



October 2020

# Town of Cobourg Climate Action Plan for Future Generations

Update 2020 to 2050

# Thank You

- **Mayor John Henderson and Cobourg Council**
- **The Town of Cobourg Staff: Glenn McGlashon, Rob Franklin, Brent Larmer, Ian Davey, Laurie Wills, Neil Stewart, Chris Barnes, Rene Champagne, Jason Johns, Teresa Behan, Melanie Chatten, Ashley Purdy, Joanne Taylor and former CAO Stephen Peacock,**
- **Sustainable Cobourg, Pres. Gudrun Ludorf-Weaver**
- **The Sustainability and Climate Change Advisory Committee of the Town of Cobourg, Chair Minnie de Jong**
- **Lakefront Utilities Services Inc.: Pres. 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, CAO Jennifer Moore, Mobashir Pannu, Adam McCue, Kaela Esseghiaer and Jennifer Hardy-Parr**

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Partners for Climate Protection

## PCP MILESTONE TOOL



HOME / SMITHJ

View

Edit

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

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## 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.**



# MILESTONE 1

## 2018 COMMUNITY INVENTORY - OVERVIEW

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### Community Inventory

[Overview](#)[Stationary Energy](#)[Transportation](#)[Waste](#)[AFOLU and IPPU](#)

### Shortcuts

[Community dashboard](#)

### GHG Emissions

106,149 tCO<sub>2</sub>e/yr

### Energy Consumption

2,671,877 GJ/yr

### Expenditure

\$47,451,531/yr

[General](#)[Documents](#)[Notes](#)[+ Completeness check](#)[+ Export to PDF](#)[+ Export to Excel](#)

### Greenhouse gas emissions (tCO<sub>2</sub>e) by sector

[Chart](#)[Data](#)

### Energy (GJ) by source

[Chart](#)[Data](#)

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?**

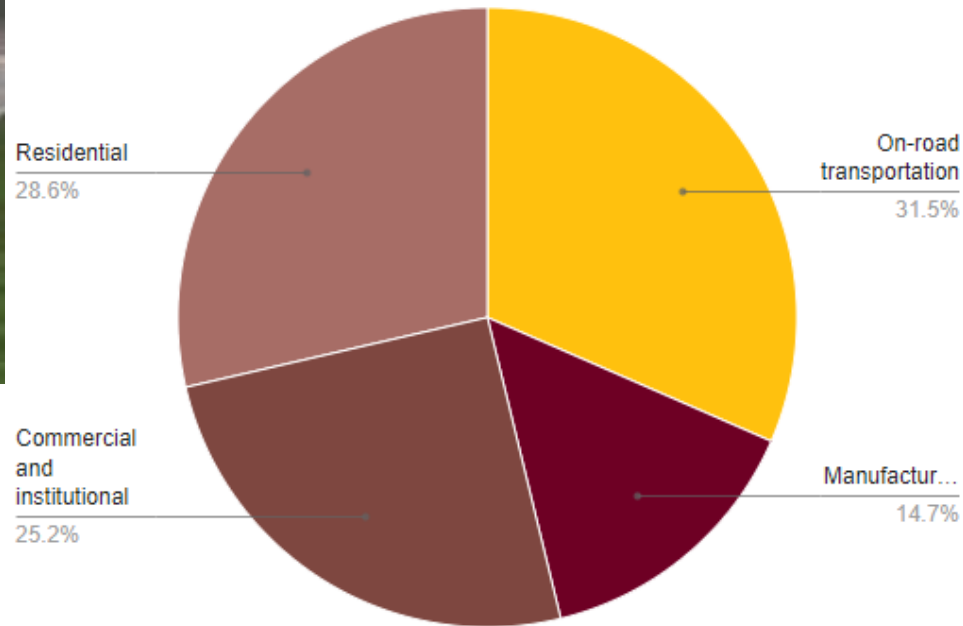
- **Energy use in manufacturing has dropped 33% due to company losses and efficiency.**
- **GHG emissions have fallen also because electricity has been 'decarbonized' by the removal of coal from the grid.**
- **GHG emissions from manufacturing are less than one quarter of what they were in 2007.**

