential energy assessment service



Peace of mind

NRCan-licensed energy advisors provide unbiased advice on how to improve your home's energy use. The service is also quality-assured by the Government of Canada to ensure the integrity of the residential energy assessment service.

Understanding your options

The residential energy assessment service provides a thorough basement-to-attic assessment of your home's energy use. The energy advisor's report will help you to plan retrofits that will improve the energy efficiency of your home or multi-unit residential building.

Proof of upgrades

After you have completed your energy upgrades, our experts will provide you with a second (post-retrofit) evaluation and a new energy efficiency rating label that indicates your home's improved energy use.

Grants toward your retrofit expenses

Only homes that have had pre- and post-retrofit evaluations from an NRCan-licensed energy advisor are eligible for grants. The grant amount is based on each of the recommended retrofits you have completed and the relative impact the retrofits have on the energy efficiency of your home. For instance, replacing your gas furnace with an ENERGY STAR® qualified furnace will achieve a high level of energy savings and will therefore have a bigger grant value.

Taking action to alleviate climate change

The use of energy from fossil fuels is a major cause of greenhouse gas emissions that contribute to climate change. Canadians are being encouraged to use less energy. **Make your contribution to help protect our environment by using the residential energy assessment service.**



Your energy advisor can suggest the retrofits that are your best options.

Who is eligible for grants?

For full details on eligibility, consult your local NRCan-licensed service organization. You can view the complete eligibility criteria on-line by visiting the ecoACTION Web site at www.ecoaction.gc.ca/homes.

Here are the main criteria:

- **You can apply for a grant for a property that you own and live in or rent out.** This includes detached, semi-detached and row houses and low-rise residential buildings of three storeys or less (with a footprint of less than 600 square metres), as well as mobile homes on a permanent foundation.
- **Grants are available for work done within a specific time frame,** so it is important to talk to your local service organization about the eligibility of your house as soon as you are ready to plan and undertake your energy efficiency retrofits. You have 18 months from the date of your pre-retrofit evaluation to complete the work and qualify for a grant.
- **Only homes that have undergone a pre- and post-retrofit residential energy assessment service by an NRCan-licensed advisor will be eligible. You will be able to apply only once per property.**
- **Homeowners must carry out specific improvements in order to qualify for a grant.** NRCan-licensed energy advisors will be able to tell you which retrofits have the greatest impact on your home's efficiency. The greater the improvement, the more the grant will be.

It is you – the property owner – who decides what retrofits recommended by your energy advisor you wish to undertake. You are responsible for choosing a contractor and for ensuring that the work is performed properly. It is important that you get a detailed written contract between you and your contractor in order to prevent problems later on. The residential energy assessment service does not assess the quality of the work performed – it evaluates only the retrofit's impact on the energy efficiency of your home.



It is you – the property owner – who decides what retrofits (recommended by your energy advisor) you wish to undertake.

How do you apply for a grant?

It's easy. Your energy advisor will apply for the grant on your behalf after you have completed the energy efficiency retrofits and your home has been re-assessed. Your advisor will prepare the paperwork for you to sign and will be able to tell you exactly how much you can expect to receive. Your energy advisor will then forward your application to NRCan.

A table of retrofits has been established to show the payment for the completion of each recommended upgrade. The grant amount has been determined by the relative effectiveness of that particular upgrade in reducing energy or water use, and not directly on the cost of the upgrade, which will vary depending on location, local pricing and labour costs, size of house, etc. Refer to the brochure *Retrofit Your Home and Qualify for a Grant!* for grant amounts related to retrofits.

A grant application must be submitted to NRCan no later than 18 months after the date of the pre-retrofit evaluation. You can expect to receive your cheque within 90 days of your follow-up evaluation.



Your energy advisor will apply for the grant on your behalf.

Schedule your evaluation today!

The residential energy assessment service is offered in cooperation with professional service organizations across Canada. Call the service organization in your area today to find out the cost of the evaluation and schedule an appointment. For the name of a service organization in your region, visit the ecoACTION Web site at www.ecoaction.gc.ca/homes or call our toll-free line.

In preparation for an energy assessment, you should ensure that the energy advisor has access to your attic, crawl space or any other hard to reach areas. The advisor will need to take photos of your house (outside and inside). You will be asked to sign a homeowner release form permitting the advisor to take the photos, to release assessment data to NRCan and to allow NRCan to carry out quality assurance measures if the need arises. A responsible person who can make household decisions should be there when the advisor does his or her assessment.



Privacy

Personal information is required to process the grant application. Any personal information that owners provide is protected under the federal *Privacy Act*. The application form provides full details on why data is collected and how it is protected. For more information about the *Privacy Act* and NRCan's information holdings, visit www.privcom.gc.ca.

Web site:

www.ecoaction.gc.ca/homes

General enquiries:

1-800-O-Canada • 1-800-622-6232 (toll-free)
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Leading Canadians to Energy Efficiency at Home, at Work and on the Road

Canada 

NEXT PHASE OF
CANADA'S ECONOMIC**ACTION
PLAN****ecoENERGY**
an ecoACTION initiative*Effective June 6, 2011*

**Save NOW
with a home
retrofit grant -
Save later on
your energy
bills.**

**The Government of
Canada has renewed
the ecoENERGY Retrofit
– Homes program
from June 6, 2011, to
March 31, 2012, to help
homeowners make their
homes more energy-
efficient and reduce the
burden of high energy
costs.**

Grant table for ecoENERGY Retrofit – Homes

The ecoENERGY Retrofit – Homes program can help you invest in energy-efficient upgrades. Owners of most houses, four-season recreational properties and low-rise multi-unit residential buildings (MURBs) can register to be eligible.

