

Partners for Climate Protection Implementing Climate Action Plans



February 14, 2018

Welcome!

We will get started at 2 pm



Webinar Instructions

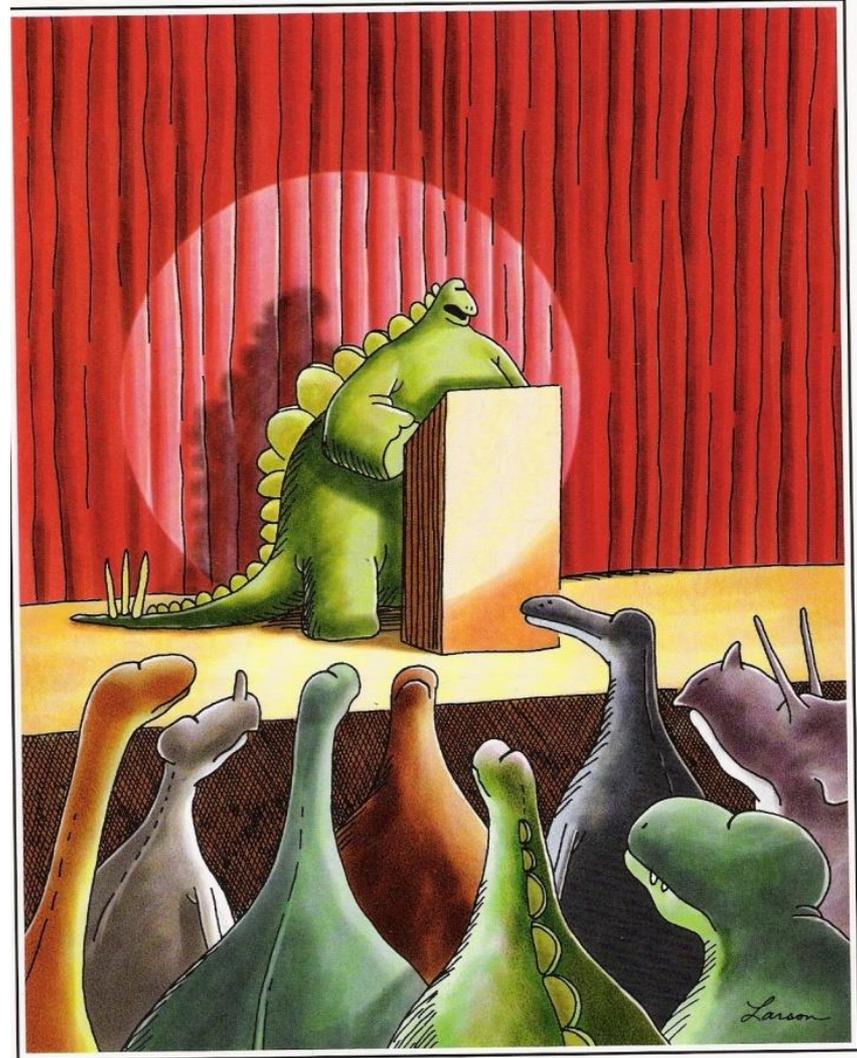
- Can connect to audio via computer
- Speakers or headphones with no microphone – will need to chat in questions
- Headset with microphone – can speak via head set
- Call in via phone – choose the phone option on the audio controls call into phone number, input access code and PIN #
- Just raise your hand to be unmuted
- Can mute via phone symbol on webinar controls
- Any issues? Just sent me a note via chat or questions

What is PCP?

- PCP is a network of >300 municipal governments that have committed to reducing GHGs and acting on climate change.
- PCP is a partnership between the FCM and ICLEI – Local Governments for Sustainability.
- It is the Canadian component of ICLEI's Cities for Climate Protection (CCP) network.
- Operating in Canada since 1994

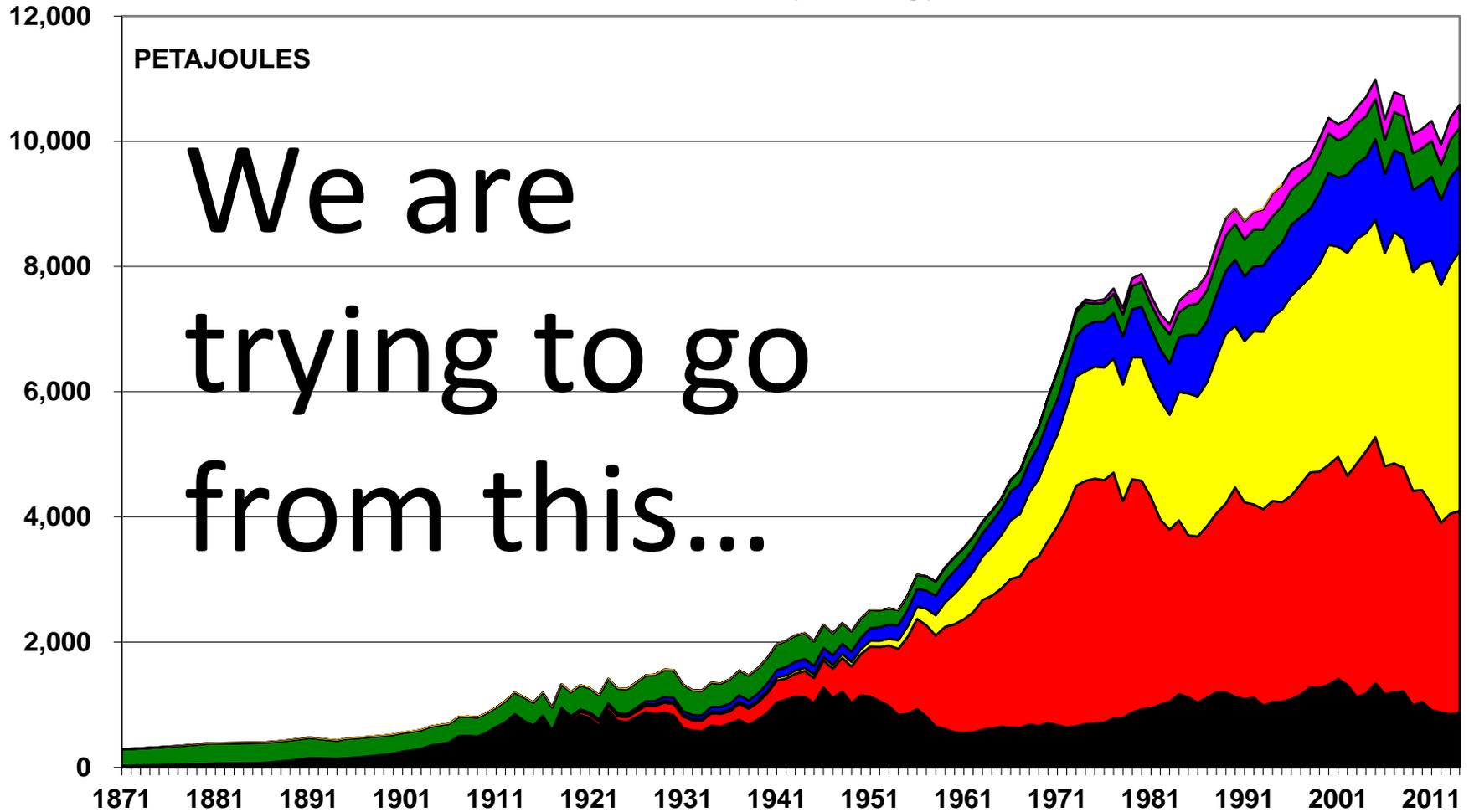
Implementation of the transition to a low carbon future is a wicked problem.

“The picture’s pretty bleak, gentlemen.... The world’s climate is changing, the mammals are taking over, and we all have a brain about the size of a walnut.”



