



ONEIA response to Ontario climate change plan submission request

Submitted November 16, 2018

On behalf of the membership of the Ontario Environment Industry Association (ONEIA), we are writing to provide input into this consultation. We thank the MOECP for the opportunity to express our membership's views and ideas, and we will continue to be a highly engaged partner as the plan develops and is executed in Ontario.

For the past 26 years, ONEIA has represented Ontario's growing environment and cleantech industry. With more than 3,000 companies, this industry generates more than \$8-billion in Ontario GDP each year, including over \$1 billion in exports, and employs more than 65,000 people in our Province. More than 45% of Canada's businesses in this sector call Ontario home and these businesses thrive when governments enact smart legislation, policies and regulations that encourage market-based solutions to environmental problems. In this light, our members are committed to providing advice to all levels of government based on the principles of sound science, sound policy, and a sound environment.

ONEIA members accept and endorse the overwhelming scientific consensus that climate change is happening and is due largely to greenhouse gases (GHGs) emitted by human activity. According to multiple studies, such activity has already contributed to an increase in global temperatures by an average of one degree Celsius. As an example, the October 2018 International Panel on Climate Change (IPCC) report highlights a number of climate change impacts that could be avoided by limiting global warming to 1.5 degrees Celsius. The degree of warming is greater (and occurring more rapidly) in northern areas, with impacts that are up to two to three times higher in the northern areas of Ontario.

Such studies have also framed a growing global business opportunity in both climate change mitigation technology and approaches, and investment in adaptive and resilient infrastructure. According to the OECD, as we move to limit global warming below two degrees Celsius, this should boost economic output by one percent by 2021 and 2.8 per cent by 2050. When investments in climate-resilient infrastructure and related measures are included, economic growth could be boosted by 4.7 percent by 2050. While the economic costs of the impacts of climate change are increasingly evident, the economic opportunities for jurisdictions with well-developed environment sectors, such as Ontario, are equally evident.

At the same time as weather events are increasing in severity and cost, Ontario is making historic new investments in infrastructure. Over the next decade, Ontario is set to spend about \$190 billion (including federal bilateral transfers) to expand and renew the Province's infrastructure. These new investments will provide a once-in-a-lifetime opportunity to prioritize investments in sustainable and resilient infrastructure, creating new markets for made-in-Ontario technology, products and services that can find global buyers in a world that needs climate resilient infrastructure solutions.

In light of the climate challenge facing Ontario, there is a domestic and global opportunity to develop our Province's environment and cleantech companies and spur the creation of new businesses by

our Provincial entrepreneurs. ONEIA is pleased to offer the following recommendations to capitalize on this opportunity:

1) Setting New GHG targets for the Province ONEIA's longstanding policy in this area is that firm GHG reduction targets send a clear signal to the market and drive the development and uptake of new technologies, products and solutions.

We support the establishment of an advisory panel of experts and stakeholders to develop policy, regulation and/or performance standards mechanisms to reduce GHG emissions to reach Ontario's targets. This panel should be composed of those with scientific and technical expertise and should have clear terms of reference that allow them to recommend evidence-based measures to rapidly reduce Ontario's overall GHG emissions from all sources. This will limit the propensity for governments to "pick winners and losers" instead of setting the winning conditions that will encourage companies to develop the solutions necessary to meet the targets.

2) Energy efficiency and conservation programs: Ontario already has a relatively low-carbon electricity system, thanks to measures begun in the late 1990s and undertaken under successive provincial governments. ONEIA supports programs that improve the energy performance for homes, businesses and other buildings in the public, health and education sectors to the extent that such measures reduce GHG emissions from fossil fueled heating systems or reduce peak demands in areas with strained transmission capacities, thereby reducing the need for standby power generation from fossil fuel sources and freeing up grid capacity for increased electrification of the transportation sector.