The maximum federal grant is \$5,000 for applications since April 2007. If you participated before April 1, 2011, and have not received the maximum amount for your current property, you can submit one more application for additional improvements after June 6, 2011. Owners of multiple dwellings and MURBs could receive up to \$1,000,000.

Steps to apply for the grant

- 1. Registration:** First, register with Natural Resources Canada (NRCan) at oee.nrcan.gc.ca/register and receive a registration number. If you do not have Internet access, you can call 1 800 O-Canada (1-800-622-6232).
- 2. Pre-retrofit evaluation:** Hire a local service organization licensed by NRCan. They will send a certified energy advisor to perform a pre-retrofit energy evaluation from the attic to the foundation. If the property has already been evaluated under this program since April 2007, a new pre-retrofit evaluation is not required.
- 3. Retrofit with receipts:** Choose, purchase and install eligible measures described in this document, and keep your receipts for three years. The more upgrades you implement, the more money you can receive, and the more energy you can save.
- 4. Post-retrofit evaluation:** Complete your renovations and obtain a post-retrofit evaluation no later than March 31, 2012. You must **show all your receipts** to your energy advisor during the final evaluation to verify that eligible upgrades were purchased after June 6, 2011, and installed after a pre-retrofit evaluation.

Most homeowners receive a grant cheque from the Government of Canada within 90 days after their post-retrofit evaluation. NRCan also transfers data to complementary incentive programs in certain provinces and territories that issue cheques according to their own criteria and deadlines.

Refer to page 10 for key grant requirements, and to the back of this document for contact information.

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Eligible improvements

HEATING SYSTEMS (New or replacement)

ENERGY STAR® and other qualified equipment or systems marked with a check mark (✓) must appear on lists of models linked from the Web version of this document (oeenrncan.gc.ca/retrofit/table). New equipment must have efficiency ratings higher than the equipment replaced. If replacing two heating systems, both new systems must be in the same category below. For oil-fired upgrades, see "Important notes about oil-fired furnaces and boilers" on page 4. For boiler upgrades, see "Important notes about combined space and domestic water heating equipment" on page 6.

Replace your heating system with one of the following bulleted items:	Category	Grant amounts		
		Home		MURB
		1 st equipment	2 nd equipment	
<ul style="list-style-type: none"> a gas furnace that has a 92.0 percent annual fuel utilization efficiency (AFUE) or higher. ✓ 	1	\$375	\$190	Same as homes
<ul style="list-style-type: none"> a gas furnace that has a 92.0 percent AFUE or higher and a brushless DC motor. ✓ 	2	\$625	\$315	
<ul style="list-style-type: none"> a gas furnace or ENERGY STAR qualified oil furnace that has a 94.0 percent AFUE or higher and a brushless DC motor. ✓ 	3	\$650	\$350	
<ul style="list-style-type: none"> a gas furnace or ENERGY STAR qualified oil furnace that has a 94.0 percent AFUE or higher and a brushless DC motor when installing a condensing furnace for the first time. ✓ 	4	\$790	\$400	
<ul style="list-style-type: none"> an ENERGY STAR qualified condensing gas boiler that has a 90.0 percent AFUE or higher. ✓ 	5	\$750	\$375	
<ul style="list-style-type: none"> an ENERGY STAR qualified oil boiler that has an 85.0 percent AFUE or higher. ✓ 	6	\$750	\$375	
<ul style="list-style-type: none"> an ENERGY STAR qualified oil furnace that has an 85.0 percent AFUE or higher. ✓ 	7	\$375	\$190	
<ul style="list-style-type: none"> an ENERGY STAR qualified oil furnace that has an 85.0 percent AFUE or higher and a brushless DC motor. ✓ 	8	\$625	\$315	
Replace your heating system in a mobile home with a qualified zero-clearance gas furnace that has a 90.0 percent AFUE or higher. ✓		\$375	N/A	
Install a ground or water source earth-energy system (sometimes called a "geothermal system") that conforms to the CAN/CSA-C448 Standard from the Canadian Standards Association. A company qualified by the Canadian GeoExchange Coalition (CGC) must install the new system or a complete replacement of an existing system (new heat pump unit and new loop). The CGC must also certify the system after installation. Visit geo-exchange.ca for a list of qualified companies and certification requirements.		\$4,375	N/A	

