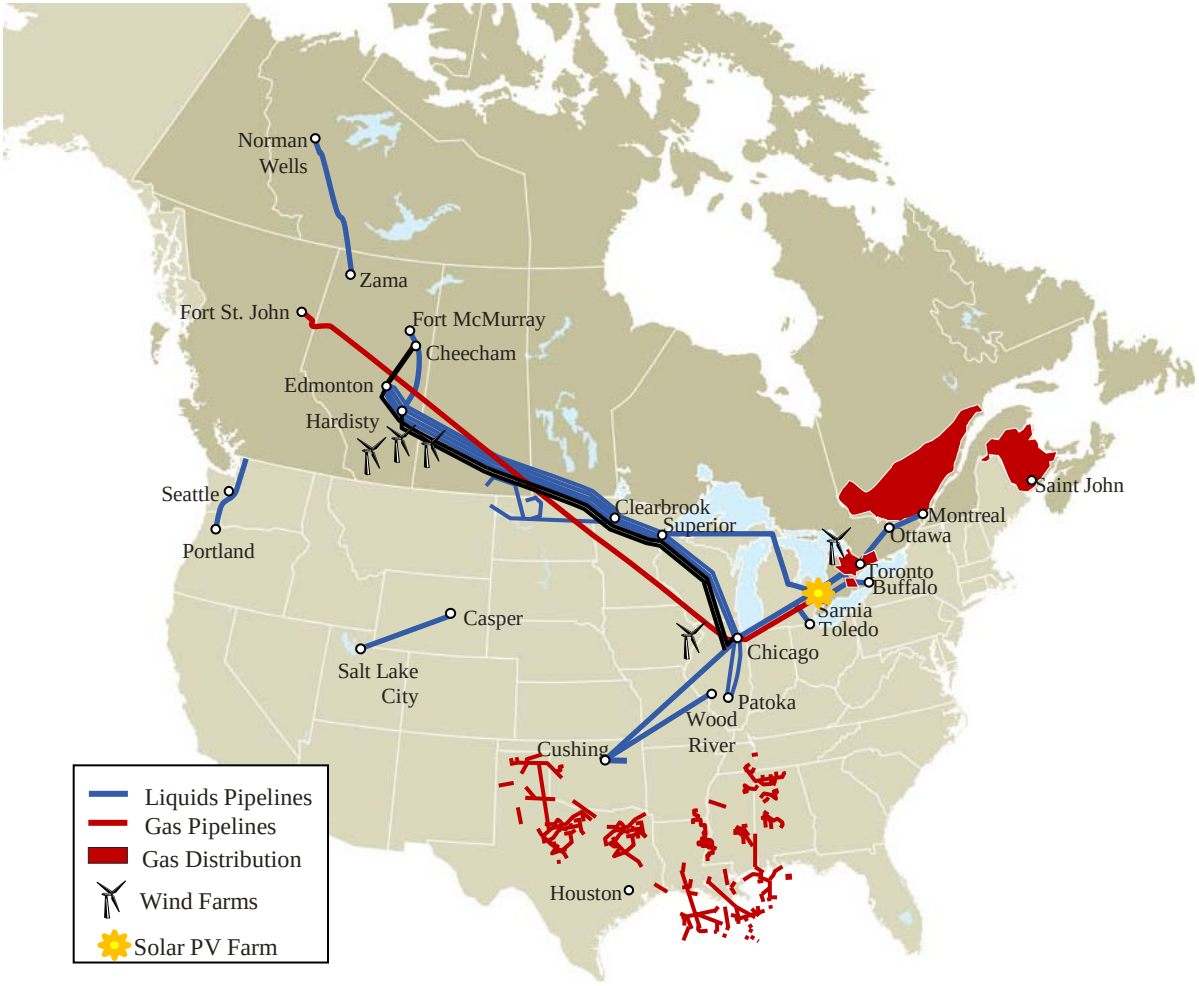
US Energy Association Technology Series

Fuel Cells for Efficiency Gains in Energy Distribution; June 21, 2010

David Teichroeb
Business Development, Fuel Cell Markets
Enbridge Inc.

