



**Environment and Climate Change Canada Detailed Management Action Plan**  
**Recommendations of report 3 [Hydrogen's potential to reduce greenhouse gas emissions](#)**  
**Spring 2022 Reports of the Commissioner of the Environment and Sustainable Development**

Paragraph number in report	OAG/CESD Recommendation	Departmental Response	Description of Final Expected Outcome/Result	Expected Final Completion Date	Action Plan and Key Milestones (Description/Dates)	Responsible Organization/ Contact (Branch, Directorate)
3.50	To improve consistency across departments, Environment and Climate Change Canada and other federal departments should adopt a standard framework to estimate emission impacts of proposed policies, clean technologies, and fuels.	<b>Agreed.</b> It is agreed that consistent and reliable emission estimates of proposed policies are necessary to inform decision making. The recently established Integrated Climate Lens Centre of Expertise, located at ECCC, has a mandate to ensure that major government decisions, namely through budget and Cabinet processes, consider climate mitigation and adaptation in a rigorous, consistent and, where possible, measureable manner.	Inventory of federal approaches to emissions modelling.  Development of guidance for evaluating emission impacts of relevant policies/programs.	Fall 2023	<ol style="list-style-type: none"> <li>1. Establish working group with government partners to develop an inventory of emissions estimation models/tools, (expected completion date: June 30, 2022).</li> <li>2. Inventory compiled, including an assessment of commonalities and compatibility issues between quantification tools being used by departments, (expected completion date: September 30, 2022).</li> <li>3. Draft common guidance for estimating emissions impacts is developed for working group members for discussion/input (expected completion date: early Spring 2023).</li> <li>4. Guidance is finalized and circulated to departments for ongoing refinement (expected completion date by Spring 2023).</li> <li>5. Training and support is put in place to support emissions quantification among departments (expected completion date: fall 2023 and ongoing).</li> </ol>	Executive Head, Integrated Climate Lens Centre of Expertise, Strategic Policy Branch
3.64	In order to increase transparency of its emissions projections, Environment and Climate Change	<b>Agreed.</b> This recommendation aligns with current Environment and Climate Change Canada practice. Environment	ECCC will continue to follow the UNFCCC reporting guidelines in clearly delineating the policies	Ongoing.	ECCC's annual reporting of GHG emissions projections will continue to follow international reporting standards in their	Director General, Economic



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	<p>Canada should develop and publish results for scenarios</p> <ul style="list-style-type: none"> <li>that include a detailed list of measures and assumptions considered</li> <li>that show a clear distinction between (1) scenarios based on existing policies and measures and (2) exploratory scenarios that include proposed or aspirational policies and measures</li> </ul>	<p>and Climate Change Canada’s GHG emission projections are published in accordance with international standards that require a clear distinction between existing and planned initiatives. ECCC models and publishes two GHG cases: the “Reference” case, which includes federal, provincial and territorial policies and measures that are funded, legislated and implemented; and the “With Additional Measures” case, which builds on the Reference case by including planned policies. International guidelines for reporting from the United Nations Framework Convention on Climate Change (UNFCCC) are available online:</p> <ul style="list-style-type: none"> <li>Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part II: UNFCCC reporting guidelines on national communications (Annex starts on Page 29, Section VI : Projections on Page 35, para 26) <a href="https://unfccc.int/sites/default/files/resource/cp2019_13a01E.pdf">https://unfccc.int/sites/default/files/resource/cp2019_13a01E.pdf</a></li> <li>UNFCCC biennial reporting guidelines for developed country Parties (Annex I, starts on page 31, Section V Projections on page 33)</li> </ul>	<p>and measures that have been implemented and received legislative and financial support from the ones that have not yet been implemented, legislated or funded.</p> <p>Canada’s reports to the UNFCCC are available at: <a href="https://unfccc.int/documents/209928">https://unfccc.int/documents/209928</a></p>	<p>Dates will vary based on UNFCCC or other legislated timelines. Next report will be Canada’s 8<sup>th</sup> National Communication and 5<sup>th</sup> Biennial Report to the UNFCCC expected late in 2022.</p>	<p>requirements to clearly describe the development of scenarios according to the status of the policies included in them:</p> <ol style="list-style-type: none"> <li>Reference case includes policies and measures that have been funded, legislated and implemented by federal, provincial and territorial (FPT) governments.</li> <li>Additional Measures Case, which builds on the Reference Case by including policies and measures that have been announced by FPT governments but have not yet received full financial or legislative support.</li> <li>Policy scenarios that build on the Reference and Additional Measures Case by including other proposed and aspirational policies and measures.</li> </ol> <p>To date, ECCC has followed these standards, such as in the emissions projections have been presented in the Emissions Reduction Plan published on March 29, 2022.</p>	<p>Analysis Directorate, Strategic Policy Branch</p>