Replace only the heat pump unit of an existing earth-energy system (ground or water source heat pump). A company qualified by the CGC must install the heat pump according to CAN/CSA-C448. The CGC must also certify the system after installation. Visit <i>geo-exchange.ca</i> for a list of qualified companies and certification requirements.	\$1,750	N/A	\$1,750 (per equipment replaced)
Replace your existing space and domestic water heating equipment with a qualified integrated mechanical system (IMS) that is CSA P.10-07 certified and that achieves the "premium" performance rating. An IMS provides space heating, domestic hot water and heat recovery ventilation functions. ✓	\$1,625	N/A	\$1,625 (per equipment replaced)
Replace your wood-burning system or appliance with one of the following: <ul style="list-style-type: none"> an indoor wood-burning appliance certified to either CAN/CSA-B415.1-M92 or the United States Environmental Protection Agency (EPA) 40 CFR Part 60 wood-burning appliance standard. Appliances exempt from EPA testing are not eligible unless they are B415.1-M92 certified. an indoor pellet-burning appliance (includes stoves, furnaces and boilers that burn wood, corn, grain or cherry pits). an indoor masonry heater. Gas fireplaces are not eligible.	\$375	\$190	\$375 (per equipment replaced)
Replace your solid fuel-fired outdoor boiler with an outdoor wood-burning appliance certified to either CAN/CSA-B415.1 or U.S. EPA Outdoor Wood-fired Hydronic Heater (OWHH Method 28) Program (Phase 1 and 2). The capacity of the new equipment must be equal to or smaller than the capacity of the boiler being replaced.	\$375	N/A	\$375 (per building)
Install a minimum of five electronic thermostats if electric baseboard heaters are the primary space heating system.	\$40 for 5	N/A	\$40 (per set of 5)
Install one of the following ENERGY STAR qualified air-source heat pumps (ASHP) that provide space heating and optional cooling. The ASHP must have an Air-Conditioning, Heating and Refrigeration Institute (AHRI) number meeting the requirements in Table 1 row 1: <ul style="list-style-type: none"> a central split-system ASHP that is a complete new system or replacement including the matched indoor coil and outdoor unit, as well as a furnace if required to meet ENERGY STAR. ✓ a single package ASHP. ✓ a ductless mini-split ASHP with at least one indoor head per floor (excluding the basement) that is a complete new system or replacement including indoor head and outdoor unit. ✓ See "Important notes about air-source heat pumps (ASHP) and central air-conditioners (A/C)" on page 5. When replacing a central A/C, see "Cooling Systems" for additional applicable grants.	\$500	N/A	\$500 (per equipment replaced or installed)

N/A = Not applicable

Important notes about oil-fired furnaces and boilers

Unlike gas-fired equipment, installers can configure oil-fired furnaces and boilers on-site to meet the heating requirements of the home. The nozzle size (which affects the heating capacity), venting arrangement (side wall or chimney) and burner model are three important components that can change the AFUE and ENERGY STAR qualification. Before purchasing a new oil-fired furnace or boiler, ask your installer to verify with the manufacturer that the AFUE is based on your specific configuration (nozzle, venting and burner) and meets the grant eligibility requirements. Once installed, ask the installer to provide your furnace or boiler specifications (brand name, model number, nozzle rating in U.S. gallons per hour, heating capacity with installed nozzle, burner model name, venting arrangement and AFUE) with your invoice.

Important notes about air-source heat pumps (ASHP) and central air-conditioners (A/C)

When selecting a new ENERGY STAR qualified ASHP or central A/C, the complete system must meet the requirements in Table 1 below. The system is composed of a matched outdoor unit (condenser coil), indoor unit (evaporator coil or head in the case of ductless mini-splits) and sometimes a specific furnace. The installer must supply an invoice with all makes and model numbers including the AHRI reference number. When the AHRI reference number includes a furnace model, that furnace must be present at the time of the post-retrofit evaluation or otherwise the ASHP or A/C will not qualify for a grant. For ductless mini-split ASHP, at least one outdoor unit combined with one or more heads must meet the 12,000 BTU/hr requirements.

Table 1: Minimum requirements for air-source heat pumps and air conditioners

	Type	Seasonal Energy Efficiency Ratio (SEER)	Energy Efficiency Ratio (EER)	Heating Seasonal Performance Factor (HSPF) for Region V (Canada)	Heating capacity (BTU/hr)
1	Air-Source Heat Pumps	14.5	12.0	7.1	12,000
2	Air Conditioners	14.5	12.0	N/A	N/A

COOLING SYSTEMS (Replacement only) ENERGY STAR and other qualified equipment or systems marked with a check mark (✓) must appear on the list of models linked from the Web version of this document (oe.nrcan.gc.ca/retrofit/table). The newly installed equipment must have efficiency ratings higher than the equipment being replaced. See "Important notes about air-source heat pumps (ASHP) and central air-conditioners (A/C)".	Grant amounts	
	Home	MURB
Replace your central air-conditioning system with one of the following ENERGY STAR qualified A/C systems: <ul style="list-style-type: none"> a central split-system A/C that has an AHRI number meeting the requirements in Table 1 row 2. ✓ a ductless mini-split that has an AHRI number meeting the requirements in Table 1 row 2 with at least one indoor head per floor excluding the basement. ✓ an ASHP that meets the requirements of the "Heating Systems" section of this document that also provides cooling (such a system would be eligible for both a space heating and cooling grant). ✓ 	\$250 (one grant only)	\$250 (per building)
Replace your window A/C unit with one of the following: <ul style="list-style-type: none"> an ENERGY STAR qualified ductless mini-split that has an AHRI number meeting the requirements in Table 1 row 2 with less than one indoor head per floor. ✓ an ENERGY STAR qualified window A/C unit. ✓ 	\$25 (per unit replaced; maximum of 5 units)	\$25 (maximum of 2 units per dwelling unit)

