

# Town of Cobourg Climate Action Plan Update 2020


September 2020

# Thank You

- **Mayor John Henderson and Cobourg Council**
- **The Town of Cobourg Staff: Ian Davey, Glenn McGlashon, Rob Franklin, Brent Larmer, Laurie Wills, Neil Stewart, Chris Barnes, Rene Champagne, Jason Johns, Melanie Chatten, Ashley Purdy, Joanne Taylor and former CAO Stephen Peacock,**
- **Sustainable Cobourg**
- **The Sustainability and Climate Change Advisory Committee of the Town of Cobourg**
- **Lakefront Utilities Services Inc.: Dereck Paul, Mark Turney, Danielle D'Sousa and Kenneth Hutton**
- **Enbridge/Union Gas Ltd. Xi (Sissi) Wang, Cindy Ni and Melissa Van Kesteren**
- **County of Northumberland, Jennifer Moore, Mobashir Pannu, Adam McCue and Jennifer Hardy-Parr, Kaela Esseinger**


[Public dashboard](#)[Your city dashboard](#)[Edit your profile](#)

MY ACCOUNT  
LOG OUT



FEDERATION  
OF CANADIAN  
MUNICIPALITIES




FÉDÉRATION  
CANADIENNE DES  
MUNICIPALITÉS




Local  
Governments  
for Sustainability

Partners for Climate Protection

PCP MILESTONE TOOL





HOME / SMITHJ

ViewEdit

Name

Judy Smith

Member for 1 year 3 months

Group

Cobourg

**The greenhouse gas calculator from FCM used to update the Town of Cobourg Climate Action Plan.**

# MILESTONE 1

## INTRODUCTION

[HOME](#) / [MILESTONE 1](#) / [INTRODUCTION](#)

[Introduction](#)

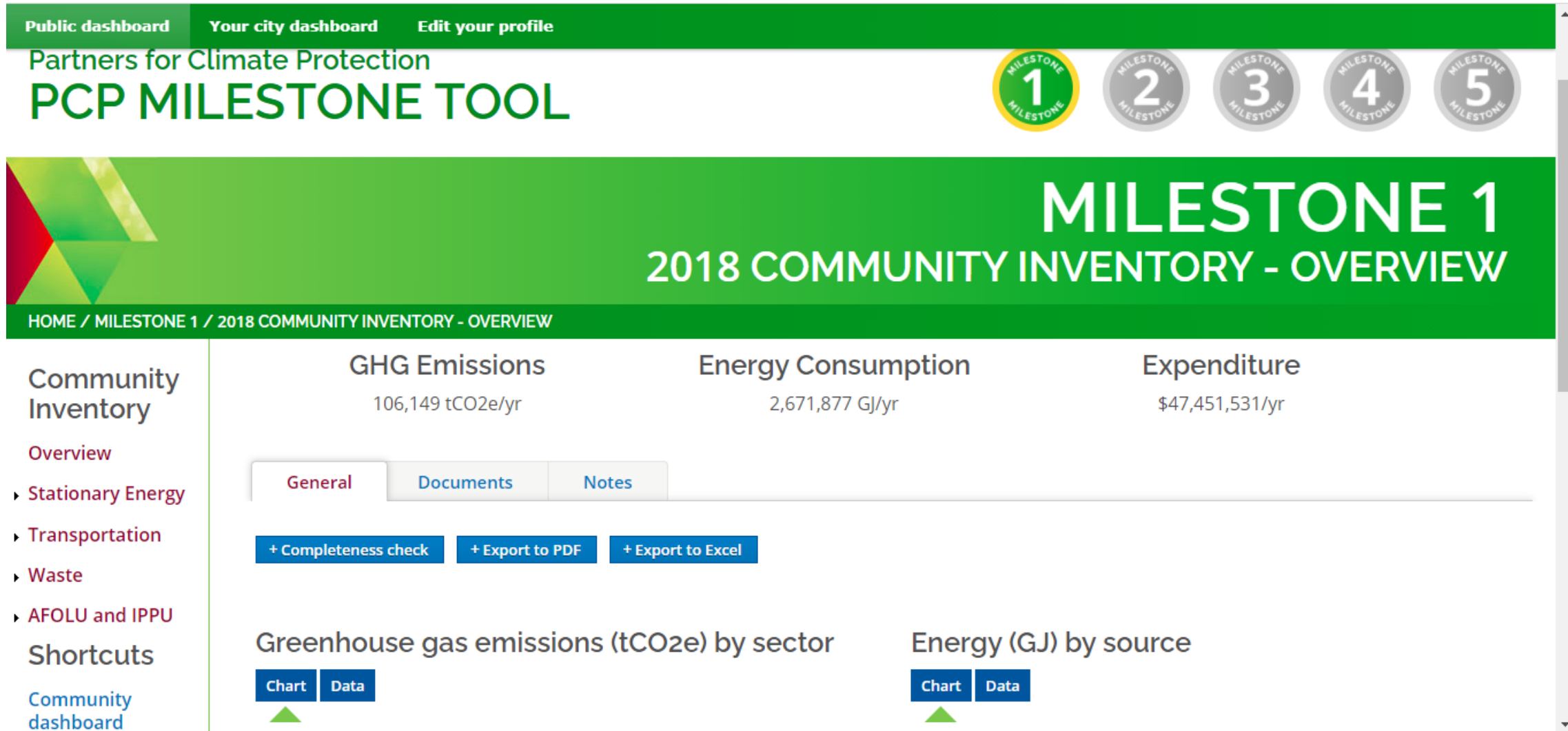
[Corporate  
dashboard](#)

