

Sustainable Development in Communities



Energy Conservation & Demand Response in New Construction

*Susan Clinesmith
Enbridge Gas Distribution
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Overview

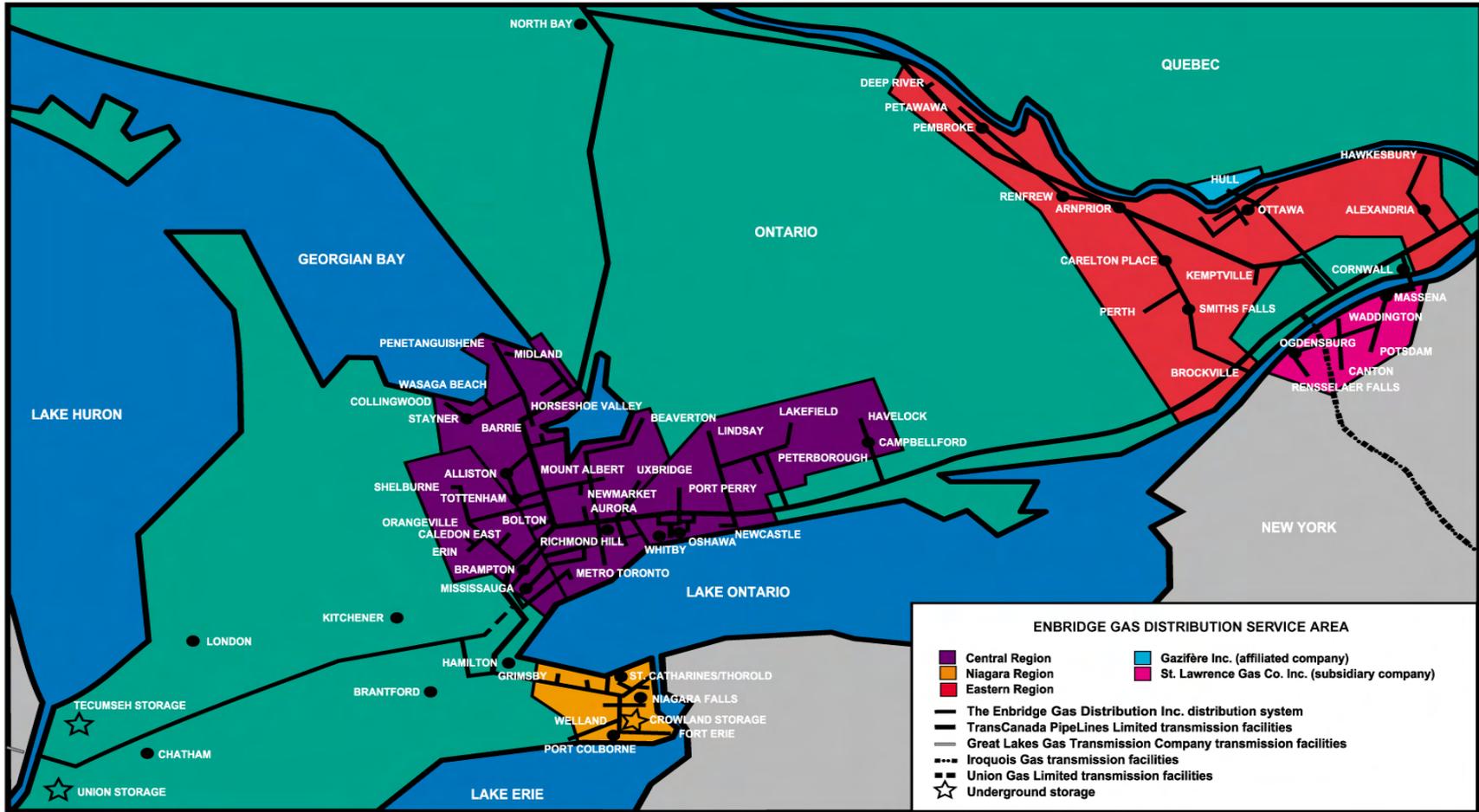


Imagine a company that will send you an expert at no charge to show you how to use less of the product they deliver!

- **Enbridge Gas Distribution Introduction**
- **Why Natural Gas**
- **Gas Approach to Energy Conservation**
- **Design & Construction Programs**



Enbridge Gas Distribution



099.03DS (REV. MAY/03)



Why Natural Gas



- **Key to energy supply challenge in Ontario**
 - Helps meet peak load requirements
 - Alleviates transmission bottlenecks
 - Short construction timelines

- **Supports environmental objectives**
 - Clean burning (low CO₂ emissions)
 - Complements conservation strategy

- **Well-developed existing infrastructure**
 - Leverage existing gas utility distribution channels

Demand Side Management



- Using energy more efficiently
- Business solutions based on technology and customer needs
- Efficiency is not only dependent on the equipment selected but also on the maintenance provided
- Energy Management is the key
- ***“A MW saved is every bit as good as a MW built” - Minister D. Duncan***

Enbridge DSM Results



From 1995 through 2006

- **Total Gas Saved** **2.92 billion m³**
Enough gas to serve over 954,000 homes a year

