

# Green Municipal Corp

Offset Credit Creation, Purchase  
and Aggregation for Canadian  
Municipalities

# Summary

- Green Municipal Corp
- Regulated vs Voluntary emission reductions
- Kyoto targets
- Federal Regulatory Framework on Air Emissions
- Opportunities for municipalities
- Barriers and Risks to accessing the market
- Role of GMC

# Green Municipal Corp

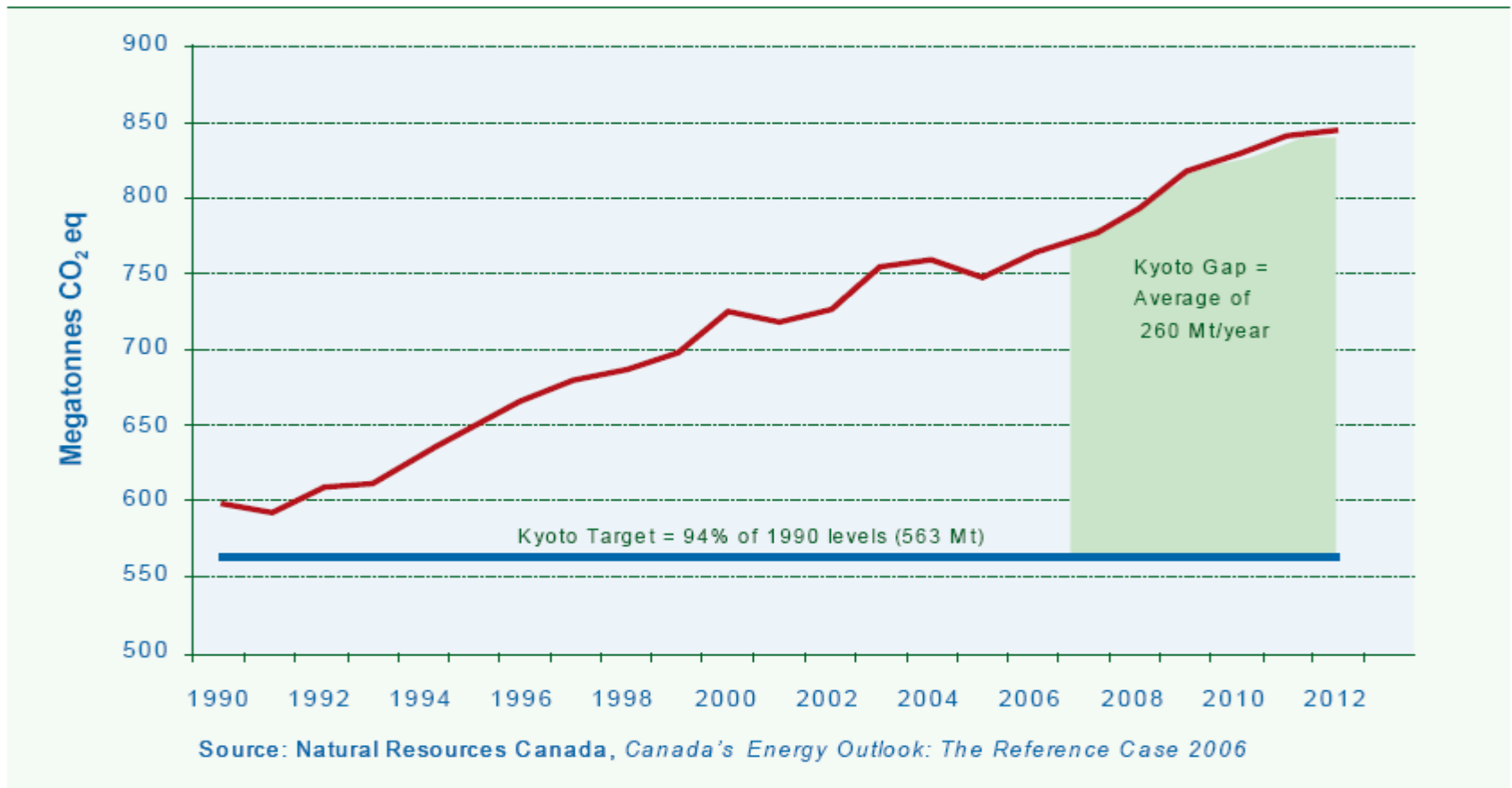
- Not for profit corporation - owned by Federation of Canadian Municipalities
- Created in 2003 to gain experience in creation and sale of VERs (Verified Emission Reductions):
  - Landfill gas capture and flare projects - Nanaimo and Fraser Fort George
- Negotiated ERPA (Emission Reduction Purchase Agreement) and sold VERs from Nanaimo to EPCOR
- Expanding to assist other Canadian municipalities to access regulated Offset Credit market