[Community  
dashboard](#)

## Introduction

Milestone 1 is the foundation for any climate change or community energy strategy. Milestone 1 involves creating a greenhouse gas emissions inventory and forecast by gathering data on community and municipal energy use and solid waste generation. Your work on Milestone 1 reveals how your community or municipal organization consumes energy and generates waste. The inventory process also provides the necessary baseline data against which your progress will be measured. By measuring emission levels at regular intervals, you will be able to see whether your community or municipal organization is reducing its emissions or continuing along a business-as-usual trajectory.

# How it works.



**An example of a module in the calculator**

# Community Analysis

**In 2007 the manufacturing sector was the biggest contributor to GHG emissions - 34%**



**Today, it is the smallest, responsible for less than 15% of all GHG emissions in the community.**

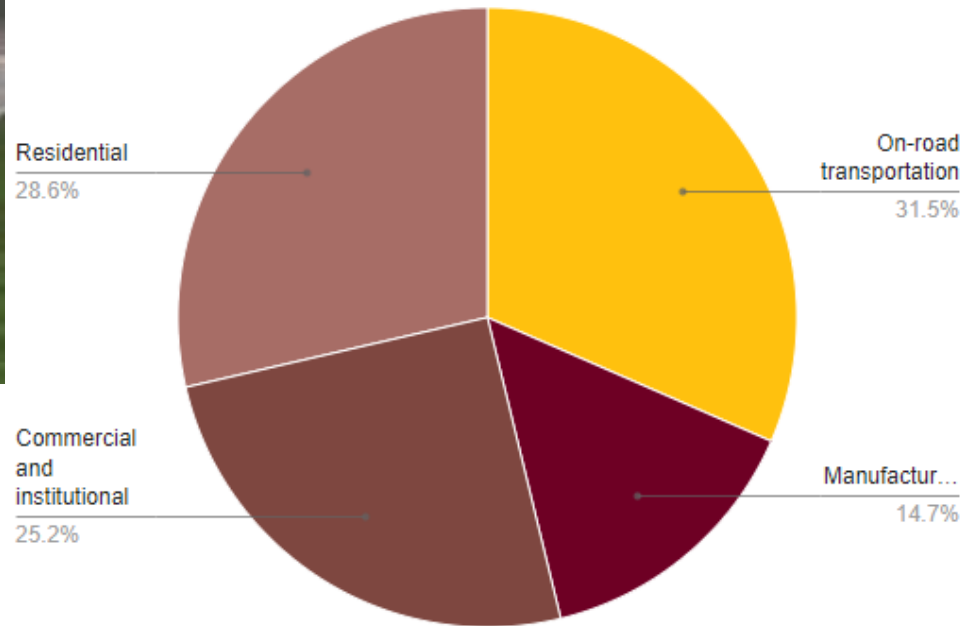
## **What has changed?**

- **Energy use in manufacturing has dropped 33% due to company losses and efficiency.**
- **GHG emissions have fallen also because electricity has been 'decarbonized' by the removal of coal from the grid.**
- **GHG emissions from manufacturing are less than one quarter of what they were in 2007.**



# Vehicles and homes are the biggest contributors to GHG emissions in Cobourg today

**All Vehicles 32%**



**All Homes 29%**



Total cost to Cobourg for fuel and electricity  
has dropped \$13 Million since 2007 from  
\$60 Million to \$47 Million\*



