



Our
change



**CLIMATE CHANGE
ACTION PLAN**

**2016 Ontario East
Municipal Conference
September 16, 2016**



sustainable
Peterborough 

Ontario
Trillium
Foundation  Fondation
Trillium
de l'Ontario

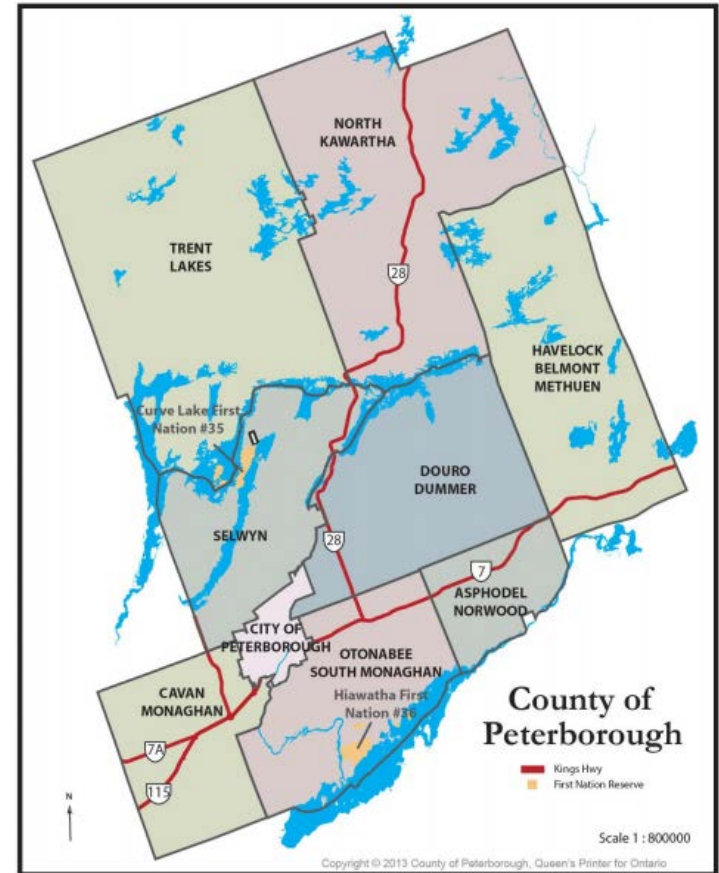
Peterborough
ECONOMIC DEVELOPMENT

FCM FEDERATION
OF CANADIAN
MUNICIPALITIES FÉDÉRATION
CANADIENNE DES
MUNICIPALITÉS



The Greater Peterborough Area (GPA) consists of:

- City of Peterborough
- County of Peterborough
- 8 member Townships
- Curve Lake First Nation
- Hiawatha First Nation



In 2010, the GPA received funding for the development of a Community Sustainability Plan. All 12 partners adopted the plan in 2012.



Vision

**Caring communities
balancing prosperity,
well-being, and
nature.**



Agriculture & Local Food



Climate Change



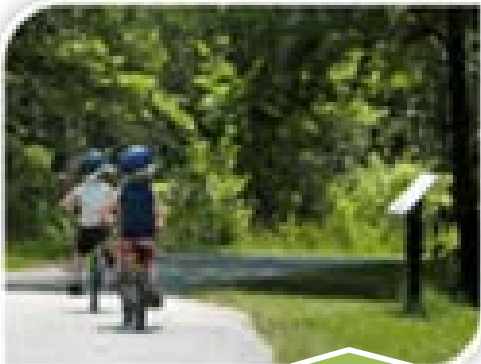
Cultural Assets



Economic Development & Employment



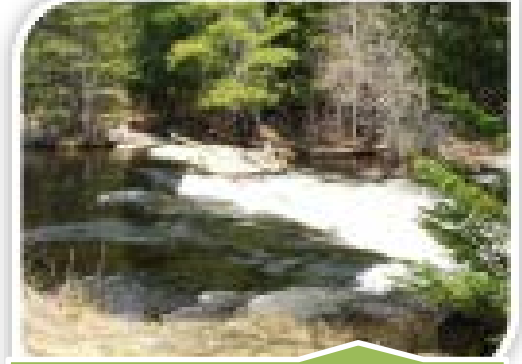
Energy



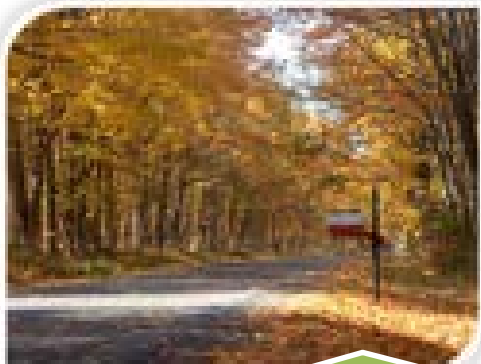
Healthy Communities



Land Use Planning



Natural Assets



Transportation



Waste



Water



Climate Change Theme

Priority Action:

- To become active members in the Partners for Climate Protection (PCP) Program to establish baseline greenhouse gas emissions, set a reduction target, and create a climate change action plan.

Strategic Direction:

- To reduce our contributions to climate change while increasing our ability to adapt to changing conditions.



FCM Partner's for Climate Protection

- 297 municipal members across Canada
- PCP is free to join
- Provides free access to PCP Tracking Tool
- Includes Corporate & Community Sectors
- Provides a 5 Milestone Framework:
 1. Establish a GHG inventory and forecast
 2. Set emission reduction targets
 3. Develop a local action plan
 4. Implement the local action plan
 5. Monitor progress and report results





Greater Peterborough Area Climate Change Action Plan

Stackable Funding through Peterborough Economic Development Corporation:

\$225,000 - Ontario Trillium Foundation over 3 years

\$175,000 - FCM Green Municipal Fund over 2 years

\$ 44,500 - City of Peterborough provided 10% cash contribution

\$444,500

Hired LURA Consulting & ICLEI Canada as consulting team in Oct 2014 for 85% of the budget; \$60,000 remaining for implementation.