VENTILATION SYSTEMS (New or replacement) If replacing a heat-recovery ventilator (HRV) or energy-recovery ventilator (ERV), the new equipment must have a higher efficiency rating than the original equipment.	Grant amounts	
	Home	MURB
Install an HRV or ERV that is certified by the Home Ventilating Institute (HVI) and listed in Section 3 of their product directory. Go to hvi.org , click "Consumers" and "Certified Products Directory." Systems listed in other sections of the HVI directory are not eligible. ✓	\$375	\$375 (per equipment replaced or installed)

Important notes about combined space and domestic water heating equipment

Some manufacturers market their equipment as “combi” or “combo” systems (e.g., boilers that supply space heating and domestic hot water or instantaneous domestic water heaters that also provide space heating). Such equipment is considered as either a boiler, an instantaneous water heater or a condensing gas storage-type water heater. Eligibility is based on the NRCAN list of qualified equipment in which the model number is found (e.g., if the equipment model number appears on the list of domestic water heaters, it will not qualify as a boiler). A combi or combo system cannot qualify for both the space heating boiler grant and the domestic hot water grant, or as an integrated mechanical system (IMS).

DOMESTIC HOT WATER EQUIPMENT (New or replacement) ENERGY STAR and other qualified equipment or systems marked with a check mark (✓) must appear on the list of models linked from the Web version of this document (oeenrcan.gc.ca/retrofit/table). Newly installed equipment must have a higher efficiency rating than the equipment being replaced.	Grant amounts	
	Home	MURB
Install a solar domestic hot water system that provides a minimum energy contribution of six gigajoules per year (GJ/yr) and is CAN/CSA F379 Standard certified. Systems must appear on CanmetENERGY’s “Performance Directory of Solar Domestic Hot Water Systems” and not be identified as “seasonal operation”. ✓	\$1,250	Refer to the program Web site for instructions
Replace your domestic water heater with an ENERGY STAR and “ecoENERGY” qualified instantaneous, gas-fired water heater that has an energy factor (EF) of 0.82 or higher. ✓	\$315	\$315 (per equipment replaced)
Replace your domestic water heater with an ENERGY STAR and “ecoENERGY” qualified instantaneous, condensing gas-fired water heater that has an EF of 0.90 or higher. ✓	\$375	\$375 (per equipment replaced)
Replace your domestic water heater with a condensing gas storage-type water heater that has a minimum thermal efficiency (TE) of 94 percent. ✓	\$375	\$375 (per equipment replaced)
Install a drain-water heat recovery (DWHR) system. Grants are based on the efficiency of the system as follows:		
• efficiency between 30.0 and 41.9 percent ✓	\$95	\$95 (per equipment installed)
• efficiency of 42.0 percent or higher ✓	\$165	\$165 (per equipment installed)

Important notes about building envelopes and insulation

- When adding insulation to the building envelope, pay special attention to the type and placement of vapour barriers, and check your local building code.
- Visit oeenrcan.gc.ca/retrofit/health for information on health and safety considerations when choosing and installing insulation.
- Insulation R-values equal the RSI value multiplied by 5.678.
- Insulation products must meet the applicable Canadian thermal insulation standard. “System values” or values of materials not tested to Canadian thermal insulation standards cannot be used for determining the amount of insulation added. Only Canadian thermal resistivity values are accepted.

Apply the appropriate MURB multiplier to the grant level for insulation and air sealing grants. Visit the Frequently Asked Questions (FAQ) section of the Web site (oeenrcan.gc.ca/retrofit/questions#murb) for a detailed description of eligible MURBs and dwelling units.

Table 2: MURB multiplier for insulation and air sealing credits

Number of dwelling units per MURB	2–3	4–6	7–9	10–12	13–16	17+
MURB Multiplier	1.0	1.5	2.0	2.5	3.0	4.0

CEILING INSULATION

Insulate a minimum of 20 percent of the total ceiling area. When the roof consists of more than one type (i.e., attic, cathedral ceiling and flat roof), all applicable grants are pro-rated based on the ceiling area and roof type. The grant for any combination of attic, cathedral ceiling and flat roof cannot exceed \$750. Grants listed reflect 100 percent of the ceiling area being of one roof type. You must add additional insulation in the same location (e.g., attic floor vs. attic ceiling) as the insulation present at the time of the pre-retrofit evaluation.

Increase the insulation value of the following:	Insulation level at the time of pre-retrofit evaluation		
	RSI 2.11 (R-12) and less	Greater than RSI 2.11 (R-12) and up to RSI 4.40 (R-25)	Greater than RSI 4.40 (R-25) and up to RSI 6.16 (R-35)
<ul style="list-style-type: none"> your attic to achieve a total minimum insulation value of RSI 7.04 (R-40). 	\$500	\$250	N/A
<ul style="list-style-type: none"> your attic to achieve a total minimum insulation value of RSI 8.81 (R-50). 	\$750	\$375	\$125
<ul style="list-style-type: none"> your flat roof and/or cathedral ceiling to achieve a total minimum insulation value of RSI 4.93 (R-28). 	\$750	\$250	N/A
<p>Insulate your uninsulated flat roof or cathedral ceiling to increase its insulation value by a minimum of RSI 1.76 (R-10) to qualify for a grant of \$500.</p>			

EXTERIOR WALL INSULATION

Insulate a minimum of 20 percent of the total exterior wall area.

