



# PROVISION COALITION

PROCESSING FOOD SUSTAINABLY

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## Summary: Ontario's Climate Change Discussion Paper 2015

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On February 12, 2015, the Ontario Ministry of Environment and Climate Change (MOECC) released its [Ontario's Climate Change Discussion Paper 2015](#) ('Discussion Paper'). This 43-page paper is meant to restart the conversation about climate change in Ontario, in terms of the possible actions the government may take. The Discussion Paper has been posted on the Environmental Bill of Rights website<sup>1</sup>, which provides an opportunity for the public to submit comments until March 29, 2015. Public consultations have also been organized across the province (a complete list can be found in Appendix 1).

The 'At a Glance' section below points to issues that may be of specific interest to the members of Provision Coalition. Excluding the brief background and next steps section at the conclusion of the document, all the information in this summary document has been sourced from the Discussion Paper.

#### At a Glance – Information for Provision Coalition Members:

Ontario exceeded its 2014 GHG reduction targets; but in order to continue these reductions and hit future targets (15 per cent below 1990 levels by 2020 and 80 per cent reductions by 2050), it must:

- 1) Ensure that the province's energy comes from lower emission sources and more renewables;
- 2) Ensure that buildings and communities are designed with energy consumption and GHGs in mind;
- 3) Develop competitive – and low carbon/zero emission – transportation options, and
- 4) Work with the industrial sector to develop innovative and productive ways to use energy and increase productivity in a low-carbon economy.

The paper identifies the private sector as a leader in this transformation, suggesting that companies need to make operational decisions that will lower their carbon footprint; some have already done this voluntarily. The government is also looking for collaboration between the private sector and government to achieve the GHG targets and develop a low carbon economy in the short term.

In order to transform into a low carbon economy and maintain economic growth, there needs to be an alignment of climate change objectives with economic signals and avoid subsidizing high carbon/low productivity economic practices. The government wants to encourage further green investment in the province, shifting to advanced manufacturing, and new approaches to insurance, risk expertise and financial services.

The paper points out that due to climatic changes across the province that affect crops and growing areas, risk mitigation needs to be incorporated into planning decisions by government and the private sector.

There is a section regarding carbon pricing, with information provided about the various systems that could be implemented; cap and trade, baseline and credit, carbon tax, and regulations and

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<sup>1</sup> <http://www.ebr.gov.on.ca/ERS-WEB-External/displaynoticecontent.do?noticeId=MTI0Mzcz&statusId=MTg3MjY0>

performance standards. In recent years, the government has been leaning towards the cap and trade model, but a carbon tax is also being discussed as a possible way forward, looking to the BC example. Recent economic studies indicate that the overall economy-wide impact of carbon pricing is either neutral or small.

Ontario's biggest GHG emitters, by sector, are identified, with the top five being transportation, buildings and communities, electricity, industry, agriculture and forestry, and waste (emissions from landfill). The government will be looking at these sectors in particular to reduce emissions through new practices, technology and improved planning. Changes within these sectors could have an impact on existing practices undertaken by the food and beverage manufacturing sector.

#### Background to Development of the Discussion Paper:

The priority given to climate change in Ontario has fluctuated over the past decade. Under former Premier Dalton McGuinty, mitigating the effects of climate change was a key objective, as seen with the early commitment to phase out coal by 2014. In 2007, Ontario released its GHG reduction targets:

- 6 per cent below 1990 levels by 2014 (to approximately 166 Mt);
- 15 per cent below 1990 levels by 2020 (to approximately 150 Mt); and
- 80 per cent below 1990 levels by 2050 (to approximately 35 Mt).

These targets remain in place.

The former Ministry of Environment (MOE) had been contemplating a flexible emissions trading system off and on for the past five years, since the first proposal was posted to the Environmental Registry in January 2009. In 2009, the Environmental Protection Amendment Act (Greenhouse Emissions Trading) amended the Ontario Environmental Protection Act (EPA) in order to develop an emissions trading program, employing "...economic and financial instruments and market-based approaches." In addition, in 2009 Ontario Regulation 452/09 obliged certain large emitters to begin reporting GHG emissions to the MOE.

