CANADIAN CLIMATE INSTITUTE | L'INSTITUT CLIMATIQUE DU CANADA

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INDEPENDENT ASSESSMENT of CANADA'S 2023 Emissions Reduction Plan Progress Report

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Wind turbines in a canola field near Pincher Creek, Alberta.

SUMMARY

The Canadian Climate Institute's *Independent Assessment of the 2023 Emissions Reduction Plan Progress Report* concludes that Canada has made significant progress in implementing policies to reduce carbon emissions, but that more is needed to put the country on track to its 2026 interim objective and 2030 emissions reduction target. In 2030, net emissions are projected to decline by 34 to 36 per cent below 2005 levels, compared to the 2030 target of a 40 per cent reduction. Progress by sector is variable. To quantify the progress so far, the assessment models existing climate policy against a no-climate-policy scenario and finds that emissions today would be 7 per cent higher, and 41 per cent higher in 2030, absent legislated, developing, and announced policies. To reach the country's legislated target for 2030, all orders of government will need to rapidly implement announced and developing policies, ratchet-up existing ones, and introduce new measures. Canada has come a long way, but there is much more to do.

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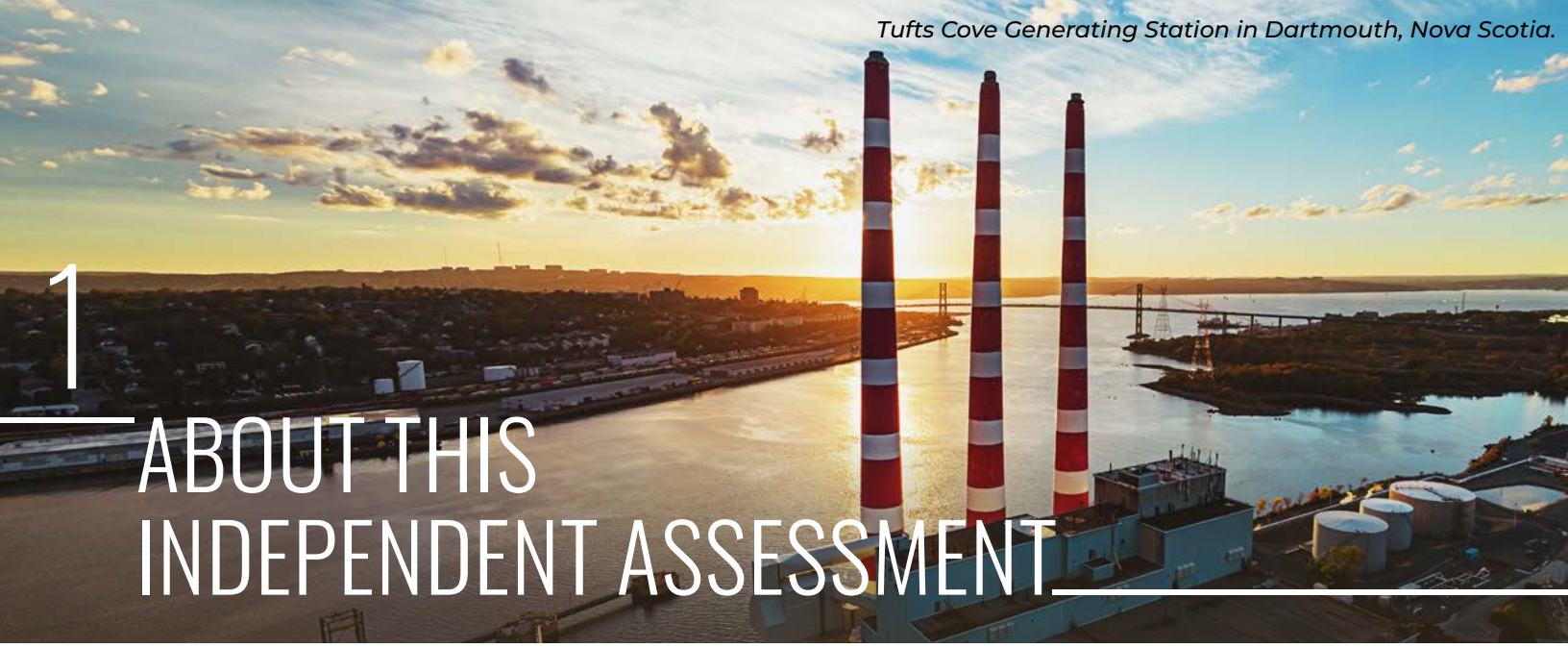


Tufts Cove Generating Station in Dartmouth, Nova Scotia.

1 ABOUT THIS INDEPENDENT ASSESSMENT

In accordance with the Canadian Net-Zero Emissions Accountability Act, Environment and Climate Change Canada (ECCC) published an *Emissions Reduction Plan Progress Report* (2023 Progress Report) in December 2023. The federal government's own emissions projections indicate that policy is expected to reduce emissions by 36 per cent below 2005 levels by 2030, which is short of the target of 40 to 45 per cent below 2005 emissions.

Just as we did with the release of the first Emissions Reduction Plan in March 2022, the Institute, in partnership with Navius Research, has reviewed the 2023 Progress Report and prepared an independent assessment. Independent assessments support continuous policy improvement by ensuring that plans and progress reports are transparent, credible, and comprehensive. Getting these details right will help get Canada on track with its 2030 emissions reduction target.

Under the *Net-Zero Emissions Accountability Act,* the government must "use the best scientific information available and promote transparency, accountability, and immediate and ambitious action in support of achieving" national emissions reduction targets. This independent assessment draws on our framework for a credible, adaptive Emissions Reduction Plan and our expectations for the progress report. This analysis assesses the 2023 Progress Report using a three-part frame:

1. **Progress: Are there indications of progress?** To meet the 2030 emissions reduction target, reported emissions in the National Inventory Report need to decline while policy implementation accelerates.
2. **Action: Are current actions placing emissions on track?** Analysis and modelling of pan-Canadian mitigation policies can verify if projected emissions are on track to meet the national target of declining at least 40

per cent below 2005 levels in 2030, or to about 440 megatonnes of carbon dioxide equivalent ($MtCO_2e$).

3. **Transparency: Is the Emissions Reduction Plan governance process transparent?** The more the Emissions Reduction Plan and progress reports provide details on policy implementation and actual outcomes, the better positioned Canada will be to course correct as needed.