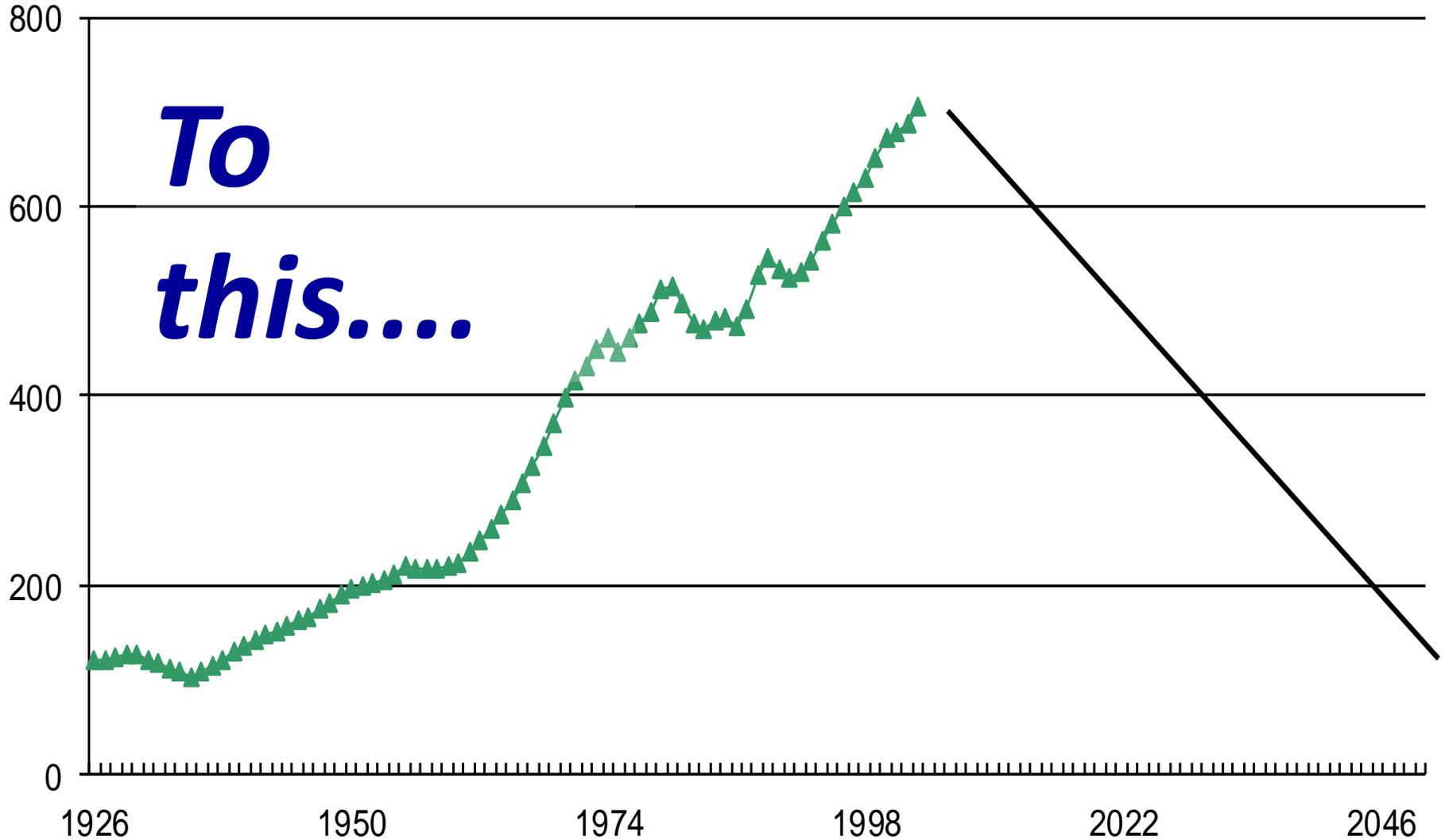
“The picture’s pretty bleak, gentlemen. ... The world’s climates are changing, the mammals are taking over, and we all have a brain about the size of a walnut.”

Domestic Consumption of Primary Energy in Canada, 1926-2014



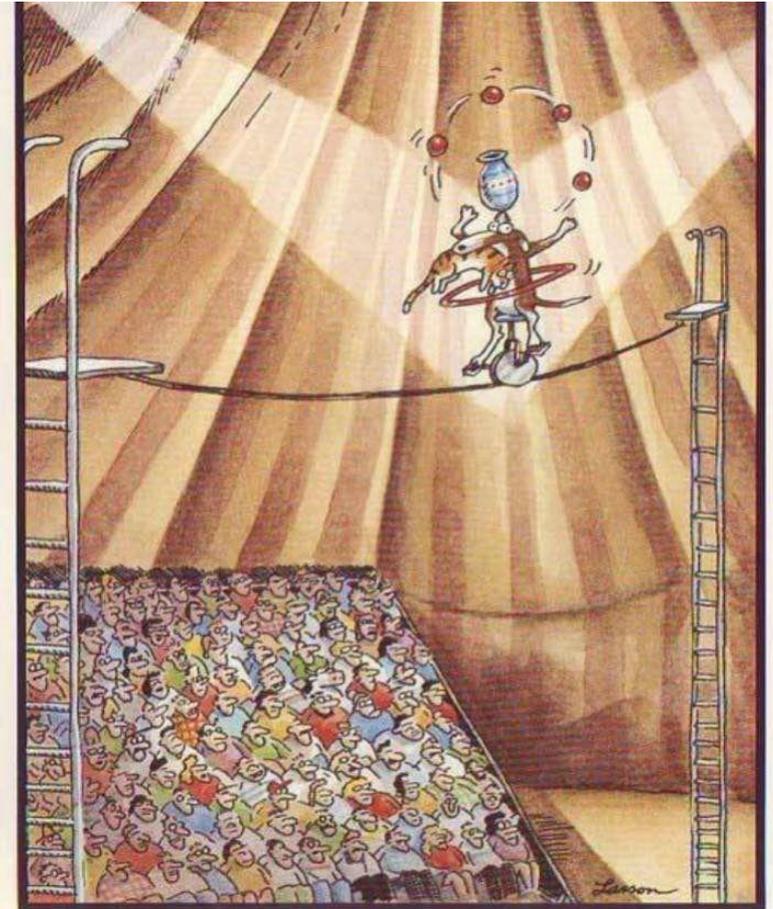
■ Coal ■ Petroleum ■ Natural Gas and NGLs ■ Hydro ■ Biomass ■ Nuclear ■ Other Renewables

Is there a pathway to Paris?



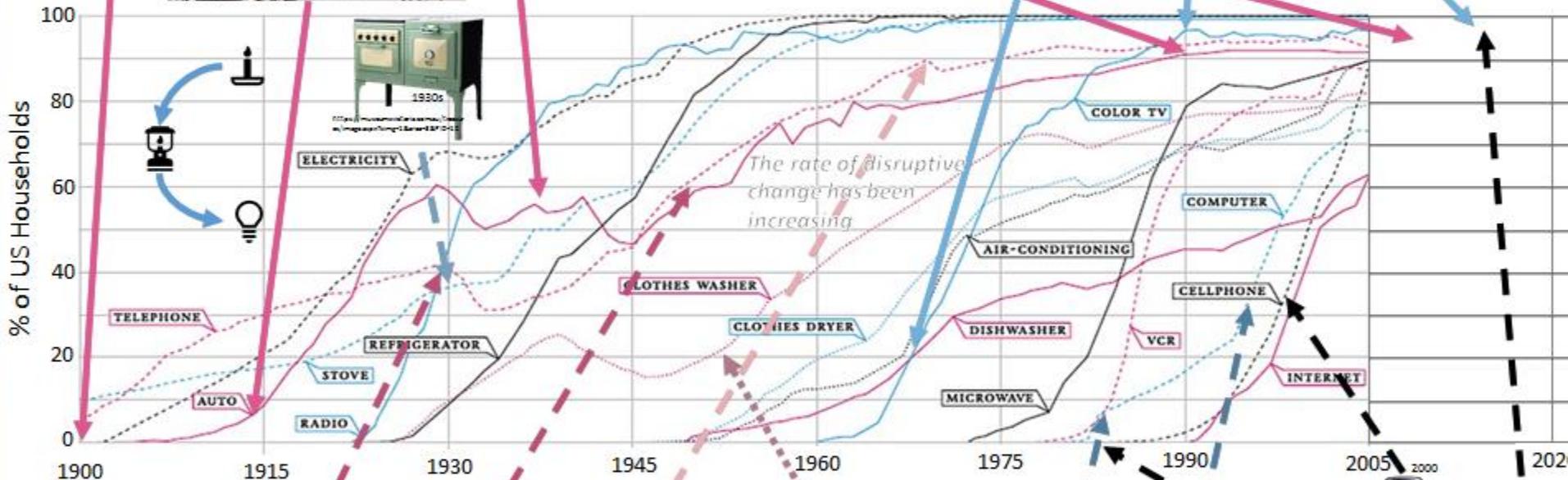
Are such futures impossible, or do they just look impossible?