# 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**

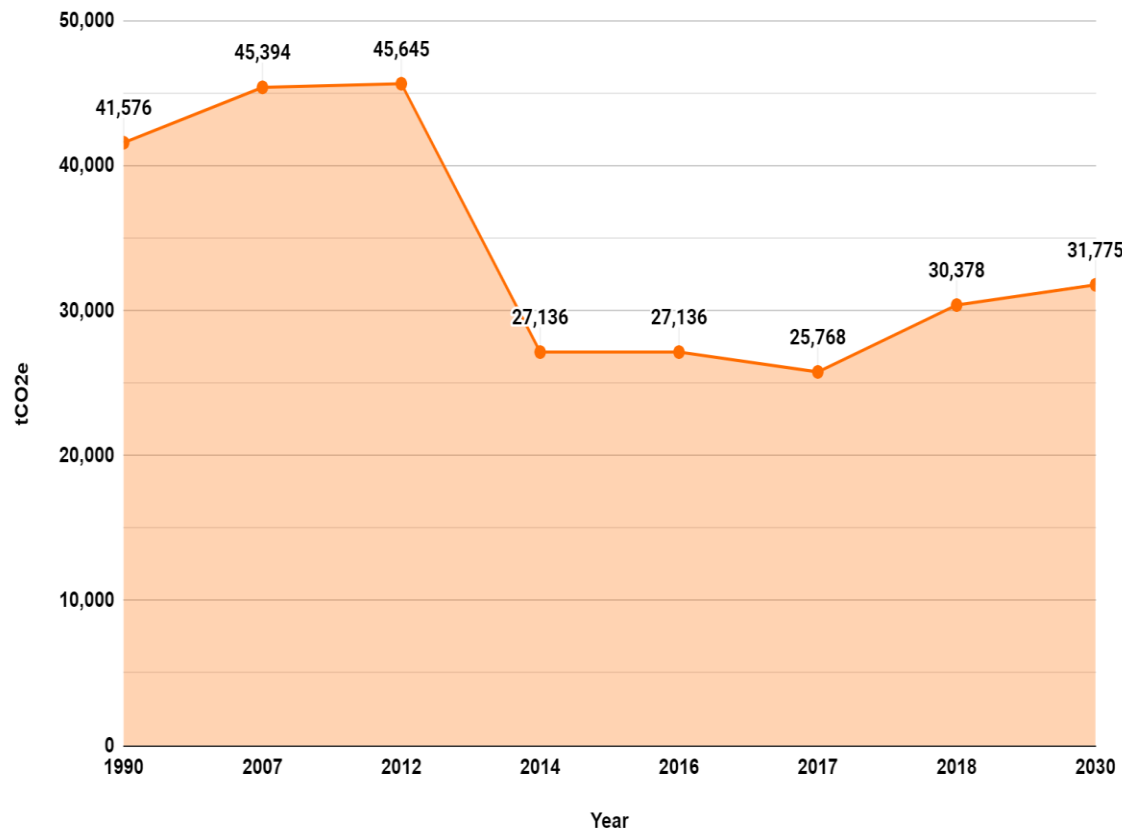
**The Kraft Plant closure in 2008 may have had the biggest effect on industrial energy use and expenditures.**



# Today residential and vehicle energy use dominate.

## Total Residential Energy Use incl. Target Year 2030

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



## Total Vehicle Energy Use incl. Target Year 2030

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 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.**



