



City of Peterborough

Presentation to Council

November 7, 2016

CLIMATE CHANGE ACTION PLAN



@sustainableptbo



#OURchange



Sustainable Peterborough



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Peterborough
ECONOMIC DEVELOPMENT

FCM

FEDERATION
OF CANADIAN
MUNICIPALITIES

FÉDÉRATION
CANADIENNE DES
MUNICIPALITÉS

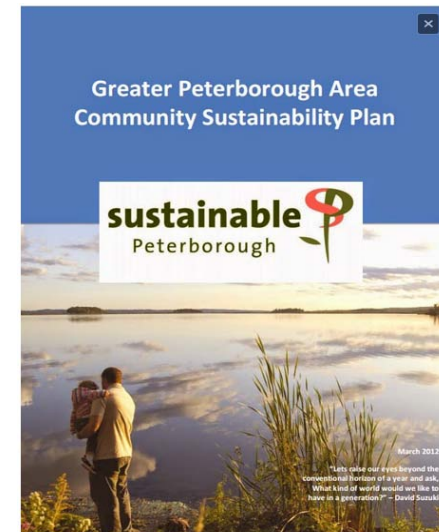


SUSTAINABLE PETERBOROUGH

sustainable
Peterborough



- Greater Peterborough Area Community Sustainability Plan adopted in 2012 by all 12 collaborative partners:
 - City of Peterborough
 - County of Peterborough
 - 8 member Townships
 - Curve Lake First Nation
 - Hiawatha First Nation
- Established 11 theme areas with 18 priority actions
- Climate Change action was to create a Climate Change Action Plan
- All municipalities joined FCM Partners for Climate Protection





FCM Partners for Climate Protection

1. Establish a GHG inventory and forecast
 - **Complete November 2015**
2. Set emission reduction targets
 - **will need to seek Council adoption**
3. Develop a local action plan
 - **will need to seek Council adoption**
4. Implement the local action plan
 - **hired Kaitlyn Ittermann, CCAP Implementation Coordinator, who works out of the County Office**
5. Monitor progress and report results





Corporate and Community Sectors

Municipal and First Nations Internal Operations

Focus Areas

- Buildings/Facilities
- Fleet/Transportation
- Corporate Policy
- Infrastructure/Assets
- Corporate Waste

