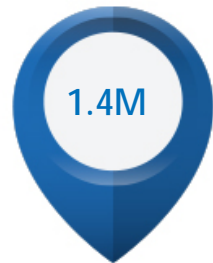
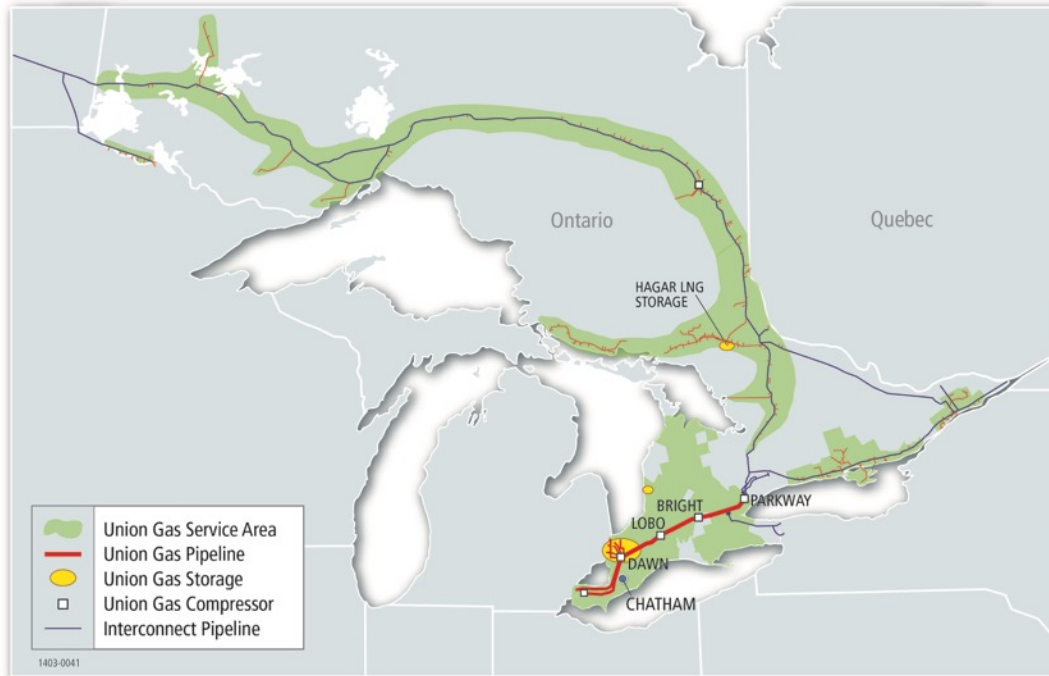


**CNG Class 8 Demonstration Project
Energy Solutions Centre TMAF
Vancouver
June 8, 2016**

Stuart Owen
Distribution Business Development Manager

Union Gas – A Spectra Energy Company



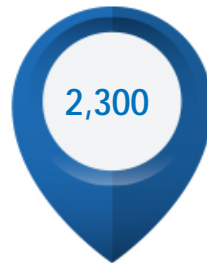
Retail
Customers



Of
Pipeline



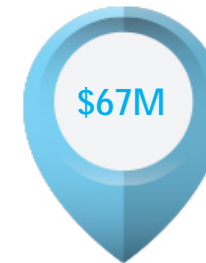
Of Storage
underground



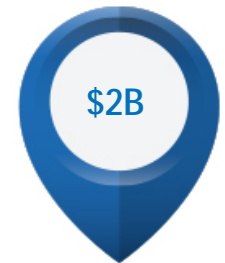
Employees



In
Assets



In Property
Taxes Paid/Year



Annual
Revenue

Everything old is new again



Background / Why a demo program?

- **Barriers to adoption**
 - Lack of wheel time
 - Power, sensory perception
 - CNG /LNG confusion
 - Many assumed all NG solutions were LNG for trucks
 - Legacy issues
 - 20 year old technology opinions
- **Conclusion**
 - Customers needed a firsthand experience operation a CNG vehicle to remove some of the barriers to adoption

Demonstration Partners Expertise



- Envoy Energy
 - ComTech CNG (aka CTC)
 - Compressor supplier
 - Station construction
 - Hiller Truck Tech
 - Truck maintenance
 - Efficiency improvements
 - Change Energy
 - Alternative Fuel Engineering Consultants
 - Union Gas
 - Metering, Analysis
 - Marketing
 - Natural Gas connection

ComTech CNG



CH₂NGE

Envoy Energy



- Union Gas / Envoy
 - Insurance / licensing issues
 - Fueling
 - Slow and fast fill
 - Data Collection
 - Improving requirements and expectations
 - GPS tracking
- Driver
 - Expectations
 - Training
- Carrier
 - Economics
 - Suitability

- The evolving program is a success
 - Process of changing plates and insurance is getting easier
 - Including e logs as required
- The Trucks Work!
 - They perform as stated pulling their max loads
- Drivers like the trucks
 - Quieter, smell better
 - Some adjustments in driving style
 - Shifting, less engine braking

- Standard spec truck
 - For most fleets these trucks are a compromise
- Technology is still moving forward
 - Aero packages are important to this market
 - Fuel economy is less than diesel
- CNG trucks carry a heavy \$ premium
 - Adoption needs to show an economic benefit
- Understand the Fleet's reason for trialing the truck
 - Is it fuel economy, power, acceptance, experience
 - Set expectations

- Evolving the program
 - Reports are changing
 - What we want vs. what the customer wants
 - Fueling choices
 - Getting the right data
 - Shippers vs carriers
- Next Steps
 - Continue to identify interested fleets
 - Identify shippers/companies that have an environmental plan
 - Permanent fueling choices
 - Get the word out

Questions