\*In 2007 \$59,982,767 and in 2018 it was \$47,299,108



# **Industrial energy demand dropped 38% and industrial energy expenditures dropped \$12M between 2007 and 2017**

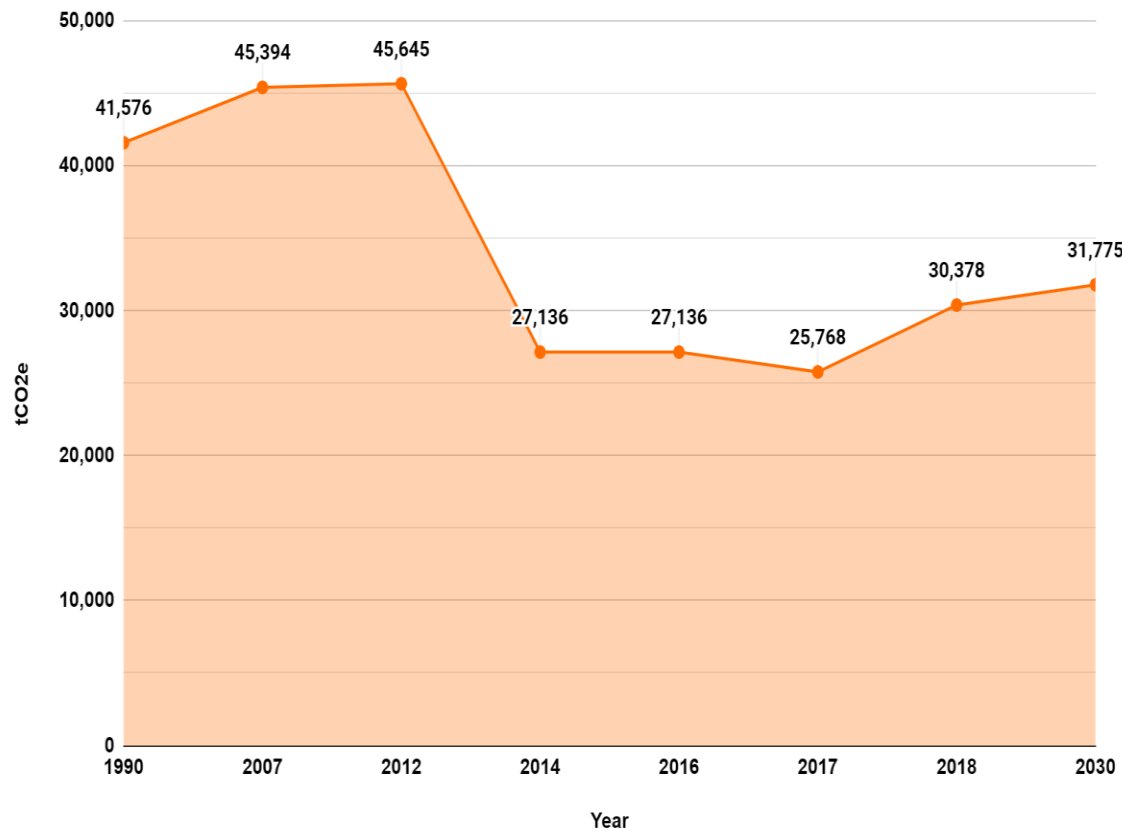
**The Kraft Plant closure in 2008 may have had the biggest effect on industrial energy use and expenditures.**



# Today residential and vehicle energy use dominate.

## Total Residential Energy Use

1. Cobourg Community Residential Greenhouse Gas Emissions Time Series 1990-2018



## Total Vehicle Energy Use

1. Cobourg Community Transportation Greenhouse Gas Emissions Time Series 1990-2018



**In 2008 Cobourg set  
a target of reducing  
emissions 23,037  
tonnes from 202,165  
tonnes CO<sub>2</sub>e in 2007  
to 179,132 tonnes  
CO<sub>2</sub>e by 2012.\***

**\*Screen capture from  
original Cobourg GHG  
Inventory Report July 2008**



## **Kyoto Target**

6% below 1990 levels  
by 2012

Cobourg's Goal... **11.8%**



**After passing their first Climate Action Plan in 2010, Cobourg spent almost \$100,000 on greenhouse gas reduction measures including:**

- substituting a solar thermal heating system for natural gas on the YMCA Community Pool**
- the purchase of a smaller service and hybrid vehicles for staff travel**
- retrofitting of streetlights to induction lighting**

