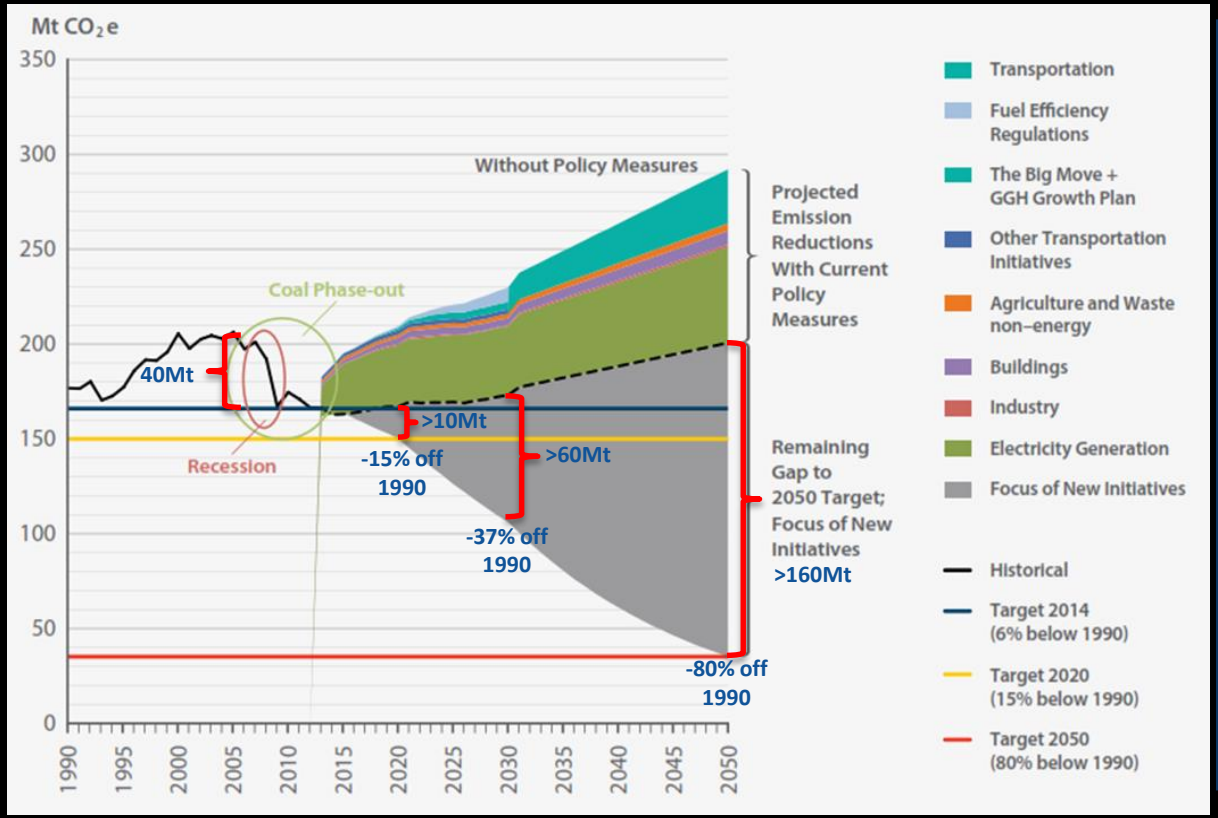
Ontario Cap and Trade: Overview and Scope of the Challenge

Council for Clean and Reliable Energy
April 14, 2016

Ontario has defined 2020 and 2030 targets and a linear path to de-carbonization by 2050



>40 Mt (-20%) reductions achieved from 2005 to 2010.