Before the release of the Discussion Paper on February 12<sup>th</sup>, the most recent publication on this issue was in January 2013, with the release of [Greenhouse Gas Emissions Reductions in Ontario: A Discussion Paper](#)<sup>2</sup>, in which it stated that a cap and trade model would be the preferred approach.

When Kathleen Wynne was elected as Premier in 2014, it was clear that climate change would once again be seen as a priority, with the renaming of the Ministry of Environment to the Ministry of Environment and Climate Change (MOECC). Glen Murray was appointed Minister of Environment and Climate Change; the first priority in his mandate letter stated that he would bring forth a Climate Change Strategy, looking forward to 2050.

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<sup>2</sup> The 2013 Discussion Paper stated that the Ontario reduction program would cover emissions of gases specified under O. Reg 452/09 and the Kyoto Protocol, and identified the following industries to be covered: petroleum refining, chemicals, steel, cement, pulp and paper, and fossil fuel-fired electricity generators.

## Introduction (p.4-6):

This section begins with global context for the issue of climate change, stating that fourteen of the first fifteen years of this century have been the warmest on record. This has led to an increasing number of extreme weather events. Despite 20 years of international negotiations, more energy, and more fossil fuels are being used, and more greenhouse gases (GHGs) are being emitted than any other time in history. If no strong action is taken, it is expected that there will be at least a 4 degrees Celsius rise in global temperatures, which will cause irreversible damage to the planet.

In Ontario, there is already evidence of the effects of climate change as seen by the damage caused by extreme weather events and physical changes to sensitive ecosystems in the Far North.

While Ontario is responsible for only 1 per cent of global emissions, it is among the largest per capita emitters of GHGs in the world.

In order to achieve the long term vision of redesigning and building strong carbon neutral communities, infrastructure and energy sources, the government is looking for input from the public – individuals, municipalities, First Nations, organizations and industry leaders.

## Section 1: Climate Change: A Plan for Ontario's Future (p.7-9)

Section 1 identifies ten guiding principles for achieving a low carbon economy, which the government will use to achieve its early and long term goals.

- 1) Action oriented – need to move quickly to achieve results;
- 2) Leadership – be an active player on international stage;
- 3) Learning – learn from partners and from best practices;
- 4) Scientific – support new technologies and innovations that help with the mitigation and adaptation to climate change;
- 5) Economically integrated – integrate economic and environmental policy in decision-making process;
- 6) Market-based and productive - use market-based instruments;**
- 7) Well-built – focused on existing and new infrastructure, create low-carbon communities;
- 8) Adaptive – remain flexible to adapt to changes in climate;
- 9) Collaborative – work with all levels and types of government, and on sub-national and international levels, as well as with public and private sectors;**
- 10) Assessing Risk – conduct risk analysis of options and cost of inaction.**

## Section 2: Long-term Goal: Transformation (p.11-22)

This section outlines what is needed to transform Ontario's communities and economy so that they are resilient to the impacts of climate change, and low-carbon. The province is looking at five key factors listed below that will shape this long-term transformation.

### *2.1 Leadership and collaboration*

*Individual and community leadership:* Personal and household choices are powerful and have the ability to drive where and how people live.

**Private sector leadership:** Organizations across sectors are increasingly evaluating and disclosing climate risks to their operations and investments, and making operational decisions that will lower their carbon footprint. They do this because it is good for the bottom line and the environment. Some companies with operations in Ontario (e.g. Nestle, Swiss Re, Philips Lighting) have aligned with statements such as the Put a Price on Carbon, initiated by the World Bank.

There is also a growing network of private investors, public pension funds and asset managers who are signatories to the UN-supported network, the [Principles of Responsible Investment](#).

