

Ontario Cap and Trade and Climate Change Action Plan Summary

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General Committee
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Agenda

- Ontario's Climate Change Strategy
 - Climate Change Mitigation and Low-Carbon Economy Act
 - Relevance to Markham
 - Climate Change Action Plan
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 - Growth Plan, Greenbelt and Oak Ridges Moraine Policies (Fall 2016)
- Next Steps
- Recommendation – to receive

Ontario's Climate Change Strategy

Five areas of transformation:

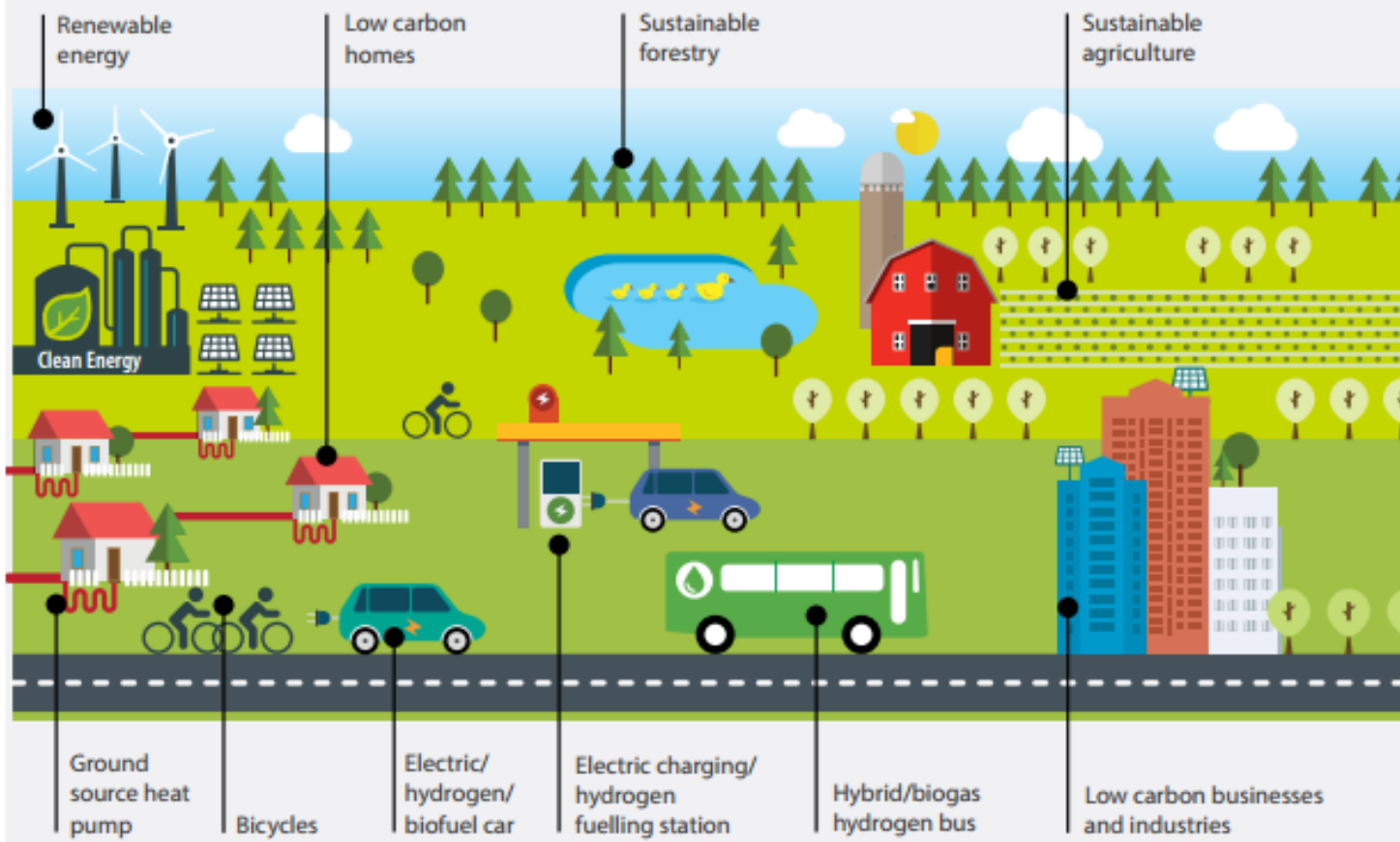
1. A prosperous low-carbon economy with world-leading innovation, science and technology
2. Government collaboration and leadership
3. A resource-efficient, high productivity society
4. Reducing greenhouse gas (GHG) emissions across sectors
5. Adapting and thriving in a changing climate

Ontario's Climate Change Strategy

To achieve these outcomes the Province will:

- Enact Climate Change Mitigation and Low-Carbon Economy Act with GHG targets to 2050 and enable Cap and Trade (May 2016)
- Release a five year Climate Change Action Plan (June 2016)
- Release a climate change adaptation and resilience plan (2017)
- Integrate climate change into all policies and plans (2016)

What Will Ontario Look Like in 2050?



