

Enbridge Gas Distribution Inc.



**Novitherm™ Heat Reflector Panel  
DSM Program**

**A.E.S.P Technology Symposium**

**Long Beach, CA**

**September 18, 2008**

**Paul Abate**

# Agenda



- **Enbridge Gas Overview**
- **Residential Novitherm™ Panel Program**
  - » Background
  - » Program Description
  - » Assumptions
  - » Market Target
  - » Promotions
- **Evaluation**
- **Research**
- **Questions**



# Enbridge Gas Distribution Inc.



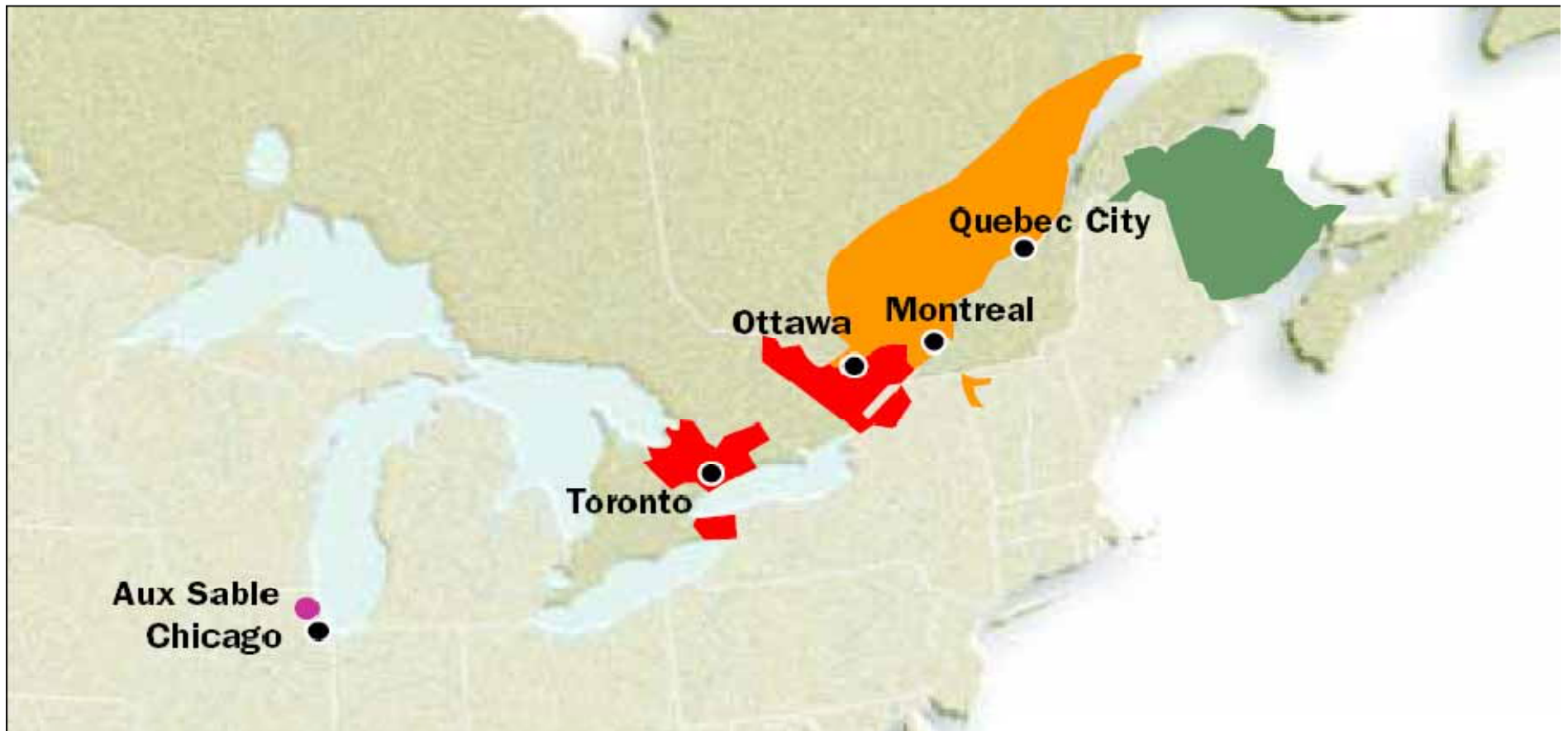
- Largest natural gas utility in Canada (1.9 million customers)
- Owns and operates over 33,000 km (20,500 miles) of pipeline for transportation and distribution
- Add ~ 50,000 new customers per year
- Employ about 2000 people in Ontario
- Generate ~ \$3 billion in annual revenues



# Enbridge Franchise Map



## Enbridge Natural Gas Distribution



 Aux Sable

 Enbridge Gas Distribution

 Noverco Inc.