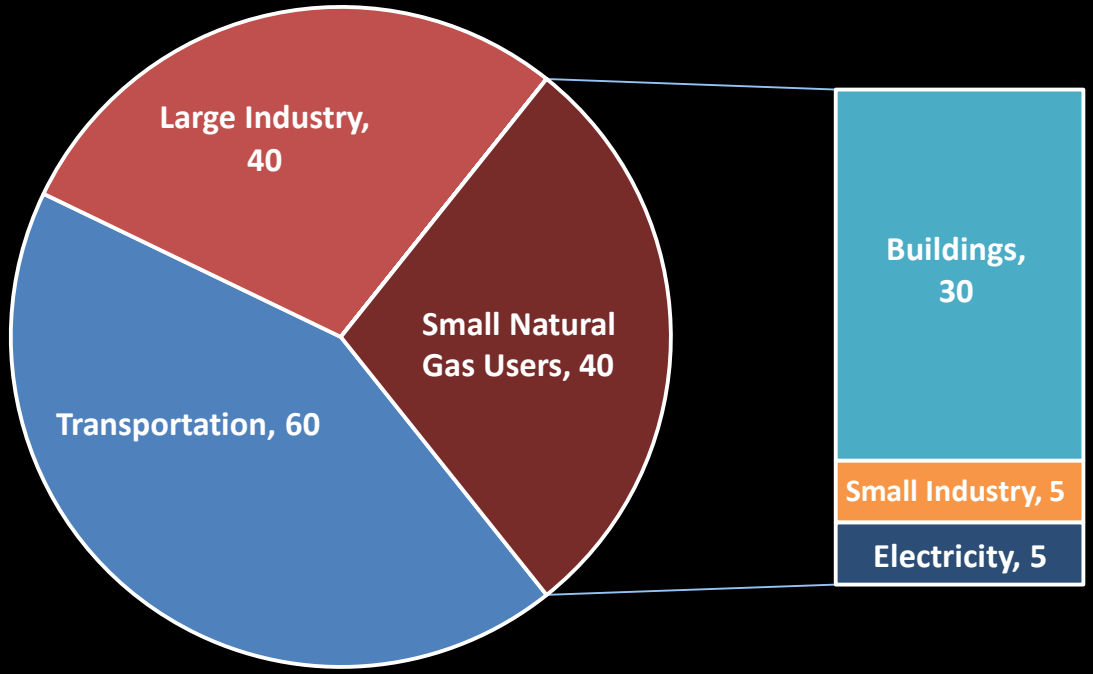
Coal retirement, CDM/DSM, industrial output decline (recession), vehicle fuel efficiency standards,…

Current measures identified for transportation and energy efficiency.

Future reductions required to fill 2020, 2030 and 2050 gaps...

Source: Ontario's Climate Change Discussion Paper, 2015, Ministry of the Environment and Climate Change

Based on Ontario's emissions profile reductions needed from NG and transport fuel use



Ontario Forecast 2017 GHG emissions for sectors / sources covered under proposed cap and trade ($MtCO_2e$)

NG and transportation fuel each meet 33% of energy demand and electricity meets 25%.