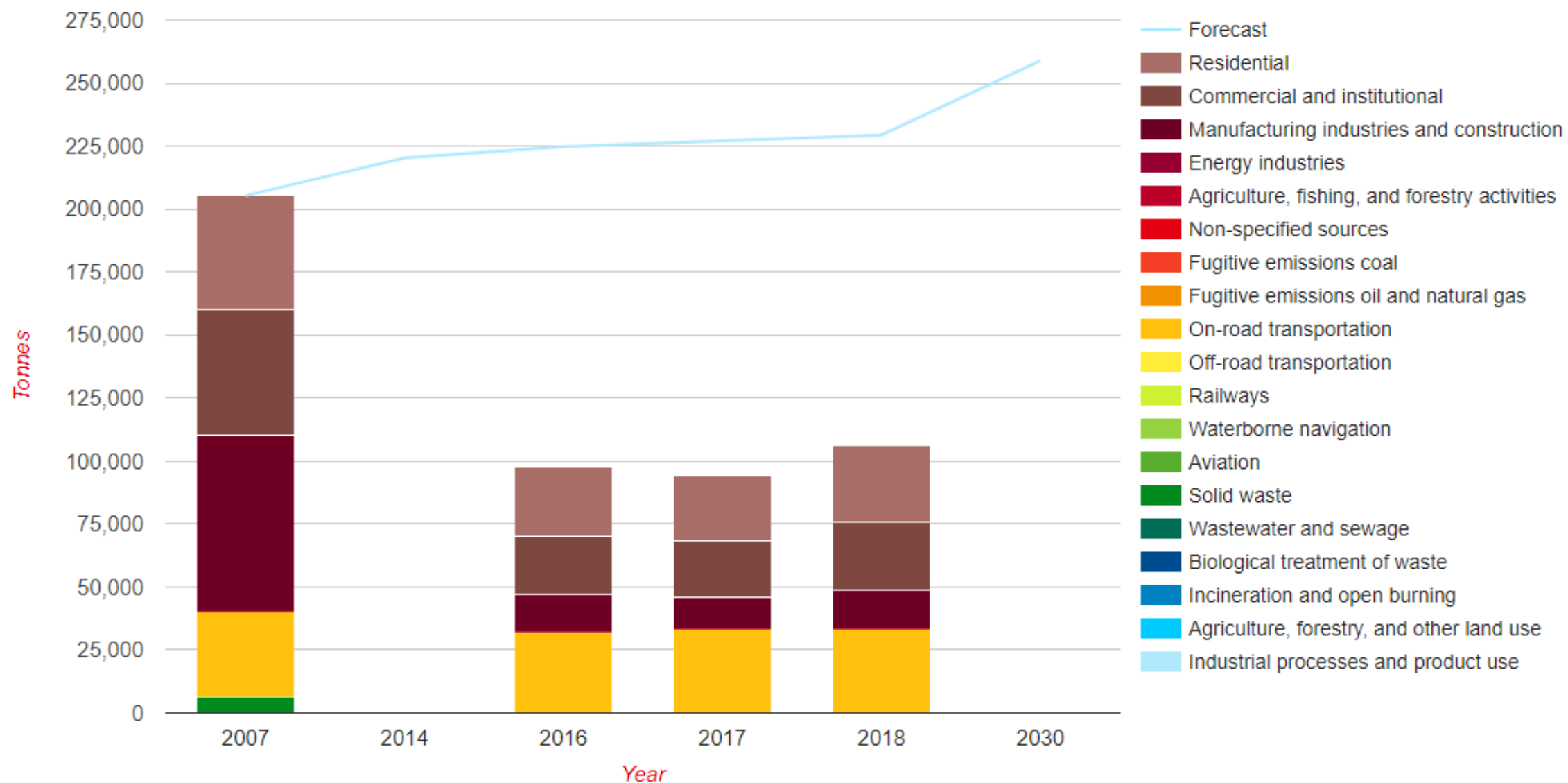
**By 2016 GHG emissions were down to 97,438 by best estimates, a drop of 52% from 2007. We met the Kyoto target.**

**GHG emissions have risen slightly since, yet by 2018 we surpassed the provincial and federal GHG target of a 30% reduction in greenhouse gas emissions below 2005 levels by 2030. In fact, we have made a 47% reduction below 2005 GHG levels\*.**

**\* 2007 data is used as a surrogate for 2005 because it is the best real data available from the original 2008 Town of Cobourg GHG Inventory Report, July 2008.**



### Community GHG emissions and forecast



**The next target is an 80% to 100% reduction by 2050 below 2005 levels. We should start on that now. It is a race against time.**



<https://youtu.be/9SvIT6z5nhc>

Why? Because we are already implementing  
the carbon future our children will inherit.

