

Legislative
Assembly
of Ontario



Assemblée
législative
de l'Ontario

STANDING COMMITTEE ON PUBLIC ACCOUNTS

CLIMATE CHANGE: ONTARIO'S PLAN TO REDUCE GREENHOUSE GAS EMISSIONS

(VOLUME 2, CHAPTER 3, 2019 ANNUAL REPORT OF THE OFFICE OF THE
AUDITOR GENERAL OF ONTARIO)

1st Session, 42nd Parliament
69 Elizabeth II

ISBN 978-1-4868-4859-1 (Print)
ISBN 978-1-4868-4861-4 [English] (PDF)
ISBN 978-1-4868-4863-8 [French] (PDF)
ISBN 978-1-4868-4860-7 [English] (HTML)
ISBN 978-1-4868-4862-1 [French] (HTML)

Legislative
Assembly
of Ontario



Assemblée
législative
de l'Ontario

The Honourable Ted Arnott, MPP
Speaker of the Legislative Assembly

Sir,

Your Standing Committee on Public Accounts has the honour to present its Report and commends it to the House.

Catherine Fife, MPP
Chair of the Committee

Queen's Park
December 2020

STANDING COMMITTEE ON PUBLIC ACCOUNTS
MEMBERSHIP LIST

1st Session, 42nd Parliament

CATHERINE FIFE
Chair

FRANCE GÉLINAS
Vice-Chair

DEEPAK ANAND

STEPHEN CRAWFORD

JILL ANDREW

CHRISTINE HOGARTH

TOBY BARRETT

NORMAN MILLER
Parry Sound–Muskoka

*STEPHEN BLAIS

MICHAEL PARSA

STAN CHO
Willowdale

*JOHN FRASER was replaced by STEPHEN BLAIS on October 1, 2020.

PETER TABUNS regularly served as a substitute member of the Committee.

CHRISTOPHER TYRELL
Clerk of the Committee

LAURA ANTHONY
Research Officer

CONTENTS

INTRODUCTION	1
ACKNOWLEDGEMENTS	1
BACKGROUND	1
GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE	1
ONTARIO'S ENVIRONMENT PLAN	2
2019 AUDIT OBJECTIVE AND SCOPE	3
MAIN POINTS OF 2019 AUDIT	3
ISSUES RAISED IN THE AUDIT AND BEFORE THE COMMITTEE	4
Plan Updates Based on Comments	5
External Advisory Panel	6
Methods to Estimate Emissions Reductions	6
Emissions Estimates Underlying the Environment Plan	8
Low Carbon Vehicles Uptake	8
Clean Fuel Initiatives	9
Industry Performance Standards	10
Emission Reduction Fund	11
Organic Waste	11
Energy Storage Innovation	12
Reductions from Future Innovation	12
Public Transit Spending	13
Internal Ministry Analysis of Initiatives in the Plan	14
IT Controls of Integrated Model to Estimate Emissions	14
Agricultural Emissions	15
Costs of Emission-Reduction Initiatives	15
Decisions by Provincial Ministries and Agencies	15
Public Reporting on Environment Plan	16
Timelines	17
CONSOLIDATED LIST OF COMMITTEE RECOMMENDATIONS	18
APPENDIX A: DISSENTING OPINION OF THE NEW DEMOCRATIC PARTY MEMBERS OF THE COMMITTEE	

INTRODUCTION

On March 11, 2020, the Standing Committee on Public Accounts held public hearings on the audit of Climate Change: Ontario's Plan to Reduce Greenhouse Gas Emissions (Volume 2, Chapter 3, *2019 Annual Report* of the Auditor General of Ontario), administered by the Ministry of the Environment, Conservation and Parks.

The Committee endorses the Auditor's findings and recommendations, and presents its own findings, views, and recommendations in this report. The Committee requests that the Ministry provide the Clerk of the Committee with written responses to the recommendations within 120 calendar days of the tabling of this report with the Speaker of the Legislative Assembly, unless otherwise specified.

ACKNOWLEDGEMENTS

The Committee extends its appreciation to officials from the Ministry of the Environment, Conservation and Parks. The Committee also acknowledges the assistance provided during the hearings and report-writing deliberations by the Office of the Auditor General, the Clerk of the Committee, and staff in the Legislative Research Service.

BACKGROUND

In April 2019, the *Environmental Bill of Rights, 1993* (EBR) was amended, transferring some responsibilities of the former Office of the Environmental Commissioner of Ontario to the Office of the Auditor General. The transferred duties include the option of reporting on the progress of activities to reduce greenhouse gas emissions. Chapter 3, "Climate Change: Ontario's Plan to Reduce Greenhouse Gas Emissions" is part of the first consolidated report issued by the Auditor General as per sections 51(1) and 51(3) of the EBR.

GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

Greenhouse gases (GHGs) help regulate Earth's temperature. While some greenhouse gases occur naturally, human activity has resulted in the release of large volumes of GHGs into Earth's atmosphere. As GHGs accumulate, they increase global temperatures. The audit noted that GHGs from human activity have increased global average surface temperatures by 0.8°C to 1.2°C (compared to pre-industrial levels). The most common greenhouse gas emitted into the atmosphere due to human activity is carbon dioxide, but others (e.g., methane and nitrous oxide) can also trap heat. The most common sources are fossil fuels (e.g., coal, oil, and natural gas) which are burned for electricity generation, industrial use, transportation, and heating. Other sources include agriculture and organic waste in landfills.

Environment and Climate Change Canada expects the rate of warming in Ontario to be almost double the global average by the end of this century as a result of

several factors, including the melting snow and ice in Northern Ontario and Ontario's large land mass.

