



Pathways to Net Zero

Personal Actions to Address Climate Change

A Northumberland Learning
Connection discussion
November 25, 2021

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We must stop adding greenhouse gases (GHG) to our finite atmosphere



The path to zero carbon utilizes:

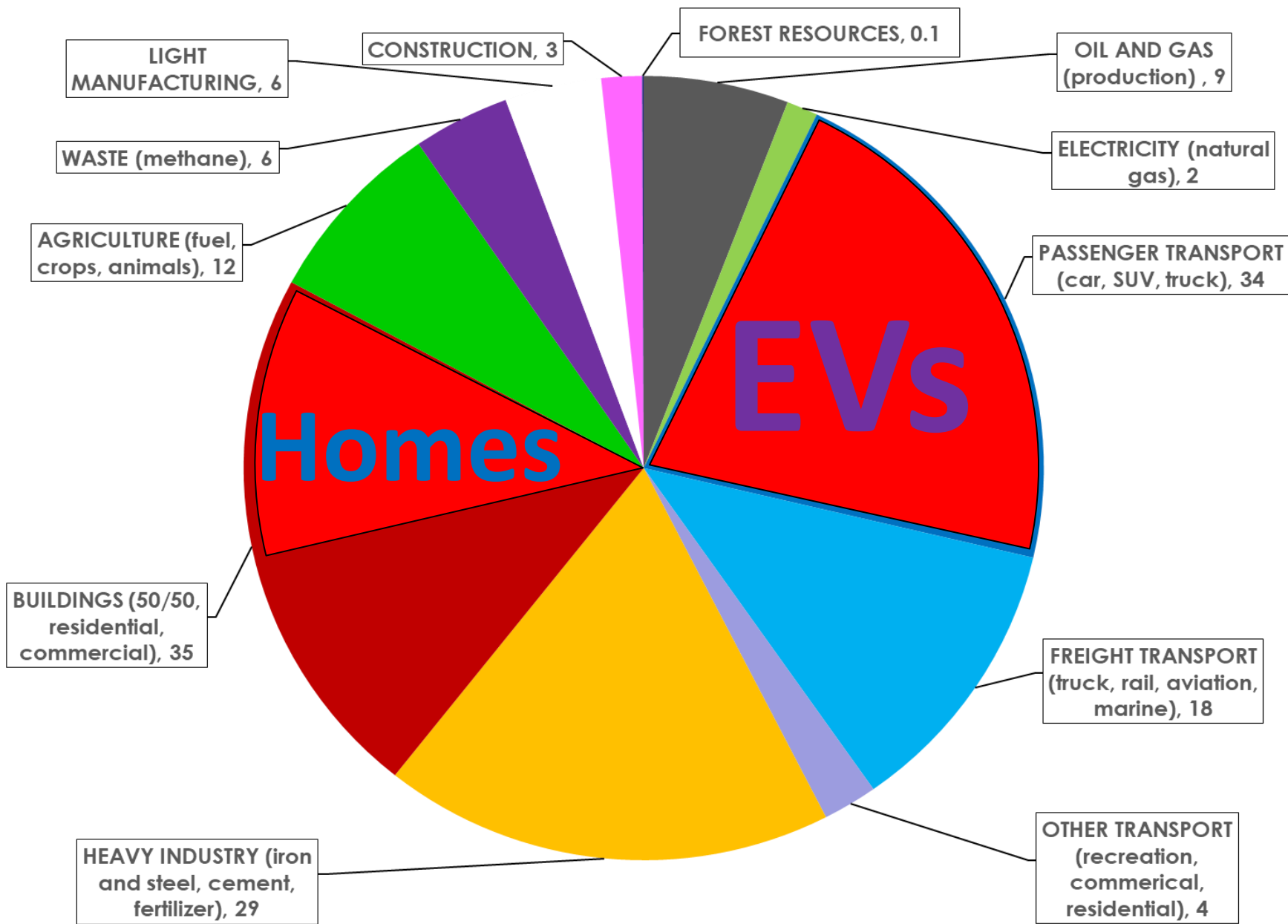
- EVs
- Heat Pumps
- Wind
- Biomass
- Geothermal
- Solar
- Hydrogen
- Smart Grids
- Storage
- Sequestration
- Nuclear?
- Policy
- Finance



