

Climate Changes Everything

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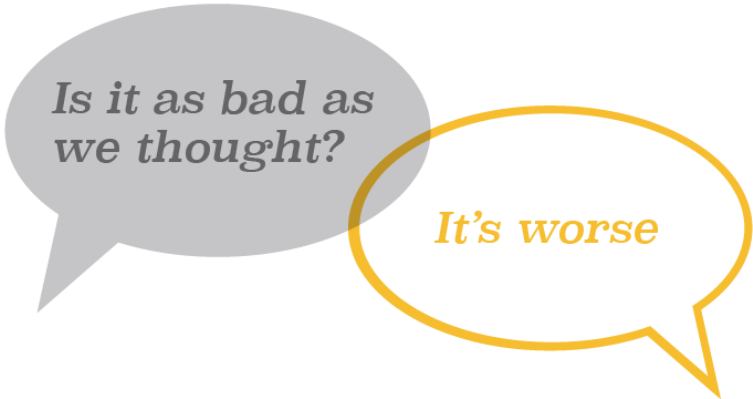
April 8, 2019



Overview

1. Climate changes everything
2. Energy Conservation
3. Urban Sprawl
4. What can we do?

Based on ECO reports
Get them at saxefacts.com



*Is it as bad as
we thought?*

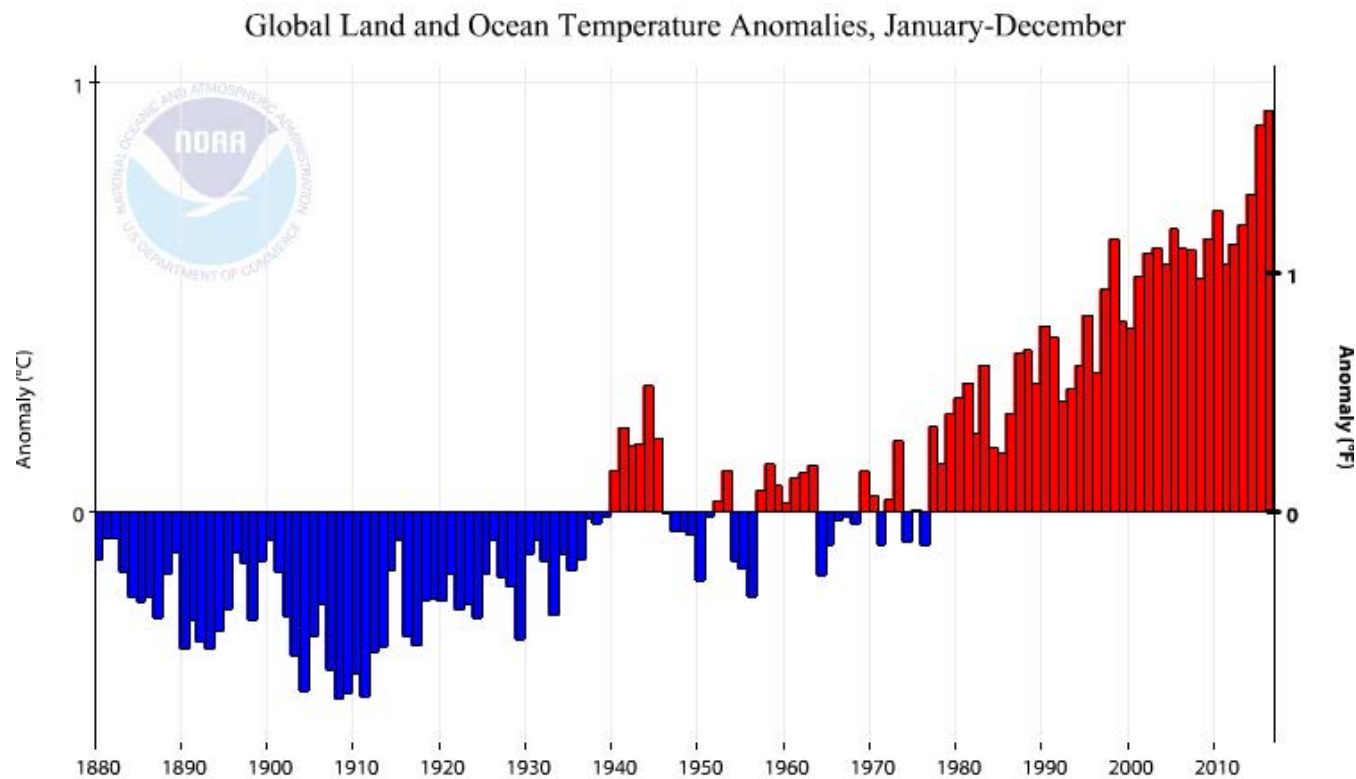
It's worse

1. Climate changes everything

Climate change is here. It affects us now.

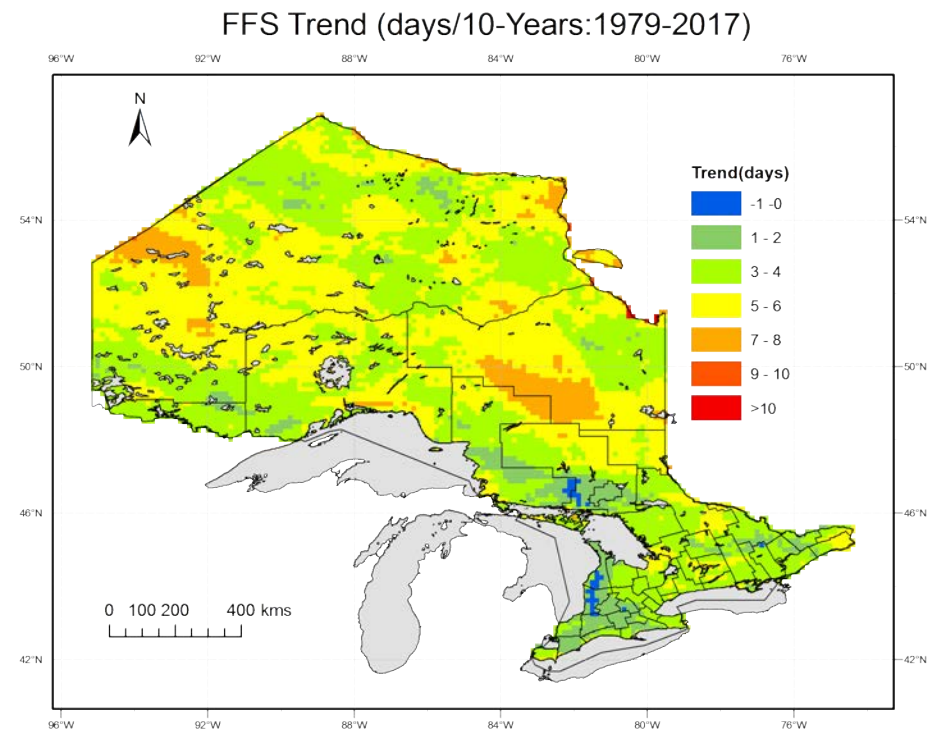
Much worse is ahead.
We're determining the future now.

20th Century “normal” is gone



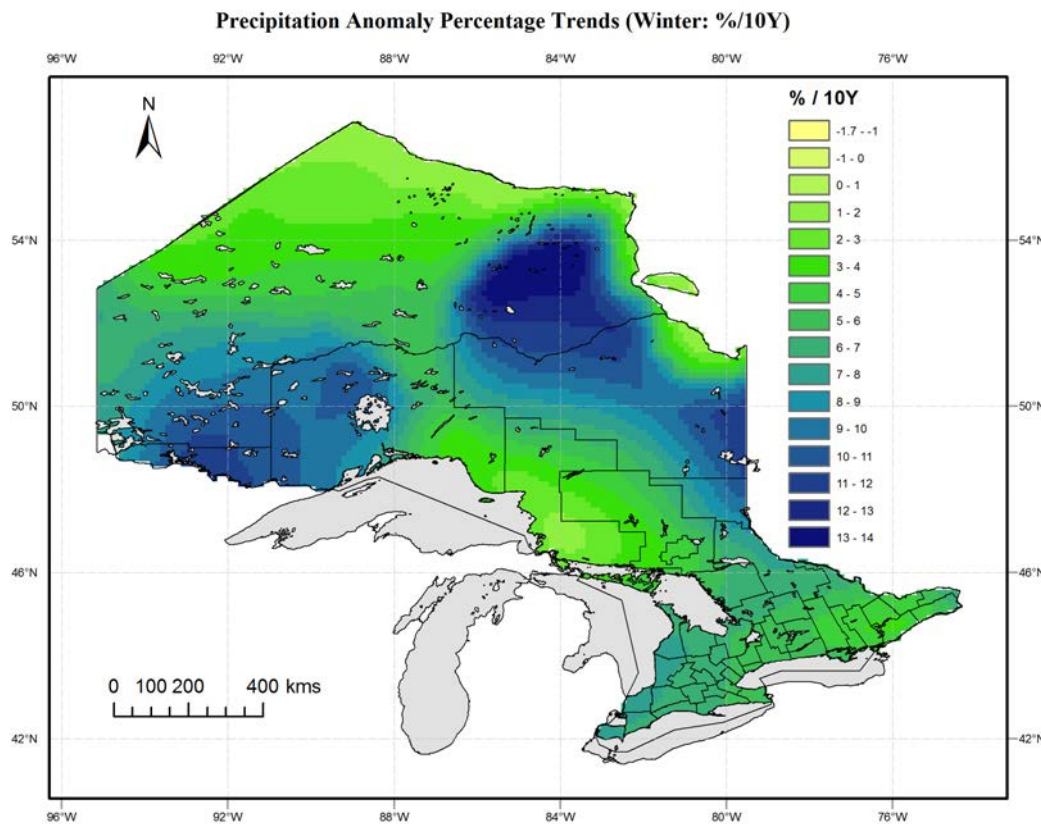
Canada warming faster than global average

- 1.5°C warmer since 1948
- 2.5°C to 3.7°C warmer by 2050
- Differs by region
 - latitude, topography, water...



Source: LAMPS Climate Change Group, [Ontario Frost Free Season Changes Analysis](#).