ONTARIO'S ENVIRONMENT PLAN

As a result of the *Cap and Trade Cancellation Act, 2018*, the Ontario government is required to establish and publish greenhouse gas emission-reduction targets. The Act also requires the Minister of the Environment, Conservation and Parks to prepare a climate change plan, regularly prepare reports on the plan, and make these documents publicly available.

In November 2018, the Ministry of the Environment, Conservation and Parks (Ministry) released "Preserving and Protecting our Environment for Future Generations: A Made-in-Ontario Environment Plan" (Environment Plan or Plan). According to the Ministry, the Plan's climate change chapter is intended to fulfil the commitment under the *Cap and Trade Cancellation Act, 2018* to prepare a climate change plan.

The Plan sets a target to reduce Ontario's emissions by 30% by 2030 (based on 2005 levels) which is aligned with the commitments the federal government has made under the 2015 Paris Agreement under the United Nations Framework Convention on Climate Change. At the present time, Ontario has shouldered the largest share of Canada's progress towards the 2030 Paris targets. According to the Ministry's analysis, the 30% reduction represents a reduction of 17.6 megatonnes (Mt) by 2030. The goal is to reduce emissions to 143.3 Mt from 160.9 Mt (the projected emissions for 2030 without provincial intervention – also known as the "business as usual" emissions forecast). To achieve this target, the Ministry's Plan outlines eight areas where the Ministry expects emissions reductions to occur:

- Low Carbon Vehicles Uptake;
- Clean Fuels;
- Federal Clean Fuel Standard;
- Natural Gas Conservation;
- Industry Performance Standards;
- Emission Reduction Fund;
- Other Policies; and
- Innovation.

The Ministry used an integrated energy-emissions-economy model to project baseline and Industry Performance Standards emission estimates. This model is a combination of three models, and is a series of mathematical equations. It integrates information on government policies, the economy, technologies, and energy use and costs.

2019 AUDIT OBJECTIVE AND SCOPE

The audit focused on the Plan's proposed path to reduce greenhouse gas emissions, including: the process for developing the Plan; its underlying assumptions and evidence used to estimate emissions reductions; the Ministry's evaluation and consideration of costs; and its approach to achieving the target.

The audit's objective was to assess whether the Ministry of the Environment, Conservation and Parks has effective systems and processes in place to ensure that

- credible information is used on an ongoing basis to assess, plan and undertake government initiatives to mitigate greenhouse gas emissions;
- initiatives to mitigate greenhouse gases are comprehensive, co-ordinated and cost-effective;
- initiatives to mitigate greenhouse gases are likely to achieve provincial greenhouse gas reduction targets, and are likely to contribute to global long-term mitigation goals; and
- the effectiveness of greenhouse gas mitigation initiatives is monitored, evaluated and reported to the public.

MAIN POINTS OF 2019 AUDIT

The audit found that the Ministry's projected emissions forecast and the estimated emissions reductions for all eight areas of the Plan are not yet supported by sound evidence or sufficient detail. The Auditor stated that the Plan is not likely to achieve its proposed emission-reduction target. Further, the audit concluded that given the limited time to develop the Plan, the Ministry was unable to use an integrated model to properly select or design all emission-reduction initiatives, or accurately estimate the associated reductions. The audit's assessment of the assumptions and emission-reduction estimates found that the Plan overestimates the emissions reductions expected, noting that initiatives in the Plan had the potential to achieve between 6.3 Mt and 13.0 Mt of the 17.6 Mt emission-reduction target.

The audit found:

- The Plan's "business-as-usual" emissions projection for 2030 was re-estimated in August 2019 to be 163.6 Mt.
- The Plan's estimates for emissions reductions from Low Carbon Vehicles Uptake include cancelled programs that supported electric vehicle adoption.
- The Plan estimates emissions reductions from natural gas customers voluntarily switching to renewable natural gas, though evidence shows that the higher cost of renewable natural gas means that few customers would switch.

- The Plan relies on the federal government's proposed Clean Fuel Standard for emissions reductions of 1.3 Mt by 2030. The Standard is not yet finalized, and is tentatively planned to come into effect by 2023.
- The Plan double counts some emissions reductions that are targeted by more than one program.
- The Plan improperly counts emissions reductions expected from reducing exported organic waste.
- The Plan states that Future Innovation will reduce emissions, but no emission-reduction programs have yet been identified.
- Following the release of the Plan, the Ministry estimated that Industry Performance Standards would result in 1.0 Mt of emission reductions rather than 2.7 Mt.

The audit also found:

- The Ministry did not fully estimate costs for more than half of the emission-reduction areas included in the Plan.
- An expert panel had not yet been appointed to provide advice on Ontario's climate change plan.
- Other provincial ministries are making decisions that may increase Ontario's emissions.
- More work is needed to embed climate change into government decision making.

ISSUES RAISED IN THE AUDIT AND BEFORE THE COMMITTEE

A number of issues were raised in the audit and before the Committee. The Committee considers the following issues to be of particular importance.

The Made-in-Ontario Environment Plan acts as the road map for the Ministry to preserve and protect land, air and water, address litter and waste, and reduce greenhouse gas emissions. The Ministry explained that the Plan is flexible and can be modified to accommodate different policy decisions or new ideas. It was noted that Ontario has played an important role in fighting climate change, with decreased provincial emissions since 2005.

The Committee expressed concern regarding the Ministry's unhurried approach to acting on the Plan, especially given the scale of the climate change crisis facing Ontario. The Ministry told the Committee it has addressed the Auditor General's recommendation to establish a new advisory panel on climate change and is in the process of acting on other recommendations in the audit.