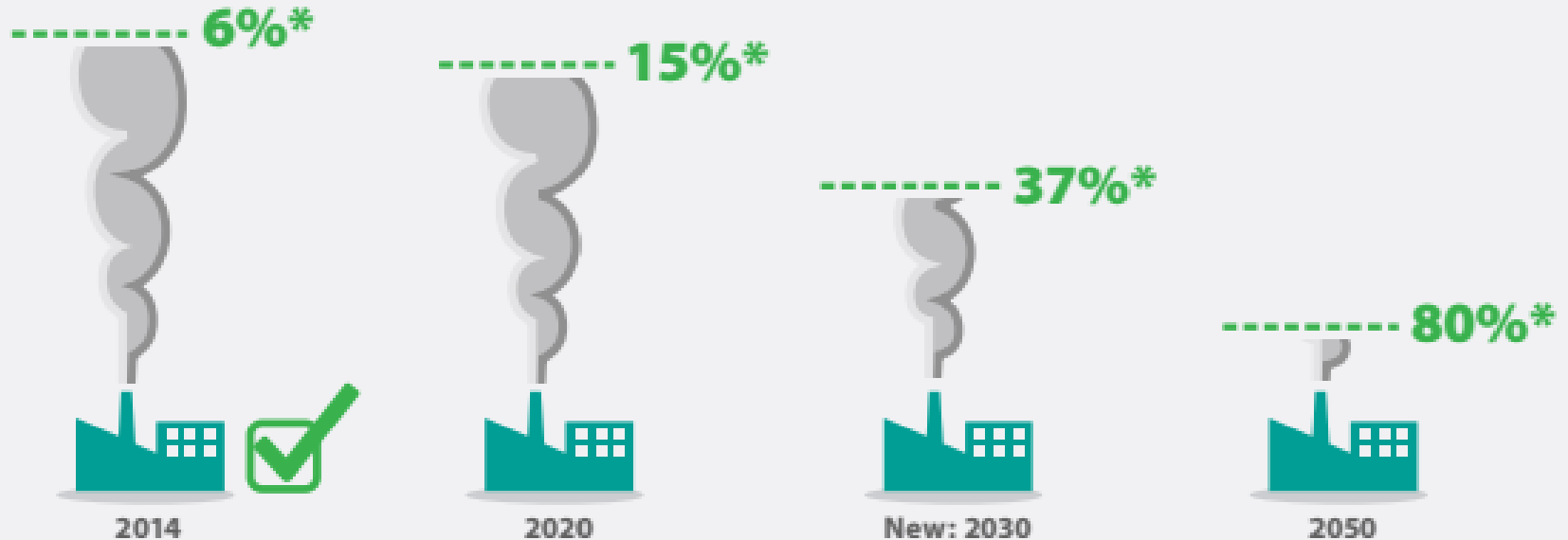
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Climate Change Mitigation and Low-Carbon Economy Act

- The act sets out the framework and rules for the cap and trade program
 - Cap-And-Trade Regulation and Reporting Regulation give further detail, methodology and guidelines
 - Mandatory participation if >25,000 tonnes of equivalent carbon dioxide (TeCO₂) per year from a single facility
 - Effective January 1, 2017
- Coordinates with Quebec and California via the Western Climate Initiative – Not For Profit that implements greenhouse gas emissions trading programs
- Sets targets for GHG emissions

GHG Target – 80% below 1990 levels by 2050

Ontario's greenhouse gas reduction targets



* below 1990 greenhouse gas emission levels

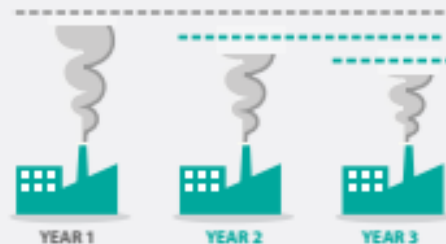
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How Does Cap and Trade Work?

