

Summary Status Table in Response to the Report of the Auditor General of Ontario

Climate Change: Ontario's Plan to Reduce Greenhouse Gas Emissions

Chapter 3, Volume 2 of the 2019 Annual Report of the Office of the Auditor General of Ontario

Ministry of the Environment, Conservation and Parks – March 11, 2020

Auditor General's Recommendations	Completed Undertaking	Outstanding Undertaking
<p>Recommendation 1: To help ensure that the public is aware that plans, strategies and policies, when posted for review and public comment on the Environmental Registry are draft, we recommend that, in the future, the Ministry of the Environment, Conservation and Parks label such documents as draft.</p>	<p>The Ministry's practice is to post proposed plans, policies and strategies as proposals (drafts) on the Environmental Registry for public comment.</p> <p>Ministry staff have noted the Auditor General's recommendation for future postings on the Environmental Registry.</p>	<p>The Ministry will consider opportunities to enhance its processes to ensure draft plans, strategies and policies are labelled as drafts (proposals) when posted on the Environmental Registry.</p> <p>The Ministry expects to implement this recommendation within one year.</p>
<p>Recommendation 2: So that Ontario's climate change planning can benefit from external expert advice, we recommend that members be appointed to the Climate Change Advisory Panel to review and provide advice on climate change planning and further refine its plan as needed.</p>	<p>On November 28th, 2019, the Minister appointed a 10-member Advisory Panel charged with providing advice on climate change commitments in the Environment Plan with an early focus on resilience.</p>	
<p>Recommendation 3: So that complex interactions between energy, economics and emissions are taken into account when selecting and designing emission-reduction initiatives, and to provide more reliable emissions estimates, we recommend that the Ministry of the Environment, Conservation and Parks:</p> <ul style="list-style-type: none"> • use integrated modelling, where appropriate, to better estimate the impact of planned and future initiatives when updating its Plan to meet the 2030 target; • annually update its estimates to reflect new information and changes to proposed initiatives, and assess whether it is on track to achieve the 	<p>The Ministry uses an integrated energy-economy-emission model supplied by Navius Research Inc. to simulate environmental and macroeconomic effects of policies.</p> <p>Other Navius Research Inc's clients include Governments of Alberta, British Columbia, Nova Scotia, Northwest Territories, as well as Clean Energy Canada, Canada's Ecofiscal Commission, and Advanced Biofuels Canada.</p> <p>The Ministry is making progress improving the model so that it can accommodate a wider variety of GHG mitigation measures</p>	<p>Additional work, which is underway, is needed to incorporate other approaches considered in the initial Environment Plan, such as:</p> <ul style="list-style-type: none"> • natural gas Demand Side Management initiatives; • Emission Reduction Fund, and • possibly cost-effective fuel switching. <p>Ministry staff are in contact with ENDM staff to confirm assumptions and incorporate the latest electricity forecast in the Reference Case.</p> <p>Next steps also include review and finalization of modelling results.</p> <p>The Ministry expects to implement this recommendation within one year.</p>