Community

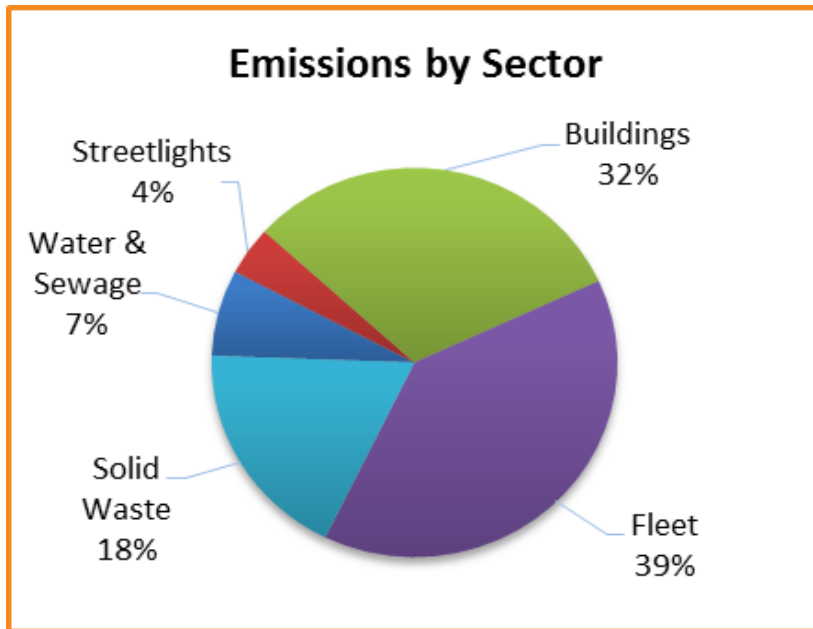
Focus Areas

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



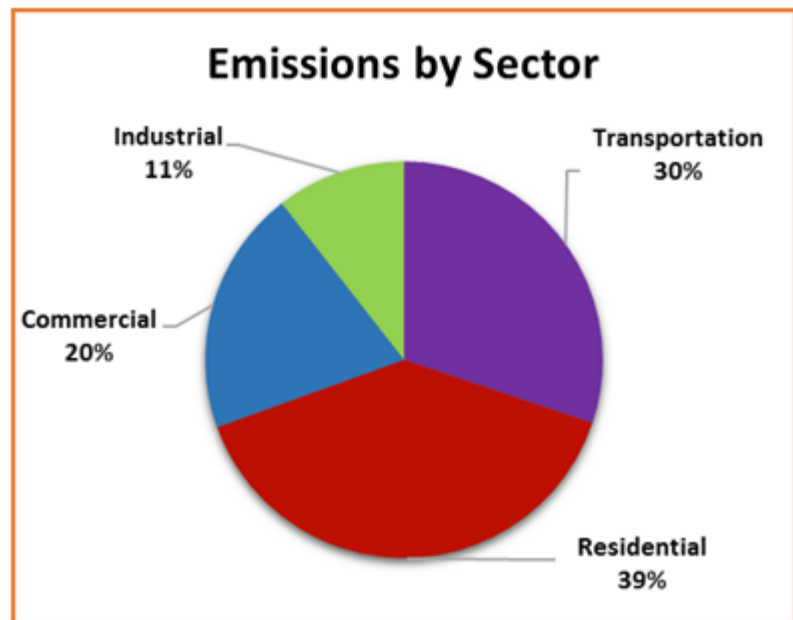
Milestone 1: 2011 Baseline GHG Emissions for City of Peterborough

Corporate (Municipal) GHG Emissions



Total Corporate Emissions for
2011: **15,129 tonnes/year**

Community GHG Emissions



Total Community Emissions for
2011: **349,743 tonnes/year**



Community Task Forces

Land Use
Planning

Transportation

Community
Energy

Community
Waste

Natural Assets
& Water

Agriculture &
Food

Economic &
Business

People &
Health



Community Action Plan

Our Homes

- H1 – Build new homes to be more efficient and have a smaller environmental footprint
- H2 – Help existing homes become more energy and water efficient and be more adaptable to climate risks
- H3 – Reduce the amount of waste generated by residents that contribute to greenhouse gas emissions

Our Workplaces and Schools

- W 1 – Improve energy and water efficiency of existing buildings and business operations
- W2 – Build new buildings to be more efficient and have a smaller environmental impact
- W3 – Facilitate climate change friendly business operations and practices
- W4 – Support local economic resilience and growth of the local green economy
- W5 – Facilitate low carbon energy generation and local energy security

Our Food

- F1 – Support localization of the food system
- F2 – Encourage purchasing of locally produced food
- F3 – Reduce the amount of wasted food

On the Move

- M1 – Build an active transportation network and support active transportation
- M2 – Facilitate alternatives to single-occupant vehicle use to reduce frequency of personal vehicle use
- M3 – Make public transportation more appealing to increase its usage
- M4 – Help transition vehicles to use cleaner and lower greenhouse gas emitting fuel sources

Our Land

- L1 – Strengthen land use policy and the development review process to better support climate change mitigation and adaptation
- L2 – Identify climate change risks and prepare for potential impacts
- L3 – Protect and enhance natural assets
- L4 – Facilitate best management practices for low emission farming and climate change adaptation

Our People

- P1 – Prepare for the health impacts associated with a changing climate
- P2 – Foster a culture of climate change awareness
- P3 – Encourage civic engagement around climate change



Corporate Action Plan

Buildings

- B1 - Institutionalize energy efficiency and low carbon thinking into the organization
- B2 - Enhance operational efficiency of existing buildings
- B3 - Build municipal facilities to ensure high environmental performances
- B4 - Improve environmental performance of existing municipal facilities
- B5 - Utilize renewable energy sources

Fleet

- F1 - Transition the municipal fleet to be more efficient and less carbon emitting

Water & Sewage

- WS1 - Enhance operational efficiency of water services system

Street Lighting

- SL1 - Improve energy efficiency of the street lighting system

Solid Waste

- SW1 - Reduce the amount of organic waste generated through municipal operations



Milestone 2: GHG Reduction Targets by 2031

Where Do We Stand with Our GHG Reduction Targets?

The Climate Change Action Plan aims to align reduction targets with national and provincial governments within the local context of the Greater Peterborough Area. The following provides three different scenarios of GHG reduction targets and outlines general what would need to occur to achieve them.