Minimum additional insulation

Percent area	RSI 0.67 (R-3.8) to RSI 1.59 (R-9)	Greater than RSI 1.59 (R-9)
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The grant is based on the percentage of wall area that you insulate and does not include walls between individual units. For a semi-detached or end unit row house, grants are 75 percent of the amounts shown. For a middle unit row house, grants are 50 percent of the amounts shown.

See "Important notes about building envelopes and insulation" on page 6.

20%	\$225	\$375
40%	\$450	\$750
60%	\$675	\$1,125
80%	\$900	\$1,500
100%	\$1,125	\$1,875

EXPOSED FLOOR INSULATION This includes overhangs and floors above an unheated space such as an unheated garage, but excludes crawl spaces.	Minimum additional insulation
	RSI 3.5 (R-20)
Insulate your entire exposed floor and increase its insulation value by a minimum of RSI 3.52 (R-20). Insulate a minimum floor area of 14 square metres (150 square feet).	\$190

BASEMENT INSULATION Insulate a minimum of 20 percent of the wall area of the foundation, including basement and crawl space walls.	Minimum additional insulation		
	Percent area	RSI 1.76 (R-10) to RSI 4.05 (R-23)	Greater than RSI 4.05 (R-23)
<p>The grant is based on the percentage of wall area that you insulate and does not include walls between individual units. For a semi-detached or end unit row house, grants are 75 percent of the amounts shown. For a middle unit row house, grants are 50 percent of the amounts shown. When both a basement and crawl space are present, all applicable grants are pro-rated to a maximum of \$1,250 based on the total wall area.</p> <p>See "Important notes about building envelopes and insulation" on page 6.</p>	20%	\$125	\$250
	40%	\$250	\$500
	60%	\$375	\$750
	80%	\$500	\$1,000
	100%	\$625	\$1,250
Seal and insulate your entire basement header area to increase its insulation value by a minimum of RSI 3.52 (R-20) to qualify for a grant of \$125.			

CRAWL SPACE INSULATION When both a basement and crawl space are present, all applicable grants are pro-rated to a maximum of \$1,250 based on the total wall area.	Minimum additional insulation	
	RSI 1.76 (R-10) to RSI 4.05 (R-23)	Greater than RSI 4.05 (R-23)
Insulate 100 percent of your crawl space's total exterior wall area, including the header area. For a semi-detached or end unit row house, grants are 75 percent of the amounts shown. For a middle unit row house, grants are 50 percent of the amounts shown. If your house contains multiple foundations, the grant amounts shown will be pro-rated based on total exterior foundation wall area.	\$500	\$1,000
OR Insulate 100 percent of the floor above the crawl space to increase its insulation value by a minimum of RSI 4.23 (R-24).	N/A	\$250

AIR SEALING	Home	
Perform air sealing to improve the air-tightness of your home to achieve the air-change rate target indicated in your "Energy Efficiency Evaluation Report."	\$190	
BONUS: If you reach 10 or 20 percent better than the target included in your report, you can obtain an additional grant.	10%	\$120
	20%	\$240

WINDOWS/DOORS/SKYLIGHTS

Windows, doors and skylights must be ENERGY STAR qualified and installed into a pre-existing rough opening in a wall or roof.

Grant amounts are calculated per rough opening, not per number of windows, doors or skylights. A "rough opening" is defined as the structural framing in a wall or roof separating a heated from unheated space that creates an opening for the installation of a window, door or skylight. For example, a bay window with three window units installed into one rough opening is eligible for only one grant.

"ENERGY STAR qualified" means that the model meets or exceeds the ENERGY STAR levels established for the climate zone where the model is installed. Each qualified model comes with a temporary label showing the appropriate ENERGY STAR climate zones. Do not remove these labels until after your post-retrofit evaluation. Visit the FAQ (oe.nrcan.gc.ca/retrofit/questions#windows) for more information on eligible models or to determine your climate zone.

You can insert a qualifying window unit into the existing frame of an old window, but replacements of only the glass, sash or door without a frame are not eligible.

Replace your windows, doors or skylights with ENERGY STAR qualified models.	Grant amount	
	\$40 (per rough opening)	

WATER CONSERVATION	Grant amount	
	Home	MURB
	\$65 (per unit replaced, maximum of 4 units per home)	\$65 (per unit replaced, maximum of 2 units per dwelling unit)

Replace your toilet with a low-flush or dual-flush toilet that meets the Uniform North American Requirements (UNAR). To find eligible models, visit map-testing.com, click "MaP SEARCH" and select "Meets UNAR/ecoENERGY requirements." ✓