GHG Emissions

What individuals control:

- Vehicle(s)
- Home(s) Heating
- Travel
- Food



Ontario 2017 159 Mt GHG/year

From 2017 NIR



2 - 6 t GHG/year

*20,000 km/year

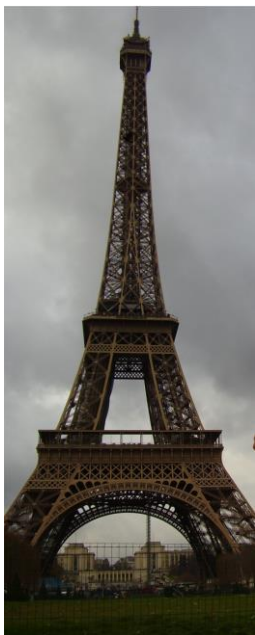


4 - 12 t GHG/year



2 t GHG/person
(return)

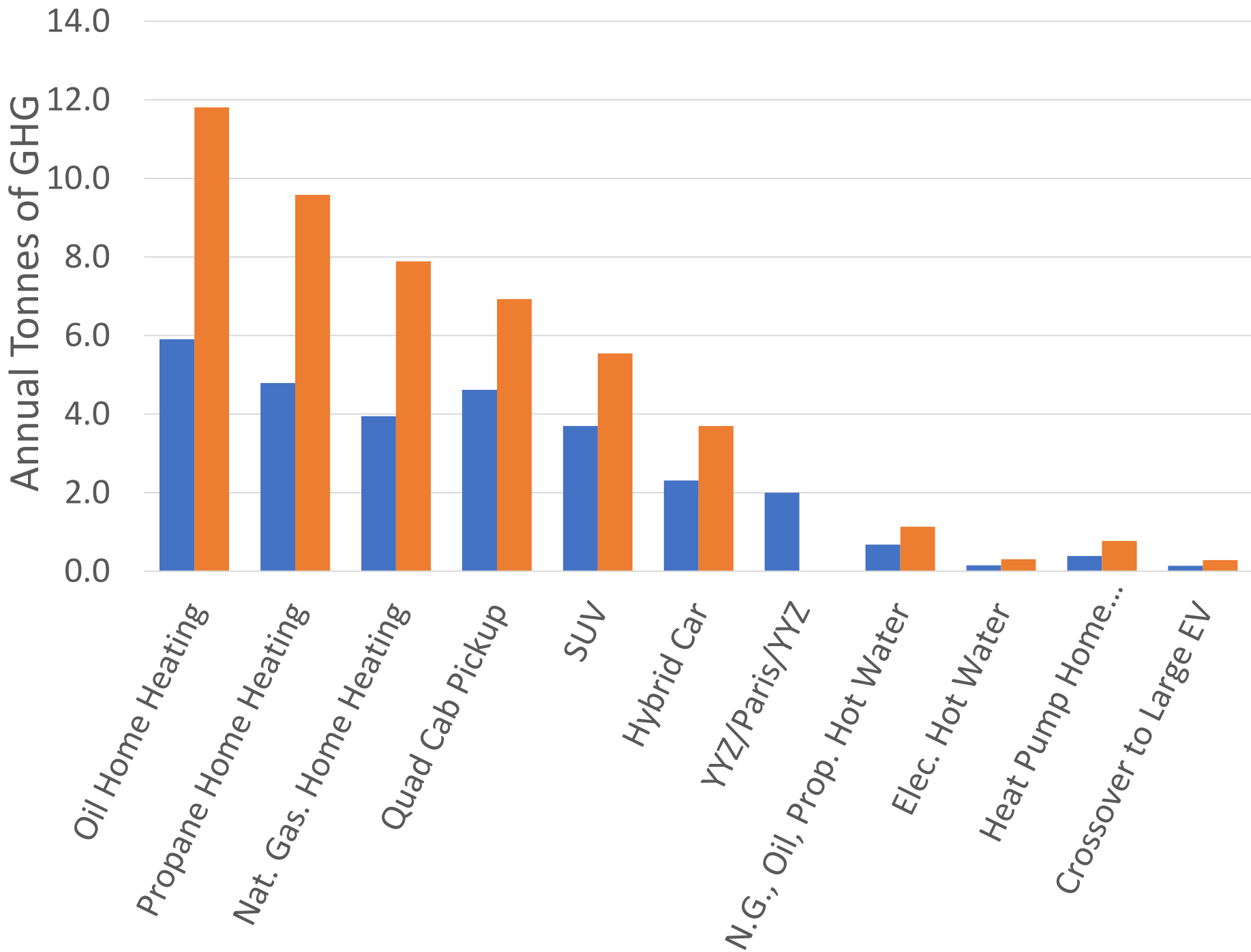
1 - 3 t GHG/year
(messy)