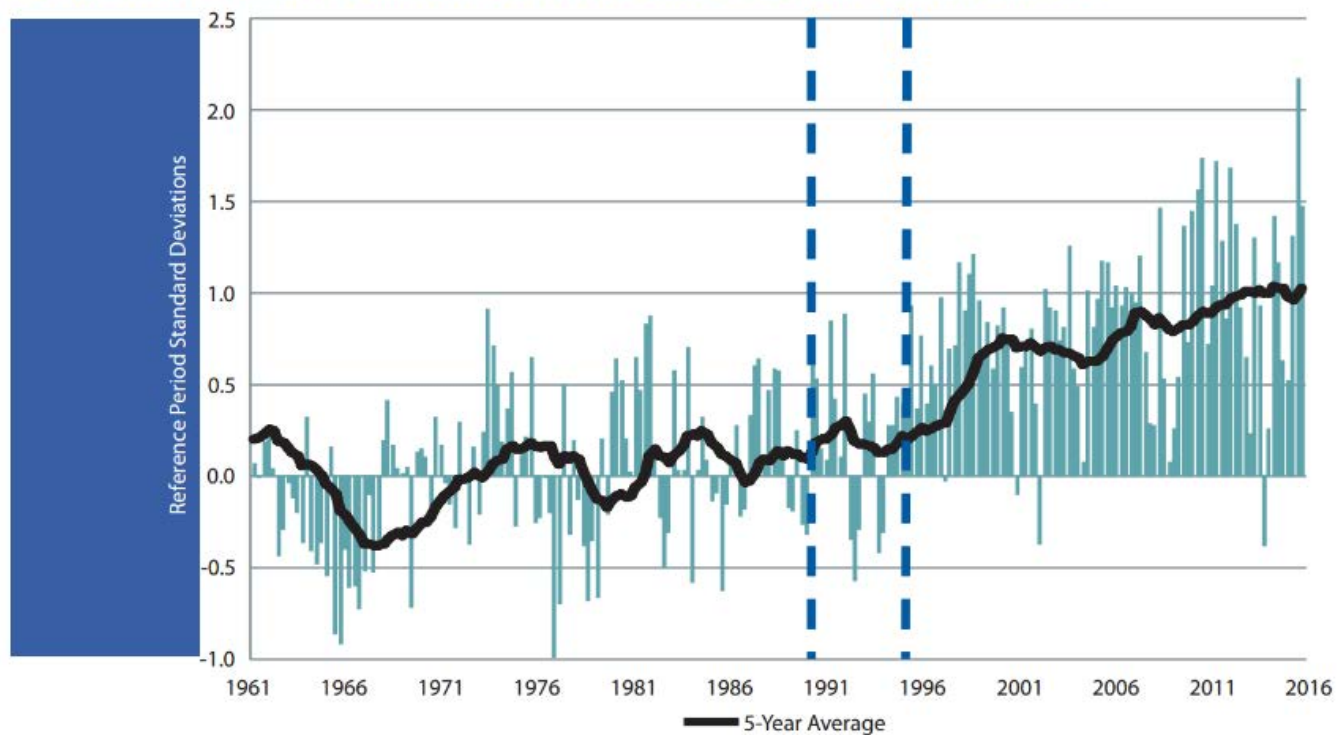
Precipitation: winter



Average change
per decade
1979-2016

4 x climate extremes

Figure 3. The Actuaries Climate Index for Canada and the United States.



When not if: floods, fire, drought, wind, heat



Photo credit: Ottawa Paramedics



Photo credit: Ryan Forbes



Photo credit: Associated Press



Photo credit: Viv Lynch. Used under CC BY-NC-ND 2.0

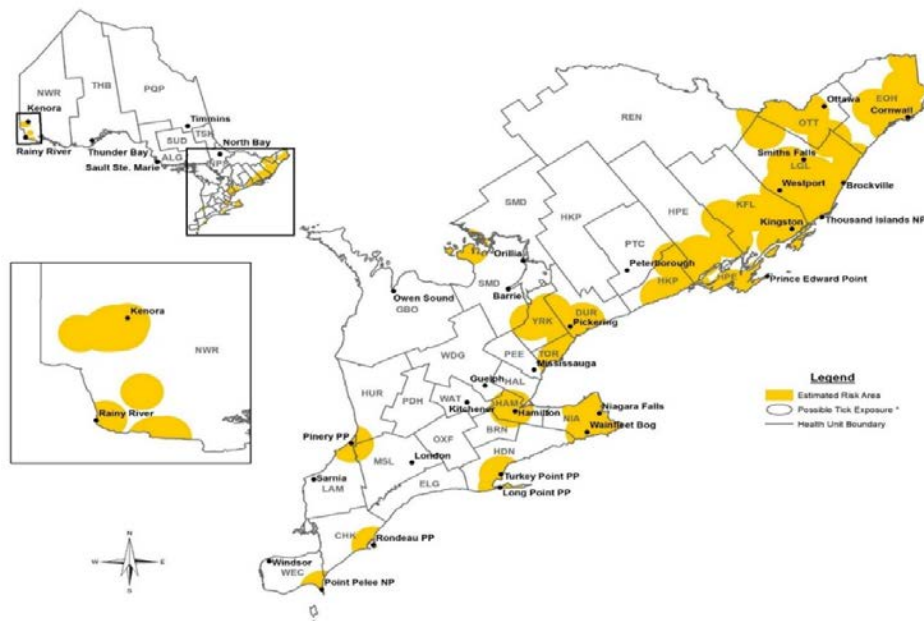


Photo credit: The Canadian Press



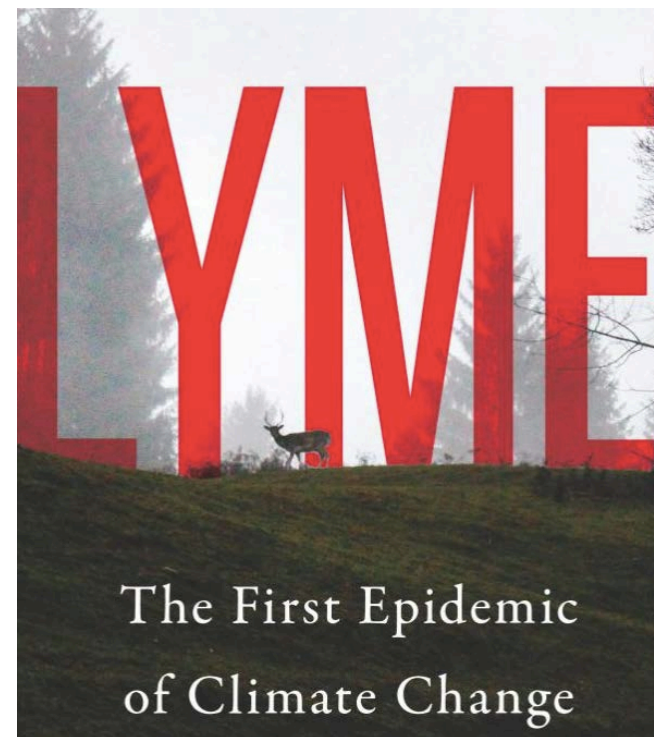
Photo credit: OPP North East

Health impacts

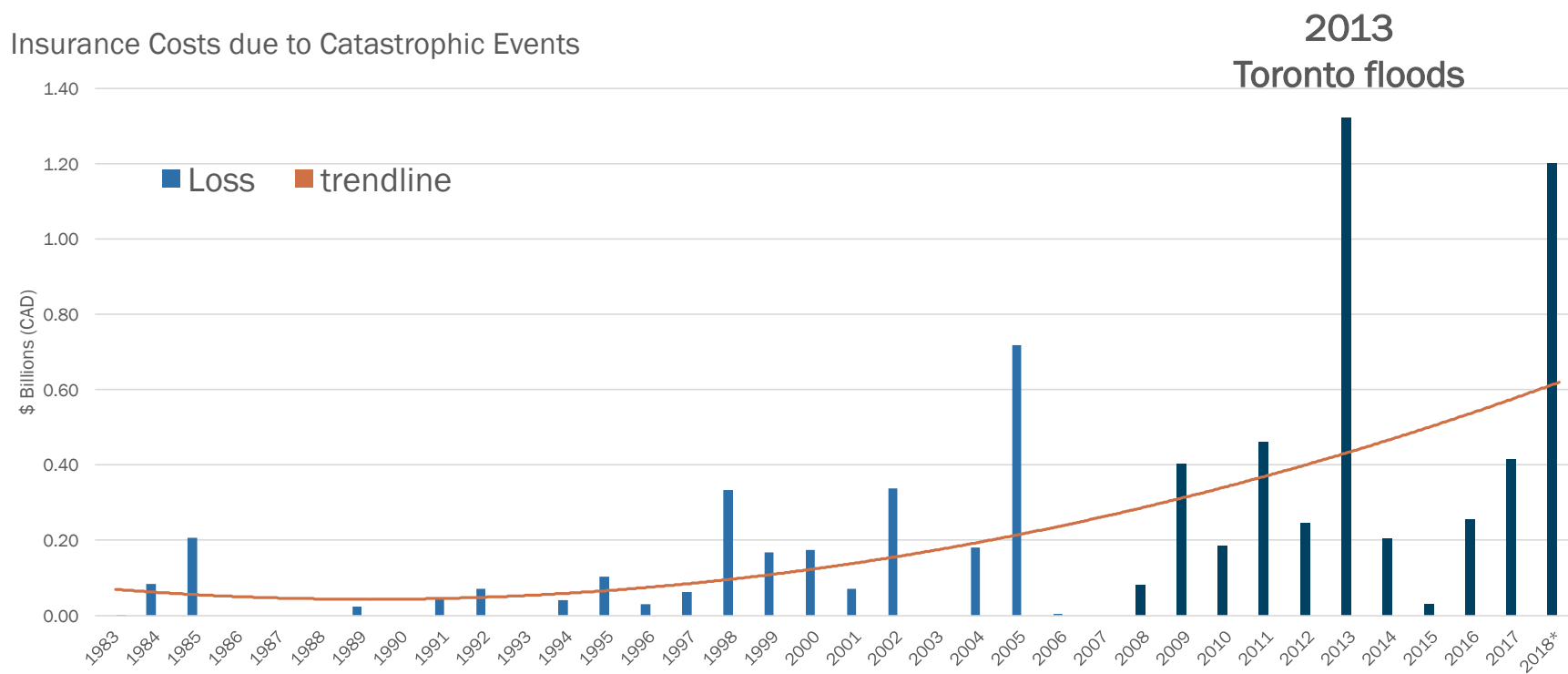


Ontario Lyme Disease Risk Map 2018: Estimated Risk

Source: Ontario Agency for Health Protection and Promotion (Public Health Ontario)



Insured losses (not including uninsured)



\$1.2 billion in first 9 months of 2018

We need to get ready for what's coming

Mitigation

- reduce emissions of pollutants (GHGs) that cause climate change

Adaptation

- cope with the impacts that have already occurred and will occur as a result of climate change

Who does 2100 matter to?



If energy conservation is good
for Ontario's economy and
environment, why aren't we
doing more of it?

Without smart public
policy, a lot of barriers
get in the way.

