

Cap and trade for business customers

A natural gas distribution perspective

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Outline

- Cap and trade overview
- Types of participants
- Potential costs
- Key dates & resources
- Lower-carbon future

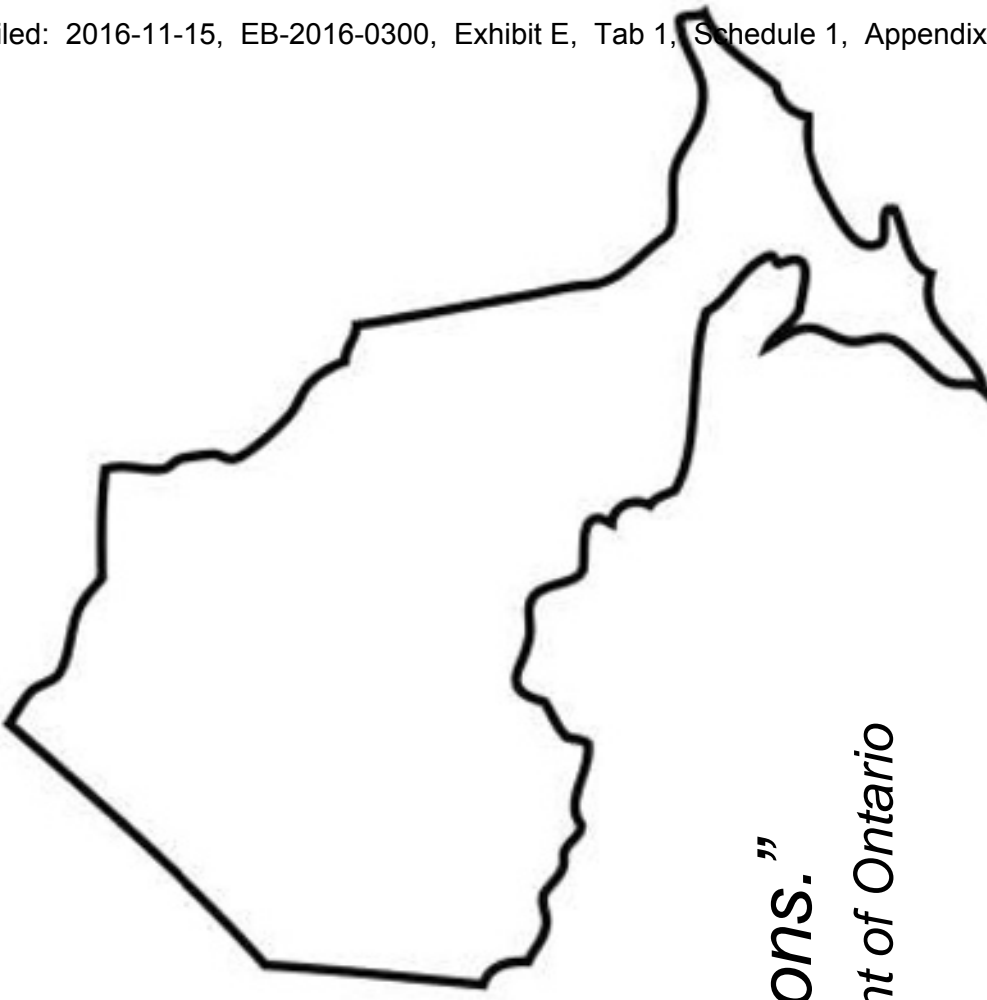
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Background

“Ontario’s cap and trade program is designed to help fight climate change, and reward businesses that reduce their greenhouse gas emissions.”

Government of Ontario



Fundamentals

- “Capped participants” must acquire permits, called allowances or credits, to match their greenhouse gas (GHG) emissions



“Cap” and “trade”

- The total number of allowances created by the government goes down ~4.5% each year (**the “cap”**)

2020	2030	2050
15% below 1990	37% below 1990	80% below 1990

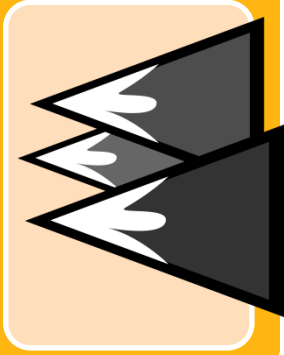
- All allowances are created by the government and entities can sell allowances to other entities (**the “trade”**)