Climate Change Action Plan (CCAP)

- contain goals, actions and emission targets that address the needs of each local municipality and First Nation partner
- each of the 12 partners will receive a unique Corporate (municipal) Sector report and a Community Sector report.
- overarching goal of the Plan is to:
 - reduce our greenhouse gas emissions;
 - reduce the use of fossil fuels;
 - lower our energy consumption; and
 - adapt to our changing climate.



Corporate and Community Sectors

Municipal and First Nations Internal Operations

- Focus Areas**
- Buildings/Facilities
 - Fleet/Transportation
 - Corporate Policy
 - Infrastructure/Assets
 - Corporate Waste

Community

- Focus Areas**
- Land Use Planning
 - Transportation
 - Community Energy
 - Community Waste
 - Natural Assets & Water
 - Agriculture & Food
 - Economic & Business
 - People & Health



Community Task Force

Land Use Planning

Transportation

Community Energy

Community Waste

Natural Assets & Water

Agriculture & Food

Economic & Business

People & Health



CCAP Themes

At Home

- Community Energy
- Community Waste
- Land Use Planning
- People & Health

At Work & School

- Community Energy
- Community Waste
- Land Use Planning
- Economy & Business
- People & Health

On the Move

- Transportation
- Land Use Planning
- Economy & Business
- People & Health

Our Food

- Agriculture & Food
- Economy & Business
- People & Health
- Community Waste

Our Land

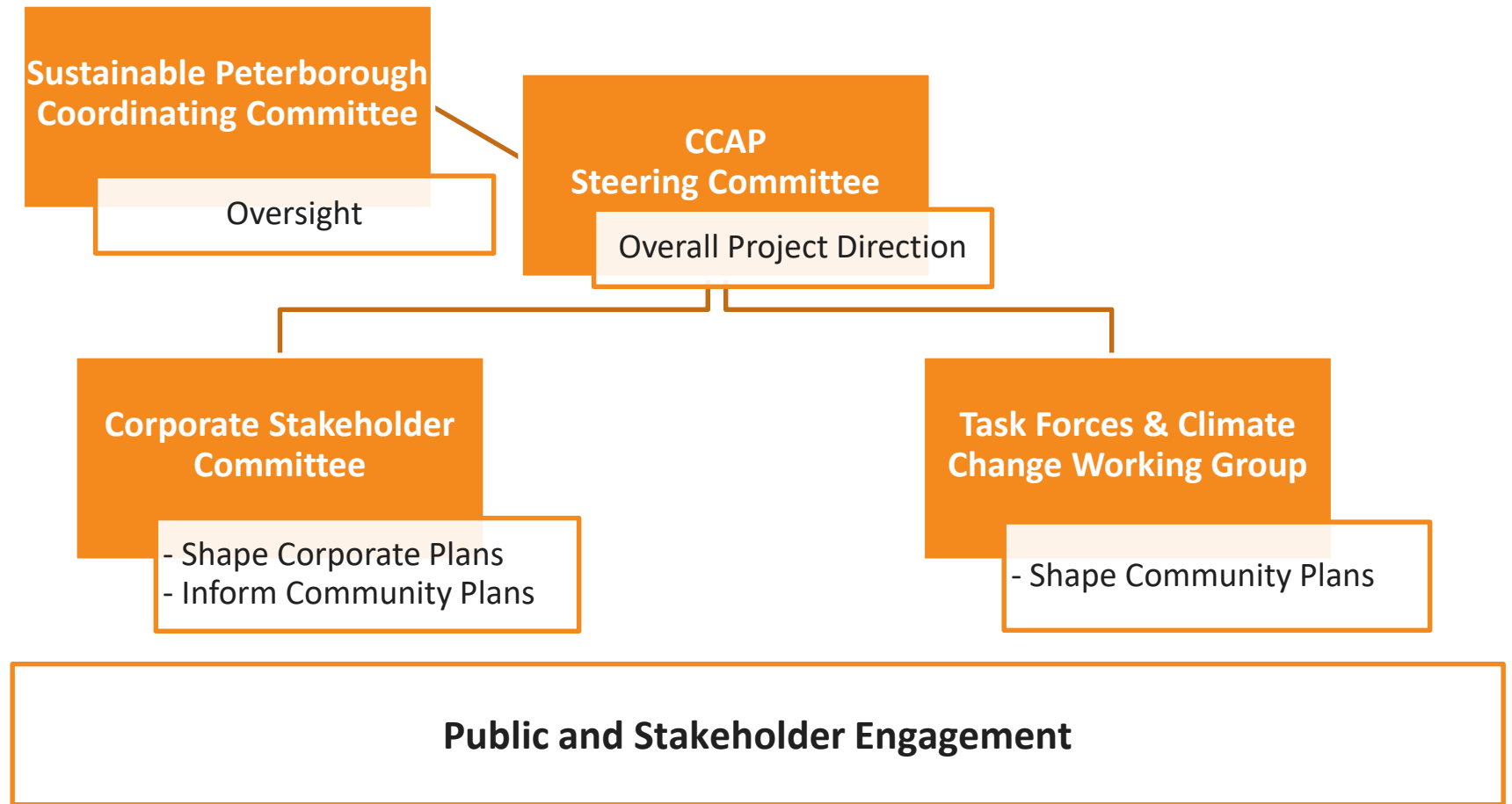
- Agriculture & Food
- Natural Assets & Water
- Land Use Planning
- People & Health