High above the hushed crowd, Rex tried to remain focused. Still, he couldn't shake one nagging thought: He was an old dog and this was a new trick.



High above the hushed crowd, Rex tried to remain focused. Still, he couldn't shake one nagging thought: He was an old dog and this was a new trick.

A History of Disruptive Change



http://www.nytimes.com/imagepages/2008/02/10/opinion/10op_graphic_ready.html



Low Carbon Energy Futures – These five things must happen:

- **Efficiency, efficiency and then more efficiency**
- **Electricity's role expands into transportation and heat**
- **Decarbonize the electricity supply**
- **Sustainable production of biofuels**
- ***Innovation to reduce fuel and electricity in provision of human needs, amenities***

Low carbon futures: Some good news and opportunities:

- The technology is “available”
- Low carbon solutions yield co-benefits that are often of greater value to stakeholders than climate mitigation
- Building out a low carbon future will require a very large, skilled work force
- ***Infrastructure renewal presents an historic opportunity for resilient, low carbon solutions***

Some wicked complications:

- Climate change and its deleterious impacts will increase throughout this century.
- The time frame for the transition is short compared to the inertia in the current energy system.
- The pre-tax price of fossil fuels will be permanently depressed in a low carbon future.
- The prices Canadian households and businesses currently pay for fuel and electricity, when converted to implied carbon prices, are in the range of \$200-\$500/tonne CO₂eq and higher.

Key considerations:

- Transition to low carbon will take place simultaneously with other disruptive and far-reaching transitions, some helpful, some not.
- Capital intensity presents a challenge to policy and business models, but not the same thing as expensive.
- Innovation in financing and business strategies necessary to remove “first cost” barrier, and to resolve split incentives.
- Education and climate literacy will speed the transition.
- ***Low carbon solutions vary according to local circumstances; local agency and capacity, including in city halls, are essential.***
- Human and institutional capacity development are constraints on the accelerated deployment of otherwise ready solutions.

1

The active engagement of local government is essential to any effective response to climate change.



60 %

Local governments have direct or indirect control over 60% of Ontario's GHG emissions.

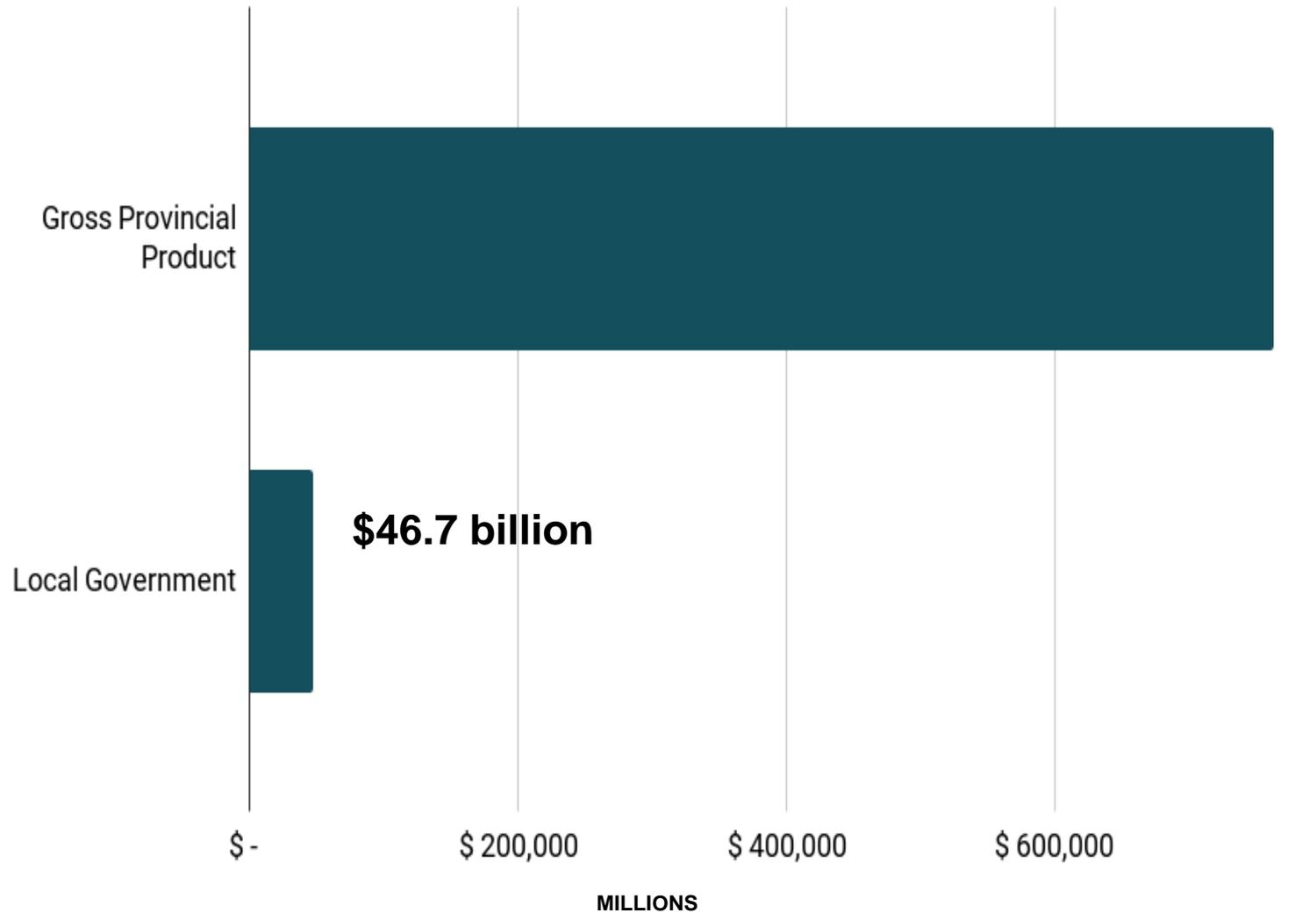
Local governments influence emissions and the scope for emission reductions through their direct and indirect control and influence over such items as:

- Local roads, including traffic management and parking
- Transportation other than roads, including public transit, cycling, pedestrian infrastructure
- Recreational and cultural facilities, community heritage, park lands and green space
- Policing, the safety and protection of people and property
- Social welfare assistance and services
- Business and economic development
- Planning, operation, ownership and policy direction of public transit
- The pattern of public and private investment in the community

And the list continues...