3) Encouraging development of Renewable Natural Gas, landfill gas and other renewable fuels: Organic materials from industrial and residential food waste, agricultural waste, and other sources are a significant contributor to Ontario's GHG emissions, with methane from such materials having impacts that are up to several dozen times as severe as CO₂. We believe any climate change solution for the Province should encourage multiple ways in which such materials can be repurposed and then recycled to supplement or displace existing fossil fuels (e.g. conversion into pipeline-ready renewable natural gas, use in power generation at waste treatment sites, etc.). Such measures would not only benefit Ontario's recycling industry but would offer new markets and opportunities to agricultural producers as well. Therefore, ONEIA believes that the Province should proceed with the implementation of the Organics Diversion Framework that it has developed.

4) Removing critical barriers to success: Many of the investments we will need to make in Ontario are at risk without the assurance of certainty for the private sector investor. A climate plan will reduce, but not eliminate, this risk. The review and change of regulations and the modernization of approvals such as EA's, ECA's and REA's that add unnecessary time and cost must also be part of the plan for success. Our members have been highly engaged on this subject, and have been advocating for a full review and change for more than seven years. We believe the province should commit to clear multi-year measures that will, among other things, provide guaranteed response times for environmental business projects and reduce the time and variability in the current system that prevents companies from adopting new environmentally-friendly technologies or otherwise engaging in economic activities that benefit the environment.

5) Supporting innovation and new solutions development: ONEIA believes that Ontario can be a leader in innovation surrounding climate change mitigation/adaptation solutions. These solutions will require thorough research, scale-up support, market development assistance and piloting/field testing in order to ensure their adoption and impact. Once developed, however, they could find a worldwide audience in jurisdictions grappling with similar climate change challenges, resulting in new jobs and economic growth in the environment sector.

6) Fuel switching of ground transportation: As transportation makes up one of the major (and growing) sources of GHGs in Ontario, we support the development of policies to significantly and rapidly enable the electrification or conversion to lower carbon fuels (i.e. CNG/RNG) within the transportation sector including mass transit, personal vehicles, freight and passenger transportation by rail, electric vehicles and low-carbon/zero-emission vehicles.

7) Improving building codes and standards: As buildings continue to be one of the main sources of GHGs in Ontario and represent one of our major vulnerabilities for severe weather events, we support changes to building codes and standards that encourage energy efficiency, building upgrades and other measures that reduce their GHG footprint and increase their resilience to such events as flooding and high winds.

8) Increased efficiency in land use planning: As Ontario's population continues to urbanize, measures that increase density, efficient transportation and efficient land use will become more important as a tool to reduce overall GHG output and foster economic growth. The plan should include defined measures that encourage urban growth planning that focuses on high density targets, transit-supportive land use planning, and complete communities that provide public transit, active transportation, support public health, and provide close connections among work, home and outdoor spaces. ONEIA also believes that this should include industrial land use planning to support the infrastructure that was outlined earlier including waste management facilities along with brownfield reutilization.

9) Infrastructure funding and government procurement: The Ontario government will be the country's largest spender on infrastructure in the next decade and is already the single biggest purchaser of goods and services in the Province. This offers an important opportunity to use procurement and infrastructure programs as a means to encourage climate mitigation and resilience and imbed it within standard government practices and our built infrastructure.

We support infrastructure and government procurement that requires lifecycle assessment infrastructure and building projects with scoring benchmarked on best-in-class lifecycle GHG emissions. Government procurement policies should also support low-GHG purchasing, manufacturing, and installation to encourage wider adoption of such practices by other major purchasers. Government procurement, particularly through pilot projects and targeted reduction initiatives, could also provide leadership in the infrastructure and buildings sectors by allowing the Province to become a "market maker" in areas such as building materials that are GHG neutral and net-zero emission projects.

10) Climate resilience: While the Province must continue its commitment to set and meet aggressive GHG reduction targets, the persistence of GHGs in the atmosphere means that a certain amount of climate change is expected for decades to come. As such, it is imperative that the Province prepare for the risks of extreme weather, changes in extreme temperatures, and changes in rainfall patterns, as well as the potential opportunities that will affect our economy, infrastructure, and health.