Our People

- Natural Assets & Water
- Land Use Planning
- People & Health



How it is Being Developed





Community Engagement

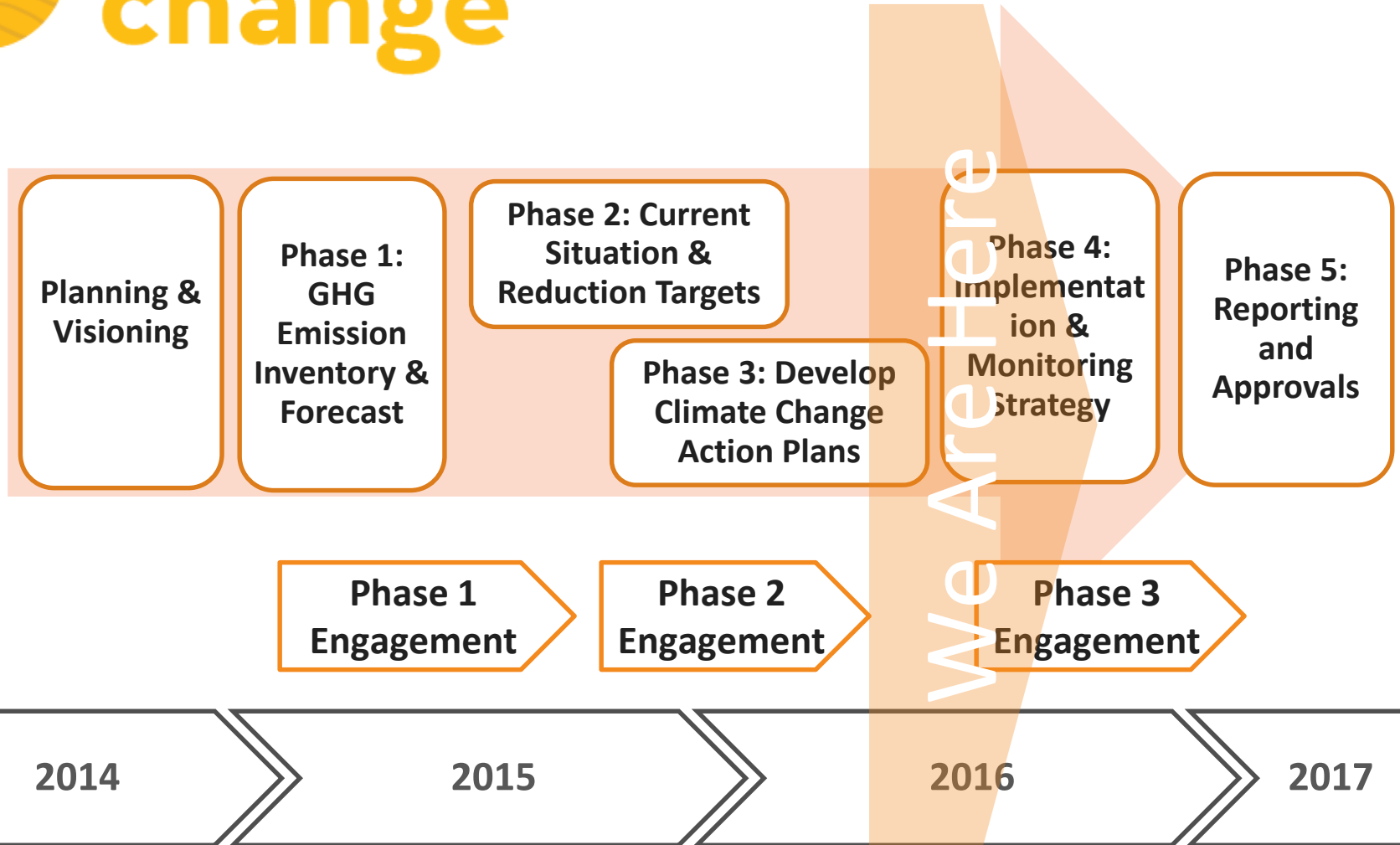
- Phase 1 Public Outreach: 780 people
- Phase 2 MindMixer: 37 participants
- Phase 3 Public Survey: 305 survey responses
- Stakeholder Sessions: 51 stakeholder groups, engaging ~150 people
- Trent Students: 40 participated, engaged ~150 people
- Task Forces: ~100 participants
- Steering Committee, CCWG, CSC: 25 people
- Staff: 25 people

Approximately 1,600 people engaged!