Our independent assessment concludes that the 2023 Progress Report does not currently place Canada on track to achieve the 2026 interim objective nor the 2030 emissions reduction target. We project net emissions[1] in 2026 to be between 590 and 593 $MtCO_2e$, which is 19 per cent below 2005 levels, within striking distance of the interim 2026 objective of a 20 per cent reduction or approximately 586 $MtCO_2e$. In 2030, net emissions[2] are projected to be between 467 and 482 $MtCO_2e$, which is 34 to 36 per cent below 2005 levels. What is also clear from our analysis, however, is that climate policy is beginning to deliver in Canada. We can expect progress to accelerate further as more policies are implemented and take effect. Further measures to scale up existing policy and implement new policy will push us closer to Canada's 2030 target.

A pulp and paper mill on Vancouver Island, British Columbia.

1 With land use, land-use change, and forestry (LULUCF) accounting.

2 Net emissions with crediting for oil and gas cap flexibility mechanisms, LULUCF, nature-based solutions, agricultural reductions, and Western Climate Initiative credits.

We offer four findings from our assessment:

1. **Canada has come a long way.** Canada's path to 2030 and net zero beyond is not a pass-or-fail test predicated on hitting any single emissions target in any particular year. It is a long road of transition that requires the routine upgrading of buildings, vehicles, and businesses. And despite concern over Canada being off track to the national 2030 target, our analysis shows that considerable progress is being made. We modelled a scenario where federal, provincial, and territorial climate policy effort does not exist. We asked, *what would happen if Canada implemented no new climate policies since 2015?* In this scenario, national emissions would be much higher today and growing fast in the future—without policies from all orders of government, emissions would be 7 per cent higher than they are today, and 41 per cent higher than projected emissions under our legislated policy scenario[3] in 2030 (or 6 per cent above 2005 levels). Every tonne reduced by these policies avoids climate impacts and damages, which are a drag on Canada's economy.

   Another indicator of progress is the movement of policies from announced to implemented. Developments in the last 20 months on our big five policies are promising, including progress on the Clean Fuel Regulations, updated carbon pricing to 2030, proposed Clean Electricity Regulations, and a proposed oil and gas emissions cap. Further movement on these policies is critical in determining Canada's progress towards its 2030 target and net zero by 2050.

2. **But there is much more to do.** Reducing emissions takes time, especially with the country only just starting to implement policy at a level of stringency sufficient to accelerate the widespread adoption of low-emitting technologies. This lag is evident in 2022, which shows only a 6.3 per cent reduction in emissions since 2005.[4] Adding to a sluggish emissions response are several risks that could impede progress, including slow policy implementation, lower policy effectiveness due to policy interactions, and the extent to which existing policies are maintained and/or strengthened by future governments. These risks conspire to keep emissions off a steady and measured decarbonization pathway to 2030 and beyond. Getting on track will require accelerating current policymaking efforts.

3. **Priority actions need to be implemented rapidly.** The government should follow through with legislating the policies outlined in the 2023 Progress Report and introduced in the months since its publication. The Institute's assessment shows that there are still key policies that must be

3 A scenario reflecting currently legislated and implemented policies.

4 Note on a net emissions basis and accounting for LULUCF, the reduction is 12 per cent.

rapidly implemented to move emissions closer to the target. These include tightening performance standards in the large-emitter credit trading markets, implementing the proposed Clean Electricity Regulations (with some proposed reforms), accelerating nature-based climate solutions, and implementing the oil and gas emissions cap and methane regulations. With the Clean Fuel Regulations fully implemented, there is a need to turn attention to buildings, which we see as a continued risk, because of rising emissions in the sector. Federal, provincial, territorial, and municipal governments must work together to implement these policies as soon as possible to drive down emissions. At the same time, quick and effective implementation of current policies will not be sufficient to get Canada on track to the 2030 target. The government must, therefore, strengthen existing policies and introduce new ones to close the gap.

4. **The 2023 Progress Report enhances transparency and accountability, but more can be done.** Our assessment of the 2023 Progress Report indicates that important strides in enhancing transparency and accountability around emission projections and policy implementation have been made. But more can be done, including supplementing future emissions reduction plans and progress reports with leading indicators of progress such as technology deployment, infrastructure build-out, and investment flows. A more comprehensive approach to progress reporting would enable more timely stock taking, improved decision making, and effective course correction.

In addition to this introductory section, this report is organized into eight sections:

- **Section 2** provides a summary of our independent assessment of the 2030 Emissions Reduction Plan and provides a base to assess the 2023 Progress Report.
- **Section 3** provides an overview of progress to date, focusing on historical emissions and policy implementation before the 2023 Progress Report.
- **Section 4** describes our analytical approach.
- **Section 5** presents the economy-wide results of our independent modelling of emissions reduction progress.
- **Section 6** presents the sector-by-sector results of our independent modelling of emissions reduction progress.
- **Section 7** assesses the 2023 Progress Report against our expectations framework.
- **Section 8** presents our findings and recommendations.

Heavy traffic on Highway 400, north of Toronto, Ontario.

2 SUMMARY OF OUR 2022 INDEPENDENT ASSESSMENT OF THE 2030 EMISSIONS REDUCTION PLAN

Our 2022 Independent Assessment of the Emissions Reduction Plan concluded that the plan was a big step forward. We found that policies in the Emissions Reduction Plan would drive emission reductions across all sectors and major sources of emissions in the economy, that it was credible and comprehensive, and that it made major progress in terms of transparency.

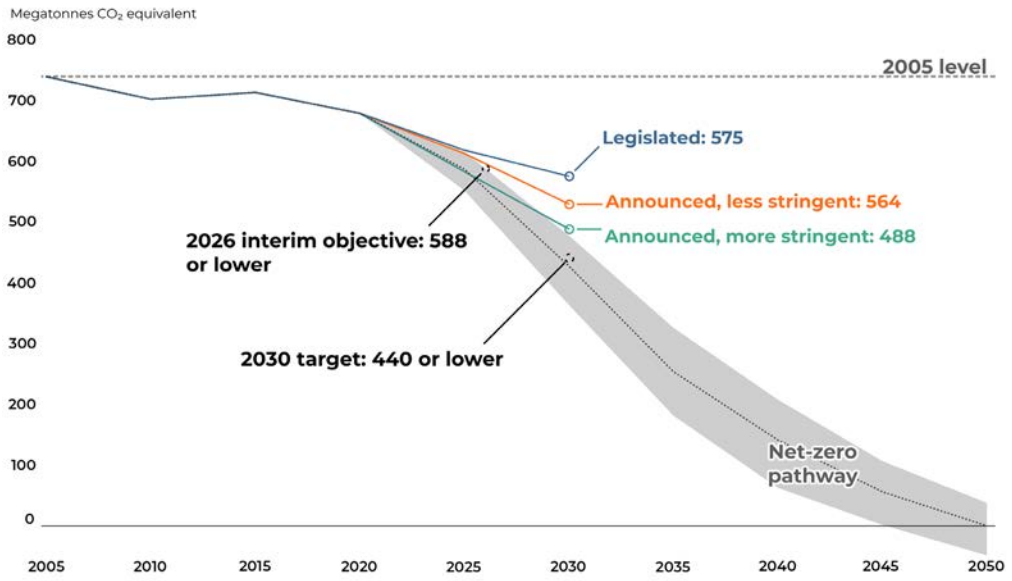
That positive assessment was tempered with caution, however, as we also emphasized that policy implementation must accelerate to deliver deep emissions reductions. We also underscored that final policy design matters, and the stylized policies we modelled could very well deviate when implemented and hence be less effective than modelled. When the plan was released, our independent modelling showed Canada was not on track to meet the 2030 emissions reduction targets: Canada was on track to reduce emissions by 36 to 39 per cent below 2005 levels (Figure 1) compared with the 40 per cent target. We also concluded that Canada's success in achieving its emissions reduction milestones would depend on the speed with which policies are implemented. Notably, 43 per cent of the planned emissions reductions in the first Emissions Reduction Plan were projected from announced policies that were not clearly defined and did not have an implementation plan. Furthermore, we found that the sheer number of policies addressing emissions is a double-edged sword—while they enable broad coverage across sources of emissions, interactions among overlapping policies could reduce effectiveness.