Total 9 - 23 t GHG/year

Ontario 11.3 t GHG/person/year**

** 2017 NIR





**Thank You
for Your Attention**

Questions?

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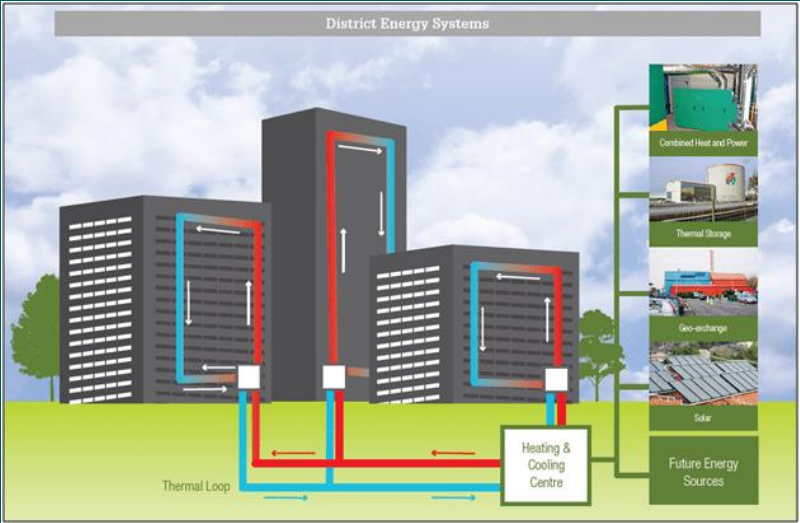
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The Opposite of Distributed Energy Resources