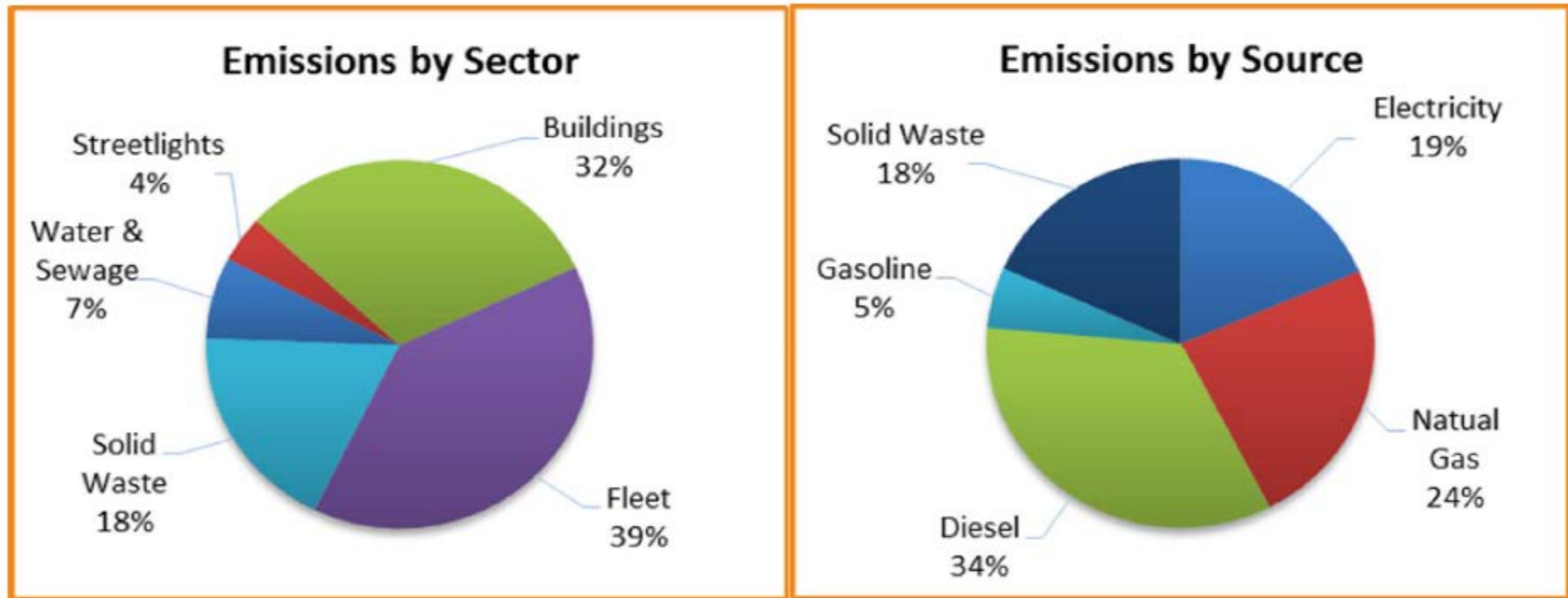


The Planning Process



City of Peterborough Corporate Emissions Profile

Fig 1. City of Peterborough Corporate Emissions by Sector and Source

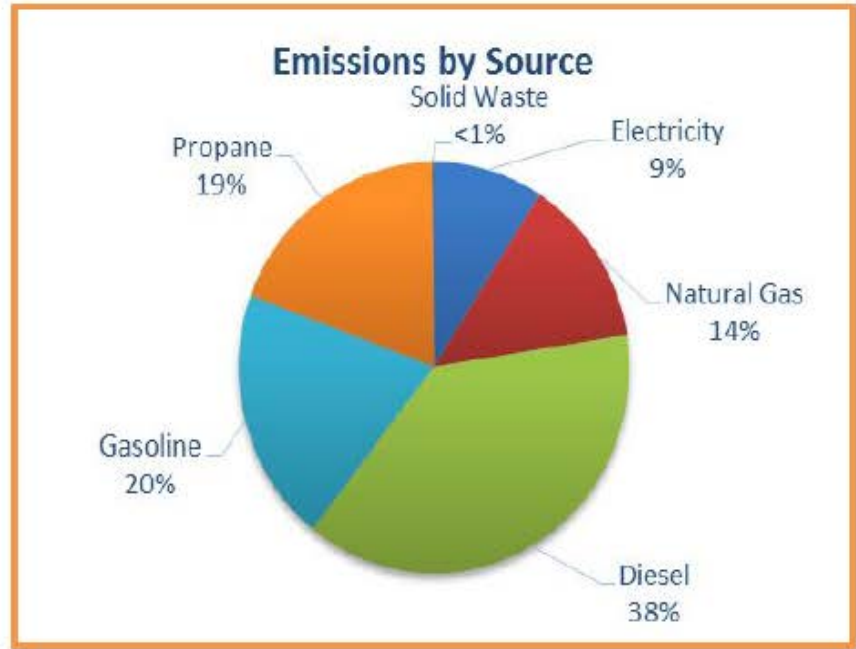
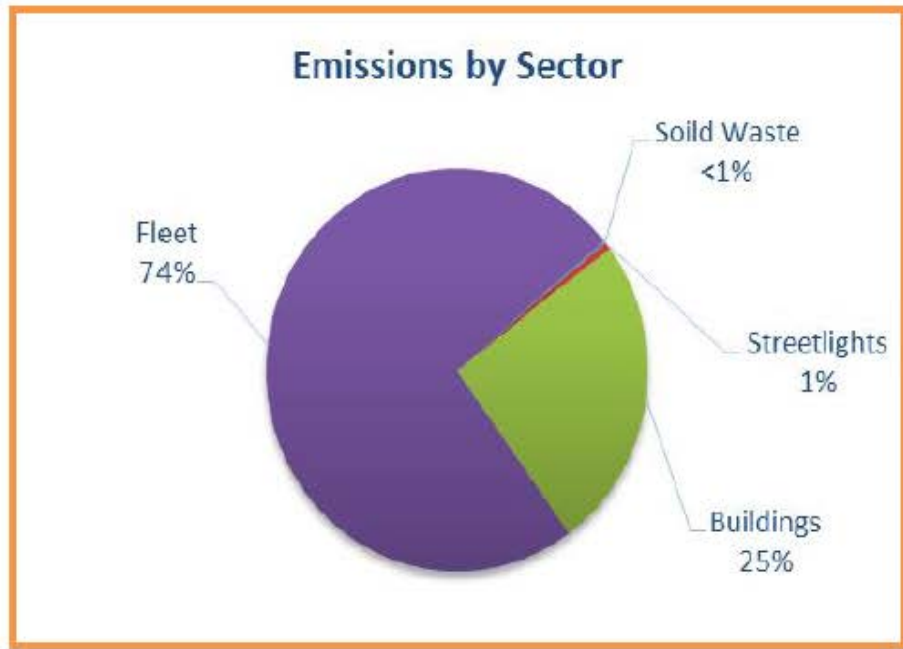


Total Corporate Emissions for 2011: 15,129 tCO₂e



County of Peterborough Corporate Emissions Profile

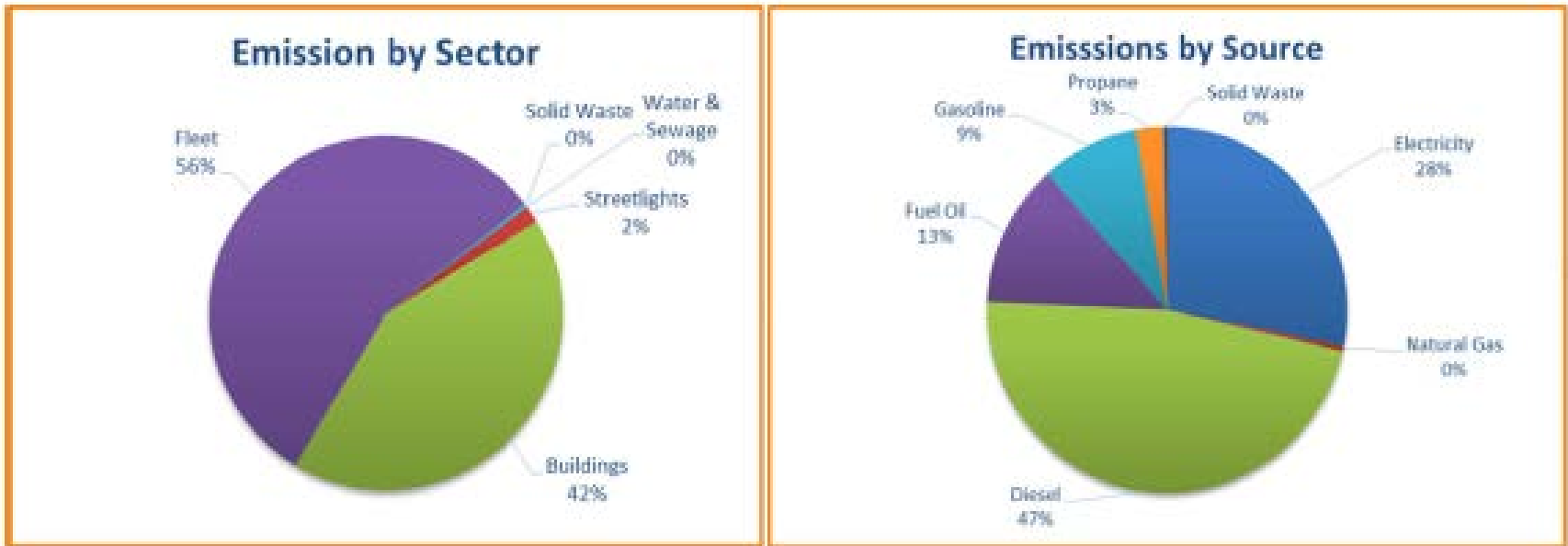
Fig 1. Peterborough County Corporate Emissions by Sector and Source