**Government Leadership:** Ontario met its 2014 target, and is currently on track to achieve 70 percent of its 2020 target; expanding its role across Ontario, other provinces, and on the international stage; putting a price on carbon. A list of recent efforts by the Ontario government is provided below:

- Signing of the [Compact of States and Regions](#), coordinated by The Climate Group, which commits international partners to publicly reporting GHG emissions every year;
- Commitment to work with provincial partners to push for greater prominence of climate change in the Canadian Energy Strategy, including the co-ordination of efforts to reduce GHG emissions;
- A [Joint Statement on Climate Change](#) with California, Quebec and British Columbia. The statement recognizes the urgency of addressing climate change and resolves to work collaboratively towards mid-term greenhouse gas reduction goals.
- An announcement stating that Ontario will host a Climate Summit of the Americas in Toronto in July 2015, which looks to strengthen a pan-American coalition of sub-national governments in advance of the UNFCCC Conference of Parties in November 2015.

This sub-section also points out the existing government policies and programs that help reduce emissions: energy conservation programs; Our Growth Plan; and building code changes.

## *2.2 Economic growth*

This sub-section states that the risk of a high carbon economy can be reduced with a new, clean low-carbon economy that will:

- **Avoid subsidizing the high carbon, low productivity economy;**
- **Align economic signals with climate change objectives, bringing forward new business models and opportunities;**
- **Pollute less and waste less, but promote more productive use of energy and natural capital;**
- **Be built with low-carbon and climate resilient infrastructure.**

This sub-section also introduces the topic of putting a **price on carbon**, which would begin to assign monetary value to GHG emissions. It also mentions the subsidies that are currently given for petroleum products. The paper states that it is necessary to have economic growth without carbon subsidies, and decoupled from GHG emissions.

**Ontario's economy has changed over the last decade with the province now emerging as the top destination for green investment in North America. This shift must continue and deepen to include new technologies and advanced manufacturing, insurance, risk expertise, and legal and financial services to support new business models.**

### *2.3 Research and innovation*

Reaching carbon neutrality will require new, previously unimagined, technological breakthroughs and scientific discoveries. Low-carbon technologies are those that allow us to move away from conventional uses of fossil fuels to lower, more efficient energy end use (e.g. wind and solar power, energy storage, energy efficient buildings and appliances); many of these technologies are in, or close to, commercialization. However, government and private sector need to invest in research now that will bring carbon neutrality in the longer term (e.g. thin film solar, carbon capture and storage).

### *2.4 Managing risks*

Ontario needs to prepare for a changing climate in ways that reflect the local and regional vulnerabilities and risks. It is usually less expensive to proactively manage risk as opposed to reacting to disasters and damage.

**Ontario climate change predictions for the next 10-30 years indicate more severe weather with more precipitation interchanging with periods of drought, and generally warmer winters and summers; the Far North is expected to warm rapidly, posing significant risk to First Nations and Métis communities.**

**At the current rate of emissions, by 2050 Ontario may experience the following impacts:**

- **Central Ontario – uncertainty about optimal growing areas and conditions for certain crops;**
- **Southern Ontario – threat of new pests and infections of crops;**
- **Northern Ontario – warming of ice-roads, making them unusable**

**The paper states that it will be important to tailor planning decisions to the local vulnerabilities and context, and involve those that are facing risks. It lists five key components of risk mitigation planning:**

- **Observations of impacts**
- **Assessment of vulnerabilities**
- **Prioritizing risks and developing adaptation plans**
- **Implementation, led by government with assistance from affected businesses**
- **Monitoring and evaluation of initiatives**

### *2.5 Well-built communities*

The planning and design of communities influence daily choices and routines. Smart design could lead to carbon neutral communities, and reduce emissions. With urban areas in Ontario continuing to grow, there must be consideration as to how to accommodate this growth, but also stabilize GHG emissions. There are a number of opportunities to achieve this – e.g., smarter reuse and treatment

of water, retrofit and repurposing of existing buildings, and green designs, such as green roofs and permeable paving.

In rural areas of Ontario, it is more challenging to deliver services and support infrastructure, as every region is unique, making rural areas vulnerable to a wide range of climate impacts. These vulnerabilities are exacerbated in the Far North. Rural areas can have an important role in the removal and storage of carbon dioxide, by way of forest, wetlands and soils.