Other important information

- 1. Homeowner responsibility:** To ensure grant eligibility, program participants are solely responsible for registering, researching program criteria, choosing eligible products, keeping receipts and meeting deadlines. This document does not detail all program requirements. For additional program information or who to contact for specific questions, visit the FAQ (oee.nrcan.gc.ca/retrofit/questions) or call the number on the back page.
- 2. Receipts and photos:** Provide your energy advisor with receipts for ALL purchases and installations of eligible upgrades during your post-retrofit evaluation, and keep these receipts for at least three years. Provide photos of work that is difficult to verify, such as insulation of walls or cathedral ceilings.
- 3. Eligible properties:** Visit the FAQ (oee.nrcan.gc.ca/retrofit/questions#eligible) or call the number on the back page for a description of eligible property types or to help determine if your home had a previous energy evaluation.
- 4. New construction:** New construction is not eligible. Renovations that include an addition could reduce your grant amount for improvements implemented in the original portion of the house.
- 5. Service organizations and energy advisors:** Visit NRCan's list of licensed service organizations searchable by postal code (oee.nrcan.gc.ca/retrofit/search) or call the number on the back page. Note that service organizations and their certified energy advisors are not contracted or paid by NRCan, nor do they act as agents of the Government of Canada. If you have questions or concerns about the quality of the evaluations or customer service you received, contact the head office of the organization you decided to hire. You can use a different service organization for your post-retrofit evaluation. Each service organization sets its own prices.
- 6. Eligible measures:** Refer to the Web version of this document (oee.nrcan.gc.ca/retrofit/table) for links to lists of equipment indicated with a checkmark (✓). Equipment must be new and not previously installed in another home or building.
- 7. Product liability:** NRCan does not endorse any specific product, retailer or contractor and accepts no liability in the selection of materials, products, performance or workmanship.
- 8. Grants per upgrade:** You can only receive one grant per eligible upgrade unless otherwise specified.
- 9. Health and safety:** All upgrades or renovations must meet local codes and by-laws. Before undertaking upgrades or renovations, find out about the appropriate products and installation techniques to ensure that your home's structure, its indoor air quality and your safety are not compromised.
- 10. ENERGY STAR equipment:** Information on ENERGY STAR is available at energystar.nrcan.gc.ca. The ENERGY STAR name and symbol are administered and promoted in Canada by NRCan and are registered in Canada by the U.S. EPA.
- 11. Final evaluations:** Book your post-retrofit evaluation as early as possible. It may be increasingly difficult to find available appointments as the program nears its end date of March 31, 2012. As the program's financial authority ends on that date, extensions or exceptions are not possible.
- 12. Program changes:** NRCan reserves the right to revise the information in this document without advance notice, including any grant amounts and eligibility requirements in effect at the time of the post-retrofit evaluation. The payment of grants is subject to the availability of funds.

[illegible]

For more information on the program, how to register or how to book an appointment with an energy advisor, visit ***ecoaction.gc.ca/homes*** or call 1 800 O-Canada (1-800-622-6232). TTY: 1-800-926-9105. After receiving an evaluation, always quote your file number when making enquiries.

Natural Resources Canada's Office of Energy Efficiency
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**GREEN ENERGY COALITION RESPONSE TO
CONSUMERS COUNCIL OF CANADA
INTERROGATORY #4**

QUESTION:

L.GEC.EGD.2

P. 11 - EFG is proposing to ramp up its programs with a focus on residential whole house retrofits. The evidence states that the ramp up EFG is proposing would result in roughly 23,000 peak hour m3 savings in 2014. Please explain how this could be accomplished in 2014 given the fact that whole home retrofits take time. How would GEC ensure that there would be sufficient take up of the programs that would allow for the deferral of Segment B?

RESPONSE:

In our testimony we estimate that Enbridge's current DSM plan for 2013 would achieve annual gas savings as a percent of sales of approximately 0.52% (Table 2). The level of savings for Enbridge's current 2014 plan would be approximately the same.¹ Our testimony also suggests that a ramped up effort could achieve savings on the order of 0.79% of sales (Table 5) – or an increase over current plans of a little more than one-quarter of one percent of sales. Several of the leading utilities whose efforts we referenced in our testimony had annual ramp ups of greater than that amount – in a couple of cases more than twice that amount (Table 3). In short, other jurisdictions have demonstrated that our estimates of ramp up are achievable.

With respect to whole house retrofits, our testimony suggests it would be possible to ramp up to retrofitting approximately 0.5% of the eligible housing stock in 2014, or a little more than a doubling of the roughly 0.2% the Company was already planning to retrofit next year. As our testimony states, several programs – including the EcoENERGY program in Ontario – achieved ramp up rates that were comparable to or greater than that.

¹ Exh. I.A4.EGD.GEC.34, p. 4 of 5.

**GREEN ENERGY COALITION RESPONSE TO
CONSUMERS COUNCIL OF CANADA
INTERROGATORY #5**

QUESTION:

L.GEC.EGD.2

Please explain your understanding as to why EGD no longer pursues residential programs focused on furnaces or water heaters.

RESPONSE:

Enbridge stopped promoting the sale of efficient furnaces once a new federal minimum efficiency standard of 90% AFUE went into effect starting 2010. The Company has not had a significant program promoting the rental of efficient water heaters since new minimum efficiency standard for those products went into effect starting 2004.

We cannot say whether Enbridge has assessed the cost-effectiveness of, or the potential for, developing programs to capture additional increments of savings over and above the current minimum product efficiency standards (as other jurisdictions have done).