Total Corporate Emissions for 2011: 1,753 tCO²e

Douro-Dummer Township Corporate Emissions Profile

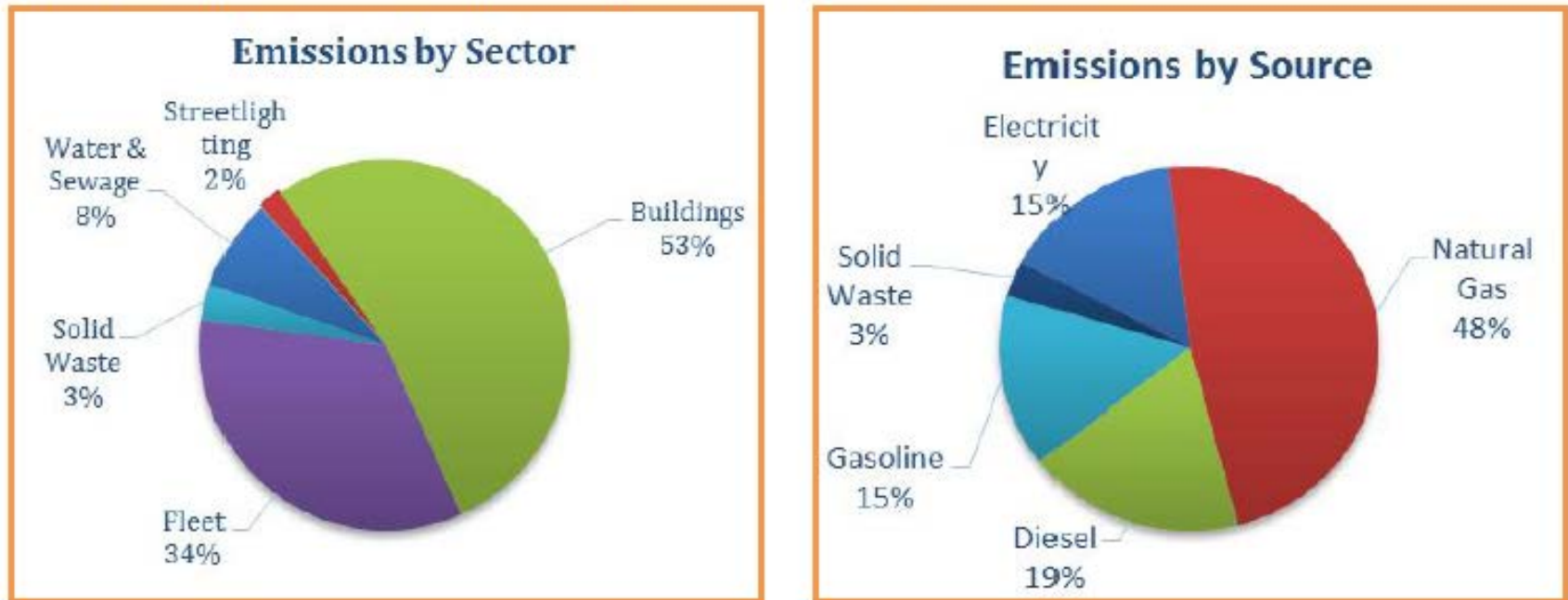
Fig 1. Township of Douro-Dummer Corporate Emissions by Sector and Source



Total Corporate Emissions for 2011: 433 tCO²e

Cavan – Monaghan Township Corporate Emissions Profile

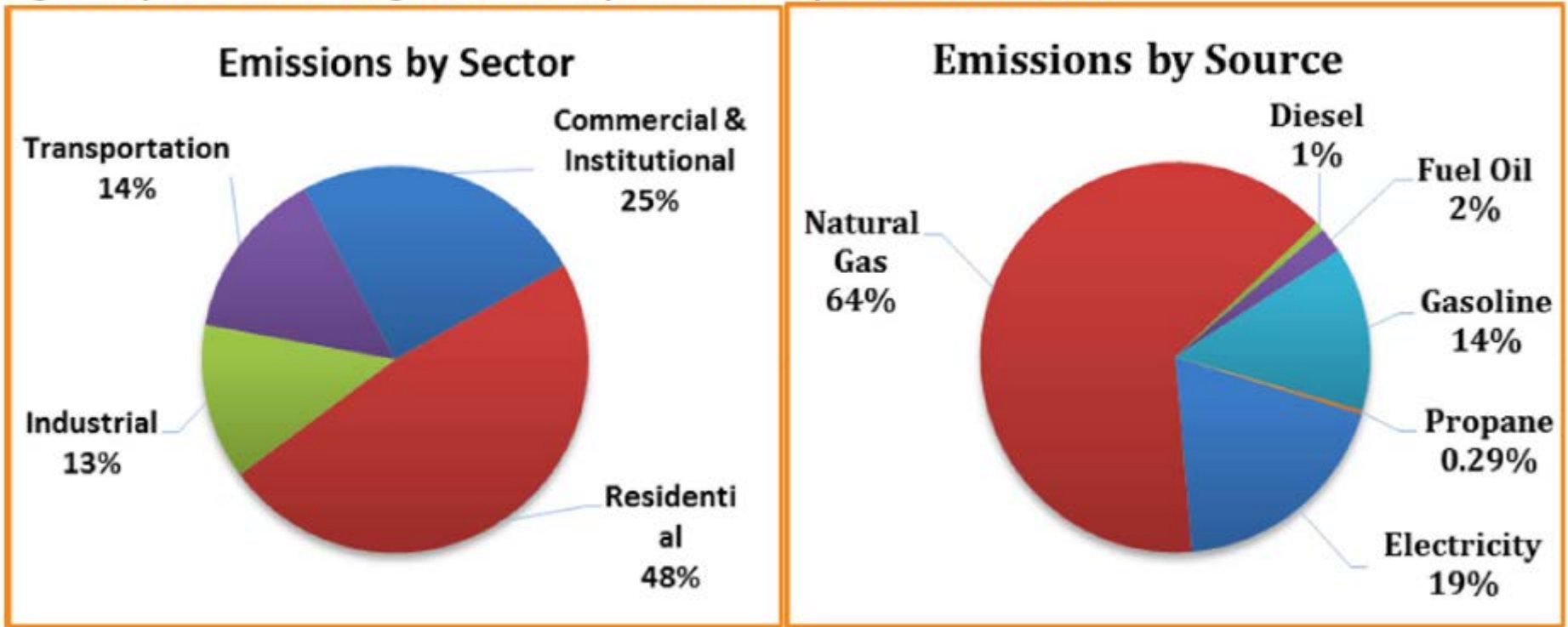
Fig 1. Township of Cavan-Monaghan Corporate Emissions by Sector and Source