Participants in cap and trade

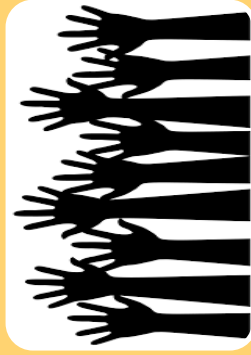
Mandatory “capped” participants

- Fuel distributors (Oil, Propane, Diesel) and NG distributors
- Electricity Importers
- Large Final Emitters (>25K tonnes CO₂e per year)



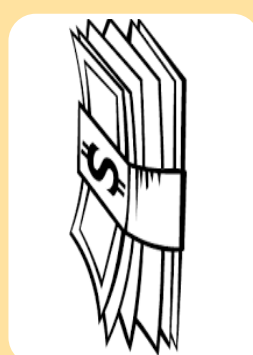
Voluntary “opt-in” participants

- Emitters between 10 – 25K tonnes CO₂e per year may decide to opt-in as a participant
- If not, NG utility responsible for acquiring NG related allowances



Market participants

- Any entity that wants to play in the carbon market (i.e. banks, etc.)



Free allowances/ early reduction credits

Free Allowances

- Only for eligible cap and trade participants who apply
- Details posted on government's EBR Registry →

Early Reduction Credits (ERCs)

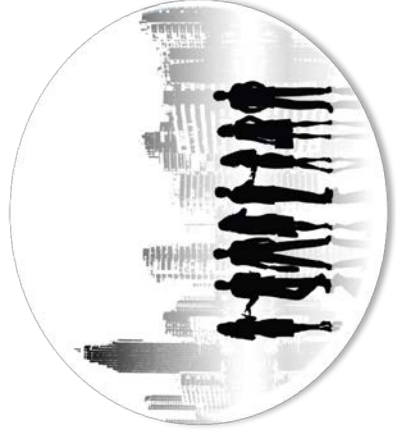
- Details expected this year
- Under draft regulation natural gas utilities not eligible

**METHODOLOGY FOR THE
DISTRIBUTION OF ONTARIO
EMISSION ALLOWANCES FREE
OF CHARGE**


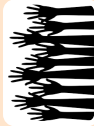
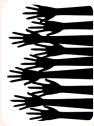

May 16, 2016

Non cap and trade participants

- Enbridge responsible for acquiring NG-related allowances for customers <25,000 tCO₂e/year
 - Costs on natural gas bill (volumetric basis)
- Exceptions:**
- Customers between 10,000 and 25,000 tCO₂e/year who “opt-in” as voluntary participants
 - Natural gas fired generators cannot opt-in