- **Total CO₂ avoided:** **5.5 million tonnes**
Roughly equivalent to removing 1.2 million cars off the roads of Ontario for one year



Business Solutions Approach



The Building as a System

- Residential/Commercial/Industrial DSM
- Fuel Switching
- Distributed Generation
- Stand-by Generation

With both

- Existing customers
- New Buildings – the focus of today's session

Enbridge Energy Efficiency Programs



- A series of programs designed to promote the specification and installation of energy-efficiency gas burning equipment and building systems.
- Provides financial assistance based on the amount of gas saved over a period of one year compared to a “conventional” system
- Includes both resource acquisition and market transformation streams
- A dedicated team of Energy Solutions Consultants to work with business customers on energy solutions

New Buildings



- Provide the best opportunity to incorporate energy efficiency cost-effectively
- Buildings have been rarely built with energy efficiency in mind, despite the downstream of benefits
- Enbridge believes that the best buildings result from a design process that considers energy and environmental efficiency from the beginning.

Building Design



- **To assist in overcoming inherent barriers to energy efficiency design, including:**
 - High information and search costs for alternative designs and new technologies
 - Default to design rules of thumb
 - Performance uncertainties about newer technologies
 - Product or service unavailability
 - Asymmetric information about technology choices

➤ Program

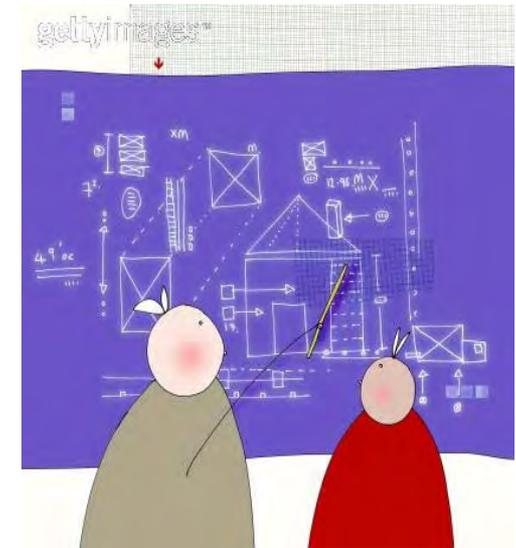
Encourages a design process that considers energy and environmental efficiency from the beginning of the design process

➤ Target

Engineering and design community

➤ Incentive

A fixed incentive of \$4,000 towards designing a new building, an addition or a major renovation



New Building Construction Program (NBCP)



New Building Construction Program (NBCP)



Program

- Helps to offset the costs of more efficient buildings for commercial, institutional, industrial or multi-residential use

Incentive

- Enbridge will pay \$0.075/m³ of projected annual natural gas savings to a maximum of \$15,000 for actual built measures
- Building may be able to qualify for both the DAP™ and NBCP incentives

Proposed OPA Program



High Performance New Construction

- Target to ICI new buildings and major retrofits
- Assist in the incorporation of conservation measures in the design, construction and operation
- Must exceed the MNECB
- Incentives for designers and proponents based on sliding scales

Will compliment natural gas utilities current offerings

- Applicants may participate in both programs

Residential New Construction



Energy Star for New Homes



- Will effectively lower the home's energy consumption by about 30% compared to a home built to minimum provincial building code standards.
- Heating and cooling systems must be efficient, ducting must be well sealed to prevent leakage, windows and doors must meet ENERGY STAR guidelines, as a whole the home must meet standards of air-tightness
- Also each ENERGY STAR qualified home must achieve electrical savings of up to 1,000 kwh.
- One way you can achieve some of these credits is by installing natural gas ranges and dryers



Some Enbridge Awards



- 2003 NRCan Energy Star Utility of the Year
- 2004 Canadian Energy Efficiency Alliance Energy Company Best Practices Award for DSM Steam Saver and for Construction Heater programs
- 2006 named on to the Top 100 Sustainable Corporations by the World Economic Forum in Davos, Switzerland
- 2007 among 21 Canadian companies named to the Dow Jones Sustainability Index North America



Conclusions



- Natural gas role is evolving and critical to Ontario energy requirements, including demand response
- Natural gas can and will play a significant role in delivering conservation and demand response in new buildings
- Enbridge objectives and approach aligned with energy policy and public support for conservation

What a time to be in the energy business!



- **“When facing a difficult task, act as though it is impossible to fail. If you’re going after Moby Dick, take along the tartar sauce!”**

Life’s Little Instruction Book, 511 suggestions, observations, and reminders on how to live a happy and rewarding life.

A close-up photograph of a hand holding a rolled-up newspaper. The word 'INVESTING' is printed in large, bold, serif capital letters across the top of the newspaper. The background is a bright, hazy sky.

INVESTING

Questions



For further info contact:

Susan Clinesmith

**Manager, Business Markets
Development**

Enbridge Gas Distribution

416-753-6256

susan.clinesmith@enbridge.com

or

General telephone: 1-866-844-9994

energyservices@enbridge.com