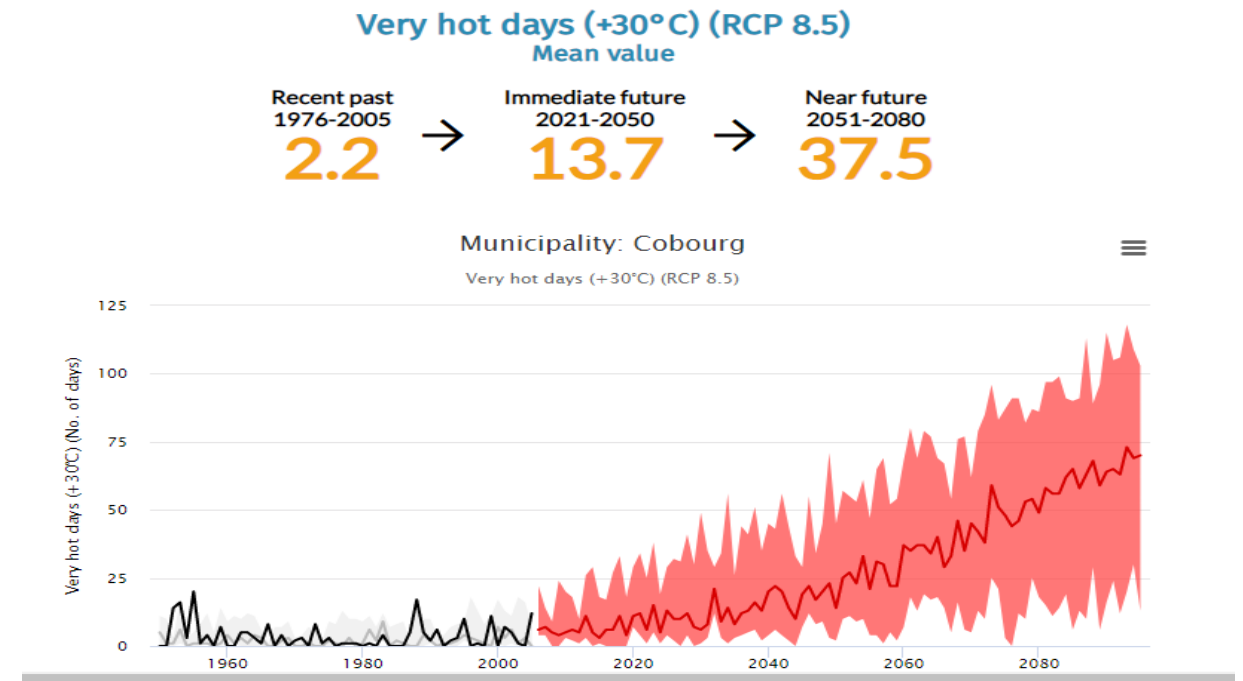
---





Impacting the future level of greenhouse gas emissions is not a choice, it is already *implicit* in everything we do. The real choice is whether we exercise that power and influence *now, while we still can*.

Climate scientists say we have 10 years to flatten the curve to prevent serious runaway climate change.



## ***Consequently, the Town of Cobourg has declared a Climate Emergency***



Pop [P](#)

**NOW THEREFORE BE IT RESOLVED THAT** Council of the Town of Cobourg declare a Climate Emergency conveying its recognition that we are facing an unprecedented crisis requiring unprecedented climate mitigation measures; and

**FURTHER THAT,** in response to this Climate Emergency, Council deem the need to reduce the effects that the Town of Cobourg is contributing to the climate crisis by way of the following actions:

- 1.** That Council create a staff position on a one (1) year contract basis, under the supervision of the Chief Administrative Officer to develop a Request for Proposal (RFP) for the Integrated Community Sustainable Plan (ICSP) and Green Design Standards and manage the project through to completion;



# **Next Steps**

- **Working with Community partners and Town staff**
- **Planning for energy efficiency in the short term and in the long term**
- **Taking advantage of federal and provincial incentives**
- **Regular annual reporting on our progress**

# **Defining Measures to Reduce our GHG Emissions**

- **Measures need to address the most critical sectors vehicles and buildings both residential, commercial and institutional.**
- **Measures need to support equity and access to funds for low income residents.**
- **Measures need to be affordable.**
- **The greatest needs should be tackled first, i.e. housing retrofits, vehicle and home decarbonization.**
- **Measures should also be judged by their ability to deliver the most gain with the least pain[cost].**