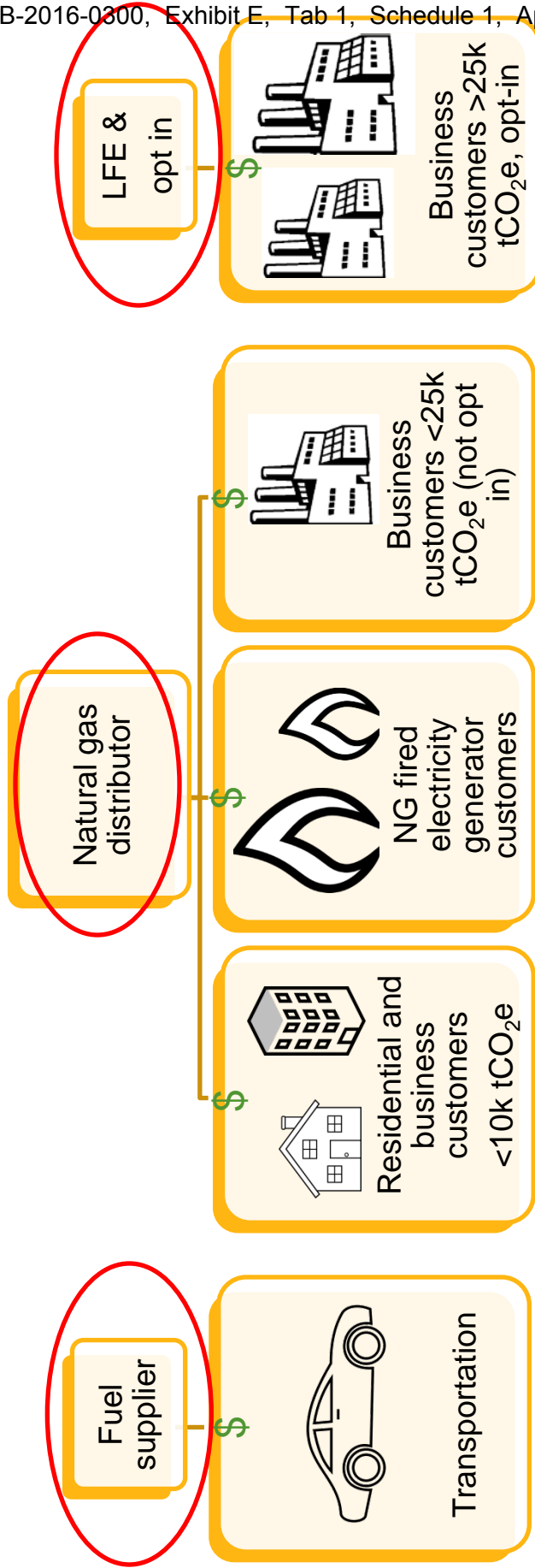
Potential cost scenarios

Customer type	Annual volume ("typical customer")	Potential annual cap and trade charge (on NG bill)	Potential annual cap and trade cost (customer manages)
A) Residential	 2,400 m ³	\$79	
B) Light Industrial	22,606 m ³	\$746	
C) Medium Industrial (not voluntary participant)	 9,976,120 m ³	\$329,212	
D) Medium Industrial (voluntary participant)	 9,976,120 m ³		<div style="border: 2px solid red; padding: 5px; transform: rotate(-10deg); color: red; font-weight: bold;"> \$329,212 FREE ALLOWANCES? </div>
E) Large Industrial	 69,832,850 m ³		<div style="border: 2px solid red; padding: 5px; transform: rotate(-10deg); color: red; font-weight: bold;"> \$230,484 FREE ALLOWANCES </div>

- Based on \$0.033/m³ of natural gas estimated by government
- Dollar amounts shown do not include free allowances, early reduction credits, energy conservation, admin costs etc.
- Assumes cap and trade costs charged to non-capped customers by Enbridge would be based on actual metered natural gas consumption
- Costs may change over time