Distributed Energy Resources



Distributed Energy Resources – Burnbrae Farms



The Most Important DER

is

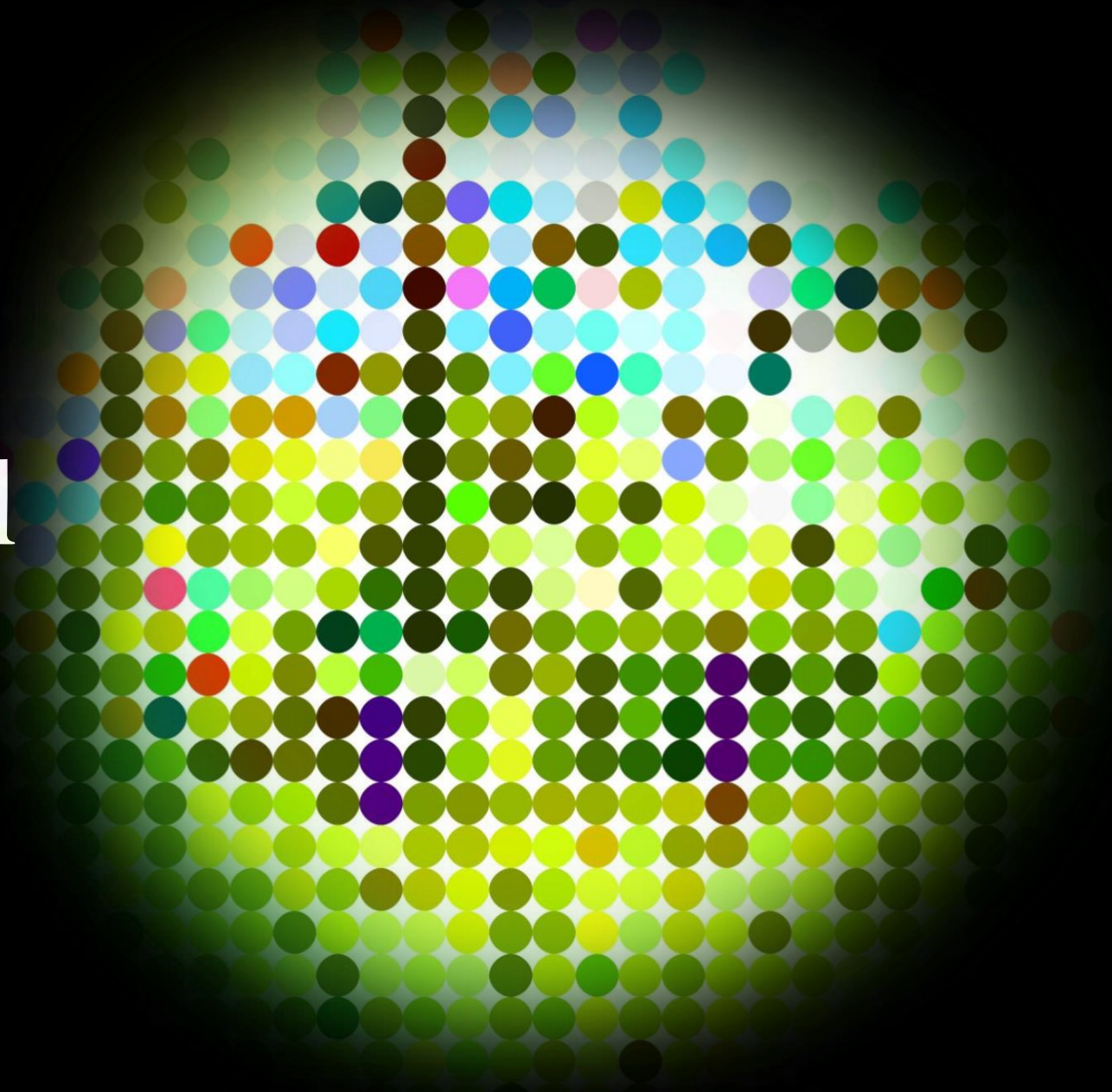
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Combating Climate Change in Northumberland