Take No Action	Take Some Action	Show Leadership
<p>Approximately 6 – 8 % reduction in emissions</p> <p>Considerations</p> <ul style="list-style-type: none"> • Takes into account coal phase-out in Ontario (approx 6.5% reduction) • Focus on provincially driven initiatives <ul style="list-style-type: none"> ○ Electric Vehicle uptake and increased fuel efficiency ○ High efficiency new buildings (net-zero by 2030) ○ Renewable content in natural gas • Some emissions reductions from livestock through changing practices (10%) 	<p>Approximately 15 – 20% reduction in emissions</p> <p>Considerations</p> <ul style="list-style-type: none"> • All of considerations included under “Take No Action” • Conservative rate of retrofitting buildings (2 – 5%) • Some fuel switching away from carbon intensive heating fuels • Low-medium uptake of distributed solar generation (5-8%) 	<p>Approximately 30 – 40% reduction in emissions</p> <p>Considerations</p> <ul style="list-style-type: none"> • Broadly aligned with provincial targets (37% reduction) • All of considerations included under “Take Some Action” • Increased emphasis on retrofitting existing buildings (40-60% of buildings receive deep retrofits) • More fuel switching away from carbon intensive heating fuels • Increased uptake of distributed solar generation (15%) • Organic diversion and waste reductions



Milestone 2: GHG Reduction Targets for the Community Sector

CCAP already
approved

Community	Baseline Annual Community Emissions (2011)	Community Emissions Reduction Target by 2031	Expected Annual Emissions by 2031
City of Peterborough	349,743 tonnes of CO ₂ e per year	39% below 2011 emissions (136,768 tonnes of CO ₂ e less per year)	212,975 tonnes of CO ₂ e per year
Peterborough County*	335,051 tonnes of CO ₂ e per year	32% below 2011 emissions (107,140 tonnes of CO ₂ e less per year)	227,911 tonnes of CO ₂ e per year
Asphodel-Norwood	32,421 tonnes of CO ₂ e per year	25% below 2011 emissions (8,169 tonnes of CO ₂ e less per year)	24,252 tonnes of CO ₂ e per year
Cavan Monaghan	54,531 tonnes of CO ₂ e per year	31% below 2011 emissions (17,017 tonnes of CO ₂ e less per year)	37,514 tonnes of CO ₂ e per year
Douro-Dummer	48,046 tonnes of CO ₂ e per year	29% below 2011 emissions (13,746 tonnes of CO ₂ e less per year)	34,300 tonnes of CO ₂ e per year
Havelock-Belmont-Methuen	37,476 tonnes of CO ₂ e per year	31% below 2011 emissions (11,646 tonnes of CO ₂ e less per year)	25,830 tonnes of CO ₂ e per year
North Kawartha	12,128 tonnes of CO ₂ e per year	38% below 2011 emissions (4,625 tonnes of CO ₂ e less per year)	7,503 tonnes of CO ₂ e per year
Otonabee South-Monaghan	49,055 tonnes of CO ₂ e per year	25% below 2011 emissions (12,210 tonnes of CO ₂ e less per year)	36,845 tonnes of CO ₂ e per year
Selwyn	77,134 tonnes of CO ₂ e per year	39% below 2011 emissions (30,178 tonnes of CO ₂ e less per year)	46,956 tonnes of CO ₂ e per year
Trent Lakes	24,260 tonnes of CO ₂ e per year	39% below 2011 emissions (9,574 tonnes of CO ₂ e less per year)	14,686 tonnes of CO ₂ e per year



Milestone 3: GHG Community Actions

**Recommended
Community Target for
City of Peterborough :**

**39% reduction
from 2011 baseline
by 2031**

Action	GHG Reduction Potential	GHG Reduction Potential in %
H1	38,094	11%
H2	6,383	2%
H3	2,468	1%
W1	25,623	7%
W2	6,143	2%
W5	13,595	4%
M1	11,654	3%
M2	2,331	1%
M3	6,993	2%
M4	38,268	11%
Total	151,552	44%