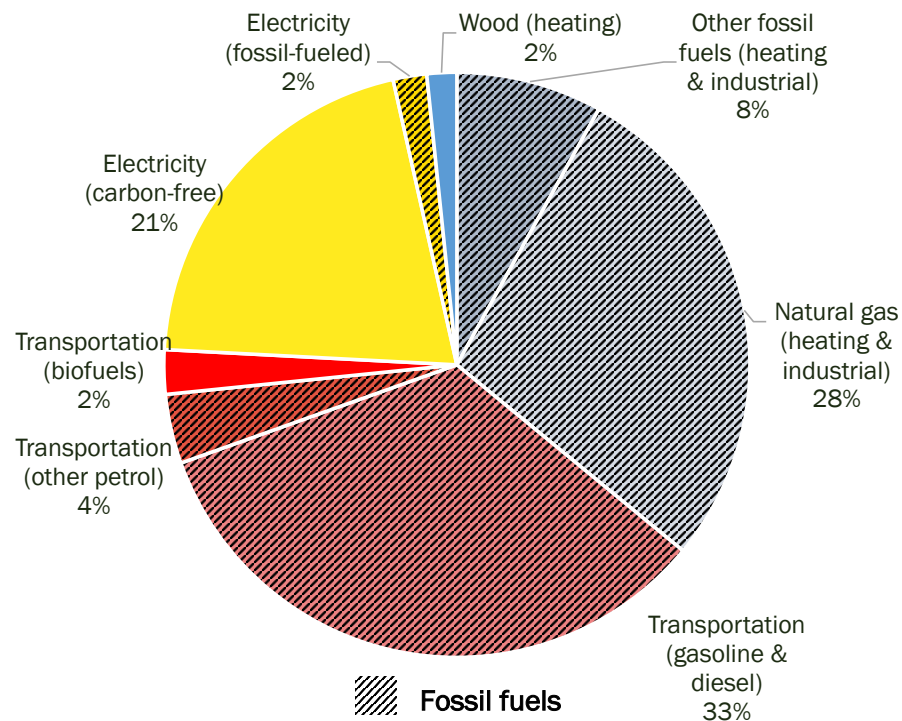
2. Energy conservation

We're foolish not to conserve energy

1. It is good for **the economy**
2. It is good for **climate**
3. It is good for health **well-being**

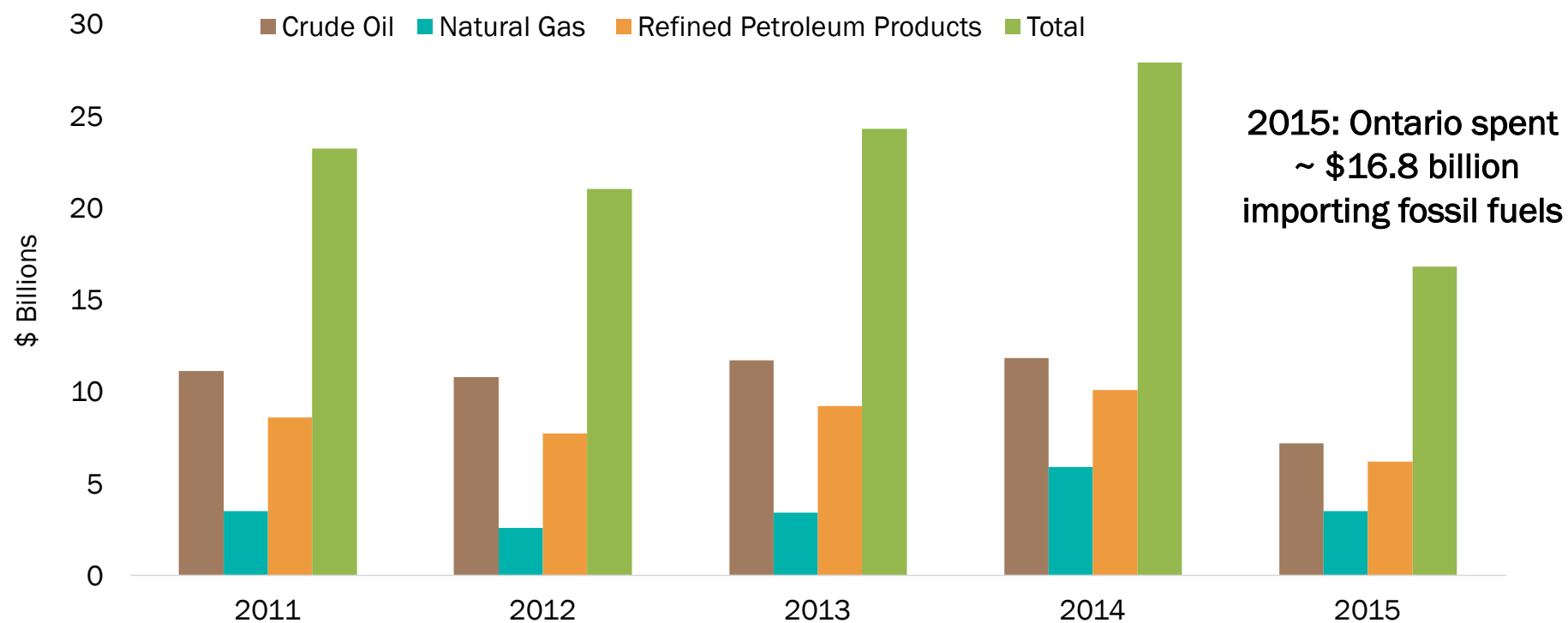


3/4 of Ontario's energy is fossil fueled



- **Electricity & natural gas** have conservation programs, building codes, appliance standards
- Action needed on **transportation fuels**
- Action needed on **other fossil fuels**.

Huge cost of imported fossil fuels



Energy efficiency good for the economy

- Net creator of jobs
- Fuels GDP growth
- Helps lower home energy bills
- Helps businesses & public sector reduce overhead
- Stimulates Ontario's growing efficiency and cleantech sectors



Source:: IESO.



Critical to climate goals

- Energy efficiency could achieve 40% of needed GHG reductions, globally (IEA)
- Ontario recently replaced GHG reduction targets with a non-binding target, more than 60% weaker.

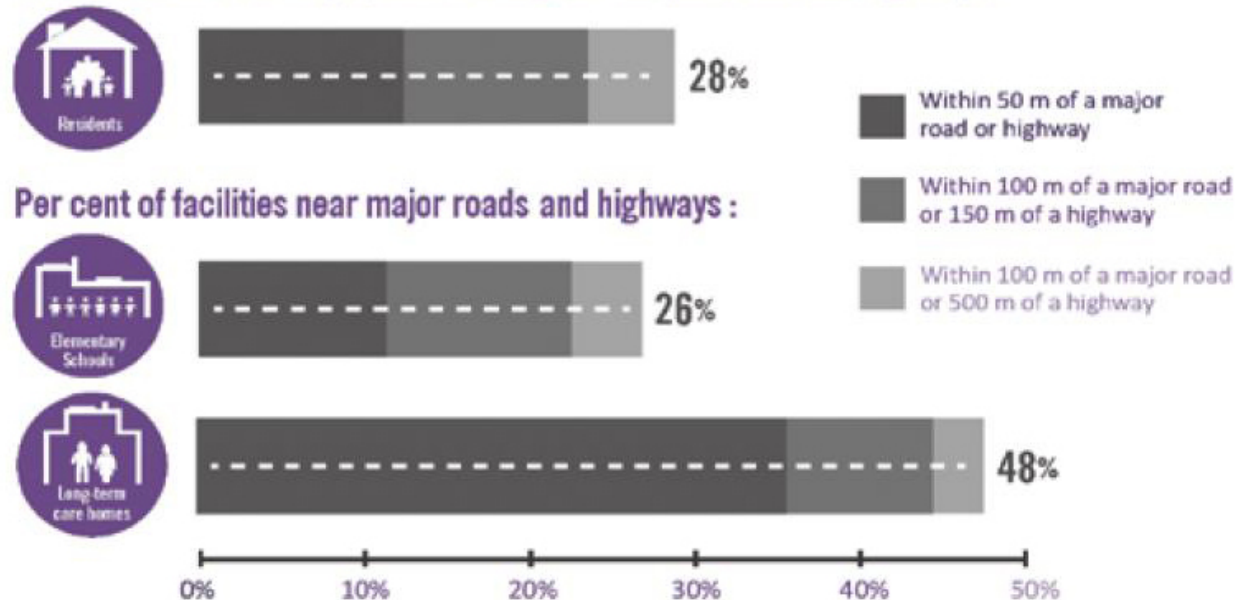
Energy efficiency is the only source of energy without any negative environmental impacts.

2 Air pollution and health

Traffic-related air pollution:

people near major roads at risk

Per cent of the Ontario population living near major roads and highways :



Who is at Increased Risk?



Children



Seniors

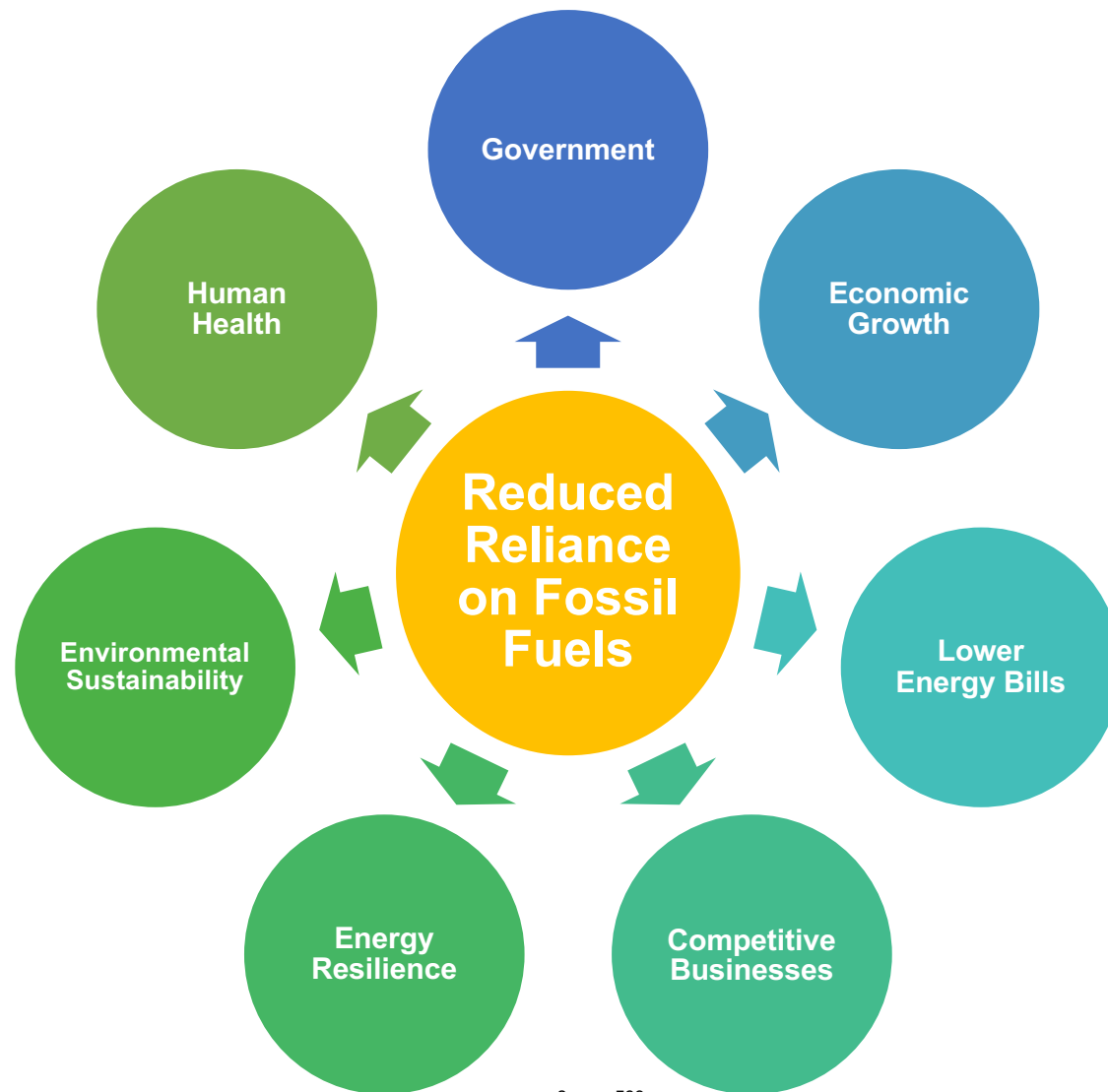


People with pre-existing health conditions

Source: Public Health Ontario

Money,
climate,
wellbeing:

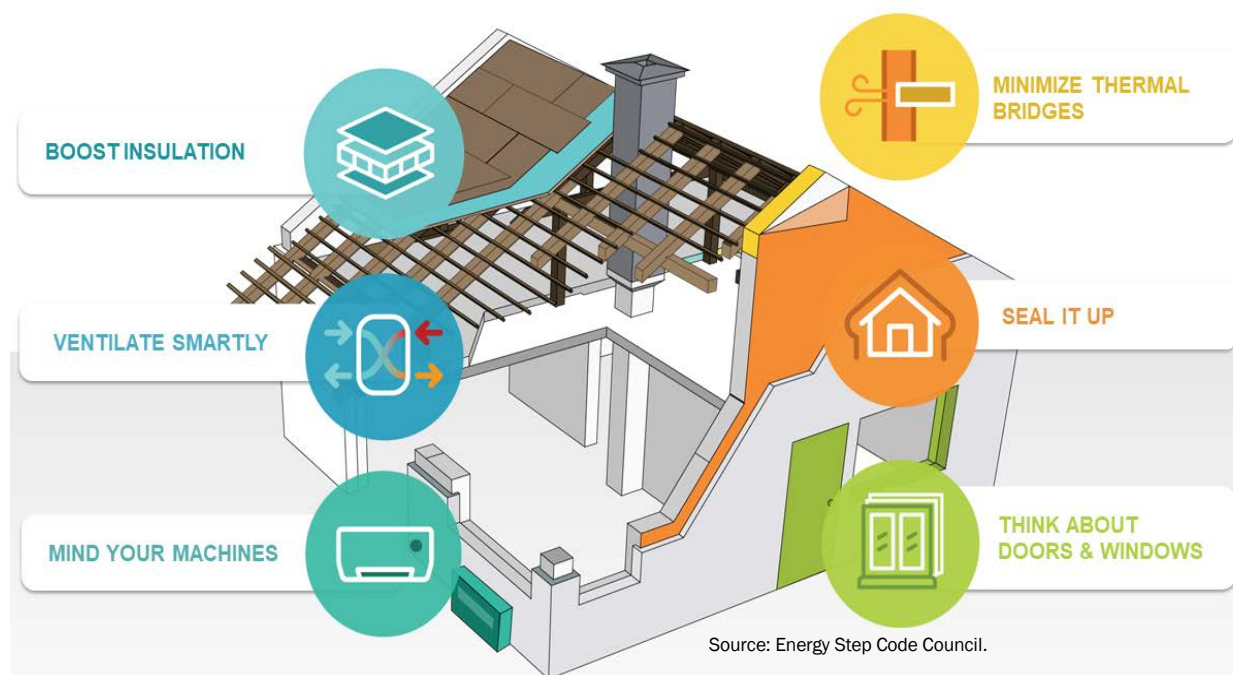
Major
co-benefits
of reducing
reliance on
fossil fuels



Source: ECO

If you're already renovating, make it energy efficient!

- Nearly half of all Ontarians plan to renovate in the next 12 months spending an average of \$13,600 per renovation
- Energy upgrades during renovations are lower cost and less disruptive



How can we save energy,
shorten commutes, and
improve quality of life?

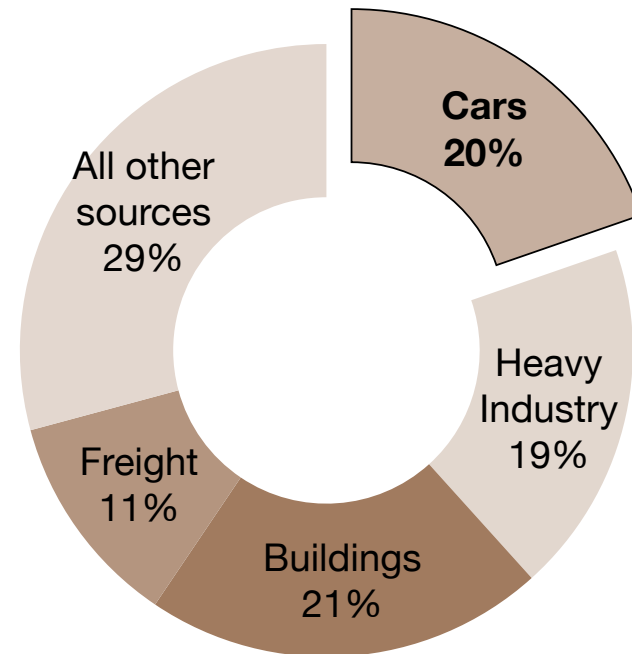
By building our
communities up and in,
instead of out.

3: Urban sprawl: the road to gridlock

2 We need to talk about cars

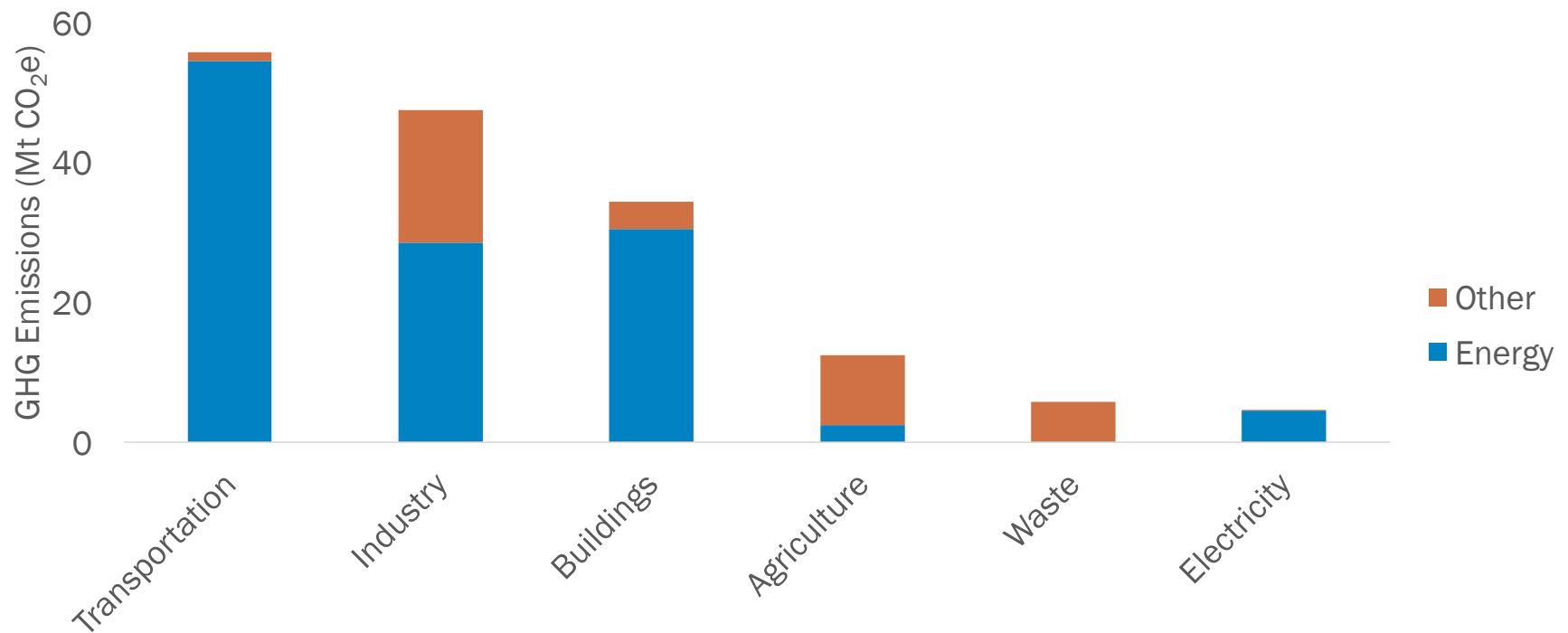
- One fifth of Ontario's emissions
- Car travel is growing faster than population
- 4 out of 5 Ontarians commute by car
- Canada's car emissions world's worst