Therefore, our 2022 assessment showed it was imperative for federal, provincial, and territorial governments to more accurately track expected emissions reduction performance so that course corrections could be made. It also showed there were five policy priorities necessary to achieve most of Canada's projected emissions reductions:

1. Continue to adjust the federal carbon price, including adding stringency to the large-emitter programs.
2. Establish an emissions cap for the oil and gas sector, complementing the forthcoming methane regulations.
3. Design Clean Electricity Regulations that can reduce emissions while expanding generation, transmission, and storage to support electrification in buildings, vehicles, and businesses.
4. Finalize the Clean Fuel Regulations to reduce the emissions intensity of gasoline and diesel.
5. Deploy land use emissions reduction and sequestration projects as fast as possible.

Figure 1:

Economy-wide emissions projections from our first independent assessment of the 2030 Emissions Reduction Plan (published April 2022)



		Emissions (Mt CO_2e)				Growth rate (CAGR %)		
		2005	2019	2026	2030	2005-2019	2019-2026	2026-2030
Net-zero Pathway	Lower effort			588	478		-2.6%	-5.1%
	Median	739	706	587	427	-0.3%	-3.4%	-6.3%
	Higher effort			514	364		-4.4%	-8.3%
Emissions Reduction Plan	Legislated			610	575		-2.1%	-1.4%
	Announced, less stringent			596	530		-2.4%	-2.9%
	Announced, more stringent			564	488		-3.1%	-3.5%
Does not meet lower CAGR		Meets lower CAGR, but not median				Meets or exceeds median CAGR		

A refinery lights up the night sky in Regina, Saskatchewan.

3 PROGRESS SINCE THE RELEASE OF THE 2030 EMISSIONS REDUCTION PLAN

The progress that Canada has made since the publication of the Emissions Reduction Plan in March 2022 can be assessed by plotting the country's emissions year to year and assessing the speed at which new policies have been implemented.

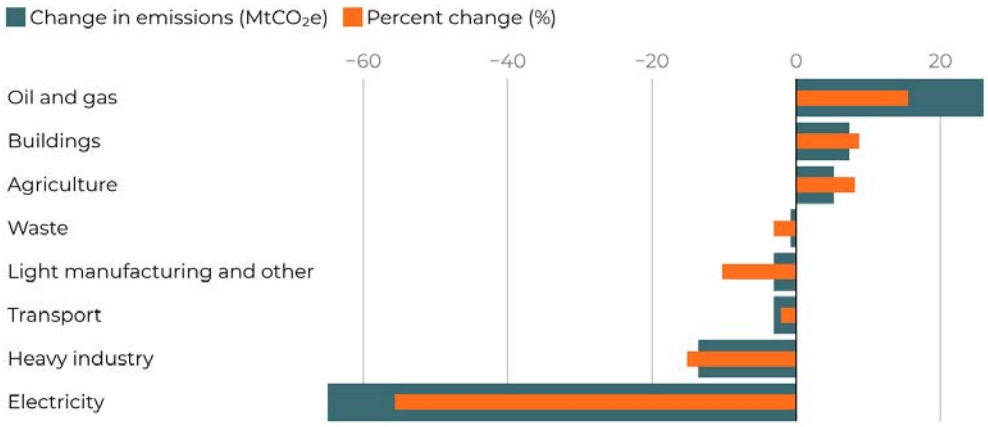
3.1 EMISSIONS IN 2022

Canada's emissions have declined slightly since 2005, but they are not yet falling at the consistent rate that is needed to get the country on track to its 2030 target.

According to the Climate Institute's Early Estimate of National Emissions, Canada's emissions in 2022 were 685 Mt CO_2e, up 2.1 per cent above 2021 levels and down 6.3 per cent below 2005 levels.[5] To reach the country's target, emissions must now fall by nearly that amount every year until 2030. Nearly three-quarters of the increase from 2021 to 2022 can be attributed to rising emissions in the oil and gas and buildings sectors. Emissions in these sectors have grown steadily since 2005 (Figure 2).

Figure 2:

Emissions changes by sector from 2005 to 2022



5 Note on a net emissions basis and accounting for LULUCF, the reduction is 12 per cent.

There is also good news in the data. Though emissions are rising in some parts of the economy, climate policy and the deployment of clean technology are offsetting some of these increases. Our analysis finds that these drivers contributed 22.9 $MtCO_2e$ of emissions reductions between 2021 and 2022, which helped hold the overall net increase to 14.2 $MtCO_2e$.

This mixed picture emphasizes the importance of accelerated policy action. Canada's existing climate policies are beginning to have some impact on emissions; the next question is whether governments are sufficiently addressing sources of continuing emissions growth and turning their new policy promises into practice fast enough.

3.2 POLICY IMPLEMENTATION BEFORE THE 2023 PROGRESS REPORT

The Canadian climate policy landscape is shifting rapidly. In the 20 months between the release of the 2030 Emissions Reduction Plan and the 2023 Progress Report, governments across the country have made important progress, implementing previously announced policies and introducing new ones. At the same time, some keystone policies have yet to be fully implemented.

There are two indicators of progress to consider: advancement of measures through the policy development cycle and action on the five federal priorities we identified in our first independent assessment.