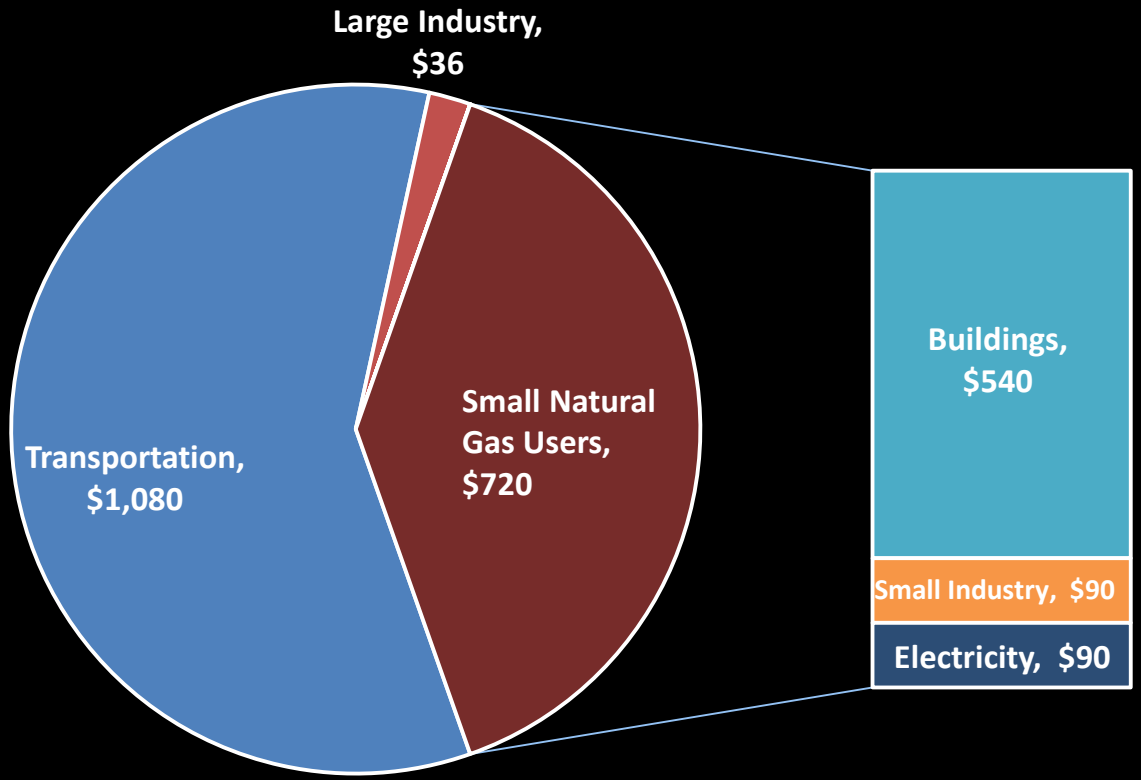
NG share of energy demand expected to grow over next 15 years.

Cap declines from 142M in 2017 to 124M in 2020 = 532M (avg 133M/yr)

To meet a 2030 target NG and transportation fuel use would need to decline by 50%.

Unlikely to influence consumer behavior – transport / NG use with a price on CO_2 alone.

In Year 1: >1.8B in revenue from sale of allowance via auction. Mostly from the small energy user.



Ontario Forecast Year 1 (2017/18) proceeds of sale of allowance (Million $s) – assuming $18/tCO$_2$e (WCI = $14US@0.77)

142M total allowances in Year 1

~38M free allocated to large industry (95% of 40M) = $0

~104M allowances auctioned.

- ~$1.1B for transport fuels (6-12 buyers).
- >$700M for NG small end users and NG generators (2 buyers).
- <40$M acquired by 100 large industrials (for portion not free allocated).

@18$/tCO$_2$ the average family will pay +$85/yr for NG and +$106/yr for transport fuel.

Ontario is linking to WCI Partner jurisdictions with shared path to 80% reduction by 2050

	1990 (Mt CO_2e)	2020 (Mt CO_2e)	2030 (Mt CO_2e)
QUEBEC	~84	*20% below 1990* ~67	*37.5% below 1990* ~53
CALIFORNIA	~431	*To 1990 levels* ~431	*40% below 1990* ~259
ONTARIO	~177	*15% below 1990* ~150	*37% below 1990* ~112
	692	648	-224 424

Ontario Energy Usage

76%
of homes use NG as primary heating fuel
(Quebec = 3%)

84,000MW
Peak day NG demand vs. peak electricity system demand of
25,000MW

15%
of the electricity generated within Ontario is NG fired
(California = 59%)

Joining WCI for 2018-2020 compliance period:

- Shared administrative burden
- Larger pool of abatement options
- Well structured to scale

BUT very different economies, energy and emissions footprints

Cap and trade $s needed to drive infrastructure deployment (EV, CNG transport, RNG, etc…).
Supported with made in Ontario policy to drive reductions in short, mid, long-term.