A climate action plan should, therefore, incorporate resilient measures to make our communities less vulnerable and more adaptive to the changing climate. While there are upfront costs to implementing such measures, research has shown that for every dollar spent on climate resilience or hazard mitigation, six dollars are saved from extreme weather damage (<https://www.nibs.org/news/381874/National-Institute-of-Building-Sciences-Issues-New-Report-on-the-Value-of-Mitigation.htm>).

ONEIA also recommends that the following items be incorporated in a climate change/action plan to address climate adaptation and climate resilience:

1) Provincial climate change risk assessment: We recommend that the Province commission a comprehensive Ontario wide climate risk assessment to identify regional climate change scenarios and climate vulnerabilities and hazards across different provincial regions and economic sectors. Such an assessment will provide information on the climate risks that the Province will need in order to develop policies, programs, regulations and standards to prepare for the changing climate (e.g. increased flooding, drought, high winds, forest fire or extreme heat); what sectors need support (e.g., transportation, infrastructure, health, agriculture, financial sectors etc.); and, the populations that are most vulnerable so that adaptation strategies and mitigation measures can be prioritized and resources can be efficiently allocated.

2) Climate resilient infrastructure: Ontario needs to identify what specific infrastructure is vulnerable and take measures to make it more resilient. Examples of such measures may include building and updating roads and bridges to withstand intense rainfalls and more frequent freeze-thaw cycles. Storm sewers may need to be retrofitted or redesigned to transport the increased volumes of water from more extreme and short-lived storms. Coupled with urban sprawl and more paved surfaces, more intense rainfall events are expected to overwhelm our current storm sewers increasing flood-related property losses.

3) Update floodplain mapping systems: While we recommend that development be prohibited in floodplains, many of the floodplain maps in Ontario are based on outdated climate data. We recommend that the Province fund, in collaboration with local authorities, support the continuous updating of floodplain maps across the Province, where relevant, for infrastructure and development.

4) Climate-resilient natural solutions and landscaping design: We recommend incorporating climate-resilient natural solutions and landscaping design in infrastructure / building design and land use planning to mitigate the climate risks of increasing frequency and severity of extreme weather events (e.g. intense rainfall and wind storms), including directing funds to restore and protect wetlands, increase tree canopy in urban areas, to support the use of pervious materials, and to install bioswales and green roofs.

5) Best practices guidance re agricultural impacts: The changing climate will have significant effects on Ontario's agricultural producers, specifically on our ability to grow crops and raise animals. Improved water management will be needed for irrigation and farmers may need to switch to crops that are more drought-resistant, pest-resistant, and heat-tolerant. Heat stress for livestock will also need to be managed. As such, we recommend that the government develop and provide best practices guidance to assist farmers in adapting to climate change so that they can maximize their crop yields and livestock.

6) Public education and outreach: Governments and businesses are only one part of the climate change equation. Educating and empowering Ontario individuals and families will be an important part of making our Province more adaptable and resilient. Given the health and safety implications of climate change, there is a need to educate the public on ways that they can protect their health from extreme heat, increased incidence of vector-borne disease (such as Lyme disease), poor air quality, and flooding. We also support an increase in science-based education on causes and effects of climate change so that individuals and families can better understand what is driving our climate change and, more importantly, the role they can play in helping our society adapt.

We are pleased to submit these recommendations as a start to an ongoing and productive conversation between Ontario's cleantech sector and the Province about how we can reduce our GHG emissions, adapt to a changing climate and take advantage of the business opportunity these changes present.

Should you have any questions about these specific recommendations, please do not hesitate to contact me directly at (416) 531-7884 (agill@oneia.ca).

Yours truly,

A handwritten signature in black ink that reads "Alex Gill". The signature is written in a cursive, flowing style.

Alex Gill
Executive Director