The Committee heard that the integrated energy-emissions-economy model is being continually improved in order to accommodate a wider variety of GHG-mitigation measures. The Committee expressed concern regarding several of the model's assumptions, particularly around innovation. The Ministry explained it is refining the information in the model by enhancing communication with partner ministries to improve assumptions about various initiatives and programs.

The Committee questioned the development of projects aimed at significantly reducing emissions. The Ministry stated that one of its most significant accomplishments has been the Emissions Performance Standard program (an alternative to the federal output-based pricing system) to ensure that polluters are accountable for their greenhouse gas emissions and to help achieve the 2030 reduction target. The Greenhouse Gas Emissions Performance Standards regulation was released under the *Environmental Protection Act* in July 2019.

The Committee heard that the Ministry has taken steps to begin the first-ever broad, multi-sector provincial climate change impact assessment. The Ministry issued a request for bids in November 2019 and is currently in the evaluation process. The impact assessment will identify where the Province is vulnerable to climate change. On July 31, 2020, the Ontario government awarded a contract to a consulting team led by the Climate Risk Institute to conduct this climate change impact assessment. The assessment will be conducted over the next two years and it is anticipated that the final results will be released in 2022.

Questions were raised about the Plan's ability to reach the 2030 emission-reduction target. The Ministry acknowledged that meeting the target will be challenging, but claimed it is possible.

It was noted that several external factors and decisions could affect the provincial government's approach to addressing climate change, such as the federal government's decision on whether to remove Ontario from the federal output-based pricing system, or a ruling from the Supreme Court of Canada on the constitutionality of the carbon tax.

Plan Updates Based on Comments

The audit found that prior to releasing the Plan, Ministry staff expressed concern that the Ministry might receive criticism for releasing a Plan for comment that appeared to be already finalized. In contrast to other proposed policies posted on the Environmental Registry, the Plan was not marked as a draft.

The Ministry told the Committee that the Made-in-Ontario Environment Plan was posted for public comment on the Environmental Registry for 60 days and received over 1,400 comments. Prior to the release of the draft Plan, the Ministry launched a digital consultation forum allowing interested parties to provide input on key areas of the upcoming Plan. The Ministry noted that it will continue to engage the public in the environmental plan decision-making process. Further, it will consider opportunities to enhance its processes to ensure draft plans, strategies, and policies are labelled as drafts when posted on the Environmental Registry.

Committee Recommendation

The Standing Committee on Public Accounts recommends that:

- 1. The Ministry of the Environment, Conservation and Parks should clearly label proposed plans, strategies, and policies on the Environmental Registry as “Draft.”**

External Advisory Panel

Under the *Cap and Trade Cancellation Act, 2018*, the Minister may appoint panels to perform advisory functions. However, the audit found that as of September 2019, no appointments had been made to the Climate Change Advisory Panel.

The Ministry informed the Committee that it established the Climate Change Advisory Panel in November 2019. The Panel’s first meeting was on January 20, 2020. The Committee expressed concern that it took the Ministry over a year to appoint the 10-member panel from when it first compiled a list of prospective members in fall 2018.

The Committee asked about the Panel members’ expertise. The Ministry explained that the Panel is designed to help prepare for the costs and impacts of climate change. Its membership includes experts on climate change resiliency who have experience in a variety of sectors, including the not-for-profit, agriculture, and insurance sectors. The Panel will provide advice on how to address the impacts of climate change on infrastructure, communities, the economy, and people. Further, it will provide guidance on how to raise awareness and facilitate access to climate data and give advice on collaboration with the federal government and provincial partners (including municipalities, Indigenous communities, business associations, health and social service providers, and the voluntary sector). The Ministry stated that it may broaden the Panel’s focus to other aspects of climate change in the future.

Committee Recommendation

The Standing Committee on Public Accounts recommends that:

- 2. The Ministry of the Environment, Conservation and Parks should**
 - a) consider whether the Climate Change Advisory Panel needs a clearly defined mandate with corresponding objectives and targets; and**
 - b) make its advice publicly available for Ontarians.**

Methods to Estimate Emissions Reductions

The audit found that the Ministry did not use integrated modelling to estimate emissions reductions for areas in the Plan (aside from the 2030 projection and reductions expected from the implementation of the Industry Performance Standards) or to help inform and determine the most effective programs for achieving the overall emission-reduction target. Instead, the audit found the Ministry used an ad hoc approach to estimate all other emissions estimates.

Further, the audit found the Ministry included in its 2030 projection some policies that were subsequently cancelled (such as conservation programs, renewable energy contracts, and cap and trade).

The Ministry told the Committee it signed a contract with an independent research company to use its model in October 2018. The model forecasts the environmental and economic effects of various policy options to address climate change. The Ministry received the model from the vendor just before releasing the Plan; consequently, the model was not yet calibrated to generate results for all the initiatives in the Plan or the interactions between policies. The Ministry stated it will improve its emission-reduction estimates based on new data and policy assumptions as they become available.

The Committee heard that the Ministry is improving the model to accommodate increased electric vehicle and compressed natural gas truck uptake, renewable natural gas, renewable content in gasoline, and Clean Fuel Standards. Further, the Ministry stated it is making adjustments so that the model can incorporate other approaches considered in the Plan, such as natural gas conservation initiatives, financing tools for an Emissions Reduction Fund, and cost-effective fuel switching.

The Ministry noted the model has already been revised with new information, including the Independent Electricity System Operator's (IESO's) new Annual Planning Outlook in January 2020 (which provides a 20-year forecast on Ontario's electricity system) and updates by the National Inventory Report by Environment and Climate Change Canada (which provides historical greenhouse gas emissions at national and subnational levels from 1990 onwards). The Ministry is working with the Ministry of Energy, Northern Development and Mines to improve information and assumptions about various energy programs and initiatives.