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targeted reductions.	<p>such as:</p> <ul style="list-style-type: none"> - Increased uptake of electric vehicles and compressed natural gas trucks - renewable natural gas - renewable content in gasoline - clean fuel standards. <p>Estimated emissions reductions will be updated based on new data and policy assumptions as they become available.</p>	
<p>Recommendation 4: To better assess whether Ontario will achieve 2.6 Mt in emissions reductions from the uptake of electric vehicles, we recommend that the Ministry of the Environment, Conservation and Parks, together with key partner ministries, base its estimates on sound evidence.</p>	<p>In December 2019 the Ministry established an inter-ministerial working group on low carbon vehicles that will explore opportunities to support the uptake of electric vehicles in Ontario. The working group is comprised of MECP, MEDJCT, MTO, MOI, ENDM and MGCS.</p>	<p>The Ministry is working with partner ministries to identify and assess opportunities that support the adoption of electric vehicles in Ontario. The Ministry is continuing to improve its emissions forecasting by making use of more robust integrated modelling approaches to estimate emission reductions associated with policy levers, including those that support the adoption of electric vehicles.</p>
<p>Recommendation 5: To help reach Ontario's emission-reduction target by 2030, we recommend that the Ministry of the Environment, Conservation and Parks analyze the feasibility and emissions impact of increasing the use of compressed natural gas, taking into consideration the life-cycle emissions associated with compressed natural gas</p>	<p>The Ministry is making progress integrating compressed natural gas trucks uptake into its preliminary emissions model.</p> <p>As part of year one activities, the Ministry's preliminary estimates using GHGenius 5.0e (the latest version of the Canadian transportation lifecycle emissions model) suggest emissions from CNG trucks are about 15 percent lower than diesel trucks on a lifecycle basis. Reductions from using compressed renewable natural gas (C-RNG) are higher.</p>	<p>The Ministry will monitor compressed natural gas activity in Ontario over the next two years to assess the feasibility of increasing the use of compressed natural gas in trucks..</p> <p>The Ministry expects to implement this recommendation within two years.</p>

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<p>Recommendation 6: To help reach Ontario's 2030 emission-reduction target, we recommend that the Ministry of the Environment, Conservation and Parks work with the Ministry of Energy, Northern Development and Mines to assess the feasibility of increasing renewable natural gas (RNG) supply in Ontario.</p>	<p>Meetings between the Ministry and ENDM have occurred to discuss a potential voluntary RNG program.</p> <p>Initial modelling (supply cost analysis) and engagement with ENDM suggests that cost may present a significant barrier to increasing RNG supply for Ontario uptake.</p> <p>The Ministry continues to monitor RNG activity in Ontario.</p>	<p>Additional meeting with ENDM on feasibility (e.g.) system costs of different levels of renewable natural gas uptake)..</p> <p>The Ministry expects to implement this recommendation within two years.</p>
<p>Recommendation 7: To better assess the contribution that Industry Performance Standards would make toward Ontario's 2030 emission-reduction target, we recommend that the Ministry of the Environment, Conservation and Parks use best practices, such as integrated modelling, that account for the interactions and overlap with other initiatives.</p>	<p>The Ministry is making progress improving the model so that it can accommodate a wider variety of GHG mitigation measures such as:</p> <ul style="list-style-type: none"> - Increased uptake of electric vehicles and compressed natural gas trucks - renewable natural gas - renewable content in gasoline - clean fuel standards. <p>Estimated emissions reductions will be updated based on new data and policy assumptions as they become available.</p>	<p>Additional work, which is underway, is needed to incorporate other approaches considered in the initial Environment Plan, such as:</p> <ul style="list-style-type: none"> • natural gas Demand Side Management initiatives; • Emission Reduction Fund, and • possibly cost-effective fuel switching. <p>Ministry staff are in contact with ENDM staff to confirm assumptions and incorporate the latest electricity forecast in the Reference Case.</p> <p>Next steps also include review and finalization of modelling results.</p> <p>The Ministry expects to implement this recommendation within one year.</p>
<p>Recommendation 8: To better assess the contribution that the emission reduction fund would make toward Ontario's emission-reduction target, we recommend</p>	<p>The Ministry is making progress improving the model so that it can accommodate a wider variety of GHG mitigation measures such as:</p>	<p>The Ministry is continuing to improve its emissions forecasting by making use of more robust integrated modelling approaches to estimate emission reductions associated with policy levers. This includes estimating</p>