**GREEN ENERGY COALITION RESPONSE TO
CONSUMERS COUNCIL OF CANADA
INTERROGATORY #6**

QUESTION:

L.GEC.EGD.2

What are the most cost-effective residential DSM measures? What are the most cost-effective residential DSM programs?

RESPONSE:

In the context of demand-side planning the term “cost-effectiveness” typically refers to whether or not a measure or program provides the needed benefits at a lower cost than the alternative - in this case purchasing more gas, building greater transmission capacity, etc. At the program level what matters most is the magnitude of *net benefits* achieved. Consider two different hypothetical DSM programs, one with a benefit-cost ratio of 2.0 and net benefits of \$100,000,000 and another with a benefit cost-ratio of 4.0 and net benefits of \$20,000,000. Ontarians would be better off – \$80,000,000 better off – under the first program, even though it has a lower benefit-cost ratio. Put another way, the scale of a program can matter more than anything else when answering the question of which program is most cost-effective.

Ultimately, we would expect that the greatest cost-effective savings potential in the residential sector would be associated with a large scale residential retrofit program emphasizing building envelope improvements. There are a variety of reasons for this conclusion, including the fact residential gas usage is dominated by space heating, that only a modest portion of the existing housing stock has participated in retrofit programs to date, the reality that minimum equipment efficiency standards for furnaces do not leave a lot of room for additional heating equipment efficiency savings, and the fact that Enbridge has largely exhausted the savings potential from low flow showerheads.

**GREEN ENERGY COALITION RESPONSE TO
CONSUMERS COUNCIL OF CANADA
INTERROGATORY #7**

QUESTION:

L.GEC.EGD.2

What are EFG's specific proposals regarding program design and budgets that it would consider sufficient to defer Segment B? Would the increased budgets also include increases in the current shareholder incentive mechanisms?

RESPONSE:

EFG did not develop specific proposals regarding program designs and budgets. That level of effort was outside our scope of work for this proceeding. Rather, we focused our evidence on a "top-down" assessment of the level of additional savings that Enbridge could achieve in the GTA, both in aggregate and for the residential sector. That high level assessment demonstrated that Enbridge has significant additional, untapped, cost-effective efficiency potential (over and above what it is currently capturing annually) that it could acquire in the GTA. See also GEC response to Board Staff IR M.GEC.STAFF.2.

With respect to increases in shareholder incentives, it is worth first noting that EGD's shareholders stand to gain substantial profits/incentives should the Company receive approval to construct its entire proposed project. In general, Board policies regarding shareholder incentives should not favor construction over efficiency. Otherwise, they would inadvertently create disincentives for utilities to pursue least-cost approaches to meeting reliability and other needs in system planning. However, in the current situation EGD needs to do dramatically more DSM, potentially at a greater cost, than it would have had to do had it done sufficient planning a decade ago when it first determined that this project would be needed. In that context, it would not be unreasonable for the Board to determine that a substantial reduction in incentives than might otherwise have been earned for pursuing additional DSM would be appropriate.

**GREEN ENERGY COALITION RESPONSE TO
CONSUMERS COUNCIL OF CANADA
INTERROGATORY #8**

QUESTION:

L.GEC.EGD.2

From EFG's perspective, if residential programs were ramped up and the overall DSM budgets increased in order to defer the GTA Project how should those costs be recovered from EGD's customer base?

RESPONSE:

To mitigate undue rate impacts EFG suggest that the Board carefully consider and compare the rate impacts both from the proposed capital project and from any alternative. In the case of the pipeline, it is our understanding that the costs will be amortized over many years, across the entire customer base, and it would be reasonable given the scale of required DSM investment to treat efficiency costs on a similar basis.

**GREEN ENERGY COALITION RESPONSE TO
CONSUMERS COUNCIL OF CANADA
INTERROGATORY #9**

QUESTION:

L.GEC.EGD.2

How do the rate impacts of EFG's specific proposals compare to the rate impacts of the proposed GTA Project?

RESPONSE:

GEC has not evaluated the annualized rate and bill effects of DSM, interruptible rates, or the proposed GTA Project. The near-term rate effects of interruptible rates and of curtailment arrangements with PEC are likely to be very small, especially if EGD pays for interruptions as they occur. The period of amortization of DSM would be one factor that could significantly affect such a comparison. DSM has typically been expensed in Ontario but in the circumstance where targeted DSM is being utilized to avoid specific infrastructure, the Board might choose to mitigate short-term revenue requirements effects by amortizing DSM over a longer period, up to the life of the DSM measures implemented.

Cost-effective DSM would reduce bills over the life of the measures, although cost-recovery patterns may result in higher bills in particular years. Segment B of the GTA project appears to increase consumer bills.

**GREEN ENERGY COALITION RESPONSE TO
CONSUMERS COUNCIL OF CANADA
INTERROGATORY #10**

QUESTION:

L.GEC.EGD.2

EGD has cited reasons other than customer growth as justification for its proposed GTA project. These include eliminating distribution system constraints, diversifying gas supply entry points into EGD's distribution system, reducing operational risks and providing improved reliability, risk mitigation and cost savings for upstream gas supply (Ex. A/T2/S1/pp. 1-2). How will EFG's proposed ramp up of EGD's DSM programs address these other considerations?