**The next target is an 80% to 100% reduction in GHG emissions 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.

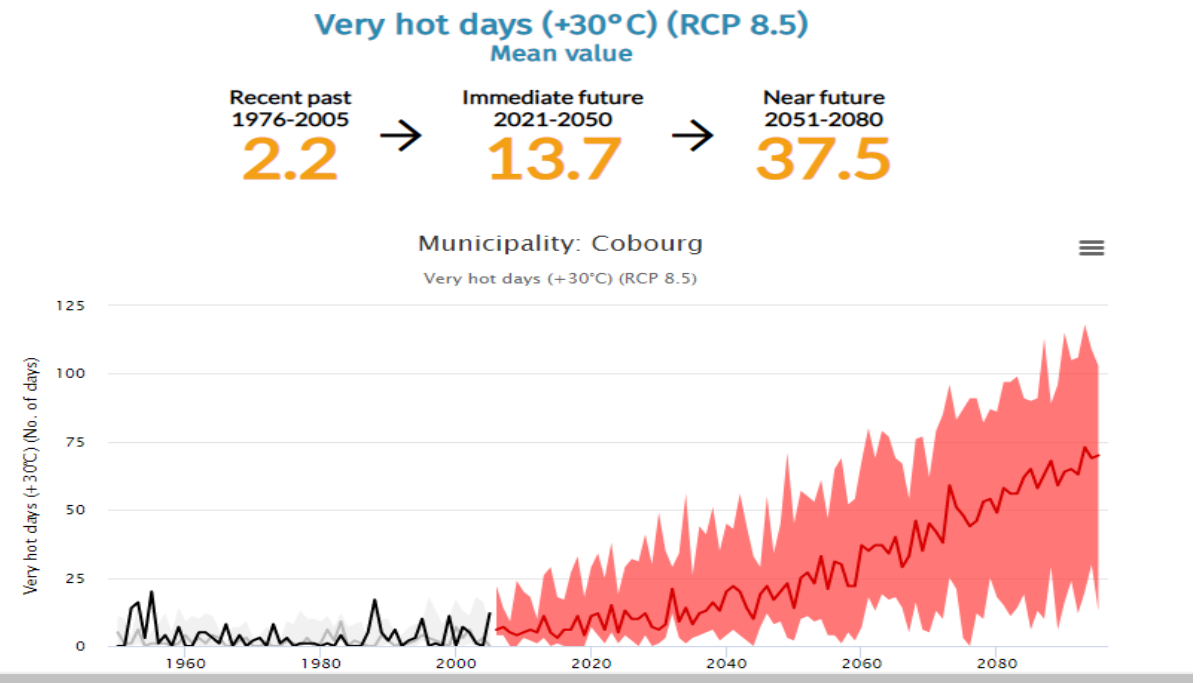
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Impacting the future level of greenhouse gas emissions is not a choice, it is already *implicit* in everything we do. The real choice is whether we exercise that power and influence *now, while we still can*.