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		<p><a href="https://unfccc.int/sites/default/files/resource/docs/2011/cop17/eng/09a01.pdf">https://unfccc.int/sites/default/files/resource/docs/2011/cop17/eng/09a01.pdf</a></p> <p>Canada’s reports to the UNFCCC include the detailed list of measures in both the Reference and With Additional Measures cases.</p>				
3.65	<p>In order to better inform decision making, Environment and Climate Change Canada, in coordination with Natural Resources Canada, should improve its pathways modelling by using reasonable, cost-effective, and technically feasible assumptions.</p>	<p><b>Agreed.</b> For purposes of modelling GHG projections in the context of Canada’s climate plan, ECCC publishes both a “Reference Case” and a “With Additional Measures” case. Both use reasonable, cost-effective and technically feasible assumptions. These assumptions are informed by the policy and program development work led by other government departments, including Natural Resources Canada, and include other considerations such as uncertainty in assumptions about future costs and technical parameters, particularly for rapidly-evolving or emergent technologies. The assumptions are also informed by reviewing the latest academic literature.</p>	<p>Implement a process with Natural Resources Canada and other departments as required to create an evergreen list of rapidly-evolving or emergent technologies (e.g., carbon capture, utilisation and storage, hydrogen, methane abatement technologies, oil sands solvents, etc.) that could have consequential impacts on results from models used in national-level projections of GHG emissions, with associated cost and technical parameters.</p>	<p>Winter 2023 for the initial list and ongoing</p>	<ol style="list-style-type: none"> <li>1. ECCC, Natural Resources Canada and other federal departments (as required) to compile draft list of technologies and associated parameters (expected completion date: Fall 2022).</li> <li>2. ECCC-Natural Resources Canada determination of which parameters to use in modelling (expected completion date: Winter 2023).</li> <li>3. Finalize list of technologies and parameters (expected completion date: Spring 2023).</li> <li>4. Ongoing discussions and updates to list as required.</li> </ol>	<p>Director General, Economic Analysis Directorate, Strategic Policy Branch</p>
3.73	<p>To improve quality, transparency, and trust in climate change modelling, Environment and Climate change Canada should develop a formal review framework where its modelling would be subject to</p>	<p><b>Agreed.</b> ECCC agrees with the importance of ensuring the on-going suitability of the models themselves and shares the objective of maximizing the transparency of the inputs to those models. In addition to the existing consultation, review and transparency</p>	<p>Emissions projections are published annually, following extensive consultation process with stakeholders.</p> <p>Convene expert-led process to provide independent advice to</p>	<p>Fall 2023 for the expert-led process to provide independent advice</p>	<p>ECCC will continue to use its formal consultation process with stakeholders in development of its GHG and air pollutant emissions projections.</p> <p>A commitment was made in the March 2022 Emissions Reduction Plan to convene an</p>	<p>Director General, Economic Analysis Directorate, Strategic Policy Branch</p>



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	<ul style="list-style-type: none"> <li>enhanced peer review</li> <li>formal consultations with stakeholders</li> <li>formal periodic quality assurance control</li> <li>public scrutiny</li> </ul>	<p>measures, ECCC will consider what additional measures may be necessary to ensure that the modelling process remains suitable and reliable by reviewing international best practices and consulting with modelling experts. The details of the approach will be determined based on these consultations.</p>	<p>enhance current modelling regime to inform the basis of future Emission Reduction Plans and progress reports.</p> <p>Detailed data underlying the projections are published On the Government of Canada Open Data Portal.</p> <p>International Review Processes of Canada’s National Communications and Biennial Reports by UNFCCC Expert Review Teams are supported.</p>	<p>Ongoing for other actions: consultations with stakeholders for the development of projections and the publication of the projections annually with the underlying data on the Government of Canada Open Data Portal. Support International Review Processes as they are scheduled by UNFCCC.</p>	<p>expert-led process to provide independent advice in time for the 2023 Progress Report, enhancing the current robust and reliable modelling regime to inform the basis of future Emissions Reduction Plans. The 2023 Progress Report is required by the Net Zero Accountability Act to be released by the end of 2023 (<i>subject to validation</i>)</p> <p>ECCC will continue to support the international review processes of its international reports (National Communications, Biennial Reports, National Inventory Reports on greenhouse gas emissions), and will continue to address the recommendations of the expert review teams.</p> <p>ECCC will continue to implement model improvements to respond to the peer review recommendations and participate in energy modelling discussions and workshops. It will continue improving and adding new data sets to the open data portal, subject to data confidentiality constraints.</p>	

**Note:**

- ECCC’s Audit and Evaluation Branch will refer to this MAP in its periodical follow-up with each Branch Head and in its report to the Deputy Minister on the progress made in implementing the OAG or CESD recommendations.