

Minister Glen Murray, Environment and Climate Change

Presentation to the Economic Club of Canada

March 22, 2017

Introduction:

Good morning everyone.

Thank you for coming this morning and thank you to the Economic Club of Canada for hosting today's event.

It is a real pleasure for me to be with you today.

I want to spend our time together today to discuss the issues that Ontario is facing around climate change and our government's plan to both combat them and also build a strong, healthy low carbon economy.

In the last ten years, Ontario has seen significant change in the ways we think about both the environment and the economy compared to our previous forty years:

We have upgraded and decarbonized the energy system – which is now 90% carbon free.

Focused on renewable energy sources and energy efficiency for buildings and homes.

Made technology and advanced skills a priority in Ontario's public education system.

And invested in critical infrastructure like low-carbon public transit.

And now, our Climate Change Action Plan is the next step in this direction. It is a step that is important to both our landscape and our economy.

I think it is important that we start our conversation here: talking about the real impacts of climate change on Ontario's geography and ecosystems, and how we are prepared to deal with these challenges.

And then discuss where we are going together, including our Cap and Trade program and our Climate Change Action Plan.

Make no mistake – this is the direction that the rest of Canada and the world are taking as well.

Last fall, the Federal Government announced its plan to fight climate change that will soon see the entire country covered by a carbon price.

Within that framework, Ontario is moving forward with our Climate Change Action Plan, which includes putting a cap on the amount of emissions businesses can release into our atmosphere.

From an economic and environmental standpoint, it is extremely beneficial for Ontario to be an early adopter.

Early adoption drives down costs and is a competitive advantage for businesses, and helps us all create a thriving low-carbon economy in our province.

SLIDE 1: A photo of Canadian boreal forest and water systems.

When you think of the most iconic parts of the Ontario landscape, you think of our lakes and forests.

This photo is just one snapshot of the breath-taking views in Canada's boreal forests and the water systems within them.

North America's boreal forests, which span the northern portion of the continent from Alaska all the way to Newfoundland, covers an astonishing 1.5 billion acres.

With about 85% of these forests right here in Canada, our country is home to the majority of North America's boreal.¹

Unfortunately, as a consequence of a changing climate, they are become highly susceptible to wild fires and increased insect and pest populations.²

The foremost Canadian expert on this issue, Dr. Dennis Murray, was on TVO's The Agenda last week and spoke about the crucial role the boreal forests play in capturing carbon in the atmosphere, saying:

"The carbon that we produce, to a very large extent, is being captured by the forests around us."

Then Dr. Murray had this to say:

"If you take a closer look at exactly what is going on in the forest, a little bit more on the processes, the interactions in the forest and how well those are structurally functional, there seems that there a number of indicators that show the forest is a state of disrepair."³

Similarly, the Great Lakes are another global treasure, and they also face similar threats.

¹ <https://www.borealbirds.org/fast-facts-boreal-forest>

² <http://blog.src.sk.ca/environment/how-climate-change-will-shape-the-future-of-canadas-boreal-forest/>

³ <http://tvo.org/video/programs/the-agenda-with-steve-paikin/seeing-the-forest-and-the-trees>

Almost 12 million people in Ontario rely on the Great Lakes for drinking water, food, electricity, employment and enjoyment.

The Great Lakes contain 20 per cent of world's fresh surface water and contribute billions of dollars every year to our economy through agriculture, shipping, clean hydro power, fisheries and tourism, to name a few.

These Lakes underpin Ontario's high quality of life.

Most climate models suggest that we may see varying degrees of decline in water levels in these Lakes over the next 100 years; one in particular suggests that we may see total declines of up to 2.5 meters (8.2 feet).⁴

The impacts of climate change are real and are being felt here at home.

What we have seen is that most people here in Ontario, and in Canada as a whole, are engaged on this issue.

They care about the health of the forests and lakes in their communities, and they also see the economic opportunities that exist in low-carbon technologies, industries and living standards.

Seizing on these opportunities to fight climate change and build an even stronger economy is what they expect from their governments.