The Committee asked if the Ministry's modelling changes include changes to the generation mix. The Ministry clarified the actual generation mix is not included in the model per se, but the demand and emissions forecasts influence the model's results. IESO's Outlook is focused primarily on demand and to a lesser extent, the emissions forecast, which is dependent on the generation mix.

Committee Recommendation

The Standing Committee on Public Accounts recommends that:

- 3. The Ministry of the Environment, Conservation and Parks should**
 - a) update the integrated energy-emissions-economy model with new information as available;**
 - b) improve communication and information sharing with other ministries to improve its understanding of planned and proposed initiatives as they occur; and**

- c) **create and publish a regular report with up-to-date information and emission forecasts, in order to publicly track the Ministry's progress towards meeting the 2030 emission-reduction goals.**

Emissions Estimates Underlying the Environment Plan

The audit reviewed the evidence and assumptions the Ministry used to estimate the projected emissions and reductions, and found that several were not supported by sound evidence. The Auditor concluded that the initiatives in the Plan could achieve between 6.3 Mt to 13.0 Mt of the 17.6 Mt emission-reduction target.

The Ministry told the Committee it is committed to using the best available science and data to support the Plan, and further, that it is constantly working to ensure the modelling is as robust, integrated and accurate as possible.

Committee Recommendation

The Standing Committee on Public Accounts recommends that:

4. **The Ministry of the Environment, Conservation and Parks should ensure the evidence and assumptions underlying the Environment Plan are based on sound evidence and current information.**

Low Carbon Vehicles Uptake

The audit found that the Plan overestimated the emissions reductions expected from the uptake of electric vehicles and the uptake of compressed natural gas instead of diesel in freight trucking.

The Ministry told the Committee it is challenging to predict future electric vehicle adoption since technological advancements may reduce the cost of electric vehicles and thus increase sales. The Committee acknowledged this challenge and highlighted the potential to promote hybrid technology until battery technology advances.

In December 2019 the Ministry and a number of partner ministries established an inter-ministerial working group on low-carbon vehicles, which has a mandate to coordinate government action in support of the Plan. The Ministry explained the group is exploring several areas related to electric vehicles, including technology and infrastructure. Further, the Ministry stated the group will explore opportunities for private sector investment in electric vehicle infrastructure (e.g., charging stations) across the province.

The Ministry stated it is making progress on integrating compressed natural gas (CNG) truck uptake into its preliminary emissions model. Ministry research suggests emissions from CNG trucks are about 15% lower than diesel trucks on a lifecycle basis (and reductions from compressed renewable natural gas are even higher). The Ministry stated it will monitor CNG activity in Ontario over the next two years to determine the feasibility of increasing its use in trucks.

Committee Recommendation

The Standing Committee on Public Accounts recommends that:

- 5. The Ministry of the Environment, Conservation and Parks should**
 - a) explore opportunities for private sector investment to develop critical infrastructure for electric vehicles in Ontario;**
 - b) improve emission-reduction estimates for both hybrid and fully-electric cars; and**
 - c) assess the feasibility of increasing the use of compressed natural gas and calculate the corresponding impact on emissions and take into account the leakage of methane in the production and transportation of natural gas.**

Clean Fuel Initiatives

The audit found the Ministry overstated the reductions from proposed clean fuel initiatives. Further, the audit found that the Plan based its emission-reduction estimates on a submission by the Ontario Energy Association to the Ministry instead of using its own analysis.

The Committee asked why the Plan estimates 2.3 Mt of reductions from renewable natural gas (RNG) when the Ministry's analysis estimated negligible emissions reductions. The Ministry considers RNG to have additional potential because the Province has substantially invested in existing natural gas infrastructure. However, the Ministry recognized that economic considerations still remain. The Ministry has an ongoing policy dialogue with the Ministry of Energy, Northern Development and Mines to discuss policy options around increasing the use of RNG, ranging from less to more prescriptive. The policy could initially be a voluntary program; if there was limited uptake, the Ministry could consider mandatory measures (e.g., requiring through the Ontario Energy Board a certain percentage of RNG content).

The Ministry could also conduct a price discovery—determine the market's willingness to pay and ability to deliver infrastructure—through a pilot RNG program. The Ministry noted existing pilots related to RNG suggest that up to a 5% injection of RNG into the natural gas system is appropriate. An injection of RNG can reduce emissions and be used as natural gas to fuel vehicles and heat buildings. The Committee asked about the cost-benefit analysis of injecting clean fuels into the existing natural gas infrastructure. The Ministry is having active conversations on this issue with the Ministry of Energy, Northern Development and Mines (which controls the policy levers in this area).

The Ministry has also been exploring options with stakeholders to increase the renewable content in transportation fuels, with the goal to reduce GHGs from transportation without increasing costs. In 2019 Ontario proposed to increase renewable content in gasoline to 15% as early as 2025 through regulatory changes. The Ministry explained it is reviewing comments and meeting with stakeholders to develop the final proposal.

Committee Recommendation

The Standing Committee on Public Accounts recommends that:

- 6. When assessing the development of renewable natural gas, the Ministry of the Environment, Conservation and Parks and the Ministry of Energy, Northern Development and Mines should collaborate to**
 - a) assess the feasibility of increasing the supply and reducing the cost of renewable natural gas in Ontario;**
 - b) consider developing and implementing a pilot program to conduct a price discovery of the renewable natural gas market in Ontario; and**
 - c) take into account renewable natural gas leakage during production and transportation.**

Industry Performance Standards

The Plan expects 1.3 Mt of reductions by 2030 to come from the implementation of the proposed federal Clean Fuel Standard in 2022 and 2023. The audit noted that, if the federal Clean Fuel Standard is not implemented, there would be an emission-reduction shortfall. Conversely, if the federal regulations are implemented, there would be an overlap with the provincial Industry Performance Standards (also called the Emissions Performance Standards or EPS).

