Life Takes Energy
Utility integration

High standard of service and operational excellence
Enbridge in Ontario

Enbridge Gas Distribution and Union Gas

• Enbridge delivers about 37% of Ontario’s total energy use each year
  • 3.5 M customers, heating more than 75% of Ontario homes and businesses.

• More than 100 years of experience in safe and reliable service

• The Sarnia-area *Dawn Storage Hub* is Canada’s largest and one of the top-5 natural gas trading hubs in North America
Achieving The Trifecta of Building Energy Performance

- Hybrid Heating
- Low-Carbon Footprint for Sustainability
- Energy Affordability
- Increased Energy Resiliency

Smart Thermal Networks
Solar PV, Energy Storage & CHP
Integrated Energy Systems
Combining Geo, Solar PV With Combined Heat & Power & micro-CHP

- Delivers improved GHG reductions (seasonal balancing)
  - Strong solar harvesting in spring & summer
  - mCHP more efficient use of natural gas (Peak power demand)
- Improved energy resiliency
- Improves net-zero affordability by right-sizing geothermal, solar & battery storage, …

Right-Size All On-Site Generation & Energy Storage
Buildings Become Part Of The Solution
Renewables, Energy Storage and Hybrid Heating Can Support Virtual Power Plant (VPP) Capability Within The Community

Original Source Image: CGA, “Natural Gas, our Place in Canada’s Sustainable Energy Future"
Renewable Natural Gas & Power to Gas (Hydrogen)

Power to Gas Hydrogen Energy Storage

1. Power Grid Stabilization Service
2. Hydrogen/Natural Gas Blending, Compression, and Injection
3. Gas Storage Buffer Tank
4. Gasifier/Reformer System
5. Power Grid Connection
6. Fueling Clean Transportation
7. Organic Waste
8. Waste Collection
9. Home Heating
10. Waste Processing

Creating energy from organic waste
Utility Infrastructure Support

Enabling a Low-Carbon Future = The Right Energy At The Right Time

A LOW CARBON WORLD

POWER TO GAS (Hydrogen)

LANDFILLS
AGRICULTURE
MUNICIPAL ORGANICS
WASTEWATER

HOME & WATER HEATING
PUBLIC TRANSPORT
POWER GENERATORS
TRANSPORT

RENEWABLE NATURAL GAS
Long-term Low Carbon Economy

ENBRIDGE
uniongas
All About You...
Doing The Right Thing, for 2 Decades

- DSM activities between 1995 and 2014 have resulted in 9.6 billion m$^3$ in natural gas reductions; enough natural gas savings to serve nearly 4 million homes$^1$ for a year.

- These natural gas reductions equate to approximately 18 million tonnes$^2$ in carbon emission reductions, which is the equivalent of removing 3.5 million cars$^3$ from the road for one year.

- Over this time Enbridge has spent approximately $326 million on DSM activities, creating nearly $2.5 billion in net economic benefits to society$^4$. Said another way, over the past two decades DSM has unlocked $2.5 billion in customer funds for economic activity in Ontario that would have otherwise been spent on energy.
Help customers find and implement energy efficiency solutions that reduce emissions and improve their bottom line through:

- **Education and knowledge.**
- **Opportunity identification.**
- **Audited quantification of savings opportunities.**
- **Monetary incentives to offset costs related to assessments, measurements and implementation.**
What’s available to help you succeed?

Real estate and Home Owners
• Retrofit Incentives for improved resale value
• Prepare for Home Labeling

Municipalities
• Municipal building stock and infrastructure projects
  • Municipal landfills, Transportation, …

Builders/Developers
• Integrated Design Session encourages building beyond Code
  • Optimum Home and Savings By Design.
Navigating the waters of Energy Efficiency programming

• Fast changing environments
  • Multiple programs and funding sources

• Your Advocate
  • to help you determine your best options to obtain highest value
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