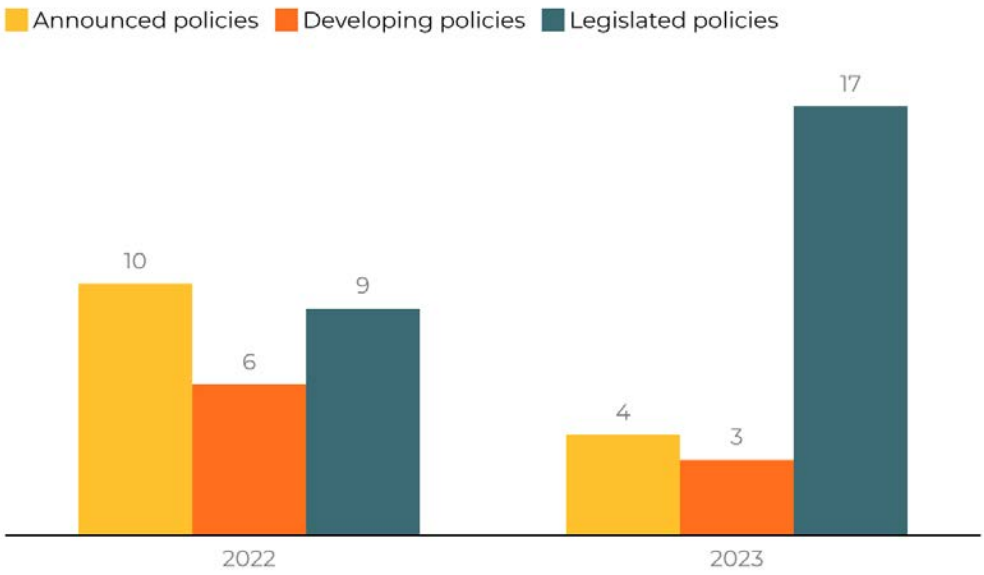
The **first indicator** is the advancement of measures through the policy development cycle. Here, the Institute assesses progress by classifying policies according to three stages of implementation:

- **Legislated:** The policies that are fully implemented or about to be implemented. These are policies whose emissions coverage, implementation timelines, and stringency are known.
- **Developing:** Policies whose design is relatively clear but that have not yet been implemented. The stringency and coverage of these measures is known but there is still some uncertainty about their final shape.
- **Announced:** These policies have yet to enter a planning cycle, with little information available about their coverage and stringency. Their design is uncertain.

Looking at progress from this perspective, the picture is encouraging. Of the policies developed since 2020 that we simulated, 19 are now considered legislated, up from nine in our April 2022 assessment (Figure 3), while fewer policies remain at the announced stage.[6]

Figure 3:

Policy implementation progress since the first independent assessment



The **second indicator** of progress is action on the five federal priorities we identified in our last independent assessment. The federal government's record is generally positive; it has implemented or released more details on four out of the five policy priorities we identified:

1. The revised federal benchmark for carbon pricing systems entered into force in January 2023 (legislated). Heavy industry programs are now more stringent thanks to the addition of a tightening rate. Unfortunately, in the same period the federal government added uncertainty to carbon pricing by exempting home heating oil from the fuel charge.

2. The federal government recently published a framework for a proposed emissions cap for the oil and gas sector (announced)[7], along with draft regulations for deeper methane reductions in the upstream oil and gas sector (developing).

3. In August 2023, the federal government proposed Clean Electricity Regulations (developing) that are intended to drive the country's electricity system towards net-zero emissions.

4. After a long development cycle, the Clean Fuel Regulations entered into force in July 2023 (legislated).

6 In fact, this figure somewhat understates policy progress, because our 2023 analysis excludes some legislated measures that we examined in 2022, and it includes new measures that entered the policy development cycle after the ERP was published. For more information on the policies modelled in our independent assessments, see the technical reports by Navius Research for the current assessment and the previous assessment.

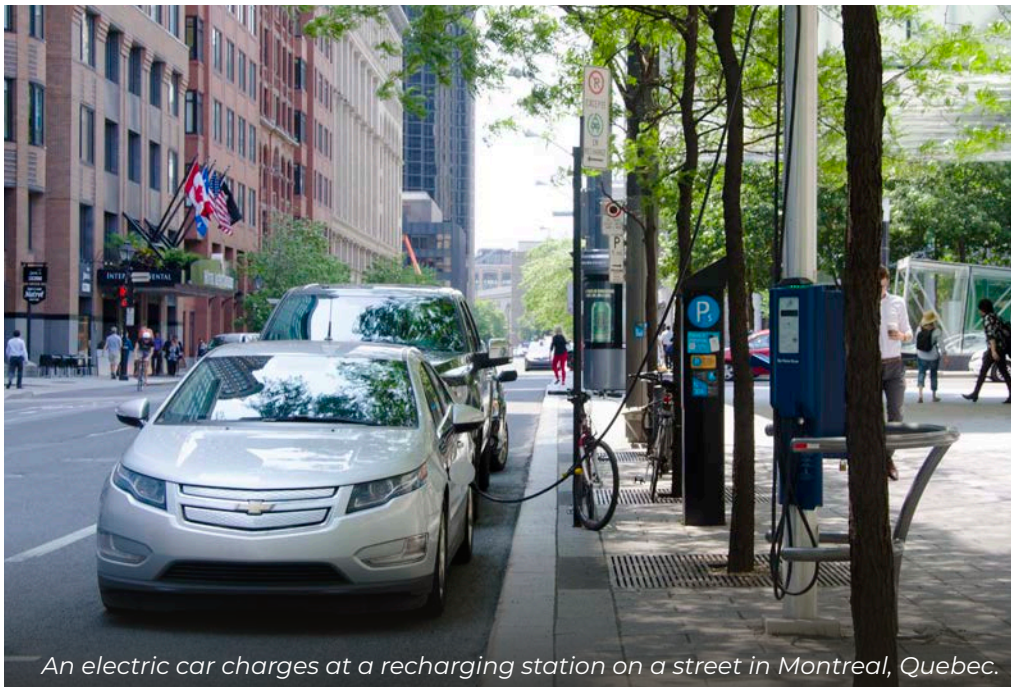
7 This policy is still considered announced because it was not modelled in the 2023 Progress Report.

5. There has been less progress on land-use policies, with no new measures implemented since the Emissions Reduction Plan was published. However, the federal government finalized its Greenhouse Gas Offset Credit Regulations in spring 2022 and is preparing offset protocols that could be used to recognize emissions reductions and sequestration in the land-use sector.

In addition to these priority measures, among the most significant newly legislated measures are five investment tax credits that are intended to encourage the uptake of emissions-reducing technologies. These tax credits—for investments in carbon capture, clean electricity, clean hydrogen, clean technology, and clean technology manufacturing—have not actually been adopted into law but their details are fairly clear, and they will apply retroactively.

Other federal measures have advanced from announced to developing. Notably, in December 2022, the government published draft regulations for a zero-emissions vehicle mandate, which sets minimum shares of light-duty vehicle sales that must be zero-emission.