The audit argued the Plan's expectation that 2.7 Mt (15%) of emissions reductions would come from the Industry Performance Standards is an overestimate due to the overlap with other initiatives. Following the release of the Plan, the Ministry estimated that 1.0 Mt of emissions reductions will come from the Industry Performance Standards.

The Ministry told the Committee it is improving the integrated energy-emissions-economy model to accommodate the Clean Fuel Standards. Further, the Ministry was awaiting a decision from the federal government on whether the Emissions Performance Standards meet the federal benchmark. In September 2020, subsequent to the public hearings on this report, the federal government accepted Ontario's Emissions Performance Standards system. Key provisions in the EPS regulation, however, will not apply until the federal government removes the output-based pricing system from its application in Ontario.

Committee Recommendation

The Standing Committee on Public Accounts recommends that:

- 7. The Ministry of the Environment, Conservation and Parks should use best practices, such as integrated modelling, to analyze interactions between, and overlap of, various federal and provincial initiatives.**

Emission Reduction Fund

The audit reported that the Plan overestimates the reductions from the Emission Reduction Fund (named in the Plan as the Ontario Carbon Trust), since it does not account for its overlap with Natural Gas Conservation, and attributes emissions reductions through residential natural gas conservation to both programs. Of the Emission Reduction Fund, \$50 million would be designated for a reverse auction, which research suggests tends to support projects that would have happened regardless of government funding.

The Committee heard that the Ministry is improving its modelling to estimate emissions reductions associated with the Emission Reduction Fund. Improvements to the model are ongoing so it can incorporate other evolving aspects in the Plan, such as financing tools for the Fund. The Ministry stated it will refine its reverse auction proposal to ensure that funding is not provided to projects that would have happened regardless.

The Committee asked how much of the Fund has been disbursed to date. The Ministry explained it is in the process of designing the structure of the Fund by comparing trusts in other jurisdictions, including different methods of funding trusts. The Ministry is refining its proposal for the Fund in response to COVID-19 developments. The design of the Fund will be the subject of a report back to Cabinet in the coming months. The Committee heard that the Ministry would receive the allocation through the budget process, which has not yet been disbursed.

Committee Recommendation

The Standing Committee on Public Accounts recommends that:

- 8. The Ministry of the Environment, Conservation and Parks should**
 - a) use integrated modelling to account for interactions and overlap with other emission-reduction initiatives; and**
 - b) finalize the framework for the Emission Reduction Fund.**

Organic Waste

The audit found that the Ministry wrongly included reductions in international emissions. The Intergovernmental Panel on Climate Change Guidelines require emissions generated by waste that is exported and landfilled in the United States to be counted in the US emissions inventory. The Ministry expects 1.0 Mt of Ontario's 2030 emission-reduction target to come from programs that increase the diversion of food and organic waste from landfills; however, about 0.3 Mt of emissions reductions are expected to come from diverting waste that would be exported and landfilled in the United States.

The Committee heard about a number of programs and policies aimed at waste diversion overall. The Ministry explained that it has adjusted its internal estimates for emissions reductions associated with organic waste. Following the Auditor General's recommendation, the Ministry has committed to reviewing the Intergovernmental Panel on Climate Change Guidelines for National Greenhouse Gas Inventories when calculating emissions reductions associated with industrial,

commercial and institutional sector organic waste diversion. As a part of that review, the Ministry adjusted its modelling so that the estimates no longer include emissions reductions occurring in the United States.

Committee Recommendation

The Standing Committee on Public Accounts recommends that:

- 9. The Ministry of the Environment, Conservation and Parks should consistently follow the Intergovernmental Panel on Climate Change Guidelines and avoid counting emissions reductions associated with organic waste diversion that occur outside Ontario's borders.**

Energy Storage Innovation

The audit found that the Ministry's modelling underlying the Plan projects that 0.3 Mt of emissions reductions will come from increased energy storage. However, the audit noted that this assumed reduction was taken from a submission from the Ontario Energy Association to the Ministry and was presented as a hypothetical example.

The Ministry told the Committee that throughout history, innovation and technology have been a catalyst for emissions reductions. Energy storage is one of the fastest advancing technologies. The Ministry stated it discussed energy storage initiatives with the Ministry of Energy, Northern Development and Mines.

Possible Committee Recommendation

The Standing Committee on Public Accounts recommends that:

- 10. The Ministry of the Environment, Conservation and Parks should work with the Ministry of Energy, Northern Development and Mines to**
 - a) determine the feasibility of implementing various energy storage technologies in Ontario; and**
 - b) explore emerging and new energy storage technologies in order to increase Ontario's capacity.**

Reductions from Future Innovation

The audit found that the Plan expects 15% (2.7 Mt) of emissions reductions to come from the area of Innovation (which includes improvements in energy storage and switching from high-carbon heating). The Ministry expects 2.2 Mt out of the 2.7 Mt of emissions reductions to come exclusively from Future Innovation. However, the audit found that the Ministry was unable to provide any evidence to support this estimate. Further, the audit found that there are currently no planned initiatives or staff assigned to develop innovative initiatives.

The Committee asked what innovations are included in the 2.2 Mt emission-reductions estimate. Ministry representatives explained that assumptions in the model are meant to be more of a generalization than an exact measurement. The Ministry highlighted that carbon capture-and-storage technologies are evolving,

as well as the potential of small modular reactors. It was noted that Ontario does not necessarily need to develop new innovations that will result in emissions reductions; rather, Ontario can import innovative technologies from around the globe.