Enbridge Overview

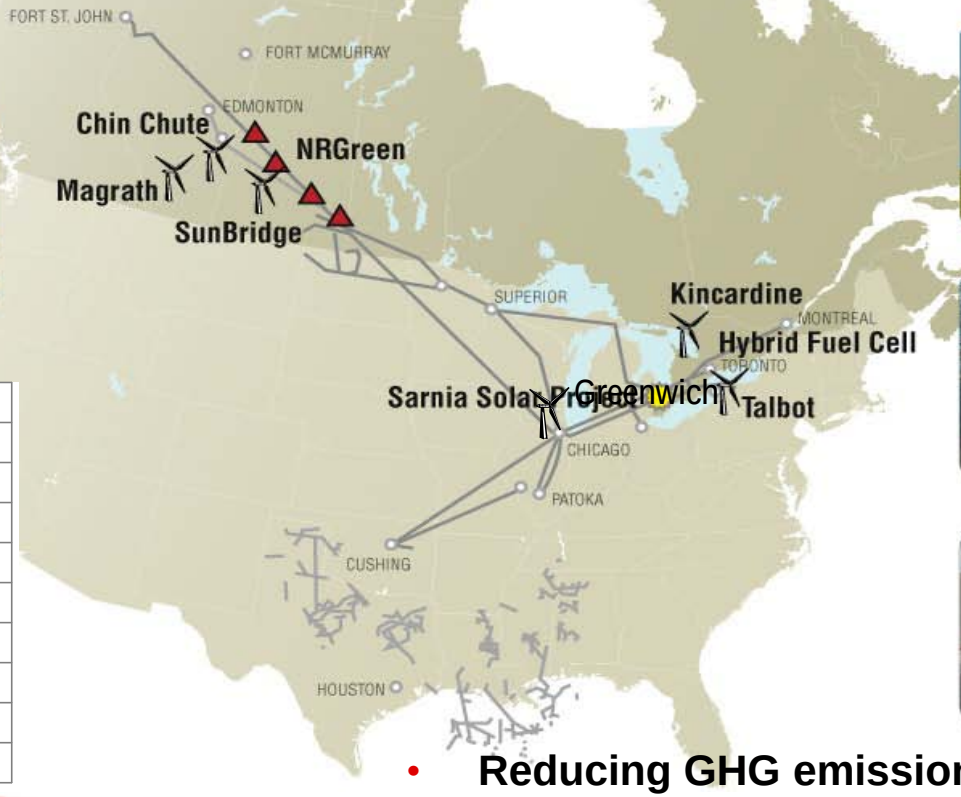


Enbridge Inc. is a leader in energy transportation and distribution in North America

- World's longest liquids pipeline system – 2 MMB/D
- Canada's largest natural gas distribution system – 5 BCF/D
- Oil and Gas cavern storage
- Wind farms, stationary fuel cells
- Solar PV farm
- $15 billion assets
- 6,000 employees
- Manage the ASAP and CO_2 Slurry consortiums

ENBRIDGE

500 + MW of Low-Carbon Power (in-service or under construction)



PLANT	SIZE
Magrath	30 MW
Chin Chute	30 MW
SunBridge	11 MW
Kincardine	190 MW
Talbot	99 MW
Greenwich	99 MW
Sarnia Solar Project	20 MW
Hybrid Fuel Cell Plant	2.2 MW
NRGreen	20 MW

- **Reducing GHG emissions from our operations**
- **Leader in harvesting waste energy for low-carbon, ultra-clean power**

ENBRIDGE

Enbridge and FuelCell Energy Partner on World's First Hybrid Fuel Cell Plant

- **Toronto, Ontario, Canada**
- **Ultra-clean power for 1700 Homes**
- **Quiet, 2.2 megawatt plant**
- **Low visual profile**
- **Suited for urban settings**
- **Near-zero smog emissions**