However, some potentially powerful measures remain at the announced stage, with much still to be determined about their final form. The government has not released details on two other forthcoming regulations: one governing waste methane and another establishing sales mandates for medium- and heavy-duty vehicles. Similarly, the federal government has yet to publish two long-awaited strategy documents: one on green buildings and another on sustainable agriculture, each outlining how Canada can align these key sectors with net zero.



An electric car charges at a recharging station on a street in Montreal, Quebec.

3.3 PROGRESS AT OTHER ORDERS OF GOVERNMENT

> Three quarters of Canada's emissions come from provinces and territories without their own legislated emissions reduction targets for 2030.

While this assessment focuses on federal policy, it is also important to acknowledge the progress made by other orders of government in the past 20 months. The progress described below is a snapshot, not a comprehensive assessment.

Since the publication of the Emissions Reduction Plan, various provinces, territories, municipalities, and Indigenous governments have been turning climate commitments into action.

Indigenous-led climate progress spans a range of activities, from the continued development of the Tu Deh-Kah geothermal project in Fort Nelson First Nation to the initiation of Indigenous Clean Energy's Project Accelerator for energy efficiency projects in Indigenous housing. At the municipal level, Calgary published an implementation plan for its climate targets, while Winnipeg advanced a plan to protect and expand its urban canopy.

Among the provinces, both Ontario and Quebec released plans for a significant build-out of their electricity systems to support widespread electrification. Quebec and Nova Scotia announced new spending to accelerate the deployment of electric vehicle chargers. Prince Edward Island created programs to provide free electric hot water heaters and home insulation to low-income households. And Alberta is expected to complete its phase-out of coal-fired electricity by early 2024 , six years ahead of schedule.

Other provincial policies remain in development. These include British Columbia's own cap on emissions from the oil and gas sector, announced in March 2023, and Nova Scotia's commitments to phase out coal-fired electricity by 2030 and introduce new incentives for medium- and heavy-duty zero-emission vehicles.

Although progress is visible across Canada, it is uneven. Three quarters of Canada's emissions come from provinces and territories without their own legislated emissions reduction targets for 2030. The lack of alignment among governments makes rapid, cost-effective climate action more difficult.

Solar panels operating beside grain elevators on a Wolf Island, Ontario farm.

4 ASSESSING ACTIONS AND PROJECTED EMISSIONS IN THE 2023 PROGRESS REPORT

4.1 WHAT'S CHANGED?

Since completing our first independent assessment of the Emissions Reduction Plan in 2022, we made several changes to our approach. As a result, we are careful in how we compare the results in this assessment to our first assessment of the Emissions Reduction Plan.

The first category of changes we made was to update the characterization of some of the policies we modelled to reflect developments over the last 20 months. This included updating the design of some policies, such as the proposed Clean Electricity Regulations, and updating the status of others—whether from announced to developing or from developing to legislated. The second category of changes was to calibrate Navius' model to align with the 2023 National Inventory Report and the latest oil price forecasts from the Canada Energy Regulator. The final change was to update the modelling tool we used. Since last year's analysis, Navius Research has integrated their gTech model with their electricity model.

While the first and second categories of changes were necessary to align with the most up-to-date policy and market assumptions, and the final change was to improve our analytical tools, all these changes serve to improve the accuracy and credibility of our analysis. More details about differences between our 2022 and 2023 results are available in Navius' technical report.

4.2 APPROACH

Our approach to assessing the 2023 Progress Report, implemented in collaboration with Navius Research, follows a three-step process.

1. **Develop a short list of policies that lead to material emissions reductions.** While the Institute identified a list of over 80 federal climate policies, only 24 will result in material emissions reductions that could be reasonably modelled. Source documents were consulted to define policy assumptions for the 24 policies with material impacts that were made for legislated and announced policies since 2020. These documents include the 2022 and 2023 federal budgets, the 2030 Emissions Reduction Plan, various background papers, and the *Canada Gazette*. Several provincial and territorial policies were also identified and modelled, such as updated large-emitter credit trading systems, B.C. and Quebec zero-emission vehicle mandates, biofuel mandates, renewable portfolio standards, the Quebec renewable natural gas mandate, and the Alberta carbon trunk line.

2. **Specify and verify policy design assumptions in 2023 Progress Report.** We developed a scenario description for each of the 24 recently legislated, developing, and announced federal policies. To improve accuracy and verify our assumptions, we shared the scenario descriptions with ECCC and worked with them to update our assumptions. For policies where information is not publicly available, ECCC did not comment on our policy design assumptions. We consulted the 2023 Progress Report after it was published and updated the policy design assumptions as needed.

Spheres containing biogas capture wells in Frédéric-Back Park, in Montreal.

3. **Define scenarios and model the outcomes.** Like our 2022 assessment of the Emissions Reduction Plan, we simulate four scenarios, each with different levels of policy design uncertainty:

   - **Legislated scenario.** Included in this scenario are policies already legislated or implemented, where the coverage of emissions, the timing of implementation, and the stringency of the policy are known, making modelling results more certain.

   - **Developing scenario**. Includes all legislated policies as well as policies that are under development, using publicly available documents that indicate core elements of their proposed design. There is less certainty in these policies as they have yet to be legislated. The proposed Clean Electricity Regulations are an example. In this scenario, the performance standards in the large-emitter pricing programs are automatically tightened to balance credit supply and demand so that the carbon price in large-emitter programs remains equivalent to the federal carbon price.

   - **Announced scenarios**. Includes all legislated and developing policies as well as those announced policies that have yet to enter a planning cycle, and where there is some information available on the specifics of policy coverage and stringency. Their design remains uncertain. The proposed oil and gas cap, for example, is included in this scenario, as are a Green Buildings Strategy and heavy-duty vehicle regulations. We simulated two announced scenarios reflecting greater or lesser stringency to bound possible emissions outcomes and account for uncertainty in policy design:

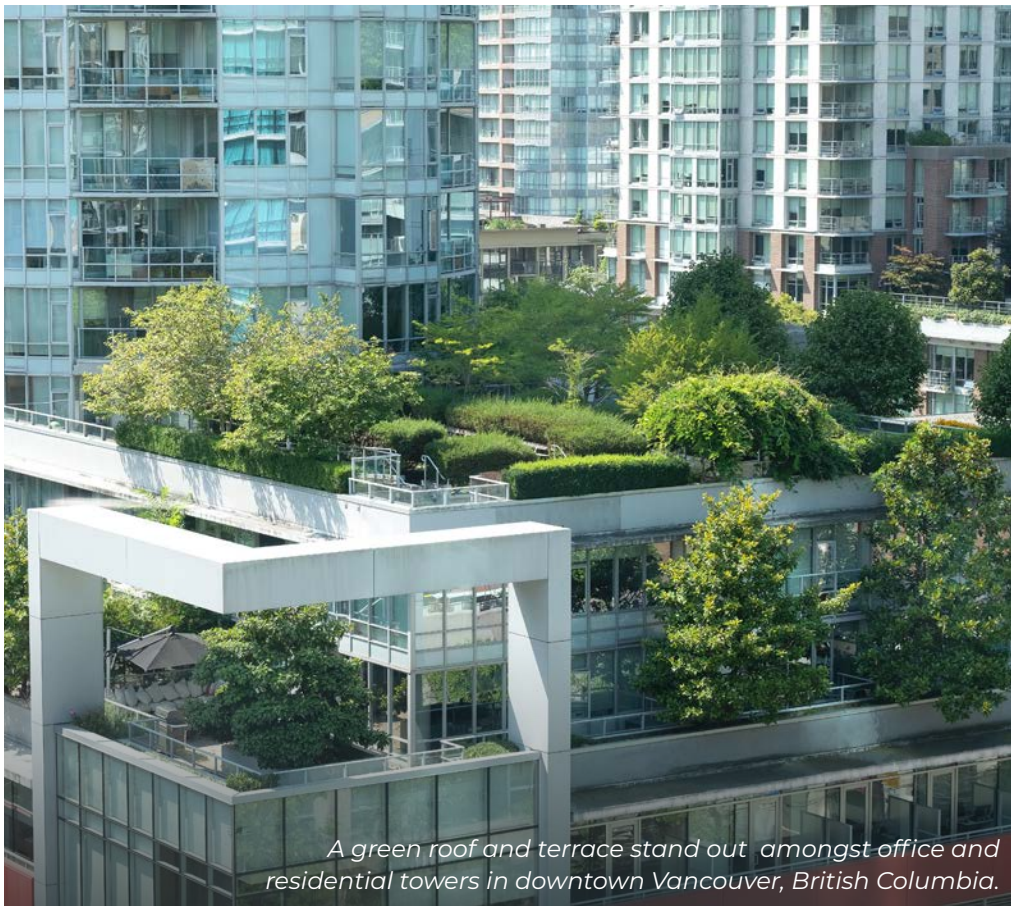
     - **Announced, less stringent.** Under this scenario, the carbon price does not hold, as some large-emitter program credit markets are not balanced due to interactions with announced policies, and the oversupply weakens the marginal price signal in some jurisdictions. The oil and gas emissions cap, as currently proposed, will lead to interactions between the large-emitter programs and the cap, and the two policies interact, exacerbating credit oversupply. In our view, this scenario most accurately reflects current policy design.

     - **Announced, more stringent**. Under this scenario, the performance standards are automatically tightened so that the carbon price in large-emitter programs remains equivalent to the federal carbon price. The oil and gas emissions cap is separated from the large-emitter programs so that the same abatement action cannot create credits under both systems.

A description of these recently implemented or announced policies included in each scenario, and assumed stringency and coverage, can be found in Navius' technical report.

In addition to these four core scenarios, we also simulated several additional scenarios to assess the trajectory of Canada's emissions in the absence of climate policy, and to test key uncertainties that may place target attainment at risk:

- **No-climate-policy scenario.** To highlight the impact of climate policy on historical and projected emissions, we stripped out from the model all federal, provincial, and territorial emissions reduction and most energy efficiency policies implemented since 2015.
- **Uncertainties in future oil price and technology costs.** Best-practice modelling of emissions pathways includes varying uncertainties. Varying the oil price as well as technology cost assumptions can shift emissions pathways significantly. We therefore simulated seven sensitivity scenarios across all the core scenarios to test for variance in the emissions pathways to 2030. Assumptions to the sensitivity cases are provided in Navius' technical report.



A green roof and terrace stand out amongst office and residential towers in downtown Vancouver, British Columbia.

An oil refinery in Port Moody, British Columbia.

5 CANADA'S EMISSIONS PATHWAYS

With implementation accelerating, we see signs of significant progress and even bigger gains to be made with appropriate increases in policy stringency. And even though emissions projections indicate that Canada is falling short of the 2030 target, Canada has come a long way. Absent the considerable range of carbon and energy efficiency policies implemented, Canada's emissions would be 7 per cent higher than they are today and would grow substantially by 2030—to 41 per cent higher than projected emissions in our legislated scenario.

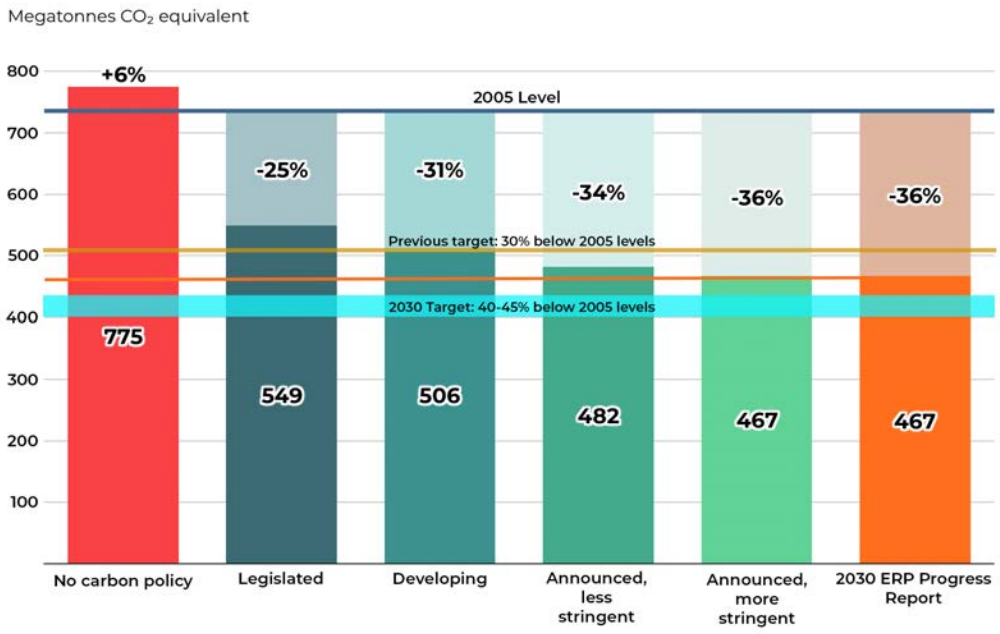
Our modelling indicates that the plans and policies outlined in the 2023 Progress Report do not place Canada on a path to achieve the 2030 target, nor the 2026 interim objective to reduce emissions by 20 per cent below 2005 levels (Figure 5). This finding holds across all the sensitivity cases (Figure 6). The scenario results are provided in Figure 4 and include:

- **No policy.** In the no-policy scenario, we take out all climate policies implemented since 2015, the year in which the model starts. Absent climate policy, there would be no incentive to adopt low-carbon technologies and processes unless for cost benefits or behavioural preferences. The result of absent federal, provincial, and territorial policies is much higher emissions—775 $MtCO_2e$ in 2030. This represents an increase of 226 $MtCO_2e$, a 41 per cent increase in emissions over the legislated scenario in 2030, and emissions that are 6 per cent above 2005 levels. This projection only accounts for land use, land-use change, and forestry (LULUCF), since Western Climate Initiative credits or nature-based solutions are not consistent with the no-policy scenario.
- **Legislated policy.** In 2026, emissions are 606 $MtCO_2e$, which is 17 per cent lower than 2005 levels, and off-track for the objective of 20 per cent below 2005 levels. In 2030, emissions are 549 $MtCO_2e$, or 25 per cent below 2005 levels, well short of the 2030 target.