Milestone 2: GHG Reduction Targets for the Corporate Sector

CCAP already
approved

Community	Baseline Annual Corporate Emissions (2011)	Corporate Emissions Reduction Target by 2031	Expected Annual Emissions by 2031
City of Peterborough	15,129 tonnes of CO ₂ e per year	40% below 2011 emissions (5,989 tonnes of CO ₂ e less per year)	9,140 tonnes of CO ₂ e per year
Peterborough County	1,752 tonnes of CO ₂ e per year	26% below 2011 emissions (460 tonnes of CO ₂ e less per year)	1,292 tonnes of CO ₂ e per year
Asphodel-Norwood	592 tonnes of CO ₂ e per year	28% below 2011 emissions (158 tonnes of CO ₂ e less per year)	434 tonnes of CO ₂ e per year
Cavan Monaghan	646 tonnes of CO ₂ e per year	29% below 2011 emissions (190 tonnes of CO ₂ e less per year)	456 tonnes of CO ₂ e per year
Douro-Dummer	433 tonnes of CO ₂ e per year	32% below 2011 emissions (139 tonnes of CO ₂ e less per year)	294 tonnes of CO ₂ e per year
Havelock-Belmont-Methuen	559 tonnes of CO ₂ e per year	40% below 2011 emissions (225 tonnes of CO ₂ e less per year)	334 tonnes of CO ₂ e per year
North Kawartha	735 tonnes of CO ₂ e per year	27% below 2011 emissions (198 tonnes of CO ₂ e less per year)	537 tonnes of CO ₂ e per year
Otonabee South-Monaghan	498 tonnes of CO ₂ e per year	25% below 2011 emissions (125 tonnes of CO ₂ e less per year)	373 tonnes of CO ₂ e per year
Selwyn	1,450 tonnes of CO ₂ e per year	40% below 2011 emissions (560 tonnes of CO ₂ e less per year)	890 tonnes of CO ₂ e per year
Trent Lakes	825 tonnes of CO ₂ e per year	26% below 2011 emissions (216 tonnes of CO ₂ e less per year)	609 tonnes of CO ₂ e per year

Milestone 3: GHG Corporate Actions

Action	GHG Reduction Potential	GHG Reduction Potential in %	Status
Buildings			
B2	171	1%	Underway: preventative maintenance program, bill validation process
B3	330	2%	Underway: full lifecycle analysis
B4	1,543	10%	Future Project
B5	136	1%	Underway: solar PV
Fleet			
F1	1,332	9%	Underway: preventative maintenance program for vehicles & equipment, vehicle/fuel performance audits
Water & Sewage			
WS1	175	1%	Underway: preventative maintenance program, operator training & education
Street Lighting			
SL1	271	2%	Future Project
Solid Waste			
SW1	2,468	16%	Underway: office waste reduction
Total	6,426	42%	

**Recommended
Corporate Target for
City of Peterborough:**

**40% reduction
from 2011 baseline
by 2031**



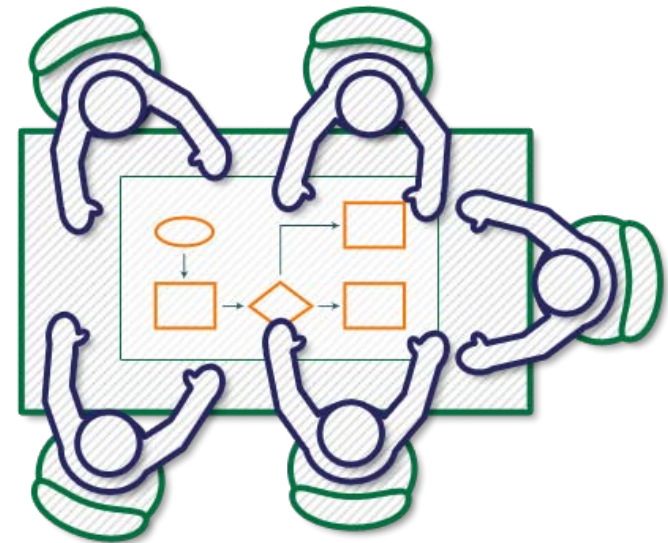
Local Value to Approving CCAP

- Timing for approval is strategic, positioning all 12 partners ahead of the curve
- Establishes local targets and actions inline with Ontario CCAP and in advance of Cap & Trade
- Ahead of proposed policy in Growth Plan for GGH to require municipalities to create GHG inventories and plans
- Essentially “shovel-ready” for provincial and federal programs and funding opportunities
- Plan is flexible and adaptable to timing & opportunities
- Let’s Council decide on the timing and selection of their actions through their budget and project approval process



CCAP Implementation and Next Steps

- Oversight Body
- Ongoing Engagement and Communication
- Tracking, Monitoring and Recording 2012-2016 Projects
- Future Funding Opportunities





Council Resolution

Will need to a Council resolution from each CCAP partner, adopting both Corporate and Community GHG Reduction Targets and Local Action Plans, but at this time, we ask:

That Council approve the following recommendation:

- a) That the presentation by Lura Consulting be received for information;
- b) That the draft Greater Peterborough Area Climate Change Action Plan be received for information; and
- c) That the staff be directed to report back on proposed targets and detailed local action plan.