# A full list of measures opportunities

Updated 05/03/24

Opportunity Details		Measure Type	Me	Measure Name	Community Measure	Year Implemented	Implementation Cost	Missing Information
ID	Location							
41	Residential	Appliances Emissions Reduction		weathering Audits and Rebates		2008		Cost, Emission Affected
42	Residential	Appliances Emissions Reduction	✓	LED Electricity Reduction Target - Residential		2011	1,046,451	Emission Reduction
43	Residential	Appliances Emissions Reduction		Green Seal Energy Savings Rebate from 2007-2012		2007	0	Cost
44	Residential	Energy Efficiency Appliances and Equipment		Refrigerator Rebates (2007-2008)		2007		Cost
45	Residential	Energy Efficiency Appliances and Equipment	✓	LED Reduction Target - Heating and Cooling Incentive Program		2011	42,051	✓
46	Residential	Energy Efficiency Buildings	✓	Energy Efficient Tapwater Program		2011		Cost, Affected Energy Source(s)
47	Residential	Energy Efficiency Buildings	✓	Energy Star Rebate Program		2011		Cost, Affected Energy Source(s)
48	Residential	Energy Efficiency Buildings	✓	Home Area Rebate				Year, Cost, Affected Energy Source(s)
49	Residential	Energy Efficiency Buildings	✓	Water Rehabilitation Low-Volume Program				Year, Cost, Affected Energy Source(s)
51	Commercial	Appliances Emissions Reduction	✓	LED Electricity Reduction Target - Commercial		2014		Cost, Emission Affected
52	Commercial	Energy Efficiency Buildings	✓	Energy Modeling Commissioning Program				Year, Cost, Affected Energy Source(s)
53	Commercial	Energy Efficiency Buildings	✓	Programs for Healthcare Commissioning				Year, Cost, Affected Energy Source(s)
54	Commercial	Energy Efficiency Buildings	✓	High Performance - New Construction Initiative				Year, Cost, Affected Energy Source(s)
55	Commercial	Energy Efficiency Buildings	✓	New Home Construction Rebate Initiative				Year, Cost, Affected Energy Source(s)
56	Commercial	Energy Efficiency Buildings	✓	Small and Medium Business Rebate Initiative				Year, Cost, Affected Energy Source(s)
57	Commercial	Energy Efficiency Equipment and Lighting	✓	Canadian Tire Store Re-Wiring		2008		Cost, Affected Energy Source(s)
58	Commercial	Energy Efficiency Equipment and Lighting		Re-wiring, with remote wireless lighting for commercial/retail/educational sector		2008		Cost
59	Commercial	Energy Efficiency Equipment and Lighting	✓	LED Micro Grant Program				Year, Cost
60	Commercial	Energy Efficiency Equipment and Lighting	✓	Canadian Tire Rooftop Solar Installation		2009		Year, Cost, Affected Energy Source(s)
63	Commercial	Energy Efficiency Equipment and Lighting	✓	Solar Installation at OPE sites				Year, Cost, Affected Energy Source(s)
63	Commercial	Energy Efficiency Equipment and Lighting	✓	Business Refrigeration Incentive				Year, Cost, Affected Energy Source(s)
63	Commercial	Energy Efficiency Equipment and Lighting	✓	Small Business Lighting Incentive Program				Year, Cost, Affected Energy Source(s)
64	Commercial	Energy Efficiency Equipment and Lighting	✓	Rebate Program Incentives				Year, Cost, Affected Energy Source(s)
65	Commercial	Energy Efficiency Equipment and Lighting	✓	Ontario Energy Audit Funding				Year, Cost, Affected Energy Source(s)
66	Commercial	Energy Efficiency Equipment and Lighting	✓	Energy Manager Incentive Program				Year, Cost, Affected Energy Source(s)
67	Commercial	Energy Efficiency Equipment and Lighting	✓	Process & Systems Program				Year, Cost, Affected Energy Source(s)
68	Commercial	Energy Efficiency Equipment and Lighting	✓	Control Response Program				Year, Cost, Affected Energy Source(s)
68	Commercial	Energy Efficiency Equipment and Lighting	✓	Energy Management Training & Support				Year, Cost, Affected Energy Source(s)
69	Commercial	Energy Efficiency Equipment and Lighting	✓	Weathering and Tuning Systems				Year, Cost, Affected Energy Source(s)
70	Industrial	Appliances Emissions Reduction	✓	LED Electricity Reduction Target - Industrial		2016		Cost, Emission Affected
71	Industrial	Energy Efficiency Buildings	✓	High Performance - New Construction Initiative				Year, Cost, Affected Energy Source(s)
72	Industrial	Energy Efficiency Equipment and Lighting	✓	Re-wiring, with remote wireless lighting		2008		Cost
73	Industrial	Energy Efficiency Equipment and Lighting	✓	Re-wiring Energy Manager Audits		2016	0	Energy Reduction
74	Industrial	Energy Efficiency Equipment and Lighting	✓	Community Power Northumberland Rooftop Solar Installation				Year, Cost, Affected Energy Source(s)
75	Industrial	Energy Efficiency Equipment and Lighting	✓	Rebate Program Incentives				Year, Cost, Affected Energy Source(s)
76	Industrial	Energy Efficiency Equipment and Lighting	✓	Process & Systems Program				Year, Cost, Affected Energy Source(s)
77	Industrial	Energy Efficiency Equipment and Lighting	✓	Control Response Program				Year, Cost, Affected Energy Source(s)