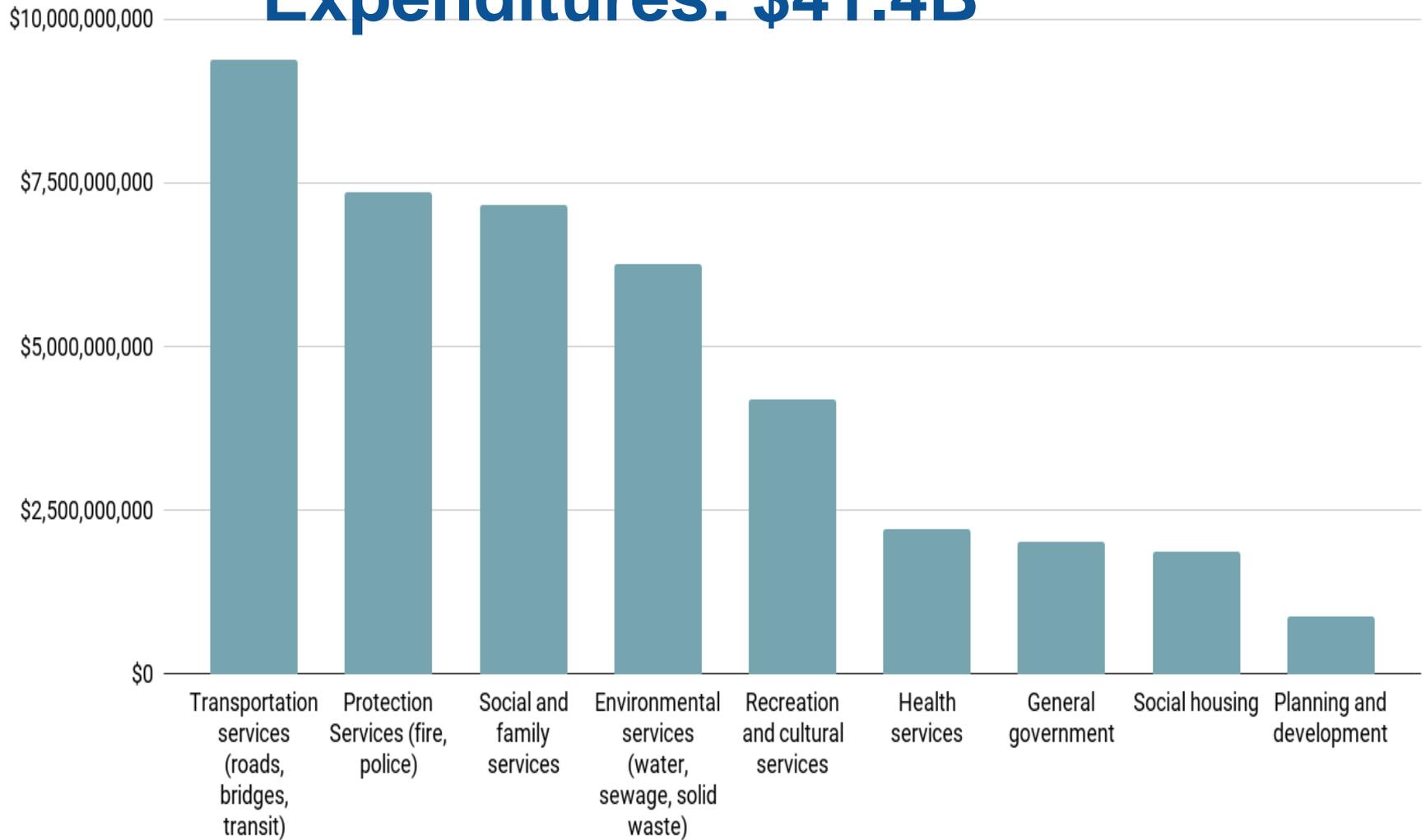
- The determination of urban form through zoning and land use regulation
- Regulation and planning of land use and the built environment, including residential and commercial buildings, site layout
- Storm sewers and drainage infrastructure
- Aspects of environmental and public health and safety
- Solid waste management, recycling and landfill facilities
- Water supply and sewage treatment infrastructure
- Their own use of fuels and electricity
- Ownership, control of energy utilities

2015 Ontario GPP: \$763B



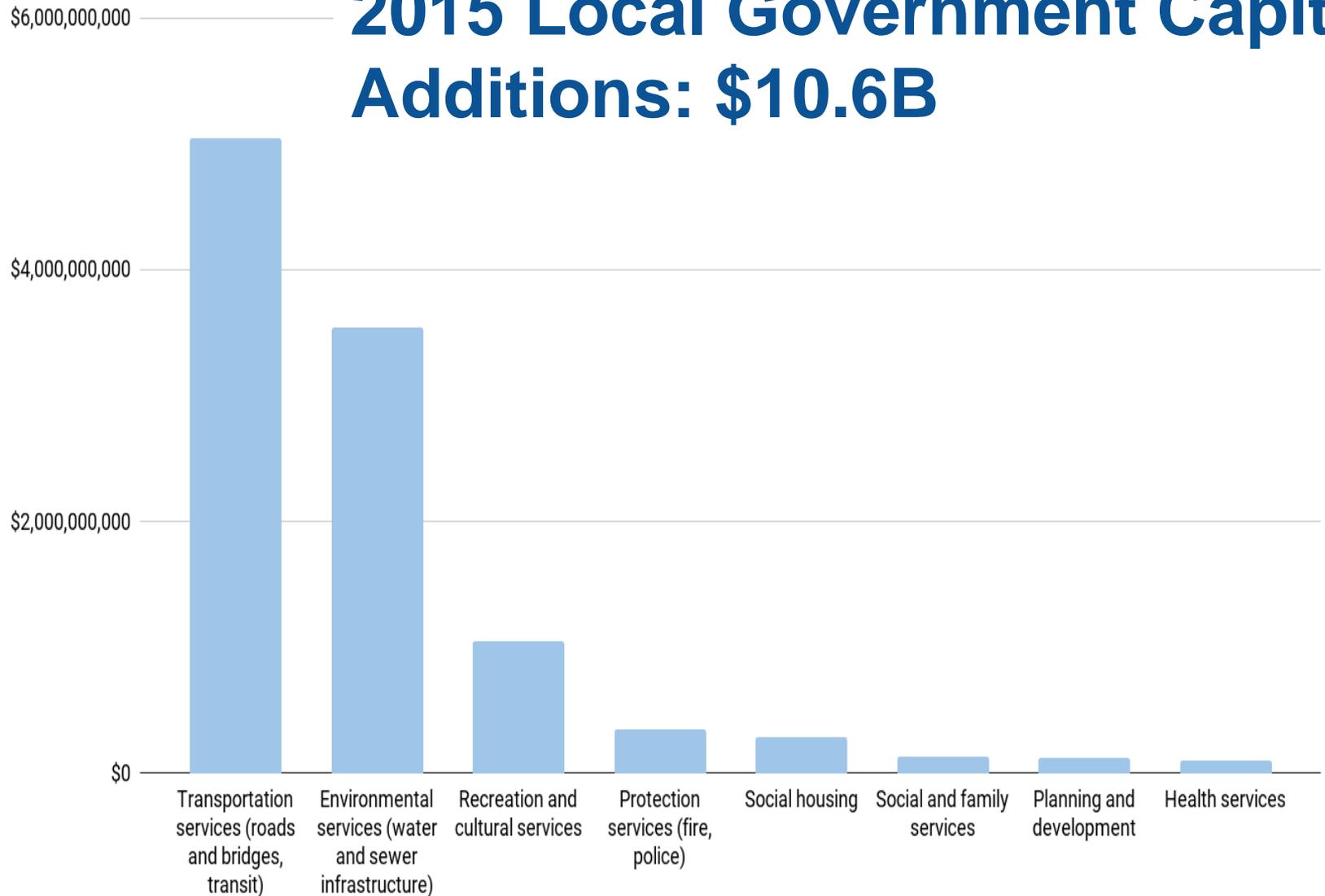
Source: Association of Municipalities of Ontario