# Regulated vs Voluntary market

- Voluntary market: (ERs and VERs)
  - Purchasers not required by government to meet emission targets
  - Chicago Climate Exchange/Montreal Climate Exchange currently list voluntary offers
  - Wide range of quality – some are feel good offsets
- Regulated market: (OCs)
  - Purchasers buy offsets as a strategy to meet federally regulated emission reductions targets
  - Very strict control – validation, verification, certification and registration all determined by government
  - Will likely replace voluntary market

# Kyoto gap forecast

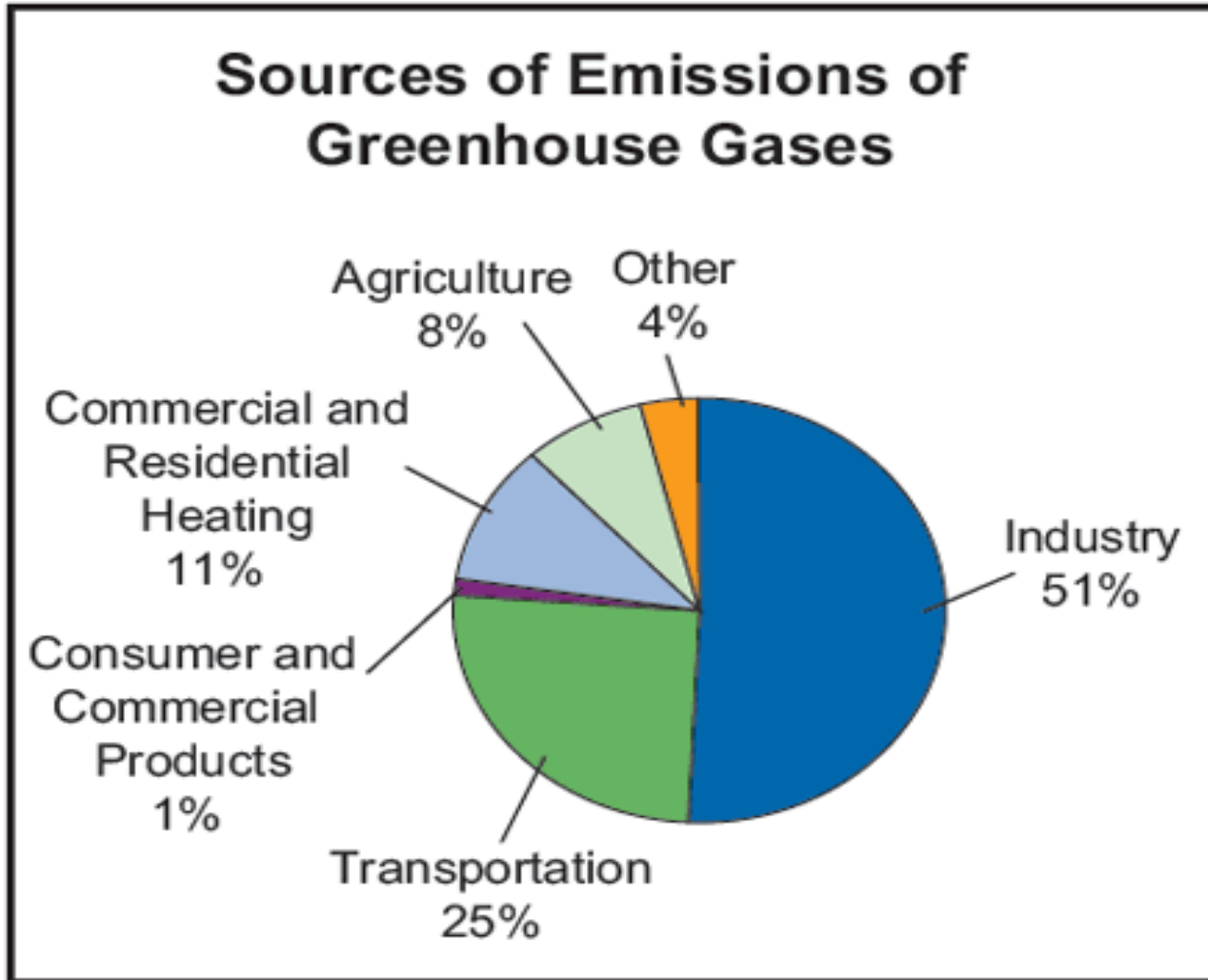
Chart 6: Canada's GHG Emissions, Projected to 2012