### Section 3: Short-Term Need: Climate Critical Actions (p.23-34)

In the absence of new actions, the government expects emissions to begin to rise again as the economy and population grow. This section identifies four key 'climate-critical policies' to be implemented in the short term (before 2020), which are essential to driving action in key sectors of Ontario's economy, achieve GHG reductions, and lead to a low-carbon society.

#### ***3.1 Price on carbon***

**The paper states that a well-designed carbon pricing system is the most cost-effective approach to reducing GHG emissions. Emitters will reduce emissions and when doing so is cheaper than paying the carbon price. Recent economic studies indicate that the overall economy-wide impact of carbon pricing is either neutral or small. The paper outlines four approaches to carbon pricing:**

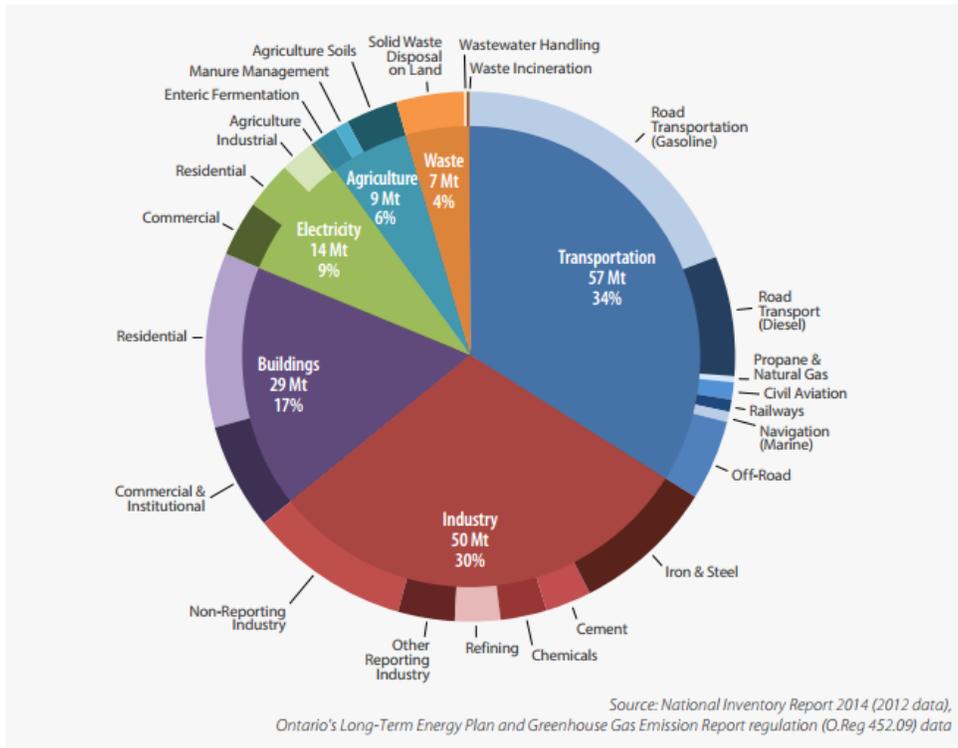
- **Cap and trade – Program places a limit on total emissions, with the price being determined in the market. The auction and trading of permits establishes the carbon price.**
- **Baseline and credit – System aims at improving GHG intensity of production while not limiting the total amount of GHG emitted.**
- **Carbon tax – The price is set, allowing reductions to vary; a charge is applied to each tonne of GHG emitted.**
- **Regulations and performance standards – Requires businesses to meet standards or targets, or to use specific technology. Market-based approaches can help emitters meet standards with increased flexibility and lower costs.**

As of May 2014, 39 national and 23 sub-national jurisdictions were implementing or were scheduled to implement carbon pricing, with another 27 jurisdictions considering carbon pricing. Nearby examples include Quebec (cap and trade, linked with California), Alberta (baseline and credit system for large industry and electricity), British Columbia (carbon tax, and possible baseline and credit system for LNG facilities). Ten companies with operations in Ontario are already covered under Quebec's program.