2015 Local Government Operating Expenditures: \$41.4B



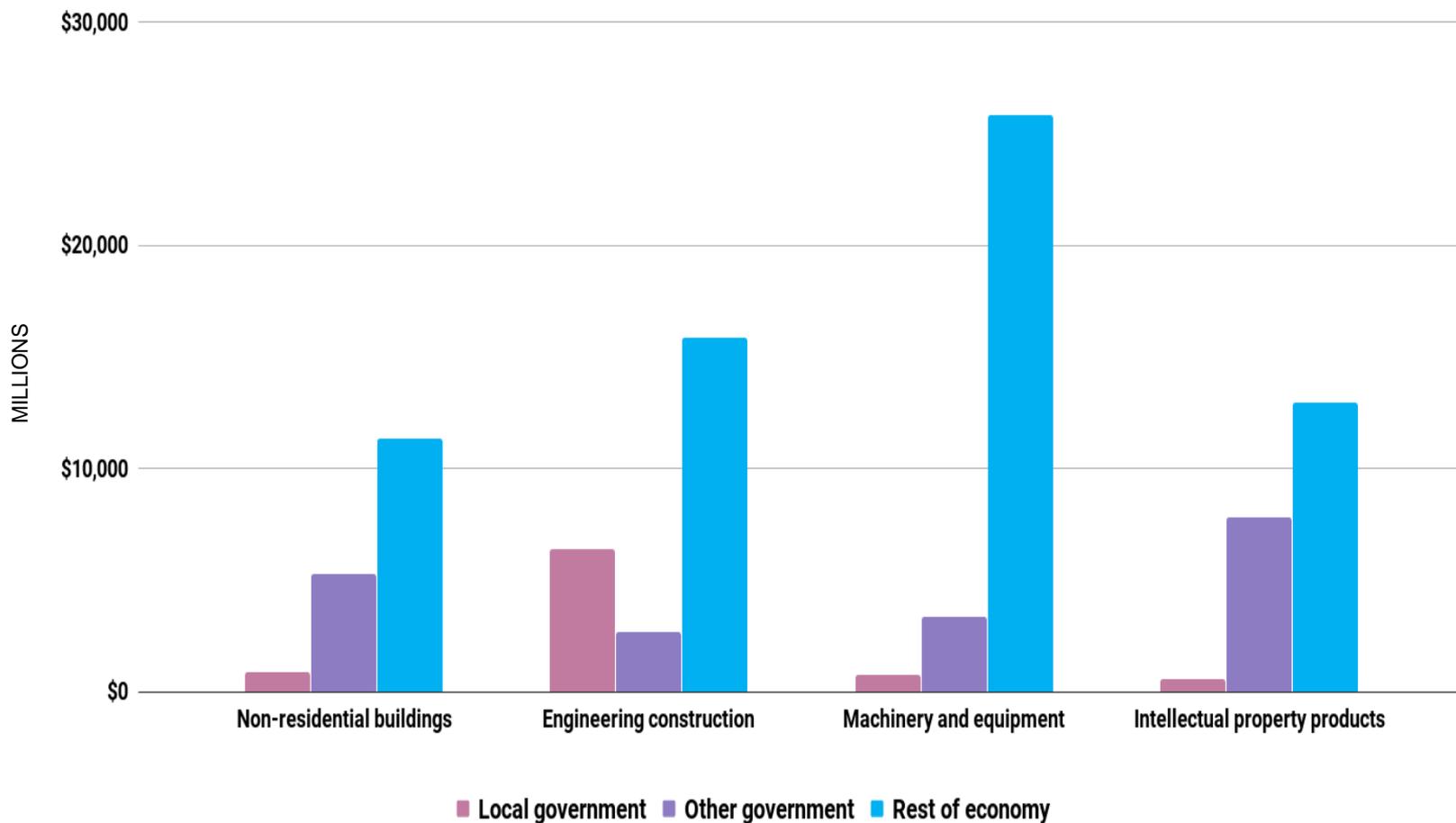
Source: Association of Municipalities of Ontario

2015 Local Government Capital Additions: \$10.6B



Source: Association of Municipalities of Ontario

2015 Non-residential Capital Investment



Source: CANSIM 031-0005

TEMPORAL SCALES OF MUNICIPAL PLANNING DECISIONS VERSUS IMPLICATIONS

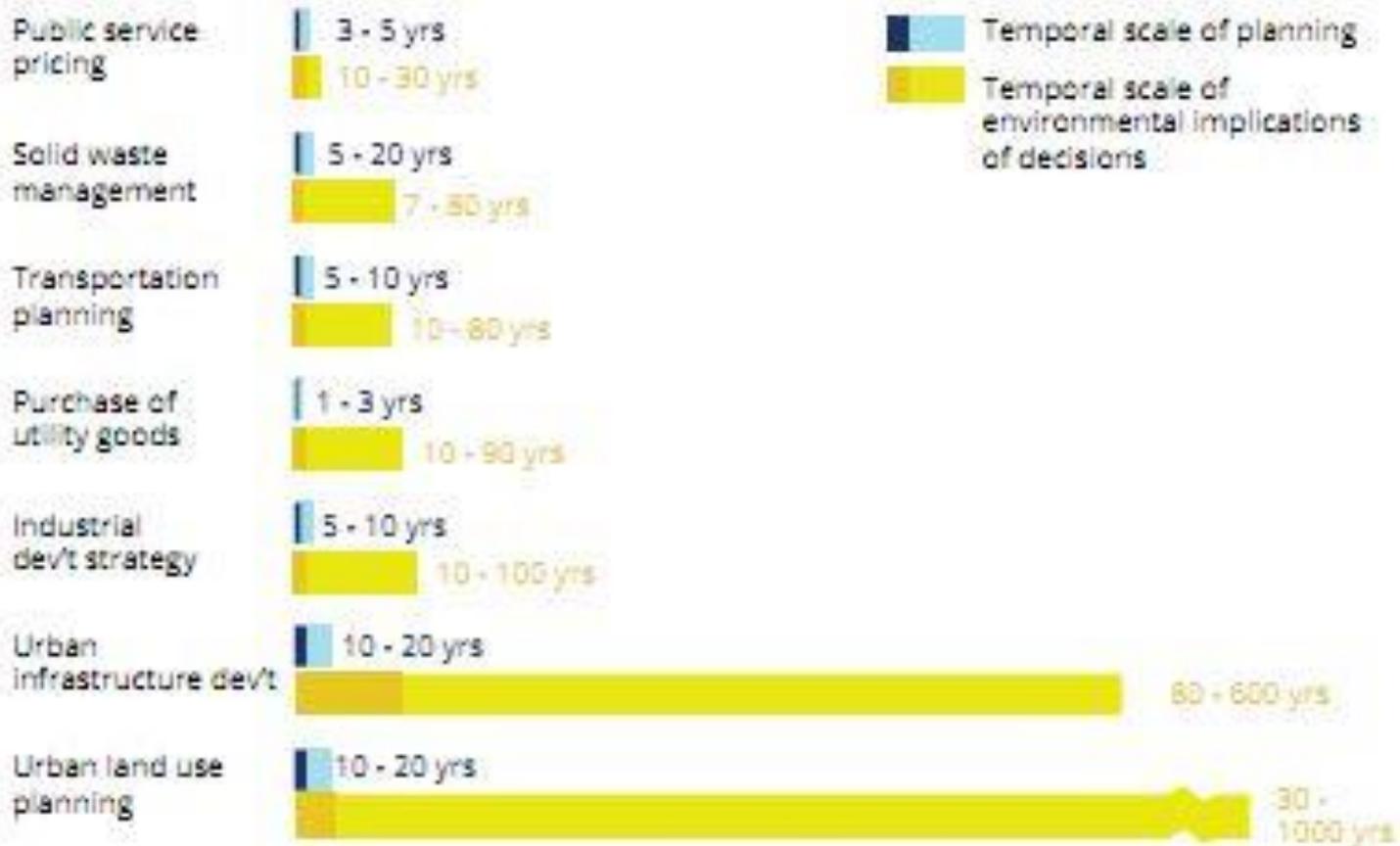
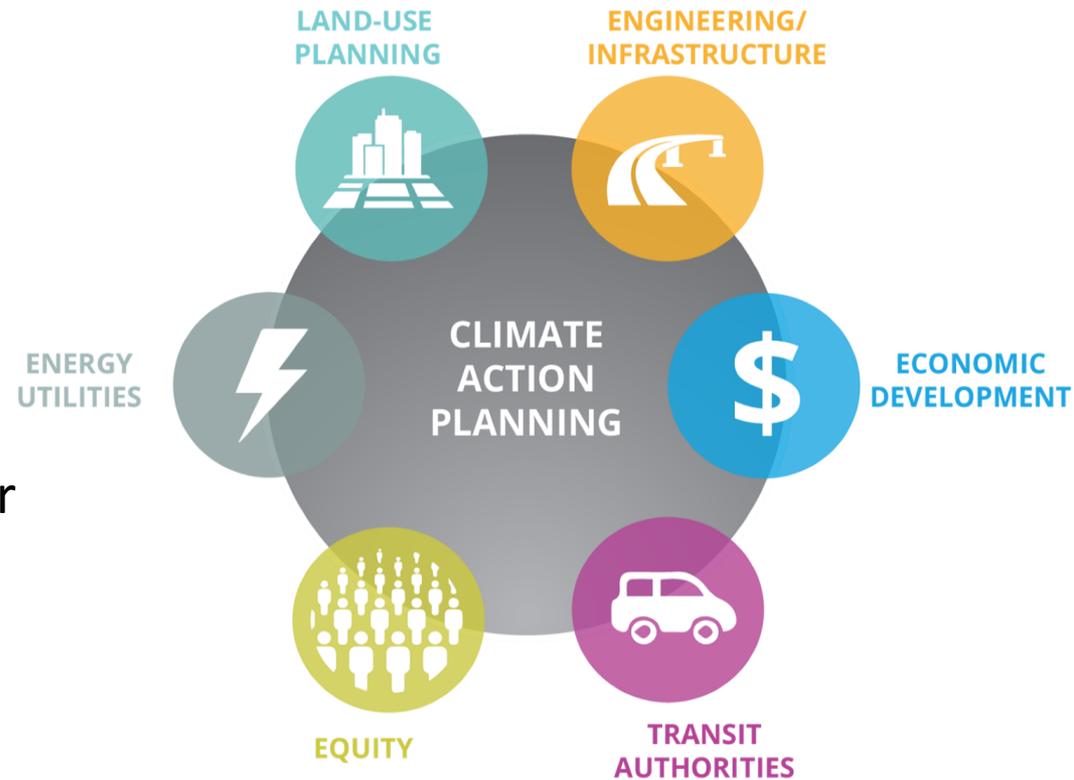