2016 GHG emissions in Ontario

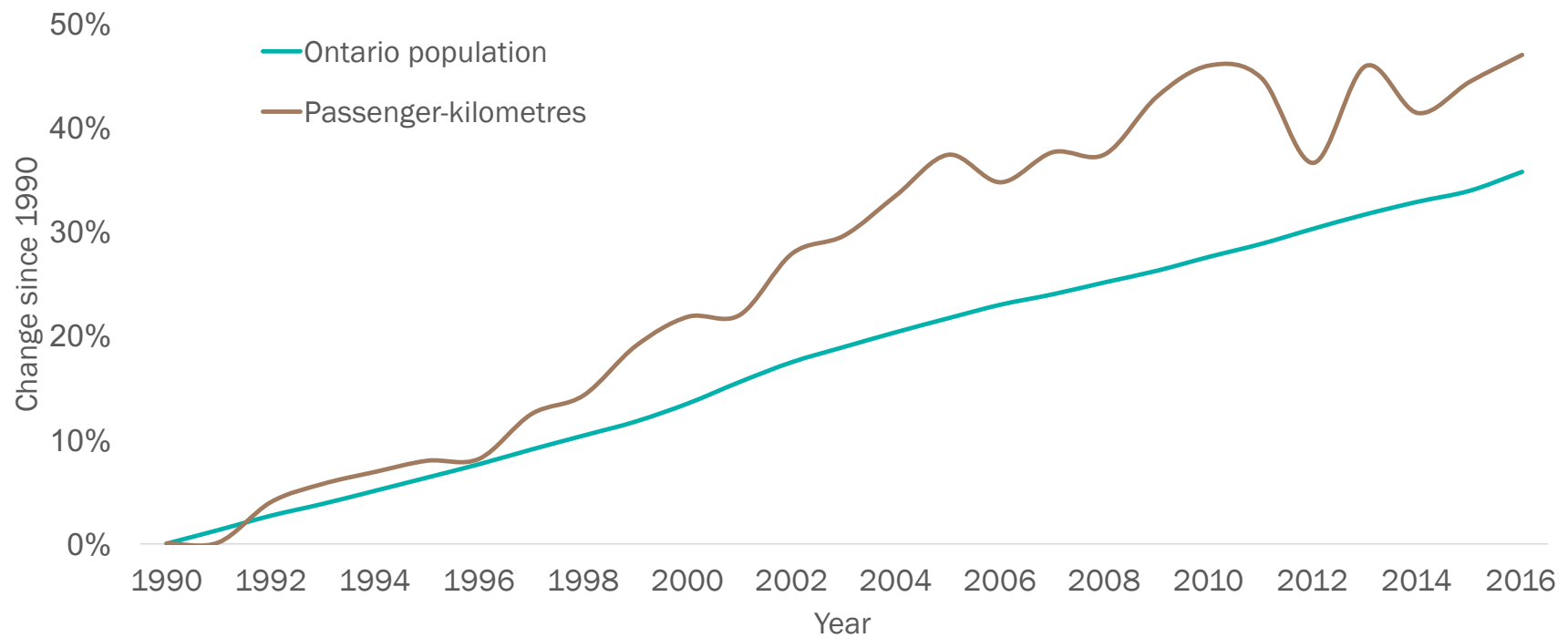


Source: Environment and Climate Change Canada

Transportation is #1

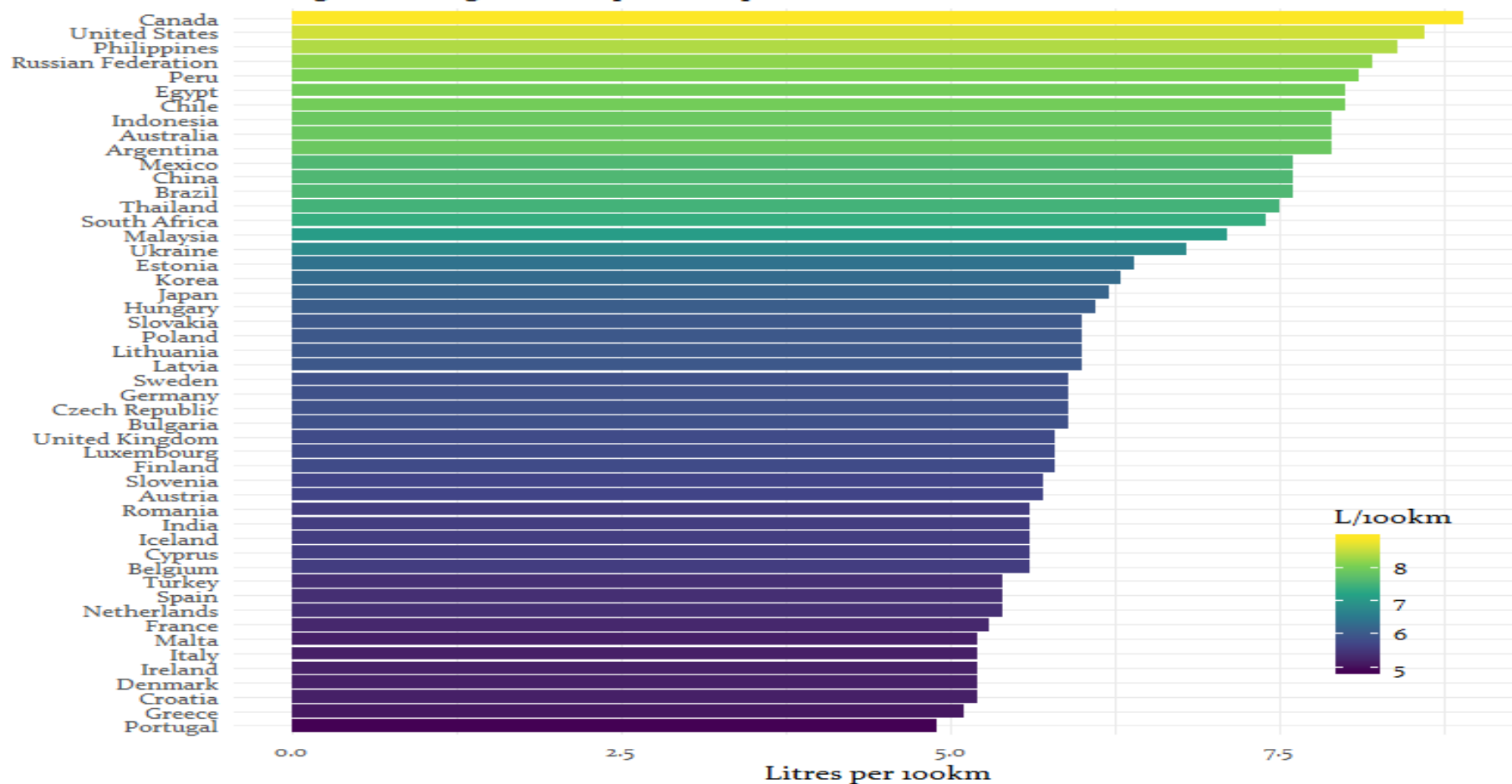


Ontarians are driving more than ever



How fuel efficient is the vehicle fleet?

Average litres of gasoline-equivalent per 100km



Source: IEA
Chart by @bcshaffer

2 Why do we drive so much?



Source: Danielle Scott / Creative Commons

- Mostly because of where we live
- 3 in 4 Ontarians live in car-dependent suburbs
- Cars often only option to get to work, shops, and school

Media headlines focus on urban high-rises...

Housing starts near 10-year high on Toronto condo boom



news

THE
HAMILTON SPECTATOR

Record setting construction boom in Hamilton this year

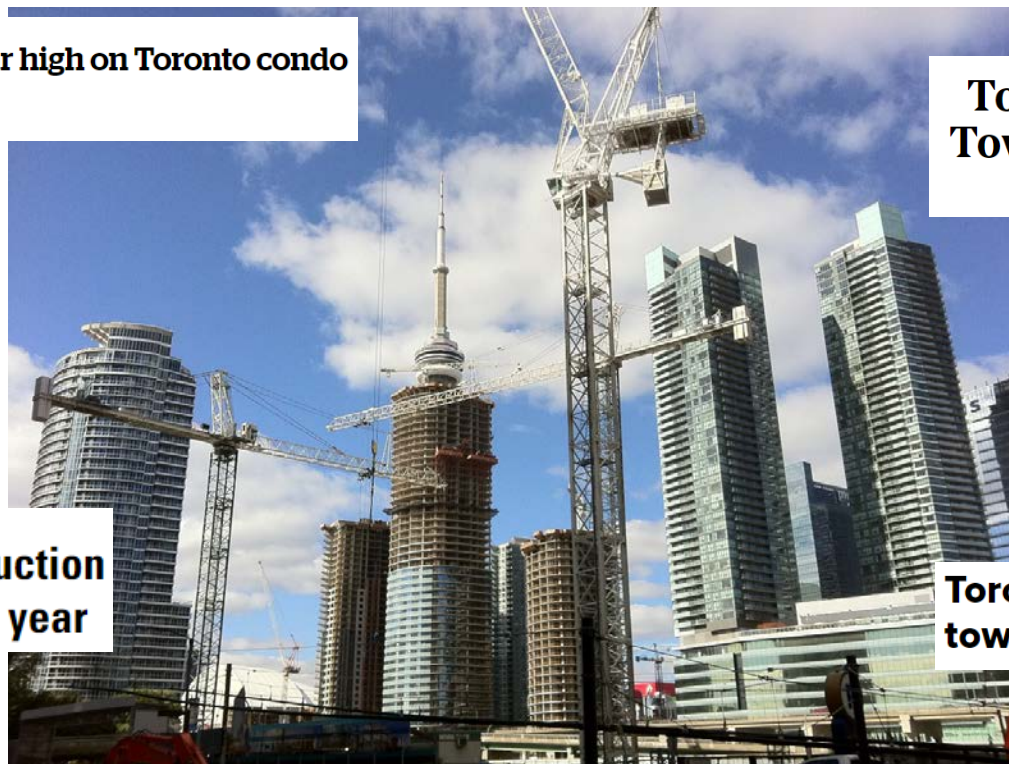


Toronto's Skyline Sees a Tower Boom to Rival New York and L.A.

THE
Hollywood
REPORTER

Global
NEWS

Toronto condo construction towers over Big Apple's



Source: Flickr / Mona P.

2

But most growth is in suburbs

- Car-dependent suburbs grew 5 times faster than walkable/ transit-friendly areas (1996-2016)
- 86% of population growth in Greater Toronto and Hamilton Area on greenfield land (2001-2011)



Source: Ministry of Municipal Affairs and Housing

2

Urban sprawl has high costs

Economic

- Infrastructure and services
- Traffic congestion
- Lost productivity
- Car costs

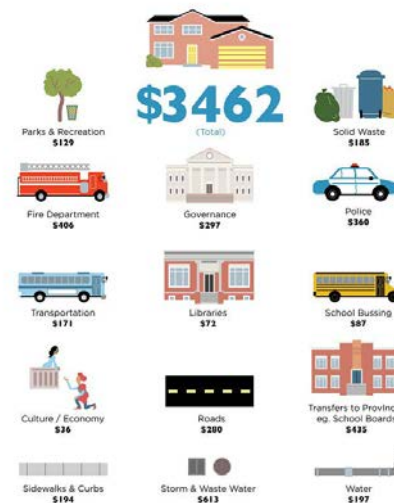
Social

- Health impacts
- Time spent in traffic

Environmental

- GHG emissions
- Loss of farmland and natural heritage
- Wildlife decline

Suburban City's Annual Cost, per Household



SP Sustainable Prosperity
For more data and more reports, visit thecostofsprawl.com
Data based on Halifax Regional Municipality

Urban City's Annual Cost, per Household



SP Sustainable Prosperity
For more data and more reports, visit thecostofsprawl.com
Data based on Halifax Regional Municipality

Source: Smart Prosperity Institute

GTA residents spend an average of

8 hours

commuting each week, more than LA, NYC and most other big cities.



Congestion costs the economy

\$11 billion

every year (more than Ontario spends on public transit and highways).

Urban sprawl creates **congestion**, which costs us all.

By 2041, the population of the Greater Golden Horseshoe will grow by

39%

leading to more sprawl, fossil fuel use, GHG emissions, and

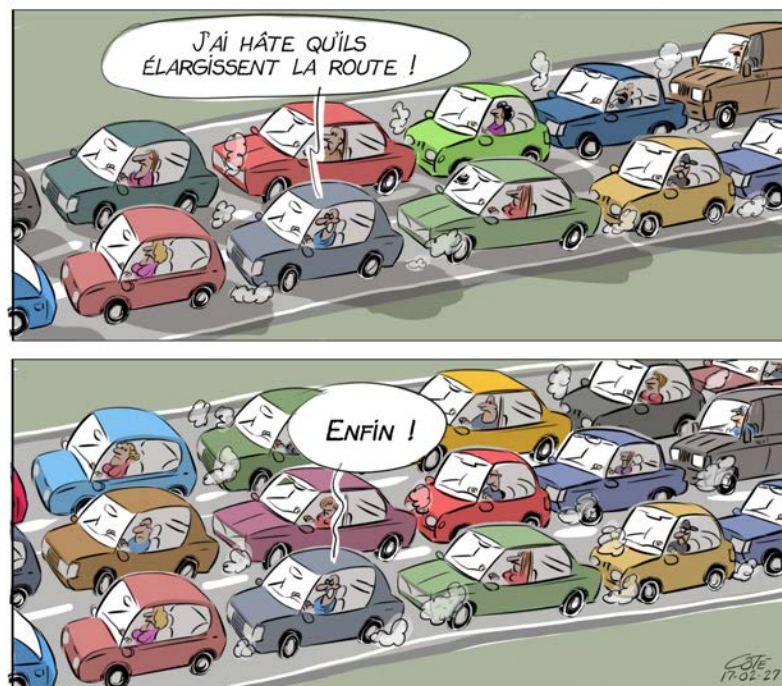
congestion.