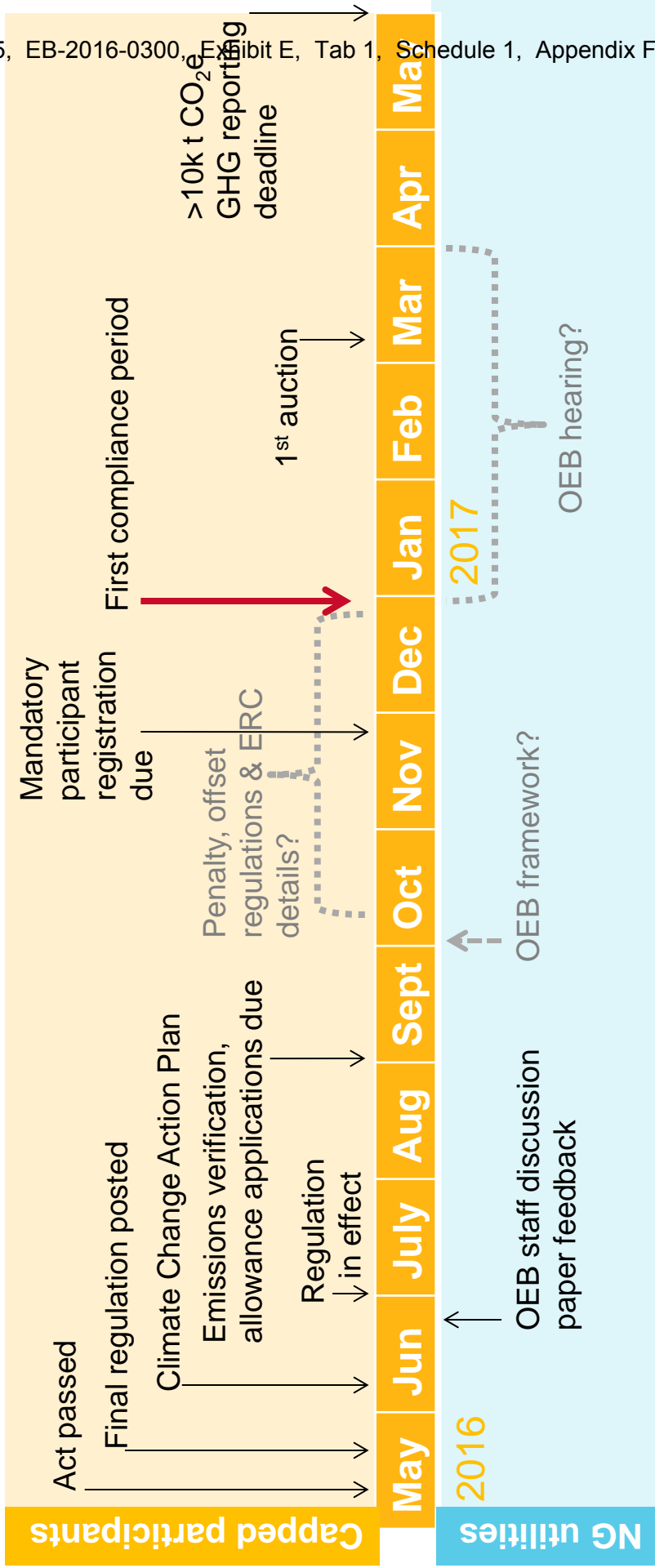


Point of regulation/ compliance obligation



Select timelines

- Capped participants need to be aware of key dates in 2016



- NG utilities have additional regulatory requirements



Enbridge Gas levers for a lower carbon economy

- Enbridge is positioned to provide our customers solutions and maintain a sustainable business
- Enbridge has several key levers for demonstrating and implementing carbon reduction
- These levers assist our customers transition to a lower carbon economy

Energy Efficiency and Conservation

Greening the Natural Gas Grid

Natural Gas Vehicles

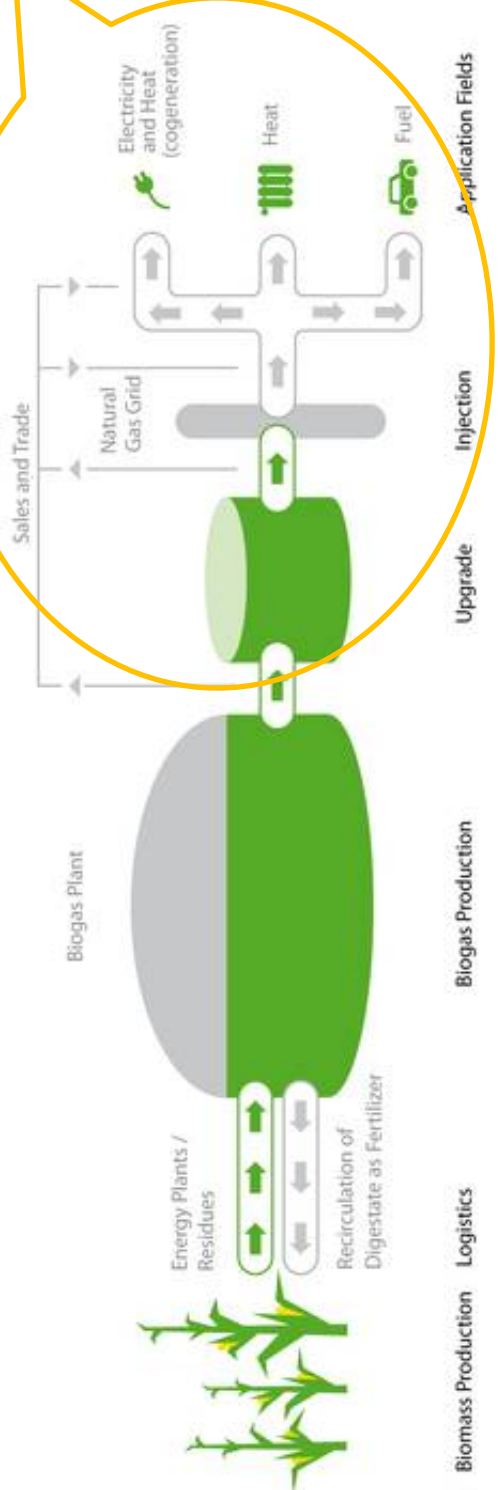
Innovation and Technology Development



Greening the NG grid

- Renewable natural gas (RNG) can be part of a diversified supply to meet Ontario's renewable energy needs
- Can be created from different sources (i.e. landfill, municipal organic waste, agricultural waste, wastewater treatment facilities)