 Enbridge Gas New Brunswick

# Background



- Between 1995 to 2006 – our Demand Side Management (DSM) programs have saved 2.9 billion m<sup>3</sup> (1 BCF) of natural gas & 5.5 million tonnes of carbon dioxide emissions
  - » Equivalent to serving 954,000 homes in a year or taking 1.2 million cars off the road for a year
  - » Natural gas savings translate into over \$1 Billion in net societal benefits

## Current DSM Programs/Rebates

- > High Efficiency Furnaces - \$100
- > Mid Efficiency Furnaces - \$100
- > Programmable Thermostats - \$15
- > Tankless – Fall 2008 (TBD)

***And our latest program.....***

# NOVITHERM™ HEAT REFLECTOR PANELS



> *Panels are placed behind radiators on external walls to radiate the heat back into the room*

- \* **Residential DSM program launched April 2007**
- \* **Aluminized surface reflects over 90% of the infra-red heat- normally absorbed by the wall behind the radiator**
- **Program targets homes that are heated with a natural gas boiler using radiators or convector systems**
- \* **Potential market is 50,000**



# Program Description

## Novitherm™ Heat Reflectors



- **Residential Customers**
  1. Receive a direct mail brochure and application
  2. Fill in the form to include number and measurements of exterior radiators
  3. Mail the application back to Enbridge for account verification and processing (Enbridge provides panels free of charge— up to 39 panels)
  4. Pay the flat fee of \$25 for shipping & Handling
  5. Fulfillment order, customer care calls and delivery process is responsibility of Novitherm

# RESIDENTIAL Program Assumptions



- **Estimated Annual natural gas savings – 140 m3 or 4% (49.44ccf)**
- **Budget ~ \$1.1M**
- **Free ridership – 0%**
- **Retail value of Product – \$213 average per home**
- **Cost to Customer - \$25 Shipping and Handling**
- **Life Cycle > 20 years**
- **TRC – Total Resource Cost- benefit cost measure**





# Market Target



- **Who?**
  - 50,000 Residential Hydronic heating customers
- **How we found them?**
  - Our Business Intelligence department compiled a listing based on inspections of installed boilers.

# Marketing Promotions & Initiatives



- **Direct Mail**
  - 4 direct mail- out campaigns from Fall 2007 & Spring 2008

2007 Fall/Winter – 2349 participants

2008 Winter/Spring to date – 2651 participants

***Results to date 5,000 participants as of August 2008.***

- **Press Release – Feb 2008**
- **Enbridge Sales Channel Consultants and HVAC's**



# Enbridge Gas Marketing brochure



Was your house  
built before 1980?



Is it heated by  
a hot-water  
radiator system?

If you answered yes to  
these two questions,  
Novitherm™ heat  
reflector panels can  
help you save money.

And good news!  
Right now you can  
get them for **FREE\***  
from Enbridge!

You only pay the  
flat shipping and  
handling fee of  
\$25 on delivery.  
Additional terms  
and conditions  
apply.\*

If your home was built before 1980  
and you are using a hot-water radiator  
heating system, your home is probably  
losing a significant amount of heat  
through exterior walls that are rot, or  
not very well, insulated. The installation  
of heat reflectors is a simple and effec-  
tive way of reducing these energy losses  
and enhancing your comfort.

# Enbridge Order form for Novitherm



Please measure each baseboard connector and each radiator (from the top of the baseboard to the top of the radiator) located on exterior walls only.