Figure 4. The temporal implications of municipal decisions.³

The point?

- Municipal communities and their governments **are already implementing** the carbon future our grandchildren will inherit.
- Impacting the future level of greenhouse gas emissions is not a choice for local government; it is already implicit in everything they do. The choice is whether to exercise that power and influence to build a low carbon community.



2

Local governments that are tackling climate change find that it helps with other goals and aspirations.



The so-called co-benefits are the *key to engagement* and the *key to successful implementation*.

- ◆ Local Air Quality Improvement, public health benefit
- ◆ Financial Savings
- ◆ Job Creation
- ◆ Technological advancement
- ◆ Local Economic Development (from direct investments and recycling of savings on fuel and electricity bills)
- ◆ Strategic Partnerships
- ◆ Higher performance buildings
- ◆ Global competitiveness
- ◆ Facilitates integration of sustainable community development strategies

Local governments in Ontario do not have a mandate to reduce greenhouse gas emissions, nor has there much senior government support (this may be changing) for local government climate change mitigation, so

WHY DO THEY DO IT ANYWAY?

Table 3. Reasons for Developing a Community Energy Plan²⁵

	Percentage of communities surveyed that identified this as a reason for developing a community energy plan:
Economic benefits	92%
Local environmental benefits (air quality)	63%
Community resilience	60%
Health benefits	59%
Social benefits	56%

²⁴ Partners for Climate Protection, www.fcm.ca/home/programs/partners-for-climate-prtection.htm

²⁵ Dale Littlejohn and Richard Laszlo, “National Report on Community Energy Plan Implementation”, QUEST, Ottawa, February 2015. Retrieved from www.gettingtoimplementation.ca.

3

Implementing local action plans:

Think locally, act globally.

Collaborate. Leverage.



TECHNICAL

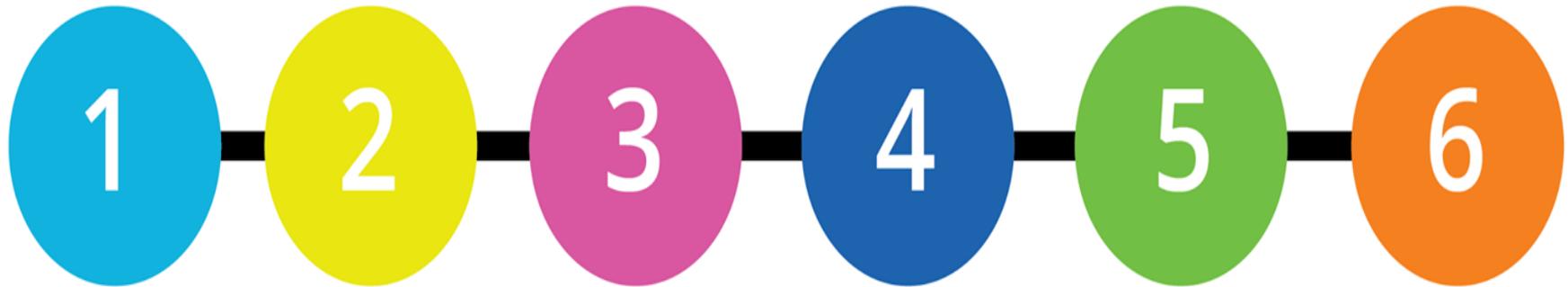
Inventory emissions in the base year and project future emissions in the absence of an explicit plan for reducing them.

Adopt a target year and related target emissions level.

Use the inventory to identify and analyze the impact and costs of measures (i.e. changes in technologies and behaviours, relative to the baseline) required to meet the target; finalize a preferred plan.

Implement the measures.

Measure progress, report results, modify the plan accordingly.



PREPARATION

INVENTORY

TARGET SETTING

SCENARIOS &
ACTIONS

IMPLEMENTATION

MONITORING &
EVALUATION

Identify & establish the partnerships and working relationships needed to produce the emissions inventory, and involve the key influencer (of GHGS in the community) and stakeholders in generating the baseline outlook.

Engage the influencer /stakeholder community in the target setting exercise or, in the case of an externally established target, in the explanation of the rationale for the target.

Work with influencers and stakeholders to identify alignments and/or conflicts between their goals and aspirations and the measures for achieving a low carbon outcome.

Implement policies, strategic partnerships, bylaws and other identified opportunities for accelerating adoption of the measures in the plan through targeted support of the key GHG influencers

Work with stakeholders and partners to share data, assess progress, and continuously improve the plan.