Can't solve congestion with roads

CAN'T WAIT FOR THE
ROAD TO BE WIDER!

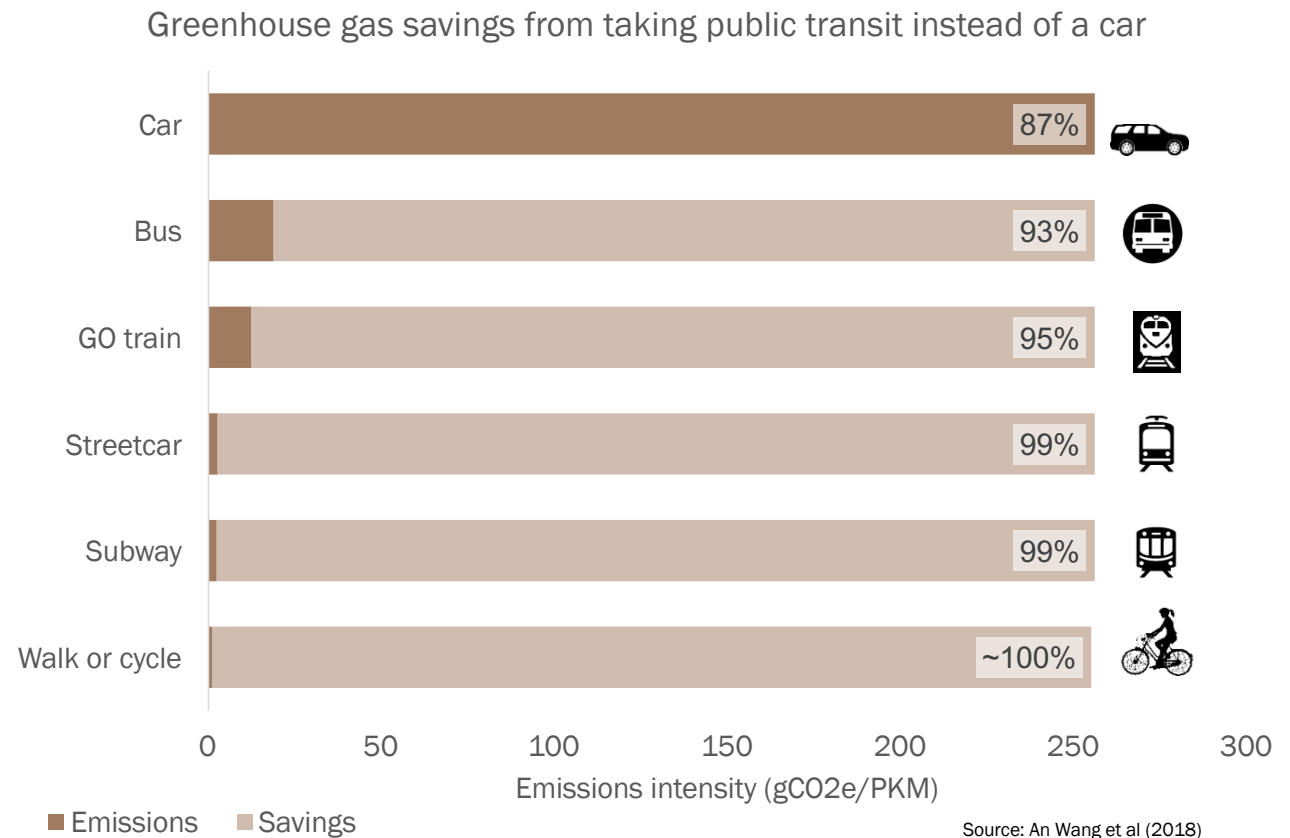
FINALLY!



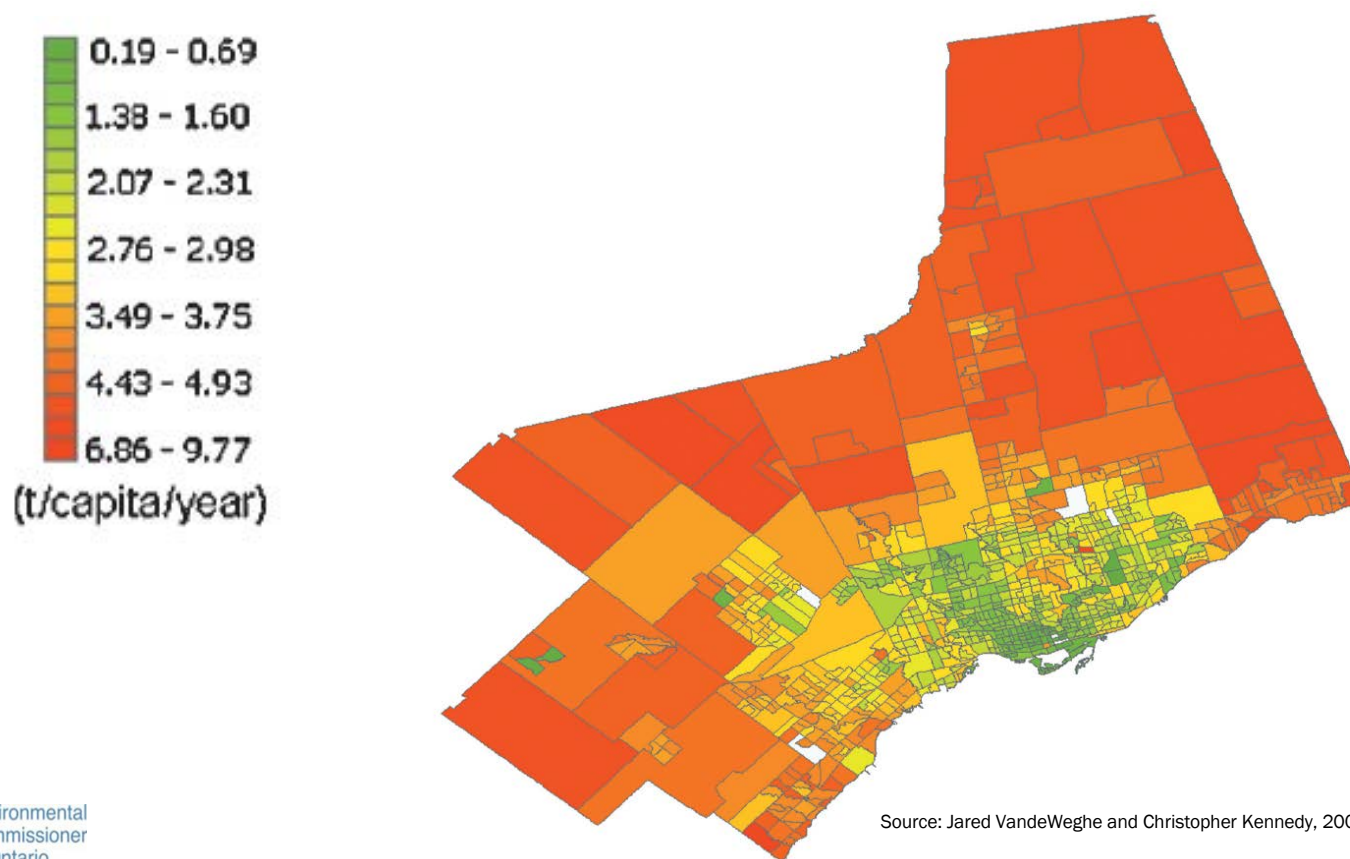
2

Driving is highly energy-inefficient

- Even those who must drive have options
- See our factsheet



Means a big carbon footprint



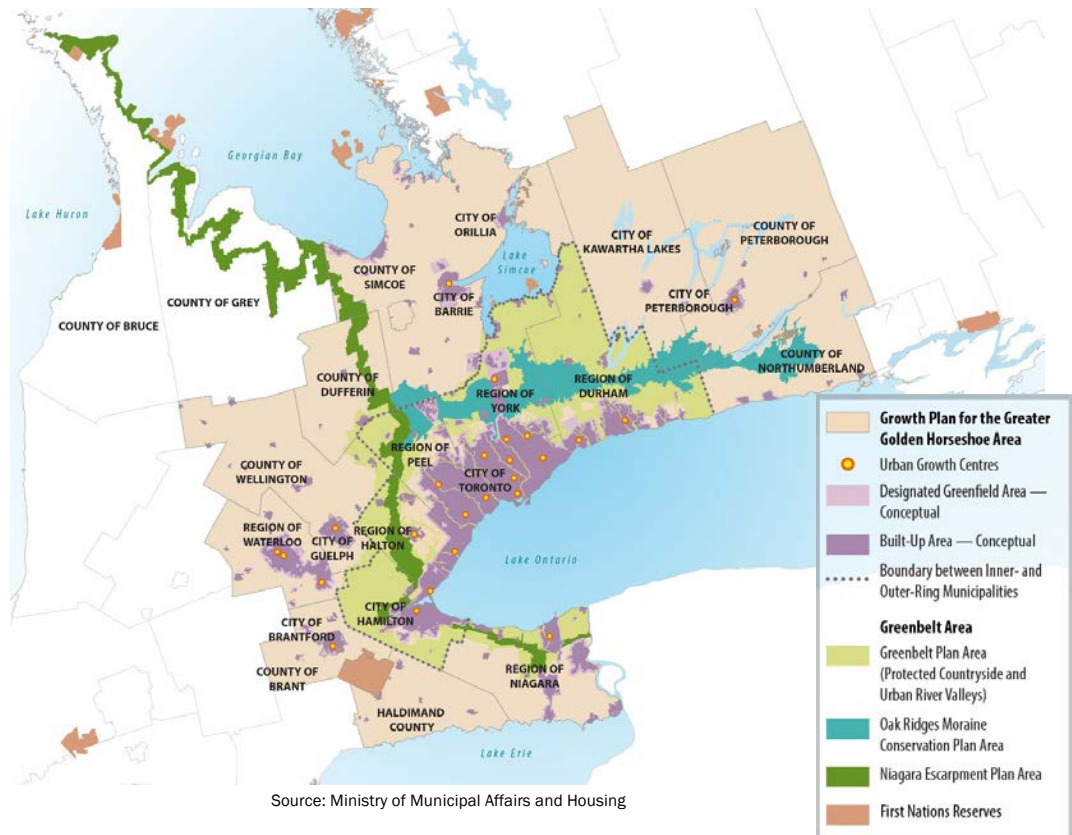
2 What are the solutions?