Number and dimensions of radiator(s) and baseboard connector(s), if applicable:

Quantity	Height x Width	cm	in
3x	20" H x 42" W (example only)		✓
1x	18" H x 36" W (example only)		✓

To apply for heat reflectors, send this fully completed Enbridge form to the following address:  
Enbridge Gas Distribution  
Attn: S. DiPasquale  
Novitherm Program, Residential Market Development,  
P.O. Box 725, Scarborough, ON M1K 0A3

## Novitherm™ Panel

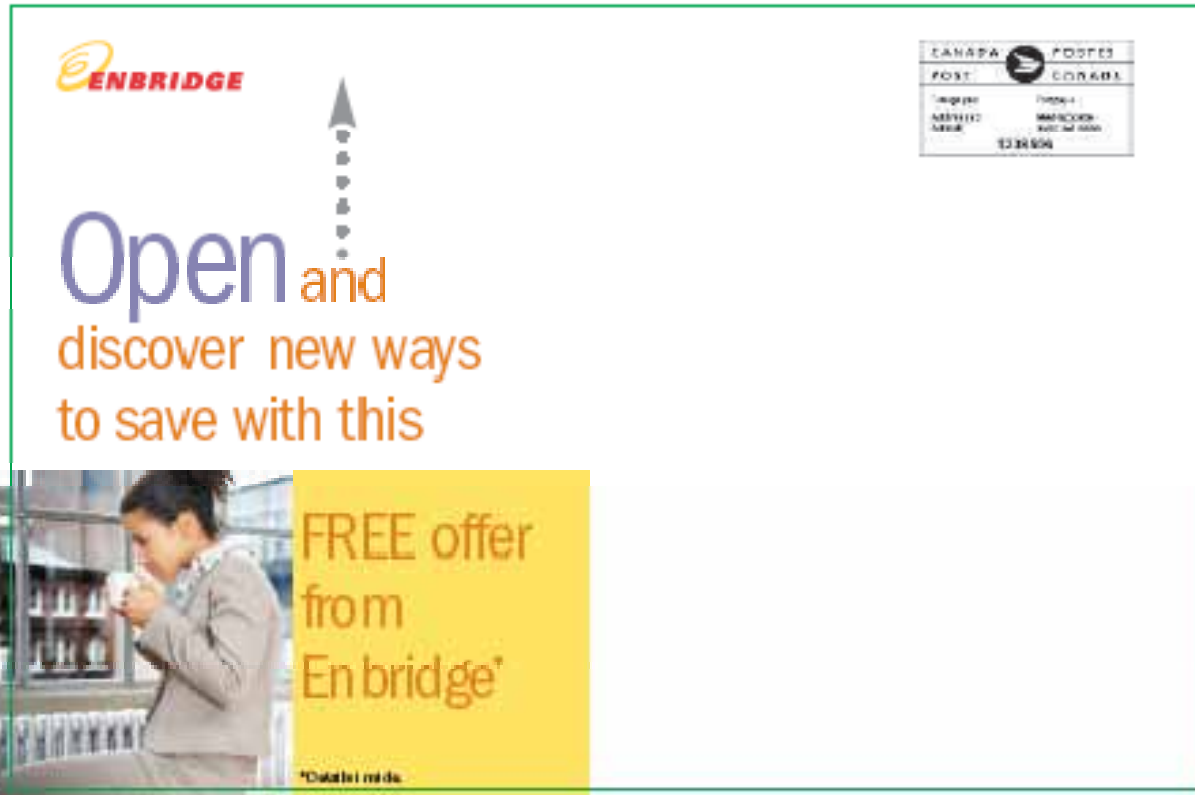
Novitherm™ heat reflectors are made of clear PVC with a reflective surface. The sawtooth profile of the reflector facilitates the circulation of warm air in the room.

Dimensions	Heat reflectors are 86.36 cm (34 in) in width by 30.5 cm (12 in) in height.
Durability	The heat reflectors have a lifespan of more than 20 years, except when subjected to prolonged, direct exposure to ultraviolet light. The aluminized surface should not be exposed to water.
Fire/smoke resistance	Tests carried out by Underwriters Laboratory of Canada (ULC) have rated the heat reflectors in accordance with the following standards:  CAN/ULC-S 102M (flame @ 30; smoke @ 60-85) ASTM E84 (flame @ 15-40; smoke @ 105-135)
Emissivity	The heat reflectors are opaque to thermal radiation with a thermal reflectance of 93%.