DFC-ERG® Hybrid FuelCell

ENBRIDGE

Small Footprint: Two Tennis Courts

ENBRIDGE

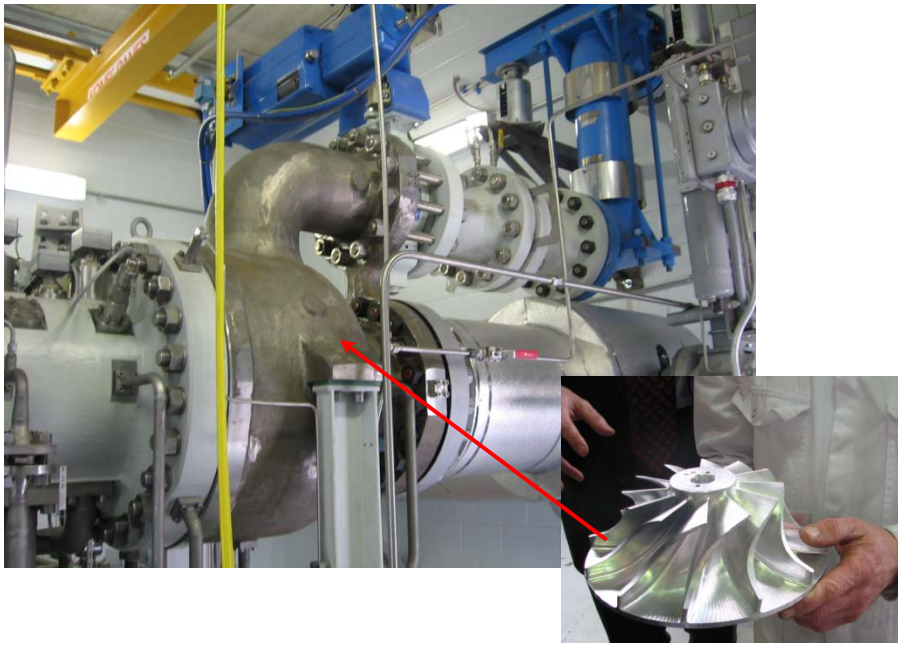
Greening the Natural Gas Grid - More Efficient, Less Emissions

Smart Energy Grid

- Will need a portfolio of low carbon and renewable energy supplies, *significant improvements in the efficiencies of energy distribution, and investment in advanced low-emission end-use technologies*
- *Smart Power Grids*
  - *Energy Storage technologies and distributed generation, etc.*
- *Smart Natural Gas Grids*
  - *Heat to Power (ORC) technology, pressure drop energy recovery using Hybrid FuelCells, renewable methane injection, etc.*