Total Corporate Emissions for 2011: 667 tCO²e

City of Peterborough Community Emissions Profile

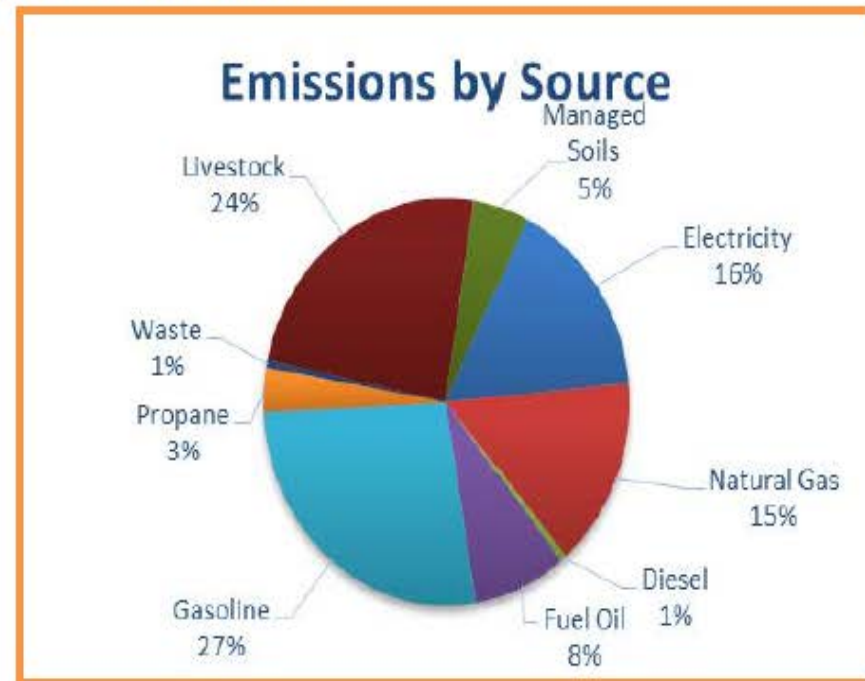
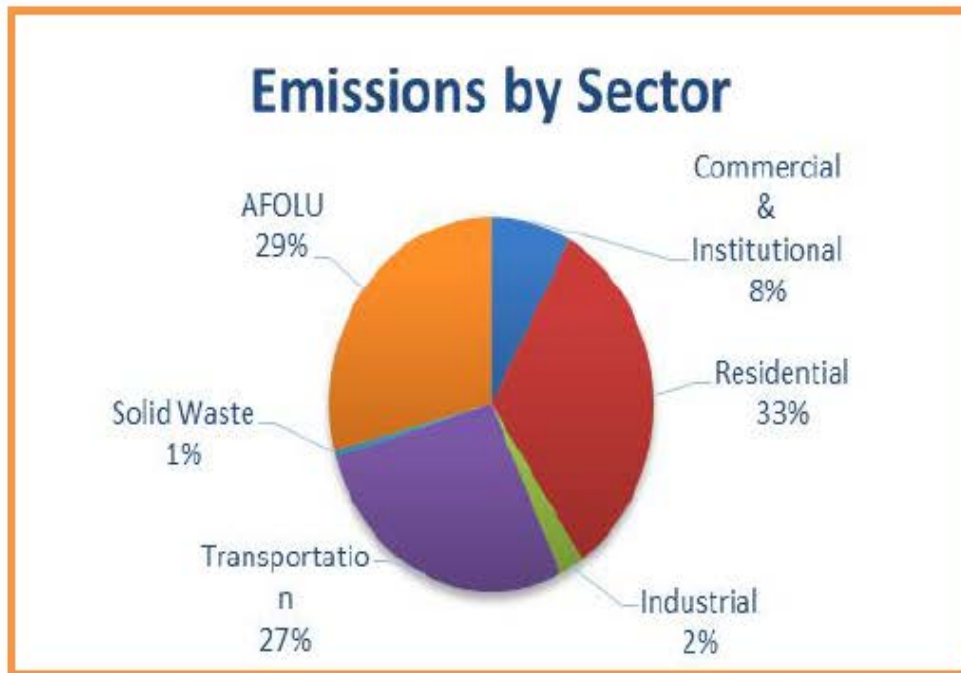
Fig 4. City of Peterborough Community Emissions by Sector and Source



