Bio Heat Workshop

Thunder Bay

March 8, 2016

Bio Heat Workshop

- Cap and Trade
  - General
  - Pulp and paper industry
- Biomass in Cap and Trade
- Issues with Stance
- Offsets

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- Move towards a low carbon economy
- Restricts GHG emissions, finite number of allowances and lowers them over time
- One allowance = 1 tonne of GHG
- Number of Allowances

- 2017 142,332,000
- 2018 136,440,000
- 2019 130,556,000
- 2020 124,668,000

- Creates a price on Carbon emissions
- Assistance factor for trade exposed emissions intensive industries

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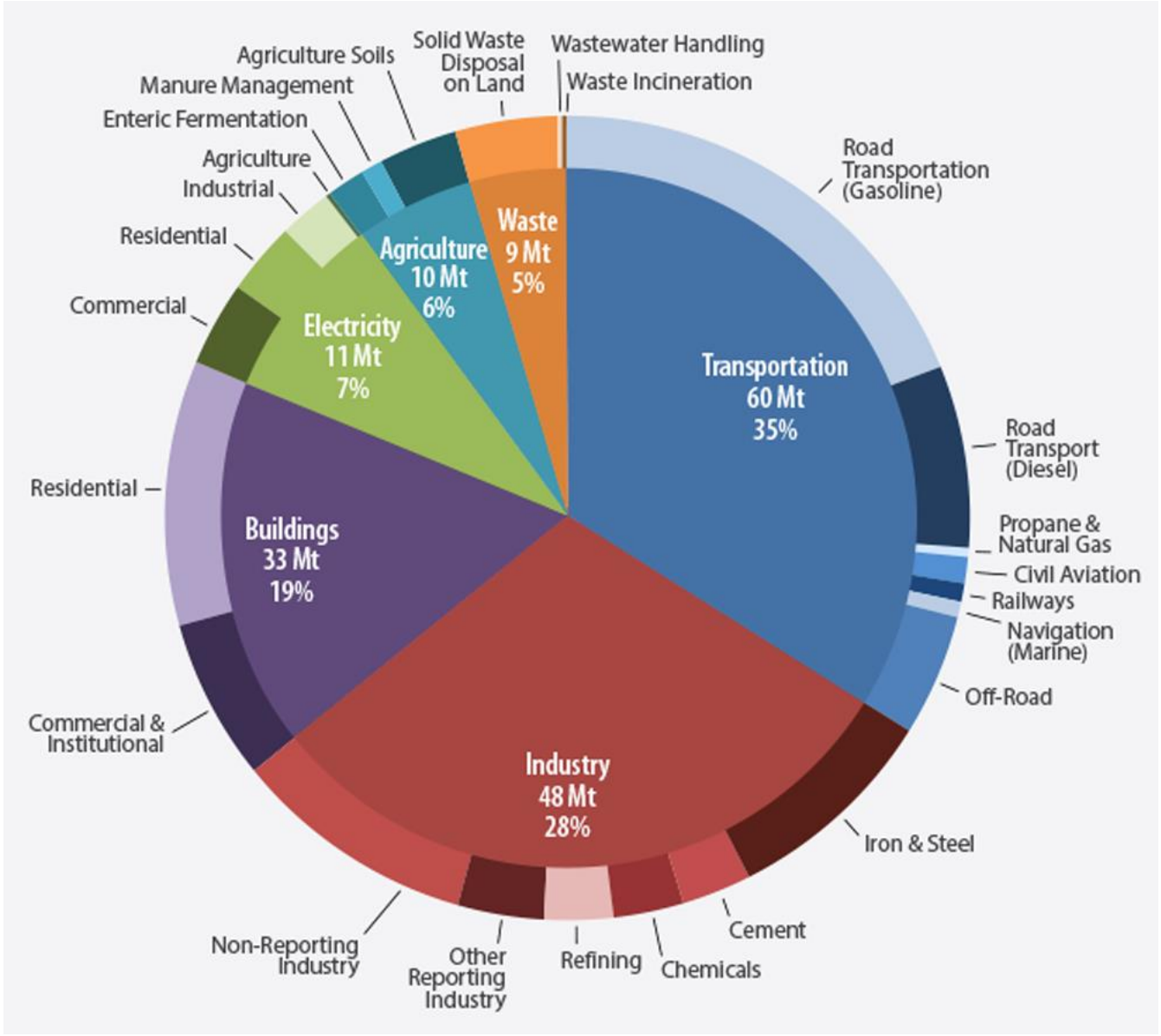
- Target – Reduce GHG emissions by 80% below 1990 levels by 2050