- **Developing policy.** Emissions are closer to the 2026 objective and 2030 target, at 597 $MtCO_2e$ (18 per cent below 2005) and 506 $MtCO_2e$ (31 per cent below 2005) respectively. This scenario includes adjustments to the large-emitter performance standards to maintain the credit price in trading markets.
- **Announced, less stringent.** With an oil and gas cap of 135 $MtCO_2e$ that interacts with large-emitter credit markets, no adjustments to performance standards to maintain the carbon price in large-emitter programs, and the implementation of policy for heavy transport and buildings, this scenario puts Canada on a path for net emissions[8] of 482 $MtCO_2e$ in 2030, or a 34 per cent reduction below 2005 levels. Since this scenario does not include adjustments to performance standards, but the developing scenario does, emissions from large-emitters are higher in this scenario, compared to the developing scenario.
- **Announced, more stringent.** This scenario separates the oil and gas cap from large-emitter credit markets, and includes adjustments to large-emitter performance standards to maintain the credit price in trading markets. This scenario puts Canada closest to its target. Net emissions are 467 $MtCO_2e$ in 2030, or 36 per cent below 2005 levels.

Figure 4:

Scenario results of 2023 Progress Report: net emissions in 2030



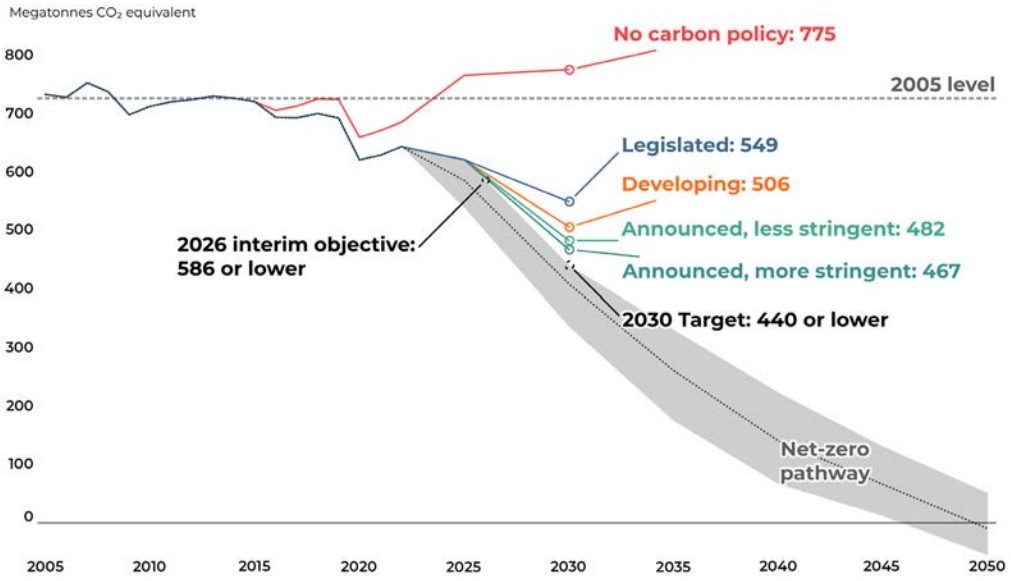
8 Net emissions with crediting for oil and gas cap flexibility mechanisms, LULUCF, nature-based solutions, agricultural reductions, and Western Climate Initiative credits.

Two indicators are used to track the emissions pathways in Figure 5 below:

- The absolute levels of emissions to be achieved, measured in megatonnes of carbon dioxide equivalent ($MtCO_2e$).
- The annual change in emissions required, specified as the compounded annual growth rate (CAGR).

Figure 5:

Canada's emissions pathways according to the Institute's independent modelling of the 2023 Progress Report[9]

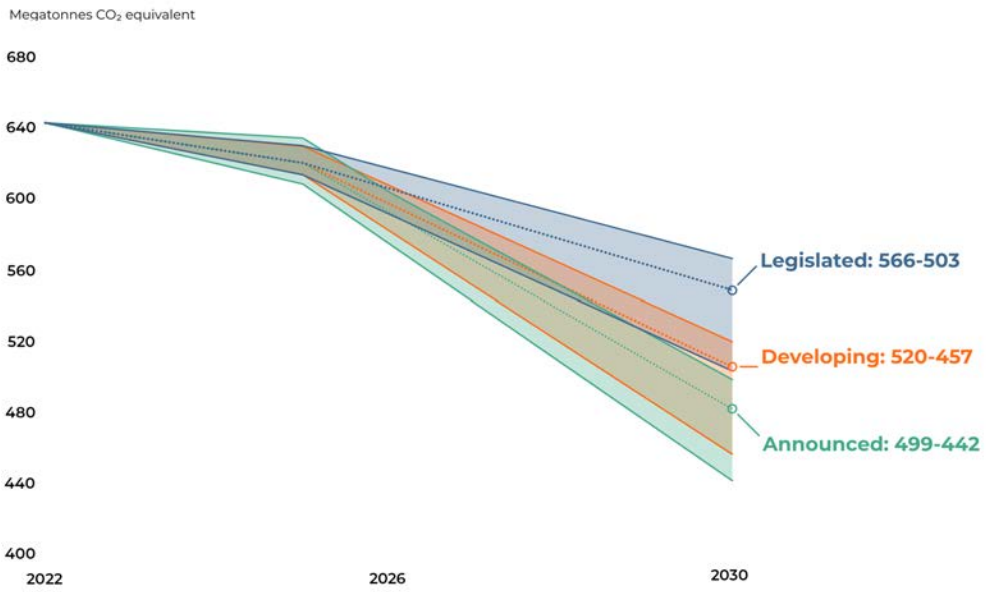


		Emissions (Mt CO_2e)				Growth rate (CAGR %)		
		2005	2022	2026	2030	2005-2022	2022-2026	2026-2030
Net-zero pathway	Lower effort			586	440		-2.3%	-6.9%
	Median	732	643	550	408	-0.8%	-3.8%	-7.2%
	Higher effort			498	336		-6.2%	-9.4%
2023 Progress Report	Legislated			606	549		-1.5%	-2.4%
	Developing			597	506		-1.8%	-4.1%
	Announced, less stringent			593	482		-2.0%	-5.0%
	Announced, more stringent			590	467		-2.1%	-5.7%
Other scenarios	No carbon policy			767	775		2.9%	0.3%
Does not meet lower CAGR		Meets lower CAGR, but not median				Meets or exceeds median CAGR		