Total Community Emissions for 2011: 283,061 tCO₂e

County of Peterborough Community Emissions Profile

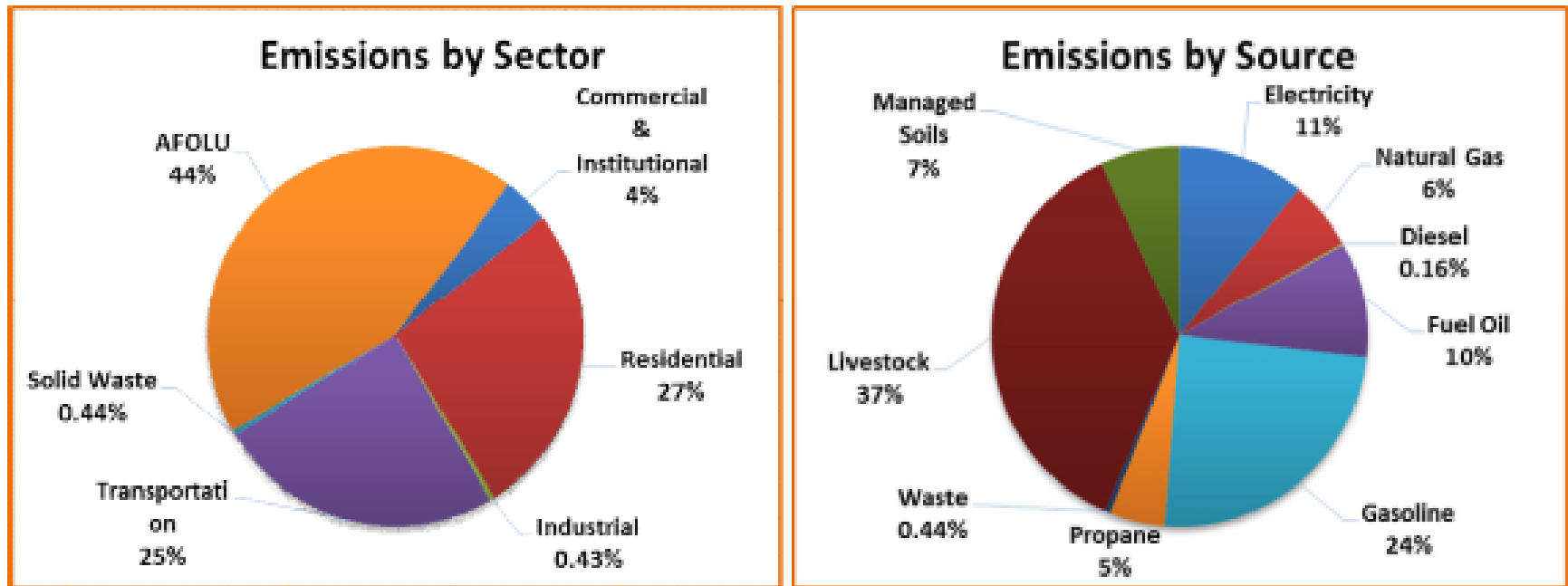
Fig 4. Peterborough County Community Emissions by Sector and Source



Total Community Emissions for 2011: 234,347 tCO₂e

Douro-Dummer Township Community Emissions Profile

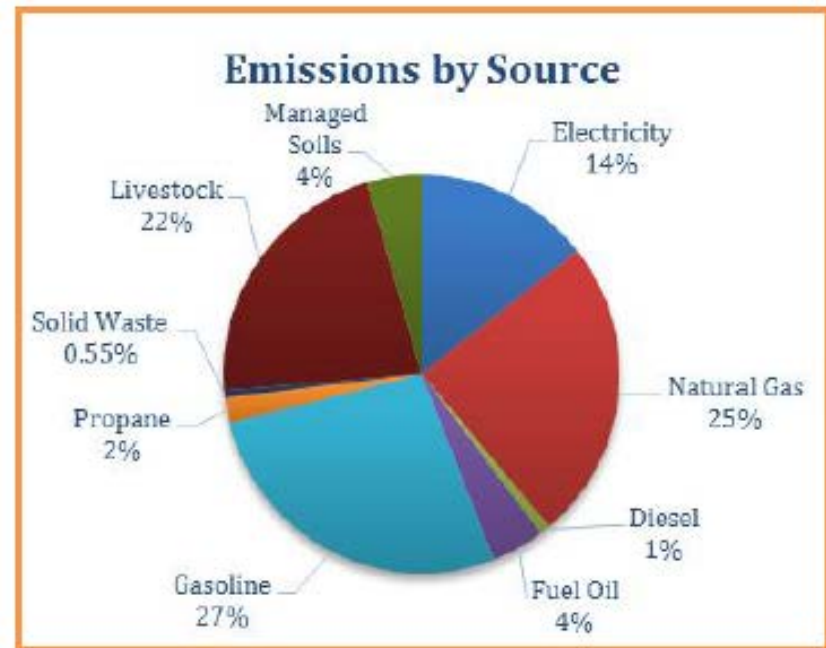
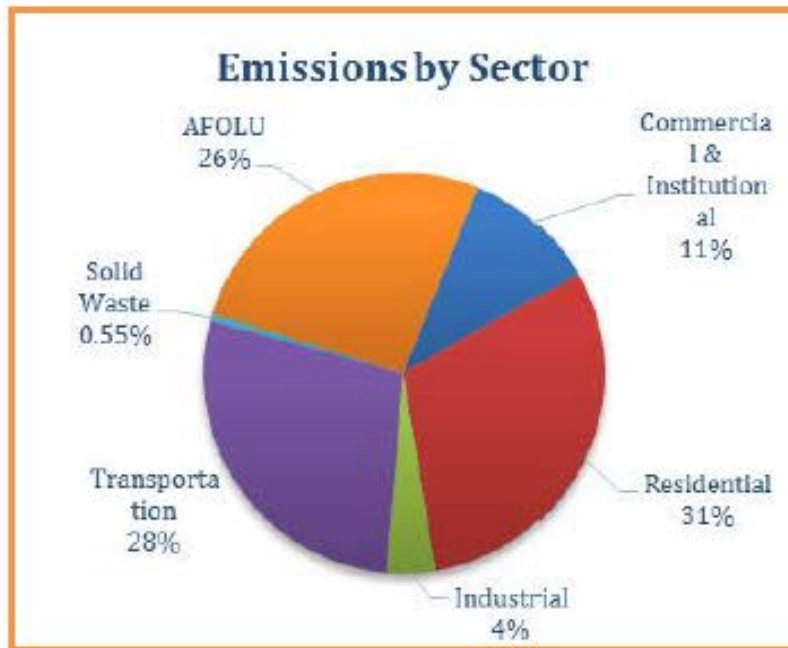
Fig 4. Township of Douro-Dummer Community Emissions by Sector and Source