#### ***3.2 Take action in key sectors***

**This figure shows the sectors responsible for GHG emissions in Ontario. NB: It does not reflect the role and value of carbon sinks, such as in the forestry and agricultural sectors.**

**FIGURE 3 Ontario's 2012 Greenhouse Gas Emissions by Sector**



**Transportation:** Ontario needs price competitive options in transportation, and further expansion of existing actions in three key areas: low-carbon mobility, vehicles, and fuel.

**Buildings and Communities:** There needs to be further action and new initiatives in the following three areas: land use and infrastructure planning, existing infrastructure, and new infrastructure.

**Electricity:** Between 2000 and 2012, Ontario has reduced emissions in this sector by more than 66 per cent, by eliminating coal as the key driver. Other actions can be taken through conservation programs.

**Industry:** It will be important to position industry to improve productivity and competitiveness by using resources more efficiently and invest in research and development. Actions to reduce emissions in the industrial sector can include fuel-switching, new energy-efficient technologies, and onsite renewable energy production.

**Agriculture and Forestry:** These are unique areas in that they emit GHG through fuel use, but also influence the removal and storage of carbon through soil and vegetation. Farmers can use various management practices (e.g. adoption of different crops, tillage, crop rotations).

**Waste: Emissions in the waste sector are generated by the degradation of organic waste disposed in landfills and, to a lesser extent, wastewater treatment. Reducing emissions from landfill will require greater diversion of organic wastes.**

### *3.3 Support science, research and technology*

Government, along with other government partners, the private sector, academia, can promote systems of innovation to support development and deployment of low-carbon technologies (e.g. research institutions, angel and venture capital investors).

### *3.4 Promote climate resilience and risk management in key areas and with key partners*

Some organizations have already started to organize multi-stakeholder dialogues around creating resilience, such as the Public Infrastructure Engineering Vulnerability Committee through Engineers Canada. Ontario is planning to invest more than \$130 billion in public infrastructure over the next 10 years, and will integrate climate change adaptation and resilience considerations by applying an 'adaptation lens'.

This concludes the informational section of the paper.

Discussion questions have been put forward by MOECC, focused on the topics that were covered in the paper. The questions can be found in Appendix 2.

### Next Steps

Once the comment period has concluded, MOECC plans to consider all input as it finalizes its Climate Change Strategy, which is anticipated to be released prior to the Climate Summit of the Americas (July 7-9, 2015). There will also be a document released in the spring regarding carbon pricing, and the mechanism options (i.e., carbon tax or cap and trade system), followed by some technical consultation.

All of these initiatives are in anticipation of the United Nations Framework Convention on Climate Change (UNFCCC)'s Conference of Parties (COP 21) in Paris, taking place from November 30 to December 11, 2015. The objective of this COP is to achieve a legally binding and universal agreement on climate, from all nations.

While Ontario will not technically have a 'seat at the table' in Paris, it is becoming increasingly clear that sub-national governments are playing a more prominent leadership role in setting GHG reduction targets.

## **Appendix 1 - MOECC In-Person Consultations**

<b>City</b>	<b>Date</b>	<b>Location</b>	<b>Time</b>
Downtown Toronto	February 24	Central YMCA 20 Grosvenor Street	6pm to 8pm
Downtown Toronto	February 25	Central YMCA 20 Grosvenor Street	6pm to 8pm
Thunder Bay	March 3	Airlane Hotel and Conference Centre 698 Arthur Street West	6pm to 8pm
Oshawa	March 3	Harmony Creek Golf Centre Clubhouse 1000 Bloor Street East	6pm to 8pm
Sudbury	March 5	Steelworkers Hall Conference Room 66 Brady Street	6pm to 8pm
Mississauga	March 5	BraeBen Golf Course Clubhouse 5700 Terry Fox Way	6pm to 8pm
Sarnia	March 10	Sarnia Library 124 Christina Street South	6pm to 8pm
Ottawa	March 11	RA Centre 2451 Riverside Drive	6pm to 8pm
London	March 12	Museum London 421 Ridout Street North	6pm to 8pm
Kingston	March 12	The Tett Centre for Creativity and Learning 370 King Street West	6pm to 8pm
Hamilton	March 16	McMaster Innovation Park 175 Longwood Road South	6pm to 8pm
Guelph	March 18	University of Guelph Arboretum College Avenue East	6pm to 8pm
Windsor	March 19	Art Gallery of Windsor 401 Riverside Drive West	6pm to 8pm
Kitchener-Waterloo	March 19	Kitchener Public Library 85 Queen Street North	6pm to 8pm