78	Industrial	Energy Efficiency Equipment and Lighting	✓	Venture 12 Rooftop Solar		2011	20,000	✓
79	Transportation	Change in Fuel Type		BEV Class Fuel Incentives based on city driving		2010		Cost
79	Transportation	Change in Fuel Type		BEV Trucks Fuel Incentives based on city driving		2010		Cost
79	Transportation	Change in Fuel Type		Hybrid Class Fuel Incentives based on city driving		2010		Cost, Vehicle Type, VET Affected, Fuel Type, Miles/ltre/hour, Vehicle Efficiency, Miles/ltre/hour
79	Transportation	Change in Fuel Type		Hybrid Trucks Fuel Incentives based on city driving		2010		Cost
79	Transportation	Change in Fuel Type	✓	Trucks Rebate		2010		Cost
79	Transportation	Change in Fuel Type	✓	Electric Cars		2014		Cost
79	Transportation	Change in Fuel Type	✓	BEV Class Cars		2008		Cost, Vehicle Type, VET Affected, Fuel Type, Miles/ltre/hour, Vehicle Efficiency, Miles/ltre/hour
79	Transportation	Change in Fuel Efficiency		Small Cars		2008		Cost
79	Transportation	Change in Fuel Efficiency		Trucks		2008		Cost, Vehicle Type, VET Affected, Fuel Type, Miles/ltre/hour, Vehicle Efficiency, Miles/ltre/hour
79	Transportation	Change in Fuel Efficiency		Trucks - Anti-idling Rebate		2008	1,000	Cost
79	Transportation	Other VET Reduction		Cars - Anti-idling Rebate		2008	6,000	Vehicle Type, VET Affected, Fuel Type, Miles/ltre/hour, Vehicle Efficiency, Miles/ltre/hour
79	Transportation	Walking/Biking	✓	Town Users responsibility for planning better networks		2010		Cost, VET Affected, Occupancy Factor, Miles/ltre/hour, Fuel Type, Miles/ltre/hour, Vehicle Efficiency, Miles/ltre/hour
80	Water	Water Recycling		Recycle Clean - Implementation to improve collection system		2016	1,200,000	✓
80	Water	Water Recycling		Recovery of Materials from garbage and debris		2008	40,000	✓
80	Water	Water Recycling	✓	Waterless Toilet Program		2018		Cost, Water Type Affected
80	Water	Water Reduction		Watering Bag Recycling		2010		Cost
					Organic Measures			
81	Buildings	Change in Energy Source				2006	1,000	Name (and this measure just as example?)
81	Buildings	Change in Energy Source	✓	Substation Upgrade Solar Installation Materials		2016		Cost, Use, Miles/ltre/hour, Cost, Miles/ltre/hour
81	Buildings	Energy Efficiency Buildings	✓	Exclude the fire wall Rebate when roof is replaced				Cost, Cost, Affected Energy Source(s)
81	Buildings	Energy Efficiency Buildings	✓	Exclude the fire wall Rebate (roof when roof is replaced)		2018		Cost, Affected Energy Source(s)
81	Buildings	Energy Efficiency Buildings	✓	Exclude the fire wall Rebate (roof when roof is replaced)		2018	48,111	Affected Energy Source(s)
81	Buildings	Energy Efficiency Buildings	✓	Exclude the fire wall Rebate (roof when roof is replaced)		2013	21,764	Affected Energy Source(s)
81	Buildings	Energy Efficiency Buildings	✓	Exclude the fire wall Rebate (roof when roof is replaced)		2018	1,000	Affected Energy Source(s)
81	Buildings	Energy Efficiency Buildings	✓	Exclude the fire wall Rebate (roof when roof is replaced)		2017	40,000	Affected Energy Source(s)
81	Buildings	Energy Efficiency Buildings	✓	Exclude the fire wall Rebate (roof when roof is replaced)		2018	10,000	✓
82	Buildings	Energy Efficiency Equipment and Lighting	✓	Victoria Heat Network (BCH) Replacement		2018	477,886	Affected Energy Source(s)
83	Buildings	Energy Efficiency Equipment and Lighting	✓	Victoria Heat District Replacement		2013	808,813	Affected Energy Source(s)
83	Buildings	Energy Efficiency Equipment and Lighting	✓	Regional Heat System to Fire Hall Thermal		2018		Year, Cost, Affected Energy Source(s)
83	Buildings	Energy Efficiency Equipment and Lighting	✓	Fire wall (garage) HVAC Replacement				Year, Cost, Affected Energy Source(s)
84	Buildings	Energy Efficiency Equipment and Lighting	✓	Fire wall (garage) HVAC Replacement		2013	101,064	Affected Energy Source(s)
85	Buildings	Energy Efficiency Equipment and Lighting	✓	Police Station (garage) HVAC Replacement		2016	268,710	Affected Energy Source(s)
86	Buildings	Energy Efficiency Equipment and Lighting	✓	Solar Rooftop Installation on CCC and in Northern Industrial Park				Year, Cost, Affected Energy Source(s)
91	Vehicle Fleet	Switch to Public Transport	✓	Free public transportation for citizens in the summer who have a library card		2009	0	VET Affected, Occupancy Factor, Miles/ltre/hour, Fuel Type, Miles/ltre/hour, Vehicle Efficiency, Miles/ltre/hour
91	Streetscapes	Energy Efficiency Lamp and Ballast		Re-wiring, every streetlight in following with remote induction lamps		2008	1,200,000	✓
92	Streetscapes	Energy Efficiency Lamp and Ballast	✓	LED Street Lighting Replacement		2016		Cost, Energy Reduction, Cost per sq
93	Streetscapes	Energy Efficiency Buildings	✓	Green Buildings Program		2010		Cost, Affected Energy Source(s)
93	Streetscapes	Energy Efficiency Equipment and Lighting		Office Use, Power Tolerance Installation		2009	0	✓