In recent public opinion research shows **two thirds of Canadians believe it is more important to implement a plan to meet Canada's climate change targets than to have all provincial and territorial premiers agree with that plan.**⁵

⁴ <http://blogs.ei.columbia.edu/2009/12/22/how-will-climate-change-affect-the-great-lakes/>

⁵ <http://cleanenergycanada.org/poll-canadians-want-federal-leadership-climate-change/>

SLIDE 3: Showing trend lines of Canada's GHG emissions, GDP, Energy Demand and population growth 1926-2006.

Let's examine the history of Ontario and Canada's greenhouse gas emissions, energy demand, gross domestic product and population growth trends.

This chart shows that during the period from 1926 to 1951, one unit of GDP was coupled with approximately one unit of CO₂ emissions.

From 1951 onwards, however, there is increasing separation between the growth and GDP and the growth in greenhouse gas emissions.

While Canada ranks 15th out of 17 OECD countries on GHG emissions per capita⁶, the level of emissions per unit of GDP was 32% lower in 2014 than 1990.⁷

Commented [OM1]: What does this mean?

Ontario's economy is now poised to be the national leader this year, according to a recent RBC Economic Outlook.

In the last year alone, Ontario added 107,500 new jobs.

And although our province's economy is growing, we are simultaneously reducing our overall emissions – a great indicator of the work that we are all doing together to create a low-carbon Ontario.

We are not alone in this - other major jurisdictions have also successfully decoupled their economic growth from their carbon emissions, and achieved large-scale GHG reductions.

We can create real economic growth and significant emissions reductions at the same time.

⁶ http://www.conferenceboard.ca/hcp/details/environment/greenhouse-gas-emissions.aspx#_ftn3

⁷ <https://www.ec.gc.ca/indicateurs-indicators/default.asp?lang=en&n=79BA5699-1>

SLIDE 4: A time graph showing the level of investment in Ontario's infrastructure, from the post war period to today.

Michael Porter and Jan W. Rivkin's from the Harvard Business School have argued that a jurisdiction's competitiveness depends on the regions' microeconomic drivers—such as roads, universities, pools of talent and cluster specialization.

How does Ontario stack up in these terms against competing jurisdictions?

Throughout our province's history, there have been periods of large investment in our infrastructure, and periods of relatively little.

Coming out of the post-war period, there was an increase in spending on the public schools, universities, roads and bridges that we still use and enjoy today.

Then, during the 70s, 80s and 90s, there was a sharp decline, where new investments in public infrastructure weren't being made.

Now Ontario's infrastructure is comprised of high-value, long-term assets that are susceptible to current climate fluctuations, and risk further deterioration due to future climate instability.

The National Round Table on the Environment and the Economy research estimated that, in the absence of action to address climate change, annual costs to the Canadian economy would reach \$21-billion to \$43-billion within four decades.⁸

Incorporating climate resiliency now into both infrastructure planning and investments can yield significant savings over the long term.

Ontario is the midst of investing \$160 billion over 12 years to modernize our infrastructure to become "climate ready," and we already have \$14 billion in major projects underway as of December 2016.

⁸ <http://nrt-trn.ca/climate/climate-prosperity/the-economic-impacts-of-climate-change-for-canada/paying-the-price>

SLIDE 5: A map of the world showing countries covered by a carbon price.

I want to speak to the current state of carbon pricing coming out of the 2015 Paris Agreement.

Carbon pricing is a growing global trend, and there is real momentum for those jurisdictions now looking to adopt a carbon pricing program.

The main push for this climate action is happening at the sub-national level, where it is viewed as both an environmental and economic imperative.

Soon, 60% of the world's economy will be covered by a carbon price.

And 90% of those carbon pricing initiatives will be cap and trade systems.

So how does this set Ontario up to be globally competitive, and to thrive, from an economic perspective?

David Sawyer from EnviroEconomics recently argued that carbon pricing will drive innovation and deploy technology.⁹

He also noted that the current carbon policies in Canada are a hedge against future low carbon transition costs, and that the improved energy productivity that Canadian firms will experience as a result of current carbon policies will most likely create long-term carbon competitive advantages.