HUMAN

The Milestone Approach

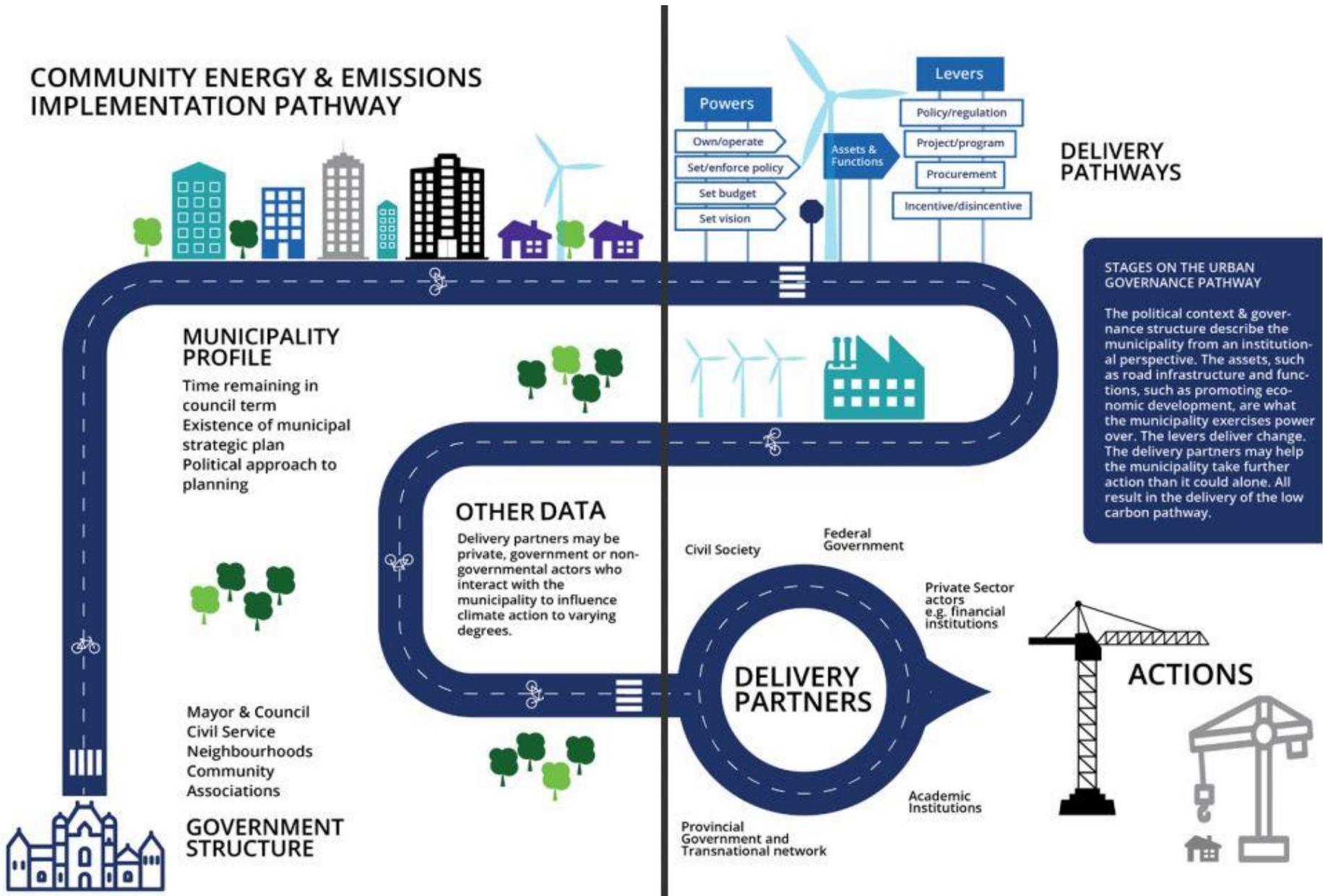
If it seems like you are going in circles some days, that's okay! That's the way it works!



Engage early and at every stage of the planning process. Encourage champions and leaders in the community. Tap into existing momentum. Develop partnerships strategically.

The Milestones	The Technical Dimension	The Human Dimension: Engagement and empowerment
1. The current situation and baseline outlook.	Inventory emissions in the base year and project future emissions in the absence of an explicit plan for reducing them.	<i>Identify and establish the partnerships and working relationships needed to produce the emissions inventory, and involve the key influencers and stakeholders in generating the baseline outlook.</i>
2. The target.	Adopt a target year and related target emissions level.	<i>Engage the influencer/stakeholder community in the target setting exercise or, in the case of an externally established target, in the explanation of the rationale for the target.</i>
3. Develop the plan.	Use the inventory to identify and analyze the impact and costs of measures (i.e. changes in technologies and behaviours, relative to the baseline) required to meet the target; finalize a preferred plan.	<i>Work with influencers and stakeholders to identify alignments and/or conflicts between their goals and aspirations and the measures for achieving a low carbon outcome. Identify and pursue opportunities for leveraging your powers, policies, spending and leadership to encourage the alignments and resolve the conflicts.</i>
4. Implementation.	Implement the measures.	<i>Facilitate, coordinate, collaborate to achieve implementation. Mobilize partners. Implement budgetary and regulatory measures as needed. Lead.</i>
5. Evaluate, report, iterate.	Measure progress, report results, modify the plan accordingly.	<i>Work with stakeholders and partners to share data, assess progress, and continuously improve the plan.</i>

COMMUNITY ENERGY & EMISSIONS IMPLEMENTATION PATHWAY



	Residential	ICI Sector	Methane	Transportation
Driver	<ul style="list-style-type: none"> • Population • No. of households/ household size • Lifestyle 	<ul style="list-style-type: none"> • Activity in the service, government and institutional sectors • Square meters of floor area 	<ul style="list-style-type: none"> • Population, level of economic activity • Generation of paper and other organic wastes 	<ul style="list-style-type: none"> • Demand for access to goods and services • Derived demand for mobility (person-miles and ton-miles) • Land use and transportation infrastructure
Causal Factors	<ul style="list-style-type: none"> • Thermal efficiency of housing stock • Housing mix • Efficiency of lights and appliances • Level of hot water demand, eff. Of system • Energy using behavior of residents • Fuel choice 	<ul style="list-style-type: none"> • Thermal efficiency of building envelopes • Energy efficiency of HVAC and other building energy systems • Maintenance of building systems, especially HVAC • Efficiency of plug-in equipment • Occupant behavior 	<ul style="list-style-type: none"> • Level of recycling • Composting • Methane recovery at landfill • Waste reduction • Conditions at landfill 	<ul style="list-style-type: none"> • Vehicle fuel efficiency • Transit modal share • Availability of alternatives to mobility, and especially to automobile • Vehicle occupancy • Driver habits • Fuel choice
Key Decision Makers	<ul style="list-style-type: none"> • Building and home owners • Residential developers and builders • Building managers • Tenants/ occupants • Appliance manufacturers • Planners; local government • Gas and electric utilities • Financial institutions 	<ul style="list-style-type: none"> • Building owners • Commercial developers, architects, etc. • Building occupants • Planners; local government • Gas and electric utilities • Financial institutions 	<ul style="list-style-type: none"> • Individual and corporate generators of organic waste • Landfill operators • Waste management agencies; local government 	<ul style="list-style-type: none"> • Automakers • Individual drivers • Fleet managers • Vehicle owners • Planners; local government

Alignment of Stakeholder Goals and Motivations is the Key to Successful *Engagement*

Connecting the Dots for Housing Energy Efficiency

Stakeholders

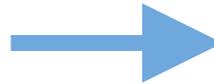
- Occupants and tenants
- Tenant and neighbourhood associations
- Landlords/building owners
- Senior government departments
- Local government, municipal service providers
- Developers
- Local businesses
- School boards
- Builders and construction industry
- Trade unions
- Colleges
- Appliance and equipment suppliers
- Banks and financiers
- Gas and electric utilities
- Building technology suppliers
- ...

Motivations

- Home ownership
- Affordable access to housing
- Comfort
- Convenient access to stores and services
- Densification
- Secure tenure
- Safety
- Energy cost savings
- Profit
- Asset value
- Client Satisfaction
- Sales, investment and business opportunities
- Resiliency, risk minimization
- Energy cost savings
- Air quality
- Employment
- Training and education
- Local economic development
- Climate mitigation
- Climate adaptation
- Increased supply of social housing