# Fed Regulatory Framework

- Large emitters required to reduce intensity of production of CO<sub>2</sub> and several pollutants (NO<sub>x</sub>, SO<sub>x</sub>, VOCs and PM)
- Starting in 2010 based on 2006 levels
- CO<sub>2</sub> intensity reductions of 18% by 2010
  - 2% per year intensity reductions after that until 2020
- Federal government forecast of effect of regulations - absolute reduction of 60 MT by 2020

# GHG Sources



# Regulated emitters

- Electricity produced by combustion
- Oil and gas
- Forest products
- Smelting and refining
- Iron and steel
- Cement lime and chemicals
- Some mining

# Regulated Emitters Compliance Options

- Internal energy efficiency investments
- Purchases of surplus reductions from other regulated emitters
- International credit purchases under Clean Development Mechanism (CDM)
- Contribution to Technology Fund (starting at \$15/tonne)
- Offset Credits (OCs) from non-regulated emitters

# So...?

- Municipalities are non-regulated emitters
- Municipalities can create OCs by:
  - Implementing CO<sub>2</sub> reducing projects that comply with federal protocols - protocols are expected to be issued for landfill gas, district energy, energy efficiency, etc.
  - Complying with federally regulated processes for validation, monitoring, verification, certification and registration
- Once they have done all of the above a municipality will have OCs that can be sold

# Why would Municipalities want access to the Offset Credit Market?

- Real environmental benefits
  - Federally verified, certified and registered CO<sub>2</sub> reductions
- Economic benefits:
  - Energy cost savings
  - Cash from sale of Offset Credits

# To sell or not to sell (is that the question?)

- Don't sell (retire emission reductions):
  - Don't spend \$ on validation, verification, etc.
  - Reductions less rigorously quantified
- Sell Offset Credits:
  - Use proceeds to pay for project
  - Use proceeds to fund other environmental initiatives
  - Use proceeds for other municipal initiatives

# Barriers to accessing OC market

- Regulatory barriers:
  - Federal government issues protocols – not all protocols will apply to municipal operations
  - Validation, Verification (VERs), Certification (OCs) and Registration – requires specialized experience and may be expensive
  - Small projects (less than 2,000 tonnes/year of CO<sub>2</sub>E) will not likely be able to access the market due to costs of verification – unless federal government provides programmatic protocols
- Market information barriers:
  - Who is buying and at what price?

# Barriers to accessing OC market – cont'd

- Technical barriers:
  - Feasibility studies and design
  - Project construction and management
  - Monitoring emission reductions
- Financial barriers:
  - Internal competition for capital funds
  - Limits on borrowing

# Risks to accessing the OC Market

- Price risk:
  - Future price of OCs is not certain and may not justify initial project investment
- Supply risk:
  - Volume of OCs from any one project varies but demand from seller is fixed
- Project management risk:
  - Projects may require new expertise to ensure maximum OC production

# Role of GMC in Offset Credit Market

- Reduce costs:
  - National contracts with consultants to carry out validation, verification, certification and registration
- Reduce risks:
  - Buy from municipality and sell to large emitter
  - Protects municipality from price and supply risk
- Improve selling prices:
  - Aggregation of OCs/VERs from several projects
  - Better price for higher volumes
- Find the buyers and negotiate best prices

# GMC's offer to municipalities

- OC/VER Purchase Agreement:
  - GMC pays guaranteed base price to municipality and shares benefits to participating partners annually if revenue exceeds costs
  - One price for VERs – one price for OCs (if in future project eligible for OC market)
  - Validation, verification, certification and registration carried out by GMC and paid for from sale of OCs/VERs
- Optional Assistance:
  - Technical options and advice
  - Financing options and advice

# Business of GMC

- Commercial operation with no subsidies:
  - Income from fees – level of fees varies with number of customers
  - Break-even financial objective
  - Excess revenue shared with municipal partners
  - Must be competitive and add value

# Development Phase of GMC

- Up to 14 months – to Dec 31/08
- My To Do list:
  - Sign OC/VER Term Sheets for specific municipal projects:
    - Initial priority to landfill gas projects
  - Demonstrate demand for service
  - Plan for full scale business post Dec31/08

# Contact information

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