RESPONSE:

Please refer to GEC response to CCC IR #12 to GEC Witness Chernick.

**GREEN ENERGY COALITION RESPONSE TO
CONSUMERS COUNCIL OF CANADA
INTERROGATORY #11**

QUESTION:

L.GEC.EGD.2

P. 14 - The evidence refers to expanding DSM in order to defer of the GTA Project. From EFG's perspective, for how long could the project be deferred?

RESPONSE:

The answer to that question depends on a number of variables, including the underlying load growth in the relevant areas, the amount of load that accepts interruptible rates, and the amount of energy-efficiency potential confirmed by an aggressive targeted DSM program. GEC has not conducted this complicated analysis, and does not have the detailed data on loads within the area affecting the justification for Segment B that would be needed for such an analysis. Depending on the various inputs, a sustained DSM program, augmented by appropriate interruptible-load efforts, could displace Segment B for the foreseeable future. In the long term, changes in demand, supply and prices may result in Segment B no longer being the preferred infrastructure option.

**GREEN ENERGY COALITION RESPONSE TO
CONSUMERS COUNCIL OF CANADA
INTERROGATORY #12**

QUESTION:

L.GEC.EGD.1

P. 14 – The evidence states that Segment B2 and possibly Segment B1 and the Buttonville are potentially avoidable by load reductions. EGD has cited reasons other than customer growth as justification for its proposed GTA project. These include eliminating distribution system constraints, diversifying gas supply entry points into EGD's distribution system, reducing operational risks and providing improved reliability, risk mitigation and cost savings for upstream gas supply (Ex. A/T2/S1/pp. 1-2). How would these other considerations be addressed through load reductions? Are these legitimate considerations from Mr. Chernick's perspective?

RESPONSE:

The question appears to refer to Exhibit A.3.1, pp. 1–2. Assuming the first question is requesting information on how these "other considerations" would be affected through load reductions, Mr. Chernick would reply that most of the considerations are not precisely defined in the question or the cited portion of the Application. With that caveat, Mr. Chernick would make the following observations:

- Distribution system constraints would be relieved by reducing load.
- Reduced load would not diversify gas supply entry points into EGD's distribution system by adding any new entry points, but would increase the percentage of load that could be served from any one point and conversely decrease the percentage of load that must be served from any one point.
- Reducing load would allow for lower pressures, which would reduce some operational risks, and would allow for greater backup between sections of the GTA, reducing other operational risks. In addition, it appears that EGD could reduce operating pressure on the Don Valley line with current load and facilities, as discussed in response to GEC.EGD.1.
- Both lower pressures and increased reserve capacity should improve reliability.
- Energy-efficiency eliminates gas price risk for the conserved quantities, and interruptible and curtailable load arrangements can mitigate the effect of gas price spikes.
- Risk mitigation can also be read to include the benefits of load reductions in reducing operational risks and improve reliability.

- Lower loads would allow EGD and transportation customers greater flexibility in selecting upstream gas supplies, which would tend to reduce costs.

In the Application, EGD presented several of these “other considerations” as benefits of the Parkway facilities and Segment A. The elimination of part or all of Segment B would not eliminate the “diversification of gas supply entry points into EGD’s distribution system, reducing operational risks and providing improved reliability, risk mitigation and cost savings for upstream gas supply” from those facilities.

In response to the second part of the question, Mr. Chernick considers all of the listed factors to be legitimate considerations in planning, including DSM planning. It is not always feasible to quantify all those benefits of DSM.

**GREEN ENERGY COALITION RESPONSE TO
CONSUMERS COUNCIL OF CANADA
INTERROGATORY #13**

QUESTION:

L.GEC.EGD.1

P. 22 – The evidence proposes options for load reductions concentrated in the area served from the Don Valley line. Has Mr. Chernick evaluated the actual potential for load reductions in that geographical area? Specifically, has Mr. Chernick evaluated the DSM potential? If not, why not? If so, please provide that analysis.

RESPONSE:

No. Enbridge has not been clear as to the geographical area in which load reductions would reduce peak loads on the Don Valley line. In the Technical Conference (June 14, 2013, pp. 105–107), Mr. Fernandes indicated that load reductions in both the peach region of Exhibit A.3.3 Attachment Figure 3 (the area directly served from Victoria Square) and also from “other parts of the GTA.” Nor has Enbridge provided data on the composition of peak load for subregions of the GTA. In any case, Energy Futures Group, not Mr. Chernick, would estimate DSM potential for GEC.

**GREEN ENERGY COALITION RESPONSE TO
CONSUMERS COUNCIL OF CANADA
INTERROGATORY #14**

QUESTION:

L.GEC.EGD.1

P. 23 – Mr. Chernick discusses curtailing supply to the Portlands Energy Centre as a means to achieve system load reduction or offering PEC an interruptible delivery tariff. Has Mr. Chernick or GEC approached PEC to determine whether these options are possible? If not, why not? If so, please provide a synopsis of those discussions.

RESPONSE:

No. Mr. Chernick is not in a position to have a meaningful discussion with PEC on rate design. That would be the responsibility of EGD.