## **Appendix 2 – MOECC Discussion Questions**

(Source: *Ontario Climate Change Discussion Paper 2015*, Sec. 4, pg. 37 – 38. See: [http://www.downloads.ene.gov.on.ca/envision/env\\_req/er/documents/2015/012-3452.pdf](http://www.downloads.ene.gov.on.ca/envision/env_req/er/documents/2015/012-3452.pdf).)

### **Discussion Questions**

#### **1. Traditional Knowledge**

- What are the best ways to employ the traditional knowledge of First Nations and Métis communities in the process of developing the climate change strategy and action plan, and in implementing their provisions?

#### **2. Actions in Key Sectors**

- What can each of the key sectors, including transportation, industry, buildings, electricity, agriculture, waste and forestry, do to contribute to Ontario's 2020 and 2050 targets?
- What can government better do to encourage industry to further increase rates of innovation that would lead to improved productivity of all capital, including natural capital, in order to reduce emissions?
- What Industry sectors may best be able to achieve voluntary emissions reductions by 2020 and by 2050 sufficient to achieve Ontario's emissions targets?
- What role can the agricultural and forestry sectors play in reducing emissions and/or providing carbon sinks or offsets?
- What role should land use planning have in affecting Ontario's boreal carbon storage?
- Climate change will have an impact on Ontario's food supply. What role should this issue play in Ontario's climate strategy?
- How can Ontario best achieve reductions in emissions in the transportation sector sufficient to achieve Ontario's targets?
- What are the barriers to uptake in low-emission, zero-emission, and electric vehicle use in Ontario?

#### **3. Communities & Built Form**

- Transportation emissions have grown at a rate faster than any other class of emissions largely because of population growth and urban expansion. What role could the Growth Plan for the Greater Golden Horseshoe and other planning mechanisms play, in combination with other government initiatives such as electrified Regional Express Rail, in stabilizing the growth in transportation and building emissions?
- Building net zero communities and buildings are already possible from an engineering standpoint yet few have been constructed. In Ontario, what changes are needed to building codes and planning processes to ensure greater uptake with regard to geothermal, solar, wind, natural light, combined heat and power, community energy and other emerging technologies?
- Buildings must be operated as efficiently as possible – if not operated properly, "green" buildings cannot achieve their sustainability objectives. Does Ontario have the skill base to build and operate such buildings and communities and, if not, what more can be done to train the appropriate expertise?
- When including emissions from electrical demand and heating gas, buildings in Ontario already account for about 1/4 of our emissions. How could emissions from the existing building stock be reduced sufficiently to ensure Ontario achieves its targets?
- What more could be done to ensure more Ontarians have the capacity to invest in low-carbon buildings and technologies?
- Risk assessment will be critical in the design and rehabilitation of infrastructure. How can Ontario communities best determine their local vulnerabilities and risks, engaging local leaders in government, First Nations and Métis communities, and the private sector?

#### 4. Price on Carbon

- This spring Ontario will confirm the market mechanism or mechanisms that will be used to price carbon in Ontario. Some of the goals of carbon pricing include:
  - i ensuring greenhouse gas emissions *reduction certainty*;
  - i supporting and encouraging *innovation* in industry;
  - i improving human, social, financial, produced and natural capital *productivity*; and to
  - i supporting households and business *transition* to the low carbon economy.
- Given the above, what market mechanism or mechanisms will best achieve these goals for Ontario?
- For those industries already facing challenges today due to changing economic conditions or technological advances in other jurisdictions, what carbon pricing market mechanism or mechanisms would be most beneficial? What design considerations should be taken into account?

#### 5. Science & Technology

- In what areas of low-carbon science and technology does Ontario have competitive advantages or strategic interests?
- How can Ontario better support early stage research that could lead to the future commercialization of technologies that will provide economic benefits while also helping Ontario achieve its carbon reduction goals?