Cap and Trade: Reducing Greenhouse Gas Pollution

The "cap" sets a maximum limit on the amount of greenhouse gas pollution industry can produce.

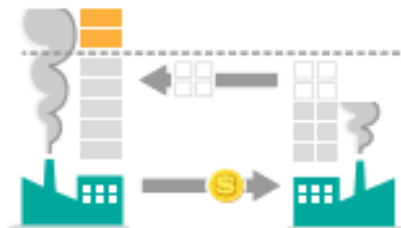
Over time, the cap is lowered, which means less greenhouse gas pollution and improved air quality.



Cap and Trade: Rewarding Innovation

If a company does not emit as much as their cap, they are rewarded with a credit.

If a company emits too much, they need to invest in credits from other companies.



Cap and Trade: Protecting Ontario for Future Generations

The money raised will be reinvested back into projects that reduce greenhouse gas pollution like public transit, and energy retrofits.

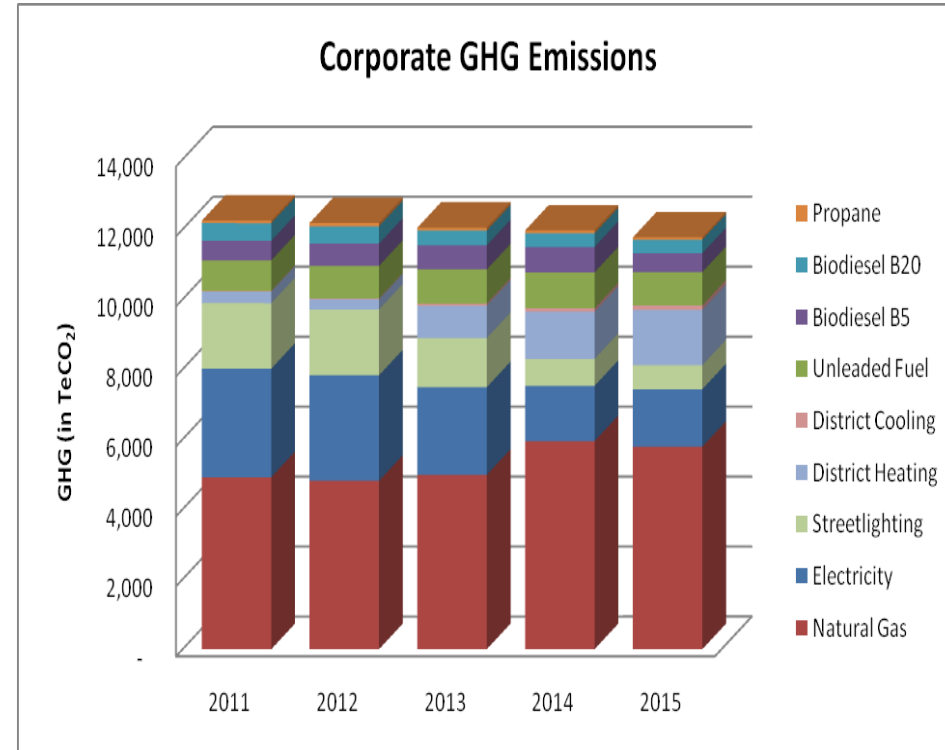


Reducing Greenhouse Gas pollution will help to protect the air we breathe, the water we drink and the health of our children and grandchildren

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Relevance to Markham

- Greenprint Energy and Climate objective – net zero energy, water, waste and emissions by 2050 is slightly more aggressive than 80% by 2050
- No direct impact from Cap and Trade – total City facility, streetlight and fleets emissions in 2015 were less than 12,000 TeCO₂
- \$150,000 to \$200,000 first year estimated budget impact from utility and fuel pass through costs