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<p>that the Ministry of the Environment, Conservation and Parks use best practices, such as integrated modelling, that account for the interactions and overlap with other initiatives.</p>	<ul style="list-style-type: none"> - Increased uptake of electric vehicles and compressed natural gas trucks - renewable natural gas - renewable content in gasoline - clean fuel standards. <p>Estimated emissions reductions will be updated based on new data and policy assumptions as they become available.</p>	<p>emission reductions associated with the emission reduction fund. These estimates will depend on the design of the program, which has not been finalized.</p> <p>Additional work, which is underway, is needed to incorporate other approaches considered in the initial Environment Plan, such as:</p> <ul style="list-style-type: none"> • natural gas Demand Side Management initiatives; • Emission Reduction Fund, and • possibly cost-effective fuel switching. <p>Ministry staff are in contact with ENDM staff to confirm assumptions and incorporate the latest electricity forecast in the Reference Case.</p>
<p>Recommendation 9: To help achieve a reverse auction that contributes toward reaching Ontario's 2030 emission-reduction target, we recommend that the Ministry of the Environment, Conservation and Parks design its reverse auction to achieve additional emissions reductions that would not have happened without government funding.</p>	<p>The Ministry has reviewed ERO and stakeholder feedback and done internal analysis on alternative approaches to the reverse auction.</p>	<p>The Ministry will refine its policy proposal such that any reverse auction would be designed so that funding is not provided to projects that would have happened without government funding. Decisions on implementing and designing a reverse auction have not yet been made.</p>
<p>Recommendation 10: To improve the reliability of estimated emissions reductions associated with organic waste diversion, we recommend that the Ministry of the Environment, Conservation and Parks follow the Intergovernmental Panel on Climate Change Guidelines for National Greenhouse Gas Inventories and</p>	<p>The Ministry has adjusted its internal estimates for emissions reductions associated with organic waste to address the issue of emissions reductions occurring in the US.</p>	<p>In future, when calculating emission reductions associated with I,C&I organic waste diversion, the Ministry will review the Intergovernmental Panel on Climate Change Guidelines for National Greenhouse Gas Inventories to determine its applicability.</p> <p>Implementation expected within one year.</p>

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transparently account for actions that occur outside Ontario's borders, consistent with international rules.		
<p>Recommendation 11: So that an increase in Ontario's electricity storage capacity contributes to achieving Ontario's overall 2030 emissions reduction target, we recommend that the Ministry of the Environment, Conservation and Parks work with the Ministry of Energy, Northern Development and Mines to identify and assess the feasibility of energy storage initiatives that are supported by sound evidence.</p>	<p>ENDM is the lead ministry on electricity storage.</p> <p>The Ministry is monitoring activity by IESO and OEB in this area, including their consultations on electricity storage.</p>	<p>The Ministry will set-up an initial meeting with ENDM to confirm objectives and research (e.g. costs of potential storage initiatives).</p>
<p>Recommendation 12: To help achieve emissions reductions from technological improvements beyond those already accounted for in the 2030 emissions projection, we recommend that the Ministry of the Environment, Conservation and Parks work with key partner ministries to identify and assess the feasibility of initiatives to support the adoption of new and innovative emission-reduction technologies in Ontario.</p>	<p>The Ministry is working with colleagues at MEDJCT to identify opportunities to support the adoption of new and innovative emissions reducing technologies.</p>	<p>The Ministry will work across government to support the adoption of new and innovative emissions reducing technologies on an on-going basis and in the context of specific actions identified in the Environment Plan.</p>
<p>Recommendation 13: To support Ontario in achieving the 2030 emission-reduction target, we recommend that the Ministry of the Environment, Conservation and Parks work with partner ministries to update its</p>	<p>Internal analysis on approach to feasibility and cost analysis.</p>	<p>The Ministry will develop guidance for estimating GHGs and conducting feasibility / cost analyses for climate change mitigation initiatives.</p> <p>Ministries will be asked to apply guidance to mitigation</p>