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

OPPORTUNITY ID	SECTOR	MEASURE TYPE	MS	MEASURE NAME	COMPLIANCE MEASURE	YEAR IMPLEMENTED	IMPLEMENTATION COST	MISSING INFORMATION
41	Residential	Abolish Emissions Reduction	✓	Building Audits and Rebates		2008		Cost, Emission Affected
42	Residential	Abolish Emissions Reduction	✓	60% Electricity Reduction Target - Residential		2013	1,000,000	Emission Reduction
43	Residential	Abolish Emissions Reduction		Green Star Energy Savings Incentive From 2007-2012		2007	0	Cost
44	Residential	Energy Efficiency: Appliances and Equipment		Refrigerator Rebateup (2005-2010)		2007		Cost
45	Residential	Energy Efficiency: Appliances and Equipment	✓	CEI Reduction Target - Heating and Cooling Incentive Program		2012	60,000	Cost
46	Residential	Energy Efficiency: Buildings	✓	GreenCheck Support Program		2015		Cost, Affected Energy Savings
47	Residential	Energy Efficiency: Buildings	✓	Energy Star Incentive Program		2015		Cost, Affected Energy Savings
48	Residential	Energy Efficiency: Buildings	✓	Home Air Seal Rebate		2010		Year, Cost, Affected Energy Savings
49	Residential	Energy Efficiency: Buildings	✓	Home Weatherization Incentive Program		2010		Year, Cost, Affected Energy Savings
50	Commercial	Abolish Emissions Reduction		60% Electricity Reduction Target - Commercial		2014		Cost, Emission Affected
51	Commercial	Energy Efficiency: Buildings	✓	Energy Modeling Commissioning Program				Year, Cost, Affected Energy Savings
52	Commercial	Energy Efficiency: Buildings	✓	Programs for Multiple Customers				Year, Cost, Affected Energy Savings
53	Commercial	Energy Efficiency: Buildings	✓	High Performance New Construction Incentives				Year, Cost, Affected Energy Savings
54	Commercial	Energy Efficiency: Buildings	✓	New Home Construction Incentive Initiatives				Year, Cost, Affected Energy Savings
55	Commercial	Energy Efficiency: Buildings	✓	Smart and Assistive Heating Transfer Incentives				Year, Cost, Affected Energy Savings
56	Commercial	Energy Efficiency: Equipment and Lighting		Creation Time Clock Re-bidding		2008		Cost, Affected Energy Savings
57	Commercial	Energy Efficiency: Equipment and Lighting		Rebidding with Low Bidder Incentive Program		2008		Cost
58	Commercial	Energy Efficiency: Equipment and Lighting	✓	CEI Meters and Project				Year, Cost
59	Commercial	Energy Efficiency: Equipment and Lighting	✓	Creation Time Rebate Incentive		2009		Year, Cost, Affected Energy Savings
60	Commercial	Energy Efficiency: Equipment and Lighting	✓	Light Installation on Open Sites				Year, Cost, Affected Energy Savings
61	Commercial	Energy Efficiency: Equipment and Lighting	✓	Business Incentive Program				Year, Cost, Affected Energy Savings
62	Commercial	Energy Efficiency: Equipment and Lighting	✓	Small Business Lighting Incentive Program				Year, Cost, Affected Energy Savings
63	Commercial	Energy Efficiency: Equipment and Lighting	✓	Rebate Program Incentives				Year, Cost, Affected Energy Savings
64	Commercial	Energy Efficiency: Equipment and Lighting	✓	Green Energy Audit Funding				Year, Cost, Affected Energy Savings
65	Commercial	Energy Efficiency: Equipment and Lighting	✓	Energy Manager Incentive Program				Year, Cost, Affected Energy Savings
66	Commercial	Energy Efficiency: Equipment and Lighting	✓	Process & Systems Program				Year, Cost, Affected Energy Savings
67	Commercial	Energy Efficiency: Equipment and Lighting	✓	Process & Systems Program				Year, Cost, Affected Energy Savings
68	Commercial	Energy Efficiency: Equipment and Lighting	✓	Demand Response Program				Year, Cost, Affected Energy Savings
69	Commercial	Energy Efficiency: Equipment and Lighting	✓	Energy Management Training & Support				Year, Cost, Affected Energy Savings
70	Commercial	Energy Efficiency: Equipment and Lighting	✓	Monitoring and Targeting Systems				Year, Cost, Affected Energy Savings
71	Industrial	Abolish Emissions Reduction	✓	60% Electricity Reduction Target - Industrial		2016		Cost, Emission Affected
72	Industrial	Energy Efficiency: Buildings	✓	High Performance New Construction Incentives				Year, Cost, Affected Energy Savings
73	Industrial	Energy Efficiency: Equipment and Lighting	✓	Rebidding with Low Bidder Incentive		2009		Cost
74	Industrial	Energy Efficiency: Equipment and Lighting	✓	Energy Energy Manager Audits		2016	0	Energy Reduction
75	Industrial	Energy Efficiency: Equipment and Lighting	✓	Community Power Northumberland Rebate Incentive				Year, Cost, Affected Energy Savings
76	Industrial	Energy Efficiency: Equipment and Lighting	✓	Rebate Program Incentives				Year, Cost, Affected Energy Savings
77	Industrial	Energy Efficiency: Equipment and Lighting	✓	Process & Systems Program				Year, Cost, Affected Energy Savings
78	Industrial	Energy Efficiency: Equipment and Lighting	✓	Process & Systems Program				Year, Cost, Affected Energy Savings
79	Industrial	Energy Efficiency: Equipment and Lighting	✓	Demand Response Program				Year, Cost, Affected Energy Savings