- Grow in, instead of out
 - Higher densities
 - Shorter distances
- Greater mix of uses
- Walkable urban design

		MISSING MIDDLE The type of development that can support transit in new and established suburban neighbourhoods is "gentle density" in the form of midrise commercial buildings and condos with street level retail, stacked townhouses and row houses					
	HIGH RISE	MID-RISE	STACKED TOWNHOUSE	TOWNHOUSE		SEMI DETACHED	DETACHED
STOREYS	12+	5-11 Storeys	3-4	1-3		1-3	1-3
AVERAGE NEW PRICE	\$562,403	\$562,403	\$520,400	\$896,589		\$845,951	\$1,783,417
AVERAGE # PEOPLE PER UNIT	2.03	2.32	2.32	2.88		3.12	3.19

Why not in Greater Golden Horseshoe?

- Projected growth by 2041:
 - 3.8 million more people
 - 1.5 million jobs
- Split into “Inner Ring” and “Outer Ring”
- Growth Plan sets planning framework for region



Does Growth Plan = compact growth?

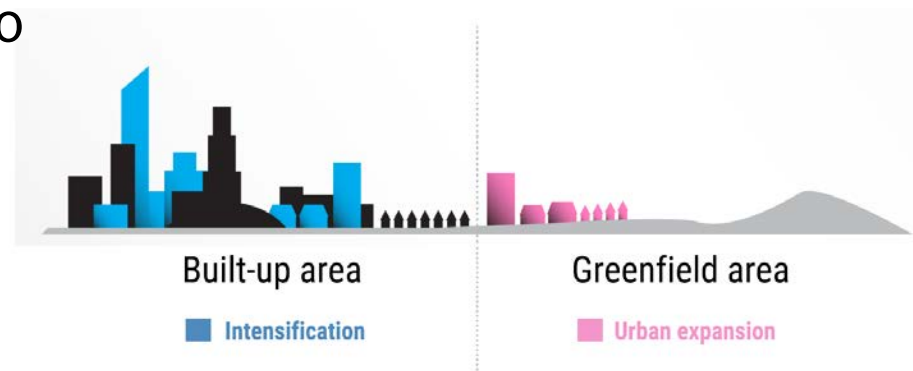
- Ambitious targets to increase densities and reduce sprawl
- Policies support alternatives to cars (transit, walking, cycling)

Density and intensification targets

Municipalities must accommodate their growth allocations through a combination of **intensification** and **urban expansion** (i.e., new suburbs).

1 At least **60%** of new residential development must be in the form of **intensification** by 2031*

2 The remaining development in greenfield areas must achieve **densities** of at least **80 people and jobs/hectare**

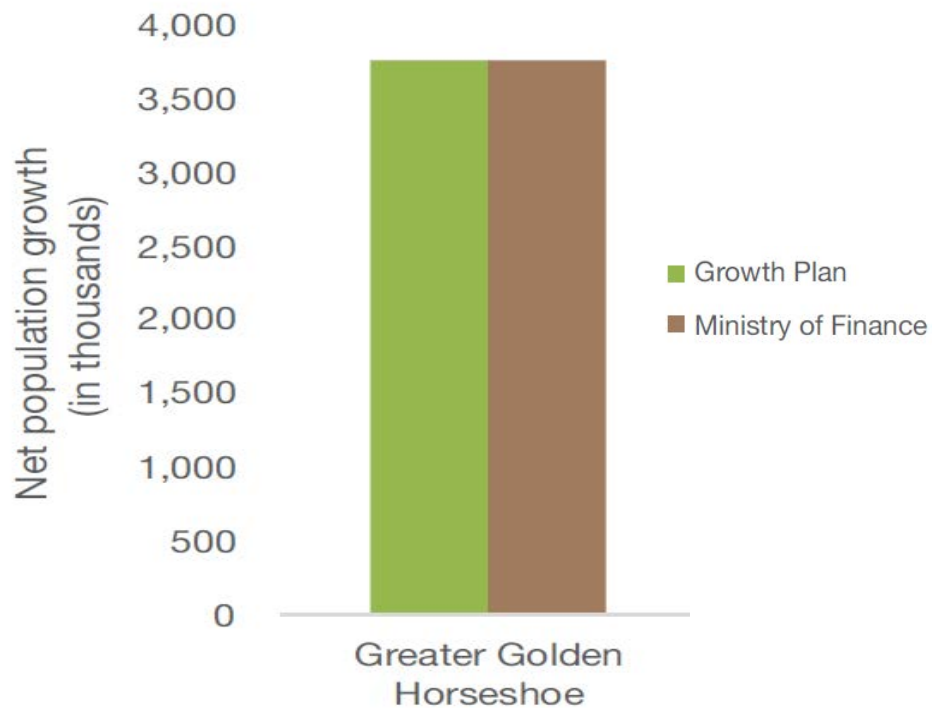


* Apart from City of Toronto which has a 100% intensification rate. Intensification and density targets subject to change if Amendment 1 to the Growth Plan (2017) is adopted.

Source: ECO, adapted from Neptis Foundation

2

Major design flaws



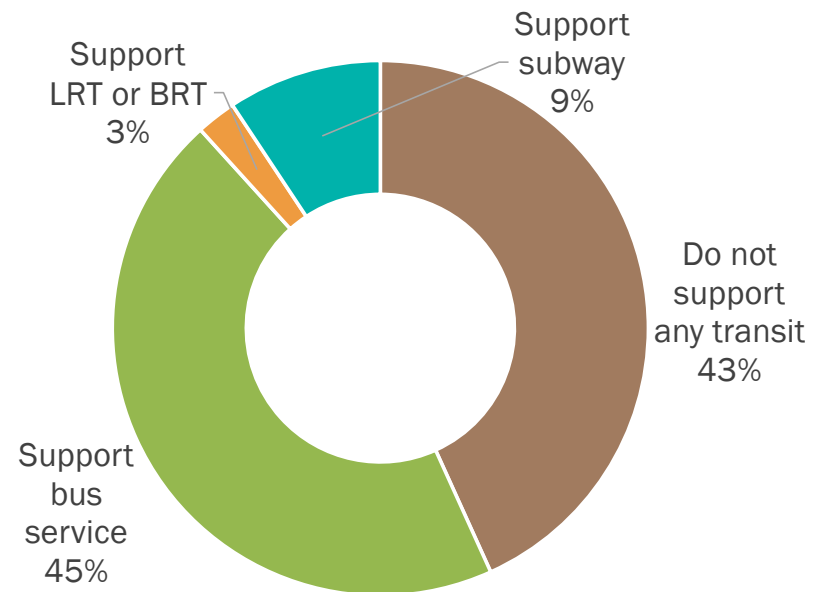
- Directs 1,000,000 to Outer Ring with low densities, few jobs
- Growth forecasts 16% higher than actual growth (2006-16)
- Job forecasts way off
- Bad commutes will get much worse

Sources: Ontario Ministry of Finance and Ontario Ministry of Municipal Affairs and Housing.

2 Plus poor implementation

- Few transit stations are meeting density targets
- Most recent growth is not close to frequent transit
- Many municipalities failing to meet “minimum” targets
- Limited reporting or oversight
- **No difference to the amount of sprawl vs pre-Growth Plan**

Transit-supportive densities at 333 Growth Plan major transit station areas



Source: Ontario Ministry of Municipal Affairs and Housing

Proposed amendment to make it worse

- Weaker targets for many municipalities
- Simplified boundary expansion process
- Reduced opportunities for public input
- Removal of “climate change” or “net-zero” wording



The screenshot shows the ERO website interface. At the top, there's a header with the Ontario logo and 'Environmental Registry of Ontario beta'. Below this is a navigation bar with 'Home', 'Search', and 'About' links, along with 'Register', 'Log in', and 'Français' buttons. The main content area displays the title 'Proposed Amendment to the Growth Plan for the Greater Golden Horseshoe, 2017'. A table lists details: ERQ number (013-4504), Notice type (Policy), Act (Places to Grow Act, 2005), Posted by (Ministry of Municipal Affairs and Housing), Notice stage (Proposal), Proposal posted (January 15, 2019), and Comment period (January 15, 2019 - February 28, 2019 (44 days) Closed). Below the table, there's a section for 'This consultation was open from:' with dates 'January 15, 2019 to February 28,'. To the right, a 'Proposal summary' section states: 'We are seeking feedback on a Proposed Amendment to the Growth Plan for the Greater Golden Horseshoe, 2017 to address policies seen as potential barriers to the development of housing, job creation and business attraction. This proposal is linked'.

ERQ number	013-4504
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https://ero.ontario.ca/notice/013-4504?_ga=2.152808575.738976320.1553271485-563716315.1478705254

Recommendations to stop sprawl

1. Remove barriers to higher housing densities near transit and jobs
2. Revise Growth Plan allocations to direct more growth to existing urban areas with transit and jobs, and limit Outer Ring growth
3. Require municipalities to up-zone near transit as a condition of funding
4. Reverse amendments that reduce density and intensification targets
5. Regularly report to the public on Growth Plan performance

4. What can we do?

Is it too late?

- We are in for big changes
 - There is still a little time to have an impact on what's coming
 - **Our choices, right now, matter**
-
- Canadian actions really matter

When the province won't lead, who can?

- Federal action – Pan Canadian Framework
- Municipalities
- Business
- Investors/pension funds
- Universities
- Media
- **Everyone**



The federal backstop is a good start.

“I used to think that top environmental problems were biodiversity loss, ecosystem collapse and climate change. I thought that thirty years of good science could address these problems. I was wrong. **The top environmental problems are selfishness, greed and apathy,** and to deal with these we need a cultural and spiritual transformation.”

Gus Speth, Vermont Law

**The climate crisis presents an opportunity
to not just avoid catastrophe,
but also to create a better world.**

**It's not just a moral obligation.
It's a moral opportunity.**

What can we do?