Integration

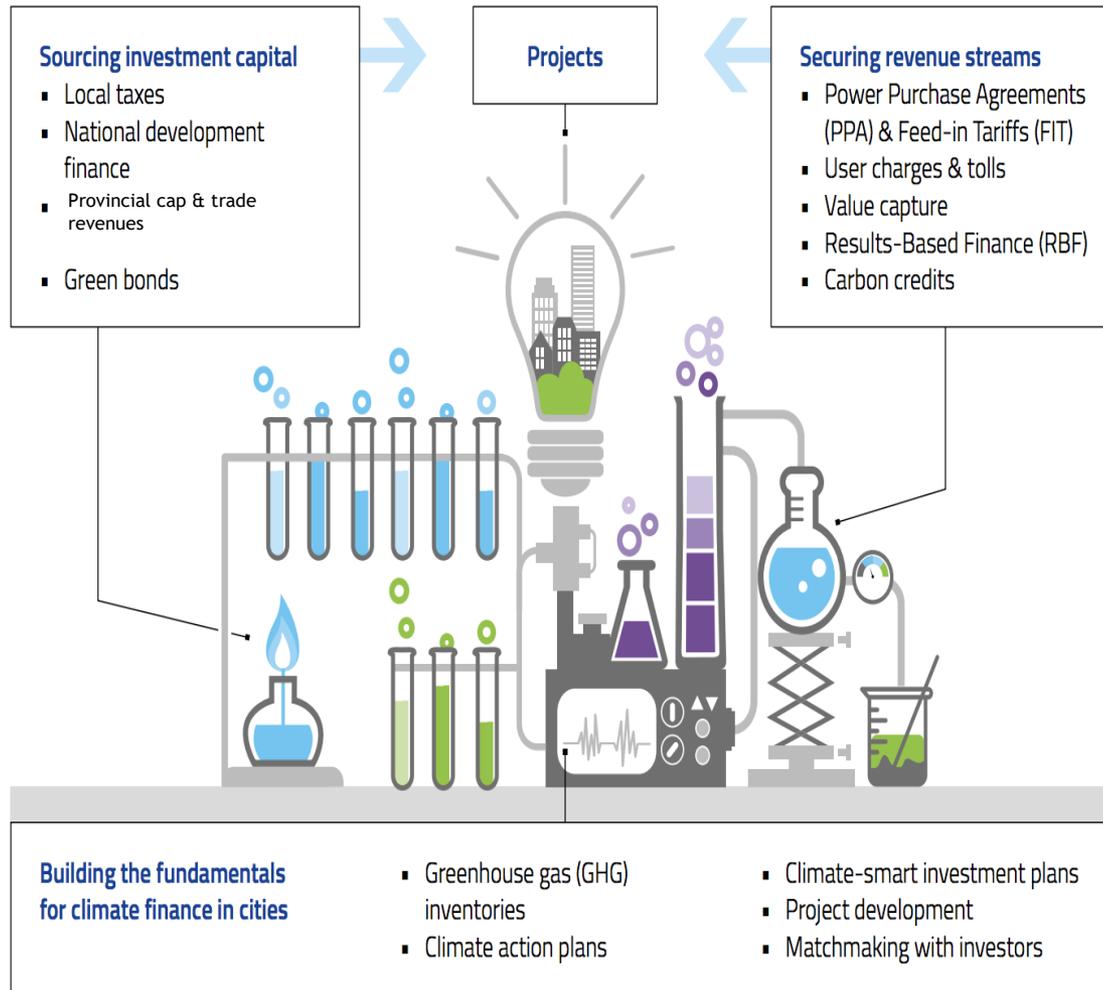
**Community Energy and
Emissions Plan**



**Official Plan
Transportation Master
Plan
Solid Waste Plan
Economic Development
Plan
Other plans and strategies**

**Staff Roles and
Responsibilities**

Investment Strategy



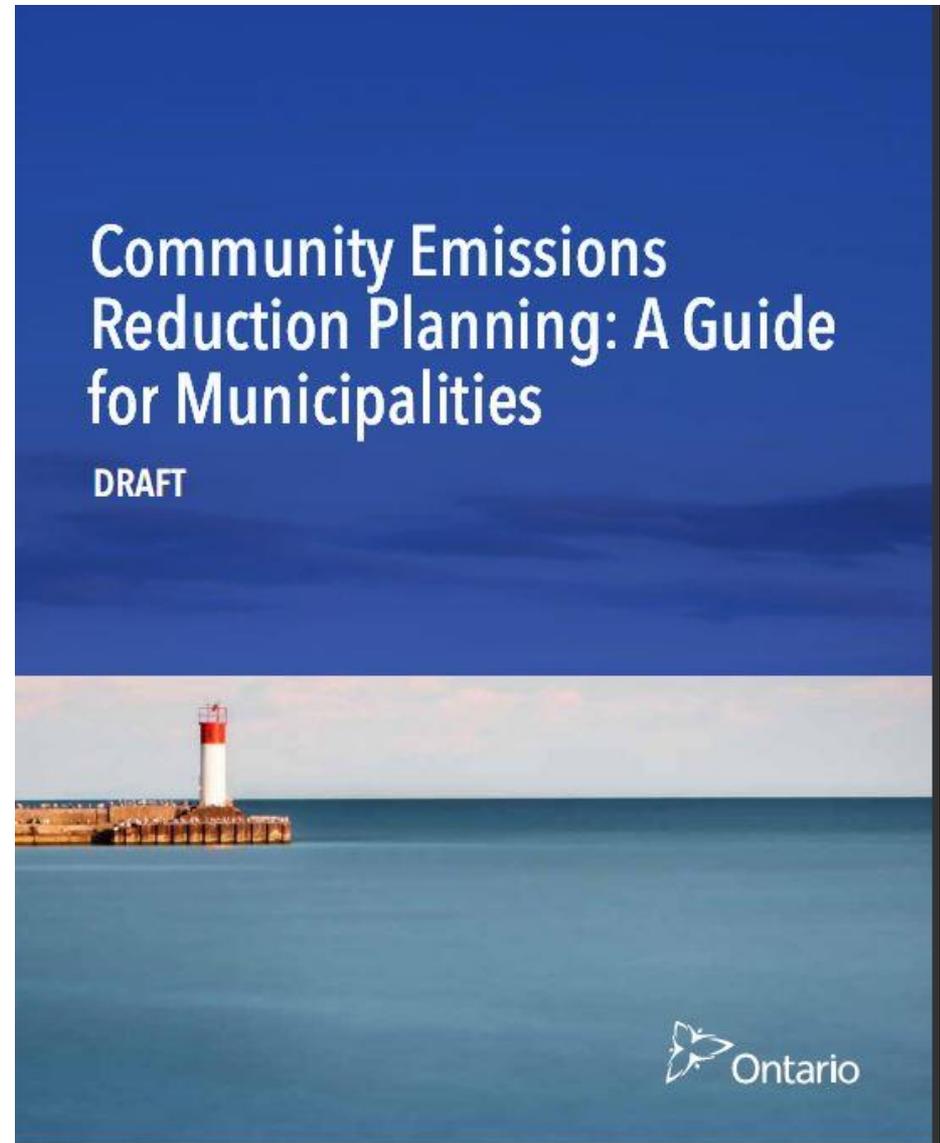
Source: Climate-KIC (modified)

Hallmarks of Successful Implementation of Community Climate Action Plans

- Leadership
- Alignment
- Leverage
- Engagement and Empowerment
- Integration
- Opportunities
- Inclusivity
- Fairness
- Innovation
- Accountability

***Comment period
closes March 4,
2018.***

<https://www.ebr.gov.on.ca/ERS-WEB-External/displaynoticecontent.do?noticeId=MTM0MjUy&statusId=MjA0MjMy&language=en>



5

IMPLEMENTATION

BASIC

INTERMEDIATE

ADVANCED

Tasks	Description	Approach: Level of Complexity		
		Basic	Intermediate	Advanced
5.1 Policies and mechanisms identification	Identification of policies and other mechanisms to achieve the actions	Policies and mechanisms are identified to implement the actions		
5.2. Investment strategy	Evaluation of the financial requirements for the actions and how to secure the required funding	Project-level analysis	Integrated, inter-departmental analysis, financial modelling	
5.3 Integration	Ensure that the actions are reflected in all local government policies and actions	<p>Implementation roles and responsibilities are assigned to a department. The Official Plan is revised to reflect the CEEP.</p> <p>Implementation roles and responsibilities are assigned across departments. The Official Plan and other plans or policies are revised to reflect the CEEP</p>		
Tools		Municipal organizational chart	Workplans	Workplans, departmental policy documents and processes, business planning

Climate Action Planning: Make it...

R *Relationships*

E *Engagement*

A *Alignment*

L *Leverage*

Ask not what your local government can do for climate change mitigation, ask what climate change mitigation can do for your community.

Upcoming Webinar

- LICs for Energy Efficiency Improvements, March 7th, 2018, 2pm
[Register here](#)
- The presentation and the video of the recording will be made available and will be sent out via email to you and will also be set up on the PCP hub
- If you haven't yet visited the PCP hub be sure to do that there are some great resources there and it is a great way to keep up to date on what PCP member municipalities are working on and new resources available.
- Thanks to Ralph
- Thanks to all of you for joining the webinar and your ongoing work on climate action in your community.
- Please do not hesitate to reach out to the PCP team with any questions you may have. Kevin Behan
(kbehan@cleanairpartnership.org)