The Ministry is working with colleagues at the Ministry of Economic Development, Job Creation and Trade to identify opportunities to support the adoption of new and innovative emissions-reducing technologies, particularly in the context of COVID-19 economic recovery actions.

Committee Recommendation

The Standing Committee on Public Accounts recommends that:

11. The Ministry of the Environment, Conservation and Parks should work with partner ministries to

- a) update the model with more precise emission-reduction estimates from prospective technologies;**
- b) support the adoption of new and innovative emission-reduction technologies; and**
- c) continually monitor emerging global emission-reduction technologies that could have an impact in Ontario.**

Public Transit Spending

The Plan includes a commitment to spend an additional \$5 billion on public transit (GO Transit, subways, and relief lines) and the Ministry estimated a 0.1 Mt reduction in emissions as a result. The audit found estimating emissions reductions from spending on public transit to be complex and uncertain because it depends on interacting programs and policies. Further, the audit stated that initial estimates from Metrolinx indicate additional capital spending will lead to a minor increase in the share of trips taken by transit from 14.2% in 2011 to 14.7% in 2041.

The Ministry noted that Green Bonds have largely invested in transit-related and transportation-related projects, which are contributing to emissions reductions in the Province. Green Bonds are debt securities where the issue proceeds are utilized to fund projects with specific environmental benefits. The Ministry of Finance (through the Ontario Financing Authority) has issued green bonds at a total of \$2.2 billion for use in various projects.

Committee Recommendation

The Standing Committee on Public Accounts recommends that:

- 12. The Ministry of the Environment, Conservation and Parks should work with the Ministry of Transportation and its partner agencies to**
 - a) determine how interacting programs and policies will lead to emissions reductions; and**
 - b) update the integrated energy-emissions-economy model with evidence-based, transit-related data and information where applicable.**

Internal Ministry Analysis of Initiatives in the Plan

The audit found that Ministry staff estimated emissions based on three scenarios: the Reference Case (emissions forecast without new climate policies); the Climate Change Plan (emissions expected if initiatives in the Plan are put into place); and the Extended Policy Case (emissions expected if additional or enhanced policies are pursued). The audit concluded the graphics in the version of the Plan shared with the public were simplified, and the emissions reductions from the latter two scenarios (Plan initiatives put into place, and enhanced policies pursued) were merged.

Committee Recommendation

The Standing Committee on Public Accounts recommends that:

- 13. The Ministry of the Environment, Conservation and Parks should work with partner ministries to update its climate change plan to include detailed actions, based on sound evidence and supported by feasibility and cost analysis.**

IT Controls of Integrated Model to Estimate Emissions

The audit found that the Ministry used an integrated model to estimate emissions for Ontario, which was accessed using an online connection (the IT system and data are hosted and stored on servers in Vancouver). The audit concluded that the Ministry has no oversight of the system's technology controls, such as security, integrity of information, or reliable access. Further, the Ministry failed to obtain assurance on the vendor's technology controls.

The Ministry explained that it will receive updated assurance reports as they become available. It also confirmed that the assurance report from summer 2019 is the most recent.

Committee Recommendation

The Standing Committee on Public Accounts recommends that:

- 14. The Ministry of the Environment, Conservation and Parks should obtain and review an independent assurance report from the vendor of the integrated model for estimating emissions on an annual basis.**

Agricultural Emissions

The audit found that the Plan does not explicitly address emissions from the agricultural sector, such as raising livestock (6.2 Mt) and producing crops (3.6 Mt). However, the audit did note that Clean Fuel initiatives or the reverse auction in the Emission Reduction Fund may help to reduce emissions that occur on farms.

The Ministry stated it is collaborating with the Ministry of Agriculture and Rural Affairs to identify agriculture-specific initiatives that may be included in future iterations of the Plan.

Committee Recommendation

The Standing Committee on Public Accounts recommends that:

- 15. The Ministry of the Environment, Conservation and Parks should work with the Ministry of Agriculture, Food and Rural Affairs to include agriculture-specific initiatives in an updated Environment Plan to reduce emissions.**

Costs of Emission-Reduction Initiatives

The audit found that the Ministry's assessment while developing the Plan focused on provincial costs, but did not consider the indirect costs to the public and businesses, or the economy as a whole. Further, when the Plan was released, the Ministry had not yet evaluated the full financial costs of the following areas: Low Carbon Vehicles Uptake, Clean Fuels, the federal Clean Fuel Standard, Industry Performance Standards, or Innovation.

The Ministry stated it has completed internal feasibility and cost analysis. Further, it will develop guidelines for conducting feasibility and cost analysis for climate change mitigation initiatives. It was noted that the Ministry will work with partner ministries to include aspects of feasibility analysis of GHG reduction targets in future iterations of the Plan.

Committee Recommendation

The Standing Committee on Public Accounts recommends that:

- 16. The Ministry of the Environment, Conservation and Parks should determine and compare costs and net emissions reductions associated with all initiatives included in the Environment Plan.**

Decisions by Provincial Ministries and Agencies

The audit found that several recent decisions by other ministries and agencies have the potential to increase greenhouse gas emissions or make it harder to reduce emissions. The audit highlighted changes that undermined electric vehicle uptake or increased personal vehicle use. Further, the audit found that Ontario has made progress toward embedding climate change considerations across government, but does not yet use best practices employed in other jurisdictions, such as integrating climate change goals in key planning documents.

The Committee asked the Ministry for an update on cross-ministry sharing of information to generate policy development. The Committee heard that the Climate Change Leadership Team (CCLT), a cross-ministry group responsible for embedding climate change understanding and capacity in government, has focused on developing options and recommendations for how ministries and central agencies can best integrate climate change in both the policy and operational decision processes. This includes work to develop information and tools to support climate change considerations in government decision making. The Ministry stated that the CCLT is presenting its work to the Deputy Ministers' Council in Spring 2020.