80	Industrial	Energy Efficiency: Equipment and Lighting	✓	Verizon LE Rebate Offer		2013	20,000	Cost
81	Transportation	Change in Fuel Type		HEV Car Fuel Incentives based on city driving		2010		Cost
82	Transportation	Change in Fuel Type		HEV Truck Fuel Incentives based on city driving		2010		Cost
83	Transportation	Change in Fuel Type		Hybrid Car Fuel Incentives based on city driving		2009		Cost, Vehicle Type, VET Affected, Fuel Type, Miles/Year, Vehicle Efficiency, Miles/Year
84	Transportation	Change in Fuel Type		Hybrid Truck Fuel Incentives based on city driving		2009		Cost
85	Transportation	Change in Fuel Type	✓	Toyota Motor		2010		Cost
86	Transportation	Change in Fuel Type	✓	Bosch City		2016		Cost
87	Transportation	Change in Fuel Efficiency	✓	HEV Fuel Use Cost		2010		Cost, Vehicle Type, VET Affected, Fuel Type, Miles/Year, Vehicle Efficiency, Miles/Year
88	Transportation	Increase in Fuel Efficiency		GM Fuel Use Cost		2010		Cost
89	Transportation	Increase in Fuel Efficiency		GM Fuel Use Cost		2010		Cost, Vehicle Type, VET Affected, Fuel Type, Miles/Year, Vehicle Efficiency, Miles/Year
90	Transportation	Increase in Fuel Efficiency		Toyota Fuel Use Cost		2010		Cost
91	Transportation	Other VET Reduction		Toyota - Anti-idling Rebate		2009	1,000	
92	Transportation	Other VET Reduction		GM - Anti-idling Rebate		2009	6,000	Vehicle Type, VET Affected, Fuel Type, Miles/Year, Vehicle Efficiency, Miles/Year
93	Transportation	Working/Waiting	✓	Transit responsibility for growing senior ridership		2010		Cost, PVT Affected, Occupancy Factor, Miles/Year, Fuel Type, Miles/Year, Vehicle Efficiency, Miles/Year
94	Water	Water Recycling		Reggie Creek - Improvements to recycling collection system		2008	2,000,000	Cost
95	Water	Water Recycling		Reggie Creek - Improvements to recycling collection system		2008		Cost
96	Water	Water Recycling		Reggie Creek - Improvements to recycling collection system		2008	40,000	Cost
97	Water	Water Recycling	✓	Municipal Recycling Program		2010		Cost, Water Type Affected
98	Water	Water Recycling		Water Recycling		2010		Cost
99	Waste	Change in Energy Source			Composting Materials	2016	5,000	Name (was this measure just an example?)
100	Buildings	Change in Energy Source	✓	Leakoff - Single Side Installation Materials		2016		Cost, Use, Miles/Year, Cost, Miles/Year
101	Buildings	Energy Efficiency: Buildings	✓	Insulate the fire wall (padding) roof when roof is replaced		2010		Year, Cost, Affected Energy Savings
102	Buildings	Energy Efficiency: Buildings	✓	Insulate the fire wall (padding) roof when roof is replaced		2010		Cost, Affected Energy Savings
103	Buildings	Energy Efficiency: Buildings	✓	Insulate the fire wall (padding) roof when roof is replaced		2016	40,011	Affected Energy Savings
104	Buildings	Energy Efficiency: Buildings	✓	Insulate the fire wall (padding) roof when roof is replaced		2013	20,704	Affected Energy Savings
105	Buildings	Energy Efficiency: Buildings	✓	Roller Shutter (padding) roof replacement		2010	5,320	Affected Energy Savings
106	Buildings	Energy Efficiency: Buildings	✓	Roller Shutter (padding) roof replacement		2010	90,260	Affected Energy Savings
107	Buildings	Energy Efficiency: Buildings	✓	Roller Shutter (padding) roof replacement		2010	15,000	Cost
108	Buildings	Energy Efficiency: Equipment and Lighting	✓	Victoria Wall HVAC (padding) replacement		2016	477,006	Affected Energy Savings
109	Buildings	Energy Efficiency: Equipment and Lighting	✓	Victoria Wall HVAC (padding) replacement		2013	629,413	Affected Energy Savings
110	Buildings	Energy Efficiency: Equipment and Lighting	✓	Roller Shutter HVAC system fire wall - Theatre				Year, Cost, Affected Energy Savings
111	Buildings	Energy Efficiency: Equipment and Lighting	✓	Fire wall (padding) HVAC Replacement				Year, Cost, Affected Energy Savings
112	Buildings	Energy Efficiency: Equipment and Lighting	✓	Fire wall (padding) HVAC Replacement		2013	101,006	Affected Energy Savings
113	Buildings	Energy Efficiency: Equipment and Lighting	✓	Roller Shutter (padding) HVAC Replacement		2016	210,703	Affected Energy Savings
114	Buildings	Energy Efficiency: Equipment and Lighting	✓	Roller Shutter (padding) HVAC Replacement		2010		Year, Cost, Affected Energy Savings
115	Vehicle Fleet	Switch to Public Transport	✓	Free public transportation for children in the summer who have a library card		2009	0	PVT Affected, Occupancy Factor, Miles/Year, Fuel Type, Miles/Year, Vehicle Efficiency, Miles/Year
116	Energy Efficiency	Energy Efficiency: Lamp and Ballast		Rebidding energy efficiency in building with LED lighting lamps		2008	1,260,000	Cost
117	Energy Efficiency	Energy Efficiency: Lamp and Ballast	✓	CEI Green Award - Rebate Program		2010		Cost, Energy Reduction, Cost per kWh
118	Energy Efficiency	Energy Efficiency: Lamp and Ballast	✓	CEI Green Award - Rebate Program		2010		Cost, Affected Energy Savings
119	Energy Efficiency	Energy Efficiency: Equipment and Lighting	✓	City Seal - Fluorescent Installation		2008	0	Cost