For technical information regarding the heat reflectors and their installation, please contact:  
  
Novitherm Canada Inc.  
Toll Free 1-866-382-5505  
www.novitherm.com  
Monday-Friday 9:00 am - 5:00 pm

Enbridge Gas Distribution  
www.enbridge.com/novitherm  
1-888-GAS-8888

# Enbridge Direct Mail envelope



# Enbridge Gas Website

[www.enbridgegas.com](http://www.enbridgegas.com)





Heat Reflector Panels - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Refresh Print Mail Stop

Address: [https://portal-plumprod.cgc.enbridge.com/portal/server.pt?open=512&objID=8408&parentname=CommunityPage&parentid=38&mode=28&hi\\_userid=28&cached=true](https://portal-plumprod.cgc.enbridge.com/portal/server.pt?open=512&objID=8408&parentname=CommunityPage&parentid=38&mode=28&hi_userid=28&cached=true) Go Links

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## Residential

[Residential](#) > [Rebates, Incentives & Energy Tips](#) > [Rebates & Programs](#) > [Heat Reflector Panels](#)

### Residential


- Self-Service
- Rebates, Incentives & Energy Tips
  - Rebates & Programs
    - Our Expert Advice
    - Efficient New Homes
    - Heat Reflector Panels**
  - Renovations & Upgrades
  - Energy Efficiency Tips
  - Home Weatherization Retrofit Program
- Equipment & Appliances
- Getting Connected to Natural Gas
- FAQs
- Conversion Tools & Calculators
- Volumes and Contributions

### Novitherm Heat Reflector Panels

How they can help save you money

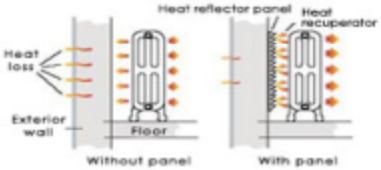
**You can get them free from Enbridge.\***

If your home was built before 1980 and you are using a hot-water radiator heating system, your home is probably losing a significant amount of heat through exterior walls that are not, or not very well, insulated. The installation of heat reflector panels is a simple and effective way of reducing those energy losses and enhancing your comfort.



### How does the heat reflector panel work?

The aluminized surface reflects 93% of the infra-red heat, normally absorbed by the wall behind the radiator, back into the room. Also, the air trapped behind the reflector panel prevents conductive heat loss to the exterior. Less energy is used, therefore, the water returned to the boiler is warmer.



**Easy & Affordable installation**

- Install panels between the wall and the radiator
- For cast-iron radiators, cover a surface corresponding to its dimensions on the wall behind the radiator.
- For baseboard convactor units, the cover should be removed and the reflector panel installed along the total surface of the metal casing behind the fins
- Clean inside the unit and the fins with a vacuum cleaner.
- Adjust the dimensions of the heat reflector panels by cutting them or overlapping either horizontal or vertical sections.

For more information about Novitherm Heat Reflector Panels, visit the [Novitherm](#) website.

Trusted sites

# Evaluation Plan



## •Reporting

### •DSM monthly results

- Variance explanations
- Re-strategize program delivery
- Promotional

### •Monthly reports

- Outlines activity levels
- Internal to Program Managers, DSM Managers, Channels

### •Customer Surveys

- conduct behavior research, product acceptance/performance

## • Tracking System

- Captures customer information i.e. orders, size & type of home
- Shipping dates
- Payments.

# Research/Validation Studies



- **2007/2008**
  - » NGTC(Natural Gas Technologies Centre) – Gaz Metro, Enbridge Gas , Union Gas
- **May 2008 - Novitherm Research Installation rates amongst participants**
  - » Actions of participants i.e. thermostat/boiler adjustments
  - » Sample – 200 – by telephone
  - » Findings – 97% installed panels, 58% did not turn down thermostat & 89% did not adjust boiler temperature. Overall, 86% satisfied.



# Research/Validation Studies



- **Nov. 2007 to Mar 2008 - Impact of Radiator Panels on Residential Heating Consumption**
  - » Investigate the effects of radiator panels on residential heating consumption
  - » ~31 homes tested
  - » Findings – average change in consumption -4.1%

# THANK YOU



## QUESTIONS?

**Contact:**

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Programs*

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*416-495-5356*