Over the next five years, our Climate Change Action Plan will help ensure our businesses, innovators and researchers are positioned to develop clean technologies and low-carbon solutions that will strengthen Ontario's competitiveness.

⁹ <https://www.enviroeconomics.org/single-post/2016/11/10/More-US-inaction-on-climate-change-is-good-for-Canada%E2%80%99s-economy>

SLIDE 6: A comparison of the impacts of cap and trade vs a carbon tax.

Our Climate Change Action Plan will help fight climate change, in part, by putting a cap on the amount of emissions businesses can release into the atmosphere.

We're moving forward with cap and trade because it's best for the Ontario economy and will result in **real emissions reductions**.

It will help us to achieve our goal to meet our greenhouse gas emissions targets at the cheapest price possible for households and businesses.

The economic modelling from EnviroEconomics demonstrates that a linked carbon market is the best option for Ontario's economy.

They compared the Cap and Trade system in Ontario directly to a Carbon Tax and the results were pretty clear:

- With Cap and Trade, household impacts would be around \$13 a month compared to \$50 with a Carbon Tax.
- For Natural Gas, with Cap and Trade, it would be 3.3 cents per cubic metre but 12.6 cents with a Carbon Tax.
- Gasoline – same story – with Cap and Trade, it is 4.3 cents per litre but with a Carbon Tax it is 16.4 cents per litre.

The PC Leader has put forward a plan that is not environmentally responsible or economically sustainable.

What's more is that his plan would take away all of the important programs that our Climate Change Action Plan is investing in – things like XXX, YYY and ZZZ.

Commented [OM2]: Add tangible examples.

SLIDE 7: A McKinsey Study Graph on the rate of Change in the Carbon Revolution

Former Secretary of State John Kerry stated that the transition to a low-carbon economy will be “one of the greatest economic opportunities the world has ever seen.”

The Climate Change Action Plan will not take away anyone’s personal choice: no one will have to stop using gas in their home or give up their gas-powered car by a certain date.

Rather, the plan creates the conditions that provide choice.

It gives consumers and businesses more reasons to reduce their carbon footprint, and creates competitive conditions for the adoption of low-carbon technology.

And a real focus of the Action Plan is on fairness and affordability.

Ensuring impacts do not adversely impact one demographic or community more than another – and that proceeds are properly recycled to help make positive contributions.

We are ensuring that assistance for low income Ontarians is a priority, and, as per the legislation, must be considered when making an investment decision.

The Action Plan will be a positive change catalyst for economic innovation in our province.

This graph shows a study by McKinsey – demonstrating that, in order to meet our global emissions targets, carbon productivity must increase from approximately **\$920 USD GDP** per tonne of CO₂e today to **\$9,000 USD GDP** per tonne of CO₂e by 2050.

This is **a tenfold increase**.¹⁰

Commented [OM3]: What does this mean?

¹⁰ The carbon productivity challenge: Curbing climate change and sustaining economic growth. McKinsey Global Institute (June 2008). <<http://www.mckinsey.com/business-functions/sustainability-and-resource-productivity/our-insights/the-carbon-productivity-challenge>>

That is why our Climate Change Action Plan places a real emphasis on innovation-driven productivity.

The Action Plan will provide a stable investment climate, improve efficiency and promote innovation.

It's about providing the tools that will help businesses and individuals become more energy-efficient, and accelerate the shift to a low-carbon society.

Ontario is already well-positioned for the economic opportunity that will come from investing in cleantech and new business solutions.

We are a global leader in low-carbon innovation, with the fastest-growing clean tech sector in Canada – \$8 billion in annual revenues, 3,000 companies and 65,000 employees.

SLIDE 8: A view from the CN tower looking at all the buildings that could be retrofitted

The Climate Change Action Plan will help make the shift to a low-carbon economy more affordable for Ontario businesses and families.

Our investments under the Action Plan will focus on two key areas to do just that: retrofits for homes and buildings and cleaner transportation options for people across the province.