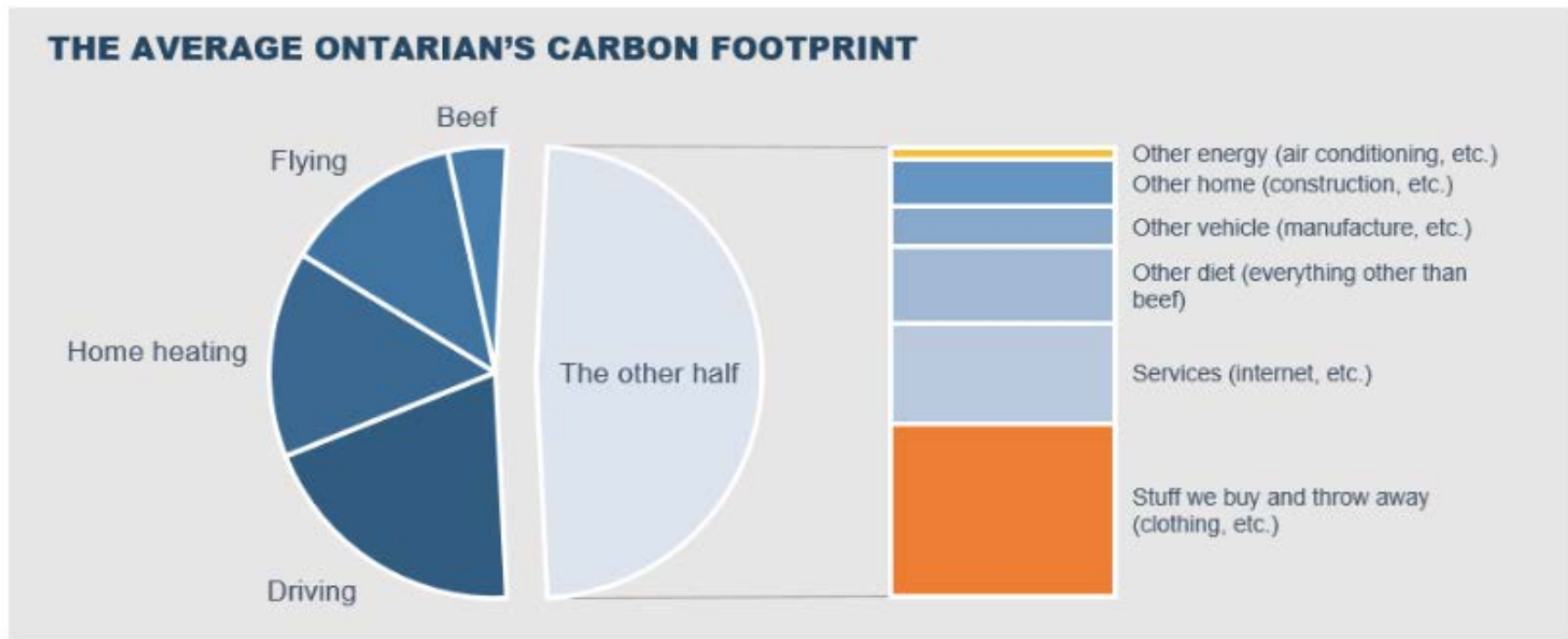
- Climate cannot be left entirely up to government

Reduce your carbon footprint

Get ready to adapt

Speak up

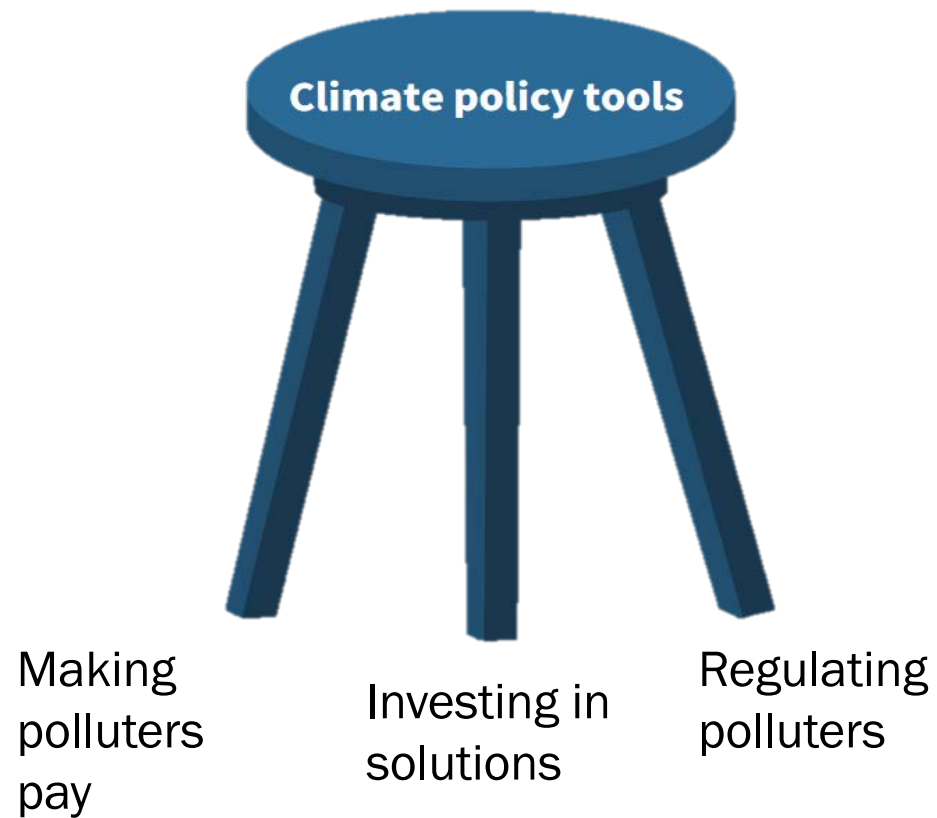
Personal footprint?



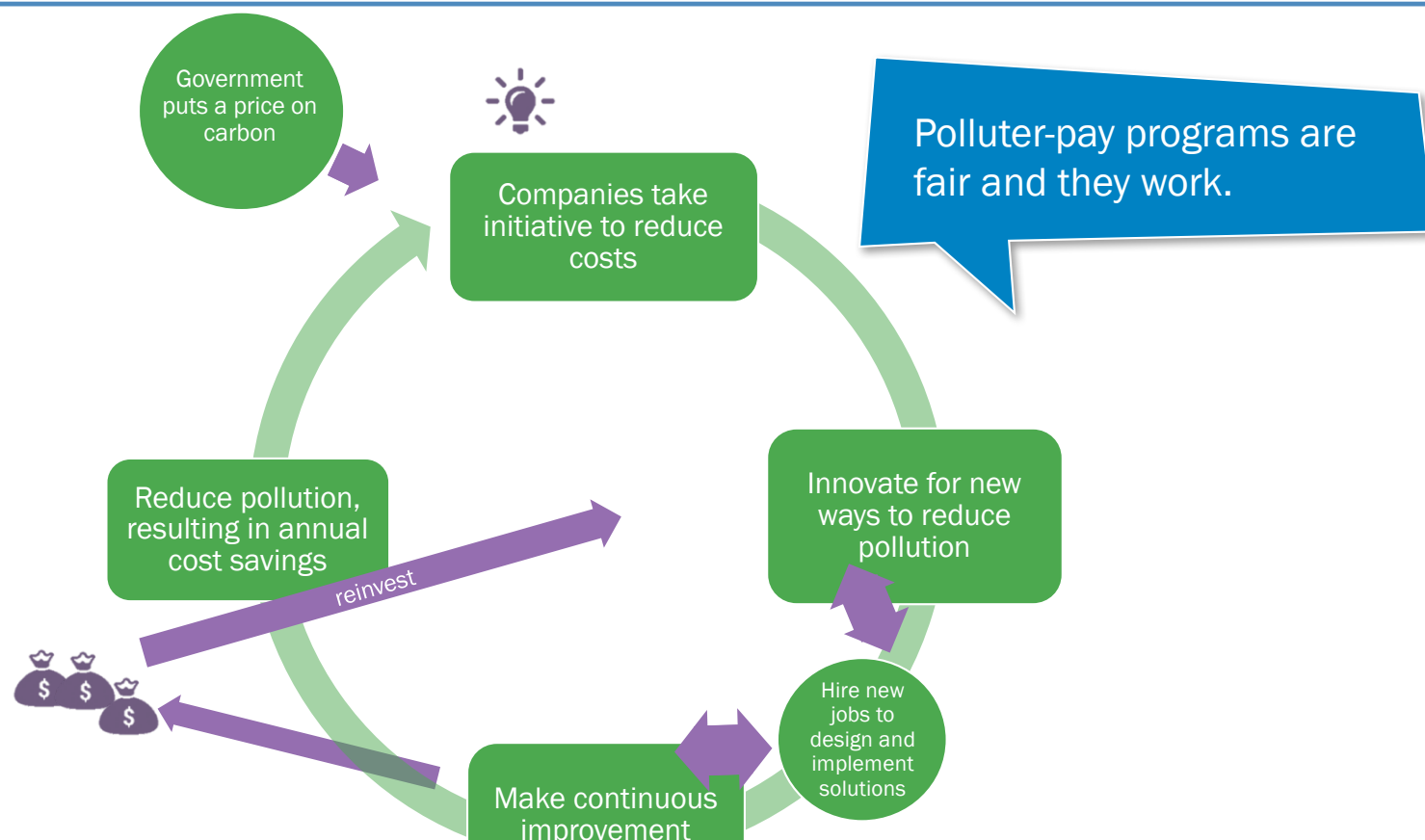
Speak up how?

**Simple clear messages,
repeated often,
by a variety of trusted voices.**

What works?

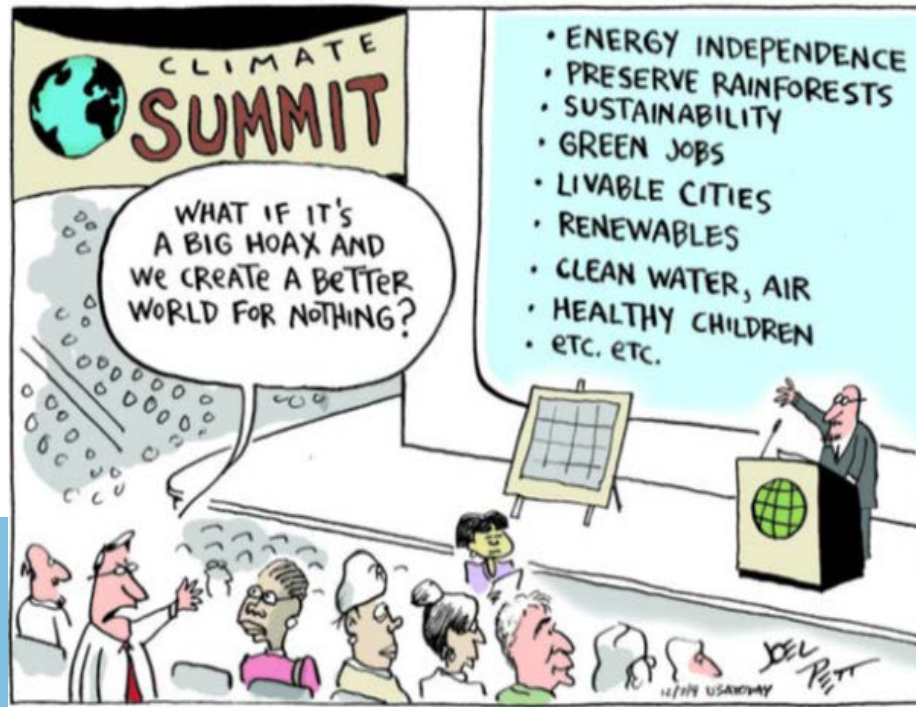


Making polluters pay leads to innovation, creativity, and jobs



Get started now

- Who can you support?
 - Don't insist on perfection
- Who can you work with?
 - Find someone new tonight
- Be a trusted voice
 - Can you build bridges?
 - Who can you meet with?



Knowledge + Action = Hope

No one can do everything, but everyone can do something

Thank you

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