The Ministry also explained that following the Auditor General's report, the Cabinet Office updated templates for policy submissions to cabinet to include consideration of climate change. The new templates were distributed to all ministries in December 2019. The Ministry also stated that CCLT members are discussing strategies on how to report to the Deputy Ministers' Council (DMC). The DMC Spring 2020 schedule was focused on COVID-19 planning and for that reason, the CCLT did not present its findings to DMC. This presentation will be rescheduled for a later date.

Committee Recommendations

The Standing Committee on Public Accounts recommends that:

- 17. The Secretary of Cabinet and the Ontario Deputy Ministers' Council should require ministries to use the guidance developed by the Climate Change Leadership Team.**
- 18. The Treasury Board Secretariat should ensure that ministries highlight and evaluate the emissions impacts of all decisions that may affect greenhouse gas emissions in their submissions to Treasury Board/Management Board of Cabinet.**

Public Reporting on Environment Plan

The audit found that the *Cap and Trade Cancellation Act, 2018* requires the Ministry to regularly prepare and release progress reports on the Ministry's climate change plan. Ministry staff are preparing advice to government on how to meet the Ministry's reporting obligations, which may include a general as well as a more specific report.

The Ministry stated it is developing a climate change plan implementation strategy to provide updates on Ontario's climate change initiatives. The Ministry is still confirming details and the implementation with its partner ministries.

Committee Recommendation

The Standing Committee on Public Accounts recommends that:

- 19. The Ministry of the Environment, Conservation and Parks should**
 - a) develop and implement measurable performance metrics;**

- b) publicly report, on a regular basis, on the government's performance metrics and progress towards meeting its 2030 emissions targets; and**
- c) explain the outcomes of all initiatives aimed at reducing emissions in the annual report.**

Timelines

The Committee asked the Ministry when it will have a timeline for an actual plan based on sound evidence with costing and timelines. The Ministry explained that the government's position is that there is no single environmental approach or solution that fully addresses the needs of all provinces, regions, or communities. Further, the Ministry told the Committee that the government has stated that the environment plan will continue to evolve as a living document to address the environmental priorities of Ontarians as new information, ideas, and innovation emerge.

Committee Recommendation

The Standing Committee on Public Accounts recommends that:

20. The Ministry of the Environment, Conservation and Parks should

- a) update the draft of the Environment Plan with recent integrated modelling and refined emission-reduction estimates;**
- b) provide specific timelines and expected emissions reductions for each action; and**
- c) present the updated draft Environment Plan, which includes subsequent developments before Cabinet for approval as required.**

CONSOLIDATED LIST OF COMMITTEE RECOMMENDATIONS

- 1. The Ministry of the Environment, Conservation and Parks should clearly label proposed plans, strategies, and policies on the Environmental Registry as “Draft.”**
- 2. The Ministry of the Environment, Conservation and Parks should**
 - a) consider whether the Climate Change Advisory Panel needs a clearly defined mandate with corresponding objectives and targets; and**
 - b) make its advice publicly available for Ontarians.**
- 3. The Ministry of the Environment, Conservation and Parks should**
 - a) update the integrated energy-emissions-economy model with new information as available;**
 - b) improve communication and information sharing with other ministries to improve its understanding of planned and proposed initiatives as they occur; and**
 - c) create and publish a regular report with up-to-date information and emission forecasts, in order to publicly track the Ministry’s progress towards meeting the 2030 emission-reduction goals.**
- 4. The Ministry of the Environment, Conservation and Parks should ensure the evidence and assumptions underlying the Environment Plan are based on sound evidence and current information.**
- 5. The Ministry of the Environment, Conservation and Parks should**
 - a) explore opportunities for private sector investment to develop critical infrastructure for electric vehicles in Ontario;**
 - b) improve emission-reduction estimates for both hybrid and fully-electric cars: and**
 - c) assess the feasibility of increasing the use of compressed natural gas and calculate the corresponding impact on emissions and take into account the leakage of methane in the production and transportation of natural gas.**
- 6. When assessing the development of renewable natural gas, the Ministry of the Environment, Conservation and Parks and the Ministry of Energy, Northern Development and Mines should collaborate to**
 - a) assess the feasibility of increasing the supply and reducing the cost of renewable natural gas in Ontario;**

-
- b) consider developing and implementing a pilot program to conduct a price discovery of the renewable natural gas market in Ontario; and**
 - c) take into account renewable natural gas leakage during production and transportation.**
 - 7. The Ministry of the Environment, Conservation and Parks should use best practices, such as integrated modelling, to analyze interactions between, and overlap of, various federal and provincial initiatives.**
 - 8. The Ministry of the Environment, Conservation and Parks should**
 - a) use integrated modelling to account for interactions and overlap with other emission-reduction initiatives; and**
 - b) finalize the framework for the Emission Reduction Fund.**
 - 9. The Ministry of the Environment, Conservation and Parks should consistently follow the Intergovernmental Panel on Climate Change Guidelines and avoid counting emissions reductions associated with organic waste diversion that occur outside Ontario's borders.**
 - 10. The Ministry of the Environment, Conservation and Parks should work with the Ministry of Energy, Northern Development and Mines to**
 - a) determine the feasibility of implementing various energy storage technologies in Ontario; and**
 - b) explore emerging and new energy storage technologies in order to increase Ontario's capacity.**
 - 11. The Ministry of the Environment, Conservation and Parks should work with partner ministries to**
 - a) update the model with more precise emission-reduction estimates from prospective technologies;**
 - b) support the adoption of new and innovative emission-reduction technologies; and**
 - c) continually monitor emerging global emission-reduction technologies that could have an impact in Ontario.**
 - 12. The Ministry of the Environment, Conservation and Parks should work with the Ministry of Transportation and its partner agencies to**
 - a) determine how interacting programs and policies will lead to emissions reductions; and**