# A Running Start Vehicles

## Electrification of:

- Passenger vehicles
- Fleets
- Transit
- Ambulances

## Biofuels for

- Heavy trucks
- Plows

# A Running Start - Housing

- **Neighbourhood Deep Retrofits**
- **A Revolving Low-interest Long-term Community Fund for Retrofits.**
- **Green Development Standards for new builds and large renovations.**
- **Incorporating community gardens, parks and trees bike sharing, car-sharing, EV charging –'complete neighbourhoods'**





# A Running Start - Microtransit

- Smaller more energy efficient bus transit
- Hybrid or electric vehicles
- On demand door to door service
- No fixed route
- Accessible to handicapped and able-bodied residents.
- Equality of service
- Bike racks on front
- Okotoks Transit Example:
- <https://www.youtube.com/watch?v=9nkjAFL6kA8&feature=youtu.be>



# A Running Start – Ending Energy Poverty

- **Build affordable housing that is net zero energy and net zero ghg**
- **Work with landlords and condo boards to retrofit existing buildings to a Passive House Standard.**
- **Pass operational energy savings onto tenants.**
- **Make used electric vehicles accessible to low income residents through low interest long term loans, and a car sharing program.**



# Example of Social and Affordable Housing and the Passive House Standard - Indwell [not for profit]

## Passive House Projects in Ontario

---



<https://passivegreen.wordpress.com/2013/03/05/a-highly-productive-healthy-and-cost-efficient-work-environment-a-passive-house-office-building/>



# A Running Start – Protect our Vulnerable Populations

- **Provide resilient housing that protects residents from extreme weather events and power outages.**
- **Establish a neighbourhood level program to check on vulnerable people during times of emergency**
- **Set a Maximum Temperature Bylaw to protect from heatwaves.**



**More to come.**

**-Town corporate GHG emissions  
Inventory and in-house GHG  
Reduction Measures  
- Appendices**

**Judy Smith Environmental Officer  
County of Northumberland  
Sept 2 2020**