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<p>climate change plan to include detailed actions, with all estimated emissions reductions based on sound evidence and supported by a comprehensive and transparent feasibility and cost analysis.</p>		<p>initiatives recommended for future iterations of the climate change plan.</p> <p>The Ministry will work with partner ministries to include elements of GHG/ feasibility analysis in future iterations of the climate change plan</p> <p>Emissions forecasts in future iterations of the climate change plan will include only initiatives that have GHG estimates.</p>
<p>Recommendation 14: To obtain assurance over a vendor's information technology system used for emissions modelling, we recommend that the Ministry of the Environment, Conservation and Parks obtain and review independent assurance reports annually for information technology weaknesses.</p>	<p>The Ministry has contacted the vendor about updated independent assurance reports. The vendor indicated that the assurance reports provided to the Ministry in Summer 2019 are the latest.</p>	<p>The Ministry will receive updated assurance reports as they become available.</p> <p>The Ministry expects to implement this recommendation within one year.</p>
<p>Recommendation 15: So that all major economic sectors are taken into account when designing emission-reduction initiatives, we recommend that the Ministry of the Environment, Conservation and Parks work with the Ministry of Agriculture, Food and Rural Affairs to include agriculture-specific initiatives in an updated Plan to reduce emissions to meet the 2030 target.</p>	<p>The Ministry is working with colleagues at OMAFRA to identify agriculture specific initiatives that could be included in future iterations of the climate change plan.</p>	<p>Continue to work with OMAFRA to confirm agriculture specific initiatives that could be recommended for inclusion in future iterations of the climate change plan</p>

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<p>Recommendation 16: To support the selection of emission-reduction initiatives, we recommend that the Ministry of the Environment, Conservation and Parks accurately assess and compare all costs and net emissions reductions associated with all initiatives under consideration for inclusion in the final Plan.</p>	<p>Internal analysis on approach to feasibility and cost analysis.</p>	<p>The Ministry will develop guidance for estimating GHGs and conducting feasibility / cost analyses for climate change mitigation initiatives.</p> <p>Ministries will be asked to apply guidance to mitigation initiatives recommended for future iterations of the climate change plan.</p> <p>The Ministry will work with partner ministries to include elements of GHG/ feasibility analysis in future iterations of the climate change plan</p> <p>Emissions forecasts in future iterations of the climate change plan will include only initiatives that have GHG estimates.</p>
<p>Recommendation 17: So that actions and decisions made by ministries support Ontario's ability to meet its greenhouse gas reduction target, we recommend that the Secretary of Cabinet, in conjunction with the Ontario Deputy Ministers' Council, require ministries to use the guidance tools developed by the Climate Change Leadership Team.</p>	<p>CCLT will be presenting to Deputy Ministers' Council in late March / early April, 2020, with an update on its work.</p>	<p>The Climate Change Leadership Team continues its work towards developing options and recommendations for how ministries and central agencies can best integrate climate change in policy- and operational decision processes. This includes work to develop information and tools to support climate change considerations.</p> <p>CCLT members, including Cabinet Office and Treasury Board Secretariat, are discussing strategies for future reports into Deputy Ministers' Council (DMC).</p>
<p>Recommendation 18: So that ministries consider the impact that their decisions may have on greenhouse gas emissions, we recommend that the impact of decisions that affect emissions be evaluated and highlighted in all Treasury Board submissions.</p>	<p>Cabinet Office has updated templates for policy submissions to Cabinet to include consideration of the environment and climate change. The new templates were distributed to all ministries December 19, 2019.</p>	<p>The Ministry is working with TBS on potential updates to the TB/MBC submission guidelines and will work with Cabinet Office to provide guidance material to ministries to support their climate change analysis in Cabinet submissions</p>

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<p>Recommendation 19: To help keep Ontarians updated on the status of efforts to reduce emissions, we recommend that the Ministry of the Environment, Conservation and Parks:</p> <ul style="list-style-type: none">• 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;• explain the outcomes of all initiatives to reduce emissions in the annual report.	<p>The Ministry is developing a climate change plan implementation strategy that will fulfill this recommendation and keep Ontarians updated on Ontario's climate change initiatives.</p>	<p>Confirm details for the proposed elements of the implementation strategy:</p> <p>Confirm implementation approach with partner ministries.</p> <p>Seek TB/MBC approval of implementation plan.</p>