- b) update the integrated energy-emissions-economy model with evidence-based, transit-related data and information where applicable.**
- 13. The Ministry of the Environment, Conservation and Parks should work with partner ministries to update its climate change plan to include detailed actions, based on sound evidence and supported by feasibility and cost analysis.**
- 14. The Ministry of the Environment, Conservation and Parks should obtain and review an independent assurance report from the vendor of the integrated model for estimating emissions on an annual basis.**
- 15. The Ministry of the Environment, Conservation and Parks should work with the Ministry of Agriculture, Food and Rural Affairs to include agriculture-specific initiatives in an updated Environment Plan to reduce emissions.**
- 16. The Ministry of the Environment, Conservation and Parks should determine and compare costs and net emissions reductions associated with all initiatives included in the Environment Plan.**
- 17. The Secretary of Cabinet and the Ontario Deputy Ministers' Council should require ministries to use the guidance developed by the Climate Change Leadership Team.**
- 18. The Treasury Board Secretariat should ensure that ministries highlight and evaluate the emissions impacts of all decisions that may affect greenhouse gas emissions in their submissions to Treasury Board/Management Board of Cabinet.**
- 19. The Ministry of the Environment, Conservation and Parks should**
 - a) develop and implement measurable performance metrics;**
 - b) publicly report, on a regular basis, on the government's performance metrics and progress towards meeting its 2030 emissions targets; and**
 - c) explain the outcomes of all initiatives aimed at reducing emissions in the annual report.**
- 20. The Ministry of the Environment, Conservation and Parks should**
 - a) update the draft of the Environment Plan with recent integrated modelling and refined emission-reduction estimates;**
 - b) provide specific timelines and expected emissions reductions for each action; and**

- c) **present the updated draft Environment Plan, which includes subsequent developments before Cabinet for approval as required.**

**APPENDIX A:
DISSENTING OPINION OF THE NEW DEMOCRATIC PARTY MEMBERS
OF THE COMMITTEE**

We believe that in a number of key areas related to public accountability the report falls short in its recommendations.

Recommendation 3. c) calls for “regular” reports from the Ministry “with “up-to-date” information and emission forecasts” so that the public can track progress of the Ministry in achieving its goals.

We believe reporting should be annual in line with jurisdictions like BC, the UK, Australia and others. At its worst “regular” can be every 4 years or every decade or more. Failure to prescribe an annual reporting cycle will downgrade the importance of reporting for the public service who, pressed by many other tasks, will likely not make it a priority. It also makes it convenient for a Minister who has not pursued the goals vigorously to decide that a given year is not the right time to report.

It undermines accountability and the ability of the Government to ensure that a plan is on track.

Similarly, in recommendation 19 the frequency of public reporting on “performance metrics and progress towards meeting its 2030 emissions targets” and “explain(ing) outcomes of its initiatives aimed at reducing emissions” are set at “regular”.

The reporting should be annual and public.

The same arguments that apply to recommendation 3. c) apply here.

If you accept that the world and Ontario face a crisis that threatens life and limb then there is no time to waste, projects need to be driven and setting frequent reporting helps drive them as in any endeavour.

It should be noted that the need for annual reporting is entirely in line with the recommendations of the Auditor General:

Recommendation #19 (pp. 162-163 of the Auditor General of Ontario’s 2019 report on Climate Change):

To help keep Ontarians updated on the status of efforts to reduce emissions, we recommend that the Ministry of the Environment, Conservation and Parks:

- develop and implement a set of performance metrics that are measurable and cover all key sectors;
- report at least annually to the public on the government’s performance metrics and overall cumulative progress toward meeting its 2030 emissions target; and
- explain the outcomes of all initiatives to reduce emissions in the annual report.

Recommendation (p. 29 of the Auditor General of Ontario’s 2019 Overview of Environmental Issues in Ontario):

In order to meet its commitment to report publicly on its progress in further developing and implementing the 2018 Made-in-Ontario Environment Plan, we recommend that the Ministry of the Environment, Conservation and Parks:

- develop key quantitative and qualitative indicators and related targets;
- establish an annual reporting timeline;
- report publicly in accordance with this timeline; and

- incorporate reporting on environmental expenditures as part of annual reporting.

Recommendation #2 (p. 167 of the Auditor General of Ontario's 2016 report on Climate Change):

To keep Ontarians updated on the status of its efforts to reduce greenhouse gases, the Ministry of the Environment and Climate Change should:

- report at least annually to the public on its overall progress toward meeting its emissions targets; and
- explain the outcomes of its specific initiatives to reduce emissions.

These three reports are available at:

https://www.auditor.on.ca/en/content/annualreports/arreports/en19/v2_300en19.pdf

https://www.auditor.on.ca/en/content/annualreports/arreports/en19/v2_100en19.pdf

https://www.auditor.on.ca/en/content/annualreports/arreports/en16/v1_302en16.pdf

It is bewildering that the Committee should ignore standard business practice and the considered opinion of Ontario's Auditor General.

Lastly, in recommendation 20. c), the words "as required" have been added at the end. Since the sense that has been given is that the Ministry sees the plan as "draft" and recognizes that it has to update it and present it to cabinet, the words "as required" undermine that goal. It is required, now.

The Government's climate plan is profoundly flawed as can be seen from reading the rest of the report which calls for simple things like basing recommendations on "evidence". Weakening it further does a disservice to Ontario.