Total Community Emissions for 2011: 47,994 tCO₂e

Cavan-Monaghan Township Community Emissions Profile

Fig 4. Township of Cavan-Monaghan Community Emissions by Sector and Source



Total Community Emissions for 2011: 55,426 tCO₂e

GHG Reduction Targets

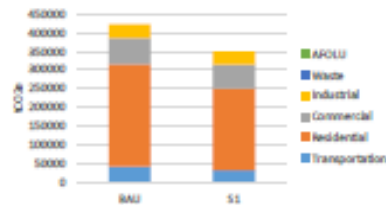
Provincial phase out of coal is a 6% reduction

Range from 25 to 40% for both Corporate and Community Sectors

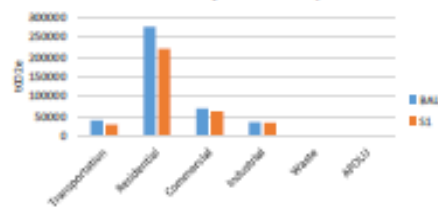
Low Target Scenario by 2031

- Minimal Emission Reductions
- Current/Planned Initiatives
- % Reduction in Emissions: 23%

Emissions Comparison



Emissions Comparison by Sector



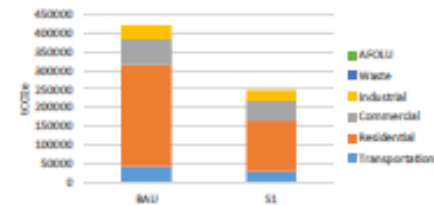
What It Would Look Like

- No change in transportation mode share
- 15% electric vehicles in 2030
- Improved vehicle fuel efficiency by 20%
- New residential and commercial buildings to meet net zero standards; industrial buildings to use 40% less energy
- On average, 33% of existing residential, commercial and industrial buildings to be retrofitted, resulting in a 40% reduction in energy use
- Natural gas to include 4% renewable content
- 5% solar PV adoption rate in the residential sector
- 10% reduction in emissions resulting from enteric fermentation
- 5% of manure handled through anaerobic digester

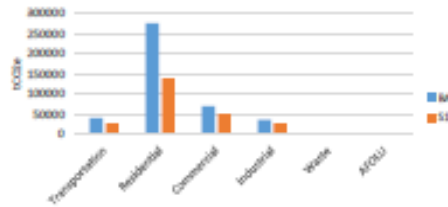
Medium Target Scenario by 2031

- Aggressive Emission Reductions
- Aligned with Provincial Targets
- % Reduction in Emissions: 37%

Emissions Comparison



Emissions Comparison by Sector



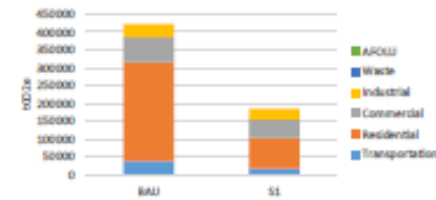
What It Would Look Like

- 2-5% reduction in personal vehicle use through mode shift, carpool, land-use (mode shift is higher in City of Peterborough)
- 15% EV uptake
- 25-30% increase in vehicle efficiency
- All new buildings are Net-Zero by 2030
- 70-80% retrofit of existing buildings aimed at 40% average reduction in energy use – some fuel switching.
- 10-15% of houses have 10 kW PV – 10% of electricity demand for IC&I is met through solar
- 4-6% renewable content in natural gas
- 50% reduction in solid waste/increased organic waste diversion
- 20-25% reduction in enteric fermentation, conversion of liquid waste management systems to anaerobic generators

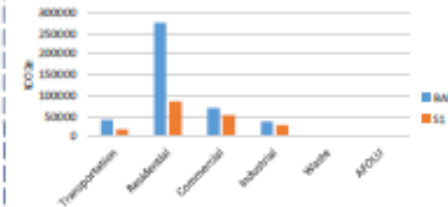
High Target Scenario by 2031

- Very Aggressive Emission Reductions
- Towards Net-Zero
- % Reduction in Emissions: 58%

Emissions Comparison



Emissions Comparison by Sector



What It Would Look Like

- Aggressive reduction in personal vehicle use (>10% in County; 20% in City)
- 25% EV adoption (in line w global leaders)
- 25-30% increase in vehicle efficiency
- All new buildings are Net-Zero by 2030
- Comprehensive Retrofit Program (90-95% of buildings – 50% average reduction – significant fuel switching)
- 15% of houses have PV systems – 15% of IC&I electricity demand is met through local renewable generation
- 4-6% renewable content in natural gas
- 100% diversion of organic waste from landfill
- 40% reduction in enteric fermentation (reliant on developing technologies); conversion of liquid waste management systems to anaerobic generators



Action Planning - Our Strategies

Our Homes:

- Help existing homes become more energy and water efficient, becoming more adaptable to climate risks
- Build new homes to be more efficient, with smaller environmental footprints
- Reduce the amount of waste generated by residents that contribute to GHG emissions



Action Planning - Our Strategies

Our Workplaces and Schools:

- Improve energy and water efficiency of existing buildings and operations
- Build new buildings to be more efficient with a smaller environmental footprint
- Facilitate climate change friendly business operations and practices
- Support local economic resilience and growth of the local green economy
- Facilitate low carbon energy generation and local energy security



Action Planning - Our Strategies

On the Move:

- Build an active transportation network and support active transportation
- Facilitate alternatives to single-occupant vehicle use to reduce frequency of personal vehicle use
- Make public transportation more appealing to increase its usage
- Help transition vehicles to use cleaner and lower GHG emitting fuel sources



Action Planning - Our Strategies

On Food:

- Support localization of the food system
- Encourages purchasing of locally produced food
- Reduce the amount of wasted food

Our Land:

- Strengthen land use policy and the development review process to better support climate change mitigation and adaptation
- Identify climate change risks and prepare for potential impacts
- Protect and enhance natural assets

Our
change

Action Planning - Our Strategies

On People:

- Prepare for the health impacts associated with a changing climate
- Foster a culture of climate change awareness
- Encourage civic engagement



Thank you!

Contact Information:

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