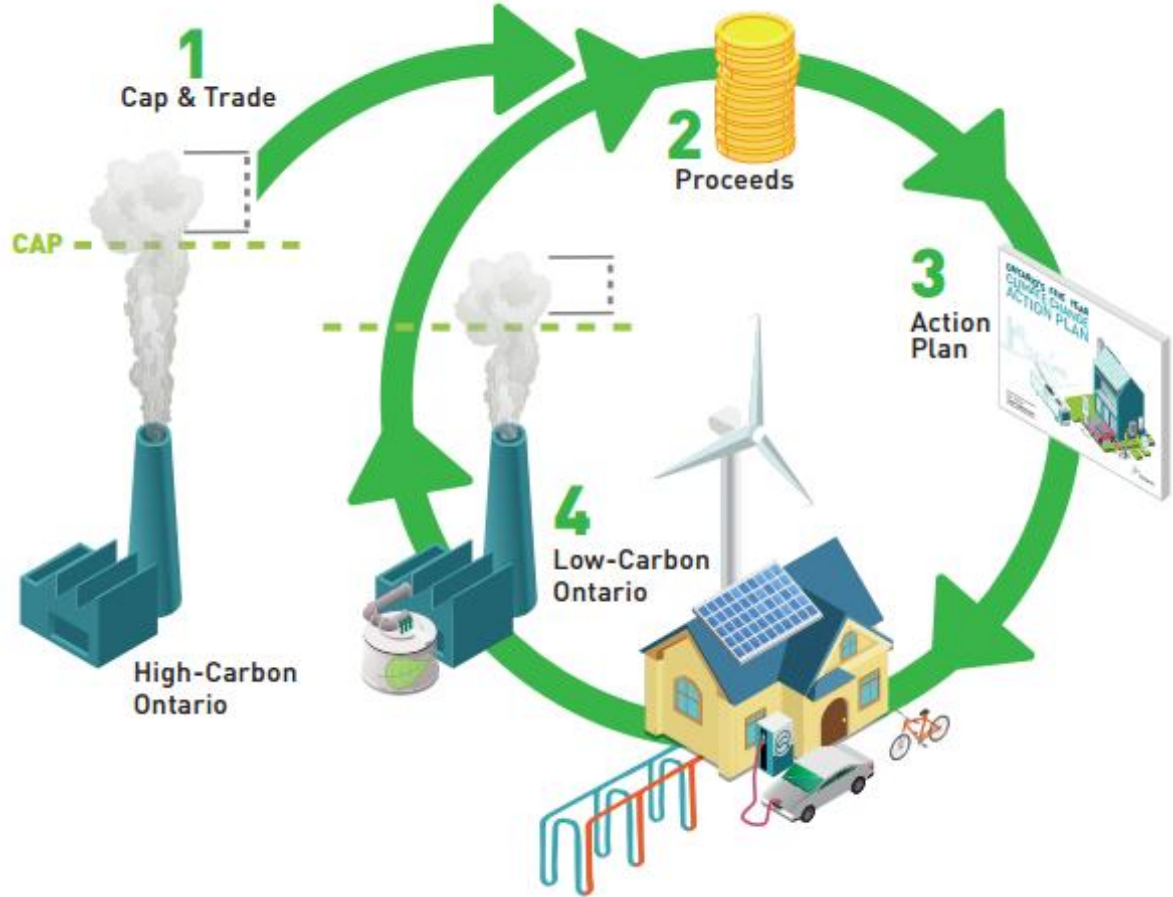


Climate Change Action Plan (CCAP)

- First five year action plan to reduce GHGs and help move Ontario to a prosperous low-carbon economy
- Does not ban Natural Gas, targets a low carbon Ontario
- Sets out how the revenue from Cap and Trade will be invested in projects and programs to help reduce GHG pollution
- Reasons that Cap and Trade was selected over other carbon pricing models for its flexibility and hard targets