NOVEMBER 25TH 2021

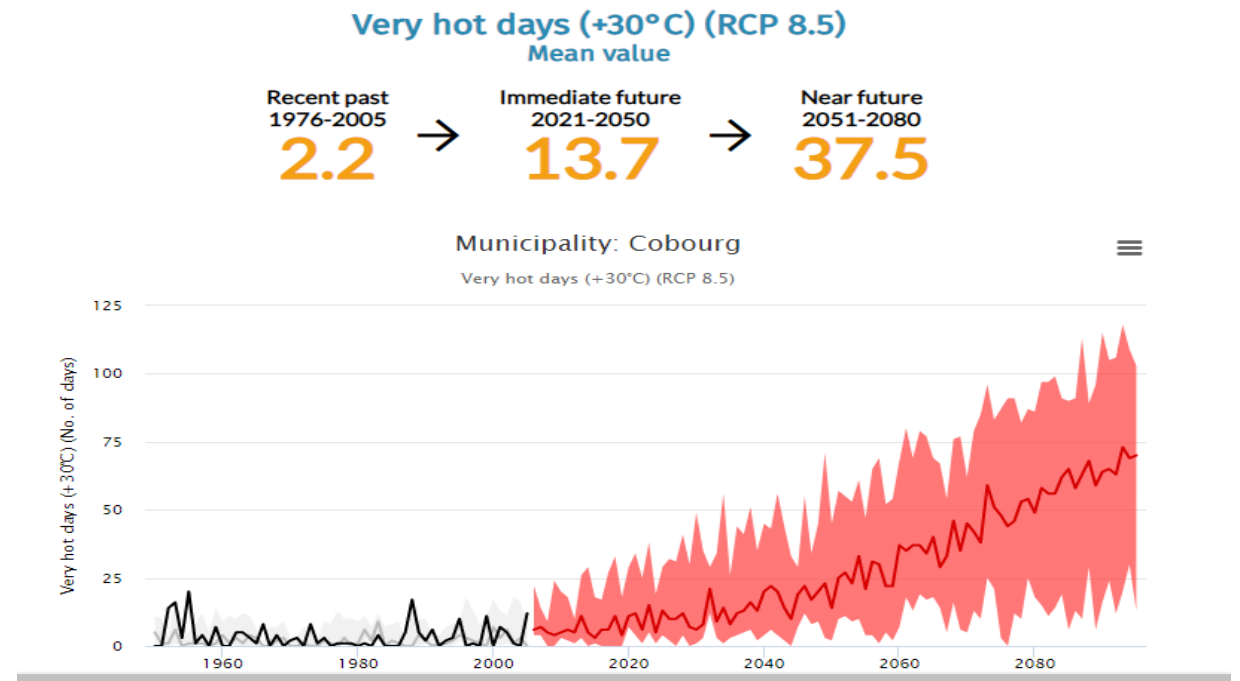
JUDY SMITH

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.



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.**



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.**



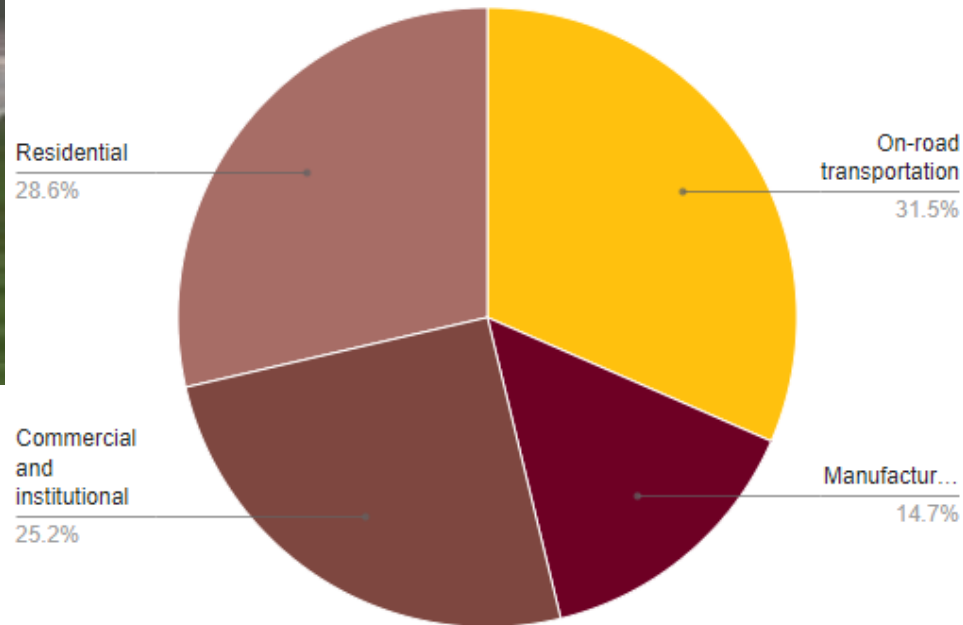
A Running Start - Housing

- **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'**



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

All Vehicles 32%



All Homes 29%



A Running Start Vehicles

Electrification of:

- Passenger vehicles
- Fleets
- Transit
- Ambulances

Biofuels for

- Heavy trucks
- Plows

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>



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:

Council has issued a Request for Proposal (RFP) for an Integrated Community Sustainable Plan (ICSP), Green Design Standards and has approval to investigate the financial feasibility of a net -zero mass retrofit of low-income neighbourhoods. On behalf of the Federation of Canadian Municipalities.