# 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>





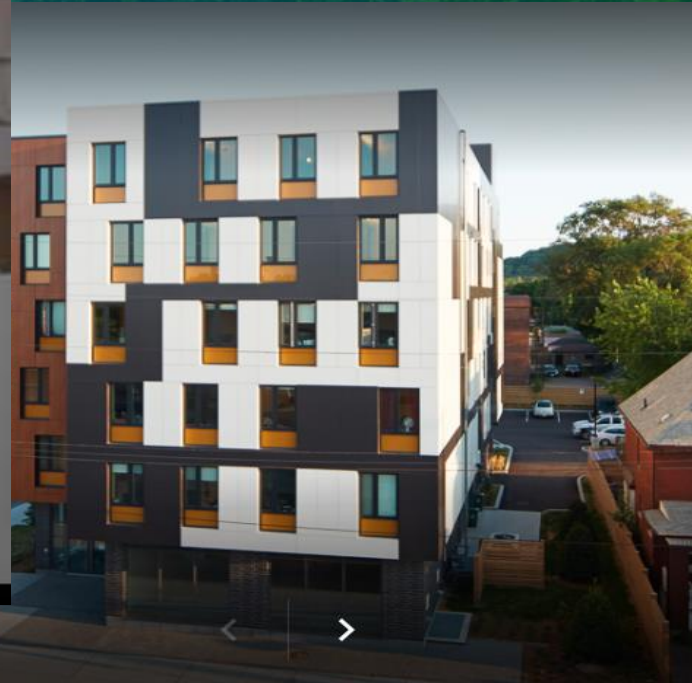
# A Running Start – Ending Energy Poverty

- **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

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# 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**  
**Nov 2 2020**