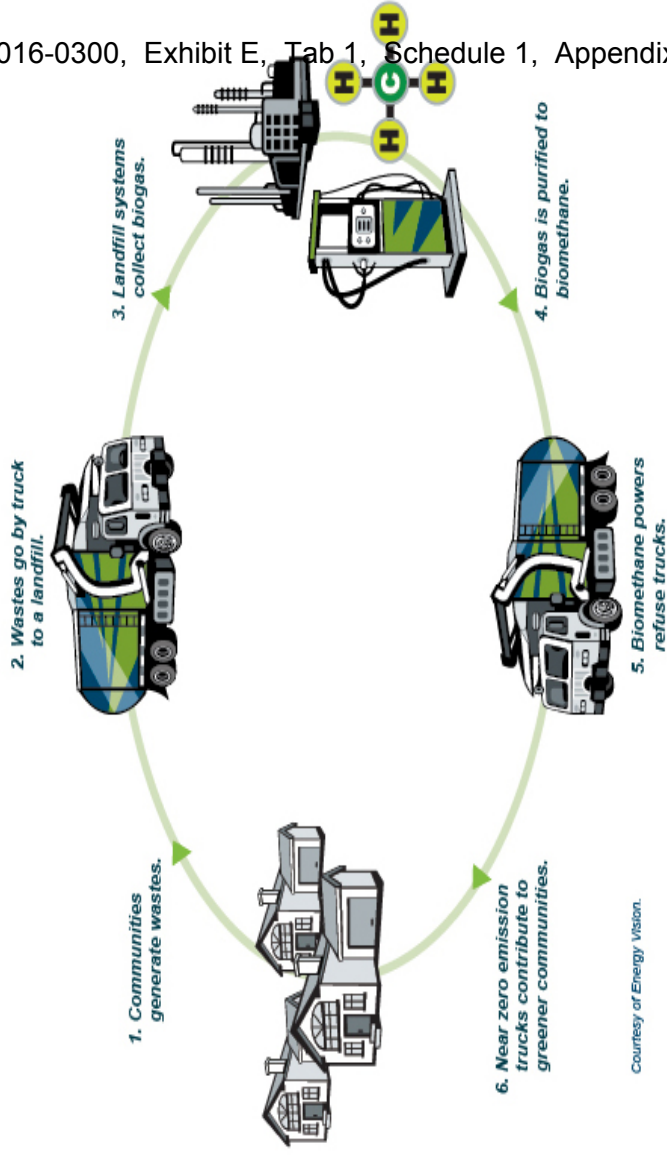
Role for natural gas utilities in upgrading, injection and distribution of Ontario's biogas supplies as RNG



Greening the NG grid (con't)

- Benefits of incorporating RNG in Ontario's pipeline network:
 - Uses existing infrastructure
 - Less expensive than renewable electricity
 - Not intermittent / does not need to be backed up
 - Can easily be stored

RENEWABLE NATURAL GAS CYCLE



NG for transportation

- Transportation = ~34% of Ontario's total emissions
- Natural gas has up to 25% lower GHG emissions and is up to 40% less expensive than diesel or gasoline
- Untapped GHG emissions reduction potential in manufacturing and freight as well as rail and marine
- If 10% of transportation fuel replaced by NG, Ontario could reduce GHG emissions b/w 1.5 and 4.2 Mt CO₂e/yr
 - Results depend on levels of renewable gas blending (up to 40%)



Cap and trade resources

- **Government:**
 - Ontario.ca/capandtrade
- **Specific industry associations**
- **Enbridge Gas:**
 - Enbridgegas.com/capandtrade
 - Enbridgegas.com/businesses/energy-management