THE VIRTUOUS CYCLE

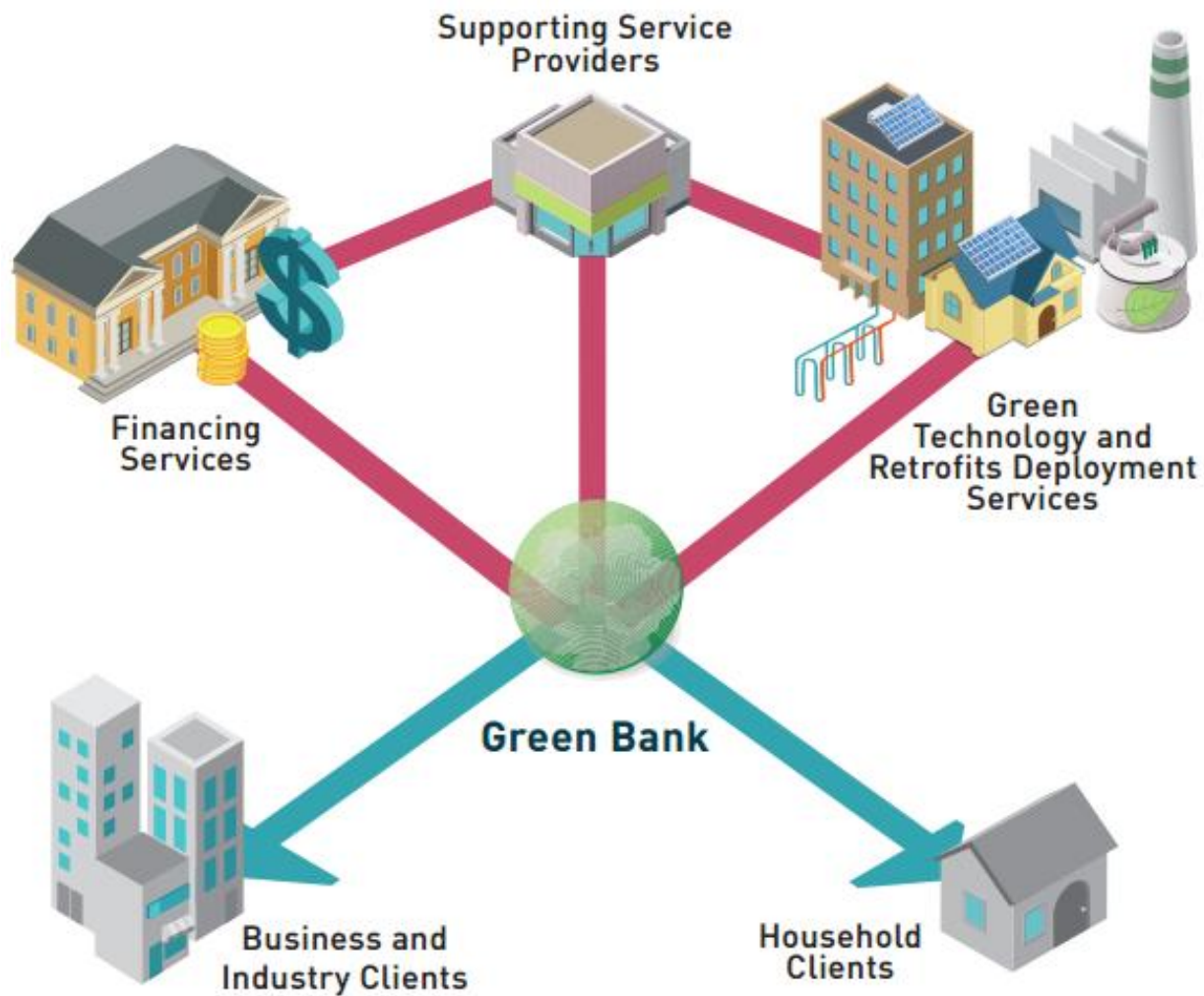
How Cap & Trade and the Climate Change Action Plan Work Together



Climate Change Action Plan

- Endeavours to create a smooth and just transition to a low carbon economy with
 - Actions to assist-low income households and vulnerable communities
 - Help for business to transition to a carbon priced economy
 - New approach to technology deployment: a low-carbon service provider and financing entity – a green bank

\$6B to \$8.3B of funding intended to achieve nearly 10M TeCO₂ reductions by 2020



Eight Action Areas

- **Transportation** – Becoming a North American leader in low-carbon and zero emission transportation
- **Buildings and Homes** – Reduce emissions from fossil-fuel use in buildings
- **Land-Use Planning** – Support low-carbon communities
- **Industry and Business** – Keeping Ontario competitive: A strong centre of modern, clean manufacturing and jobs
- **Collaboration with Indigenous Communities** – Partner to reduce emissions and transition to a low-carbon economy
- **Research and Development** – Focus on climate science and zero-carbon breakthroughs
- **Government** – Move toward a carbon neutral public service
- **Agriculture, Forests and Lands** – Productive, sustainable and a pathway to creating offsets

ACTION AREA: TRANSPORTATION

- 1) Increase the availability and use of lower-carbon fuel
- 2) Increase the use of electric vehicles
- 3) Support cycling and walking
- 4) Increase the use of low-carbon trucks and buses
- 5) Support the Accelerated Construction of GO Regional Express Rail

ACTION AREA: BUILDINGS AND HOMES

- 1) Improve energy efficiency in multi-tenant residential buildings
- 2) Improve energy efficiency in schools and hospitals
- 3) Reduce emissions from heritage buildings
- 4) Help homeowners reduce their carbon footprints by supporting additional choice
- 5) Set lower-carbon standards for new buildings
- 6) Promote low-carbon energy supply and products
- 7) Help individuals and businesses manage their energy use and save money
- 8) Training, workforce and technical capacity