- Interim targets – 15% below 1990 by 2020

  - 37% below 1990 by 2030


Agriculture Soils
Solid Waste Disposal on Land
Wastewater Handling
Manure Management
Waste Incineration
Enteric Fermentation
Road Transportation (Gasoline)
Agriculture
Industrial
Waste 9 Mt 5%
Residential
Agriculture 10 Mt 6%
Commercial
Electricity 11 Mt 7%
Transportation 60 Mt 35%
Road Transport (Diesel)
Residential
Propane & Natural Gas
Buildings 33 Mt 19%
Civil Aviation
Railways
Navigation (Marine)
Off-Road
Commercial & Institutional
Industry 48 Mt 28%
Iron & Steel
Cement
Non-Reporting Industry
Other Reporting Industry
Refining
Chemicals

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- Who are those in Cap and Trade program?
- Large emitters >25,000 tonnes per year GHG are capped industries
- Opting in for those emitters between 10,000 – 25,000 tonnes per year
- Natural gas distributers
- Petroleum product suppliers

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- Free allowances in Year 1, then annual reductions of those allowances
- Allows trading amongst the large emitters (WCI)
  - Flexibility
  - Rewards innovation
  - Most cost-effective method to reach emission targets
- Cap and Trade is supposed to grow the economy and create jobs
- Most Important…

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- $1.8 - $2.0 BILLION/Year

- All funds will go into a Greenhouse Gas Reduction Account

To support:

- Greenhouse Gas Reductions
- (minus all admin fees to run the program of course)

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- Invest in programs that reduce GHG
  - GTA Rapid transit

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- Help save families money

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- Reward innovative companies by creating more opportunities for investment

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- **Pulp and Paper Sector made significant investments reducing GHG emissions by over 65% since 1990 - far exceeding the Provincial 2020 and 2030 reduction targets**
  - Sector GHG emissions about 2% of Ontario's industrial emissions
  - Sector is now generating its energy using about 80% renewable fuels and has implemented available low cost energy efficiency projects

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- Biomass used in combustion will not require any allowances, therefore
- It is considered **GHG neutral**
- **That's the good news!**

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- Now the bad news!
- Energy Use-Based Allocation methodology must be used for Ontario's Pulp and Paper industry.
- $$\mathbf{A_c = A \times [(Ei_{Non\_Cogen} + Ei_{Cogen\_Heat} \times 0.049317) + (Ei_{NoGas} \times EF_{Fuel}) + (Heat_{Imported} \times NBF \times 0.0616)] \times C_c + (Ei_{Biomass} \times EF_{Biomass\ CH4\_N2O})}$$

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- Specific complaints of the pulp and paper industry:

 - no baseline is included for the energy use-based formula, always under-allocated allowance for nest year despite actions taken
 - no recognition of biomass
 - no recognition of early actions
 - industry is subject to the same decline in cap as everyone else

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- If no changes to the Regulation as a result of the 45 day comment period of the EBR the pulp and paper industry, the greenest industry of all large emitters, will be at a competitive disadvantage to other jurisdictions.
- Quebec pulp and paper companies were the only sector to receive 100% free allocations when Quebec introduced Cap and Trade.

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- Large and growing backlash against the position of biomass being considered Carbon nuetral in GHG accounting
- Sparked by widespread clearcutting of southern U.S. forests for pellet production destined for European large scale electrical generation.
- Has some merit, MNRF scientists have studied this

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Time to Carbon Neutrality (year)	Biomass Resource	Baseline Scenario	Reference Fossil Fuel[a]
< 1	forest residues, forest thinnings, primary and secondary mill residue, urban wood waste	disposal through burning without energy recovery	any fuel
	bioenergy plantations	not applicable	any fuel
< 20	biomass plantations	forest conversion to other land use	any fuel
	forest residues	no-collection	coal
	primary and secondary mill residues	disposal at landfill	coal, oil
	trees killed by natural disturbances	no-collection	coal
< 40	biomass plantations	no-harvest	coal
	forest residues	no-collection	oil, natural gas
	forest thinnings	no-collection	coal, oil
	primary and secondary mill residues	disposal at landfill	natural gas
	trees killed by natural disturbances	no-collection	oil, natural gas
	urban wood waste	disposal at landfill	coal, oil

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Time to Carbon Neutrality (year)	Biomass Resource	Baseline Scenario	Reference Fossil Fuel[a]
< 100	biomass plantations	no-harvest	oil, natural gas
	forest thinnings	no-collection	natural gas
> 100	roundwood	no-harvest	coal
	urban wood waste	disposal at landfill	natural gas
	biomass plantations, trees killed by natural disturbance, primary and secondary mill residue	use of biomass for traditional HWP	any fuel
	roundwood	use of biomass for traditional HWP	any fuel
	roundwood	no-harvest	oil, natural gas

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- Offset regulation will be proposed later in 2016 **if** the climate change legislation passes

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- Protocols are now being developed
- Protocols set out the requirements to demonstrate the offset criteria:

  -ownership, real, additional, verified,

  -unique, permanent and enforceable

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- MNRF working on a Forest Carbon Policy Framework (FCPF).
- This initiative is exploring forest carbon policy options (including offsets) on managed Crown forests (Area of the Undertaking).
- Key interests include viability/feasibility of such projects, offset supply, and coordination of stakeholder engagement with MOECC.

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Questions??