These two areas represent 68% of Ontario's total emissions.

On homes and buildings, the Climate Change Action Plan will provide access to greener and cheaper alternatives to more efficiently heat and cool homes and other buildings.

There are a huge number of such buildings and homes in the GTA alone – and retrofitting these has the potential to be the biggest economic and job creator ever in Ontario.

Commented [OM4]: Can we say this??

SLIDE 9: Pembina Institute Graphic on Home and Building Retrofits

I want to share some key facts on retrofits as well:

Home renovations to increase energy efficiency have been shown to save natural gas consumers anywhere from \$1.50 to \$4 for every dollar invested.

And according to the Pembina Institute, for every \$1 million invested in energy efficiency, \$3-4 million in economic growth and 13 direct jobs are created.

Right now, we are developing the Ontario Climate Change Solutions Deployment Corporation.

It is a not-for-profit provincial agency that will connect homeowners and businesses with the programs and resources they need to save money and reduce their carbon footprints easily, with one simple online tool.

This Agency, whose official name and website will be launched this spring, will help people and businesses across the province to:

- Reduce their greenhouse gas emissions
- Save money on energy costs
- Improve productivity and global competitiveness
- And spur economic growth and create jobs.

On transportation, our Climate Change Action Plan will provide greener and cheaper alternatives for people to get around in their daily lives.

To give just one example: Plug N Drive estimates that the average driver can save \$1,500-\$2,000 per year in fuel and maintenance costs by driving a fully electric car, all while reducing their GHG emissions by 90%.

The Action Plan will accelerate the shift to electric, plug-in and hydrogen vehicles through the electric vehicle incentive program and the electric vehicle advancement program.

It will also improve cycling infrastructure, allowing many more people in communities across Ontario to safely and easily ride to school and work each day.

The Action Plan will make investments in public transit to reduce emissions on daily operations, such as by electrifying the Regional Express Rail network.

And our new renewable fuel policies, including XXX, will begin to address the annual increases in greenhouse gas pollution from passenger vehicles.

Taken together, these actions are designed to meet the challenges of reducing transportation emissions, while also building a modern, efficient low-carbon transportation sector.

Commented [OM5]: Can we explain a little more here what these policies entail?

Slide 10: Visuals of the below examples in action.

Across Ontario, innovative change is already happening in our businesses:

General Motors is building an Autonomous Vehicle Innovation Centre in Oshawa

- Creating approximately 1,000 jobs over the next two years in Ontario, where it proposes to carry out its research work on connected and driverless technology.

Goldcorp is converting to electric motors for their mining equipment

- At their Borden mine, Goldcorp will use an electricity- and battery-powered underground fleet, which is expected to eliminate all greenhouse gasses associated with the movement of ore and waste rock, equal to roughly 50% of the total GHGs on-site, while also reducing its maintenance and energy costs.

Brookfield has established the Building Energy Innovators Council

- Which is an industry-driven initiative to accelerate collaboration, innovation and the adoption of new, energy efficient building technologies and renewable energy solutions across Canada, supporting the transformation of the built environment into the low carbon era.

EllisDon – Created the Sustainable Building Services division.

- Invested in high-performance building design, advanced clean-technology integration and low-carbon strategies for the building construction sector.
- Have provided technical guidance and support to over 160 'green' building projects in Canada and internationally, with a total construction value of over \$13 billion.
- In just one example, EllisDon helped George Brown College's new Waterfront Development Block 5 to achieve LEED® Gold Certification.

Conclusion:

In closing, I would like to thank you all for coming this morning.

It has been a real pleasure to talk about something I feel so passionate about, and something that impacts all of us.

Everyone in this room has the opportunity to be part of the solution and to set Ontario up as a global economic leader and an example for others to follow in reducing emissions and combatting climate change.

I am confident that the Climate Change Action Plan will serve as a catalyst for this important work. But we will need all of your inspiration, ingenuity and innovation to help us meet our targets and continue to build a strong, thriving low-carbon economy.

Thank you.