ACTION AREA: LAND-USE

- 1) Strengthen climate change policies in the municipal land-use planning process
- 2) Support municipal and other stakeholder climate action
- 3) Reduce congestion and improve economic productivity

ACTION AREAs Continued

ACTION AREA: INDUSTRY AND BUSINESS

- 1) Help industries adopt low-carbon technologies
- 2) Help the agri-food sector adopt low-carbon technologies

ACTION AREA: COLLABORATION WITH INDIGENOUS COMMUNITIES

- 1) Collaborate with Indigenous communities

ACTION AREAs Continued

ACTION AREA: RESEARCH AND DEVELOPMENT

- 1) Support innovation and commercialization of new low-carbon technologies
- 2) Set Tax and Regulatory Policies that Encourage Innovations
- 3) Support research and development through a Global Centre for Low-Carbon Mobility

ACTION AREA: GOVERNMENT

- 1) Reduce emissions and energy costs across government

ACTION AREA: AGRICULTURE, FORESTS AND LANDS

- 1) Reduce emissions from waste and move Ontario towards a circular economy
- 2) Increase our understanding of how agricultural and natural lands emit and store carbon
- 3) Maximize carbon storage from agriculture
- 4) Understand and enhance carbon storage in natural systems
- 5) Update Environmental Assessments to Account for Climate Change

Relevance to Markham

Electric Vehicles – area of opportunity and change in support of the developing Municipal Energy Plan (MEP) and Official Plan - \$250M to \$277M (total amount available Provincially)

Support Cycling and Walking – area of opportunity in support of Official Plan and Master Transportation Plan - \$150M to \$225M

Help homeowners reduce their carbon footprints by supporting additional choice – area of opportunity in support of MEP concept of community retrofits - \$681M to \$824M plus \$1B to \$1.3B for electricity rate stabilization from GHG reduction measures

Relevance to Markham

Set lower-carbon standards for new buildings - net zero carbon by 2030 phasing to begin 2020 - area of opportunity and change in support of Official Plan (OP) where a Community Energy Plan is required for Secondary Plans, MEP and Greenprint

Support municipal and other stakeholder climate action – area of opportunity - a Challenge Fund or program for municipalities, more Community Energy Plan funding and community energy mapping - \$270M to \$325M

Reduce congestion and improve economic productivity – area of opportunity – municipal tools to pilot congestion management plans and ‘low emission zones’, municipal and private business grants to implement TDM plans - \$10M to \$20M

Relevance to Markham

Strengthen climate change policies in the municipal land-use planning process

- Empower municipalities by changing relevant acts
- Allow us to require electric vehicle chargers
- Set by-laws for green standards
- Make climate change a Provincial Interest in Ontario's Planning Act
- Consult and propose amendments to Planning Act to make mitigation and adaptation mandatory in Official Plans
- Eliminate minimum parking requirements

Relevance to Markham

Strengthen climate change policies in the municipal land-use planning process

- Specify climate change standards to be met in land-use planning
- Link employment and institutional land with transportation planning to ensure transit access
- Develop guidance for municipal consideration of climate change
- Compliance with Provincial planning direction to access infrastructure or climate change funding where appropriate
- Climate change partnerships with community organizations, institutions and private sector to develop innovative climate change ideas - \$7M

Relevance to Markham

Support research and development through a Global Centre for Low-Carbon Mobility – area of significant opportunity - Based at a post-secondary institution in Ontario, a Global Centre for Low Carbon Mobility will be set up to advise the government on low-carbon transportation, and to direct funding for research, development and low-carbon manufacturing - \$100M to \$140M

Growth Planning Policies

Planning Policy staff will bring forward to Development Services Committee a presentation for input on the proposed changes to the Growth Plan, Greenbelt and Oak Ridges Moraine Policies in the fall of 2016

Next Steps

- Sustainability Office will ensure Municipal Energy Plan is aligned to the concepts and funding opportunities in the CCAP – our plan is due to be completed be presented to this Committee in Q1 2017
 - Community Energy Plan for Secondary Plans to be aligned to net zero carbon new building requirement and continue as planned with compact complete communities per the OP
- Sustainability Office will continue to track Provincial activity on climate change plans and will ensure Markham takes advantage of any promotion of our leadership and/or funding opportunities for our many well aligned initiatives

Recommendation

That General Committee receive the presentation “Ontario’s Cap and Trade and Climate Change Action Plan Summary”.