ENBRIDGE

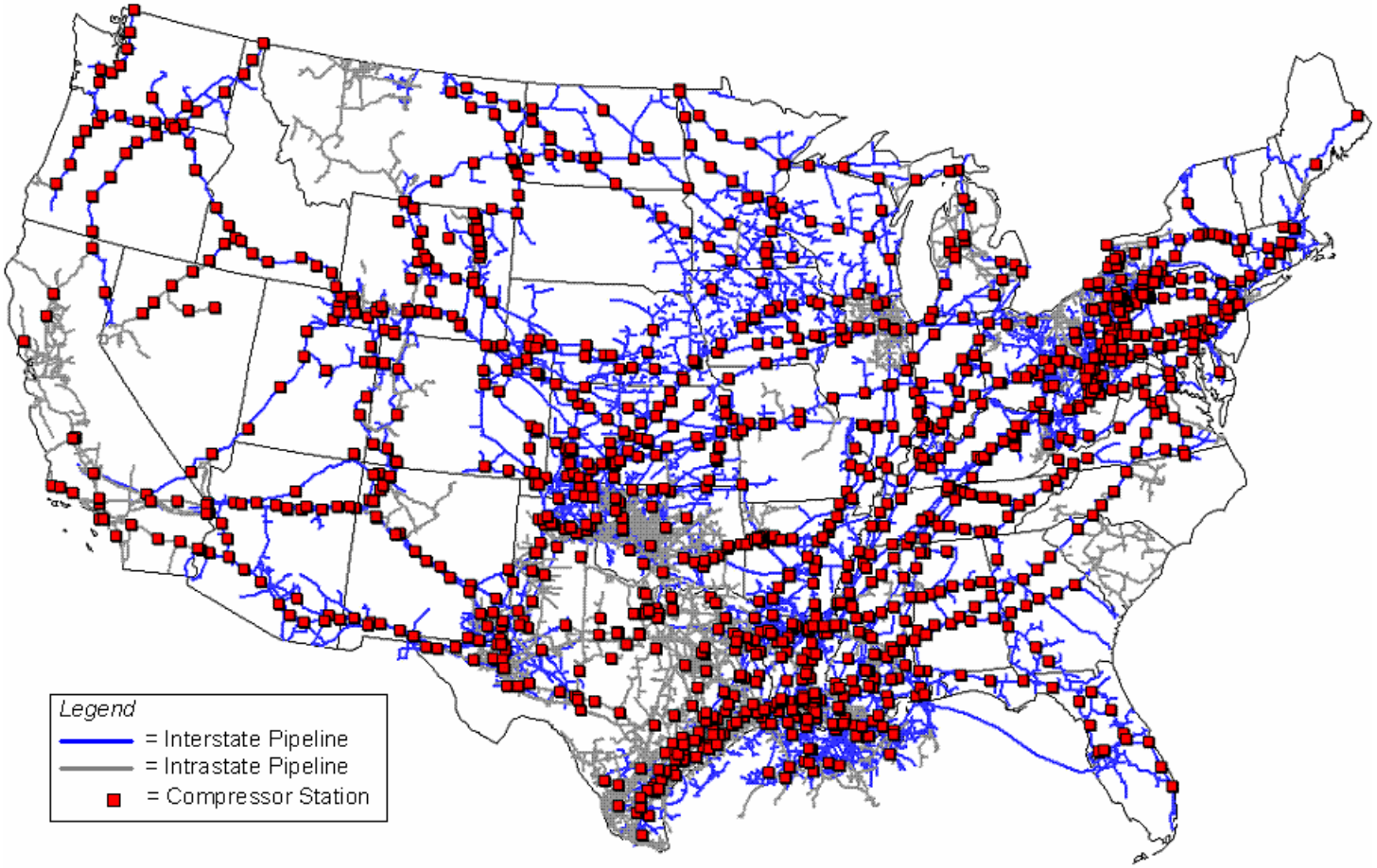
Green Toronto Award in 2009; Efficiency



DFC-ERG®, Hybrid FuelCell, used for utility pressure reduction - more efficient pipeline operations and less air emissions

ENBRIDGE

Efficient Pipeline Pressure Reduction; an Untapped North American Resource



Source; US Energy Information Administration
http://www.eia.doe.gov/pub/oil_gas/natural_gas/analysis_publications/ngpipeline/ngpipeline_maps.html

North America has significantly more pressure reduction stations vs. compressor stations

ENBRIDGE

The Technology Story To Date

- **Toronto plant's first-year operations**
  - 93 % unit availability
  - Base load, with ability to follow grid's load-shape
  - > 60% fuel to electric efficiency with near-zero smog emissions
  - some plants can be tuned for 70% + fuel to electric efficiency
    - Maintains compliance with CARB air emission levels

ENBRIDGE

Policy can Advance Investment

- **Supportive policies to promote wide adoption**
  - ✓ Investment Tax Credit (Currently in place through 2016)
  - ✓ Recognition of value of clean energy generation and improved pipeline energy delivery efficiency in US Federal Policies
    - ✓ Creation of direct or RPS-like efficient natural gas generation incentives
  - ✓ Regulatory support to allow gas utility investment in alternative pressure reduction technology .
    - Early regulatory progress; California Public Utilities Commission approval of electrical utility ownership (university-based fuel cells)

ENBRIDGE

Conclusions

Thank You

For more Information contact:

David Teichroeb , 416-495-5355
david.teichroeb@enbridge.com