9 This graph shows net emissions, including LULUCF.

Figure 6:

Uncertainty range in Canada's emissions pathways under 2023 Progress Report



5.1 COMPARISON WITH THE FEDERAL MODELLING OF THE 2023 PROGRESS REPORT

Independent assessments of government emissions projections ensure that plans and progress reports are transparent and credible. Table 1 compares emissions reductions from our independent assessment modelling to the 2023 Progress Report. Two observations are evident:

- The total national emissions are 8 per cent higher in our developing scenario relative to the comparable with-additional-measures (WAM) scenario in the 2023 Progress Report. The policies included in our developing scenario aligns most closely with those in the with-additional-measures scenario. Our announced scenarios include two additional policies—the proposed oil and gas emissions cap and post-2027 heavy duty vehicle regulations—which are not included in the government's modelling.
- Most sectors are closely aligned. Oil and gas emissions are much higher in our scenario. Much of this difference has to do with assumptions about oil and gas prices and assumed growth in oil and gas production. This deviation is likely reasonable given the sensitivity of production to prices. Electricity emissions are lower in our developing scenario, likely due to different modelling approaches, how technology such as storage are represented, and the impact of policy on technology deployment. Differences in waste are due to scenario design, where we have included announced landfill methane regulations in the announced scenarios.

Table 1:

Comparing independent assessment of emissions reductions to government projections[10]

Sector	Historical		Projected in 2030						
	2005 NIR	2022 EENE	ECCC Progress Report (WAM)	CCI					
	$MtCO_2e$		$MtCO_2e$	Developing		Announced			
				Mt	vs. ERP	less stringent		more stringent	
						Mt	vs. ERP	Mt	vs. ERP
Oil & gas[11]	168	194	128	148	16%	152	19%	150	17%
Electricity	117	52	20	12	-40%	25	25%	18	-10%
Transportation	156	153	137	134	-2%	133	-3%	132	-4%
Heavy industry	89	75	63	69	10%	73	16%	68	8%
Buildings	85	92	69	79	14%	68	-1%	68	-1%
Agriculture	64	69	63	63	0%	63	0%	63	0%
Waste	22	21	13	17	31%	10	-23%	10	-23%
Others	30	27	20	28	40%	28	40%	28	40%
Total (excl. LULUCF)	**732**	**685**	**512**	**551**	**8%**	**552**	**8%**	**537**	**5%**
LULUCF, nature-based, ag, and WCI imports*			-45	-45		-45		-45	
Oil and gas cap compliance*						-25		-25	
Total (with adjustments)	**732**	**685**	**467**	**506**	**8%**	**482**	**8%**	**467**	**0%**

*adopted directly from ECCC

10 Numbers may not add up due to rounding.

11 In this table, emissions in the oil and gas sector are gross emissions. An additional 25 Mt of compliance flexibility, as proposed in the oil and gas emissions cap framework, are deducted from the total below.

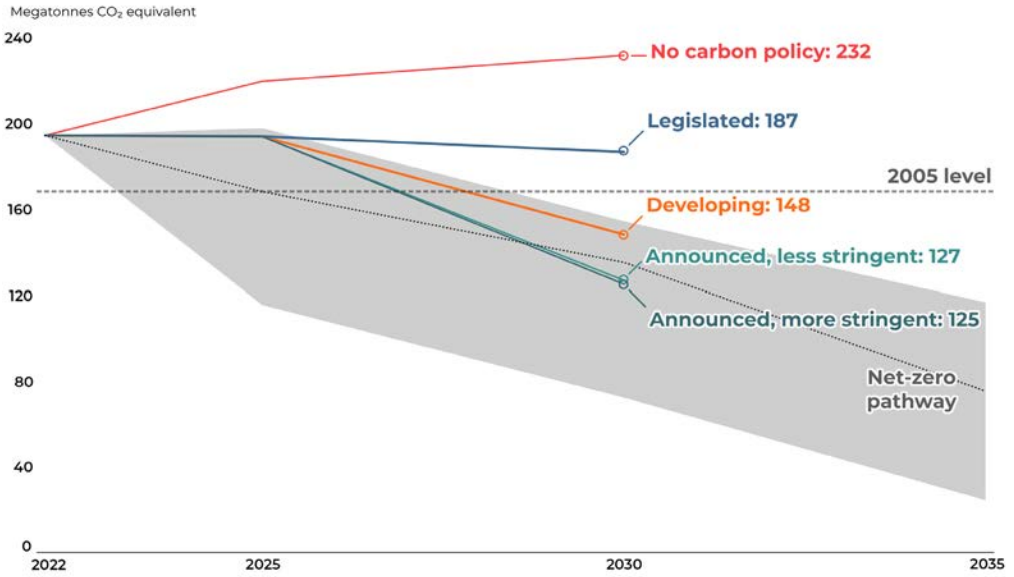
6 SECTORAL EMISSIONS PATHWAYS

6.1 OIL AND GAS (UPSTREAM AND DOWNSTREAM)

Policies focused on the oil and gas sector include large-emitter carbon pricing, a proposed cap on upstream emissions, methane regulations, the Clean Fuel Regulation, the carbon capture investment tax credit, and access to the Net Zero Accelerator. Emissions are on track for the net-zero pathway in 2026 and 2030 under the developing scenario, while both announced scenarios push emissions further onto the pathway. However, announced policies in this sector carry significant implementation risk. The slow development of the emissions cap, which does most of the heavy lifting to reach the net-zero pathway, and its reliance on alternative compliance flexibility mechanisms for an additional 25 $MtCO_2e$ of reductions (including payments to a decarbonization fund), introduce significant uncertainty for emissions reductions in the announced scenarios. Significant risk therefore still exists in the sector.

Figure 7:

Oil and gas emissions projections under the 2023 Progress Report[12]



		Emissions (Mt CO_2e)				Growth rate (CAGR %)		
		2005	2022	2026	2030	2005-2022	2022-2026	2026-2030
Net-zero pathway	Lower effort			189	154		-0.7%	-4.9%
	Median	168	194	161	135	0.8%	-4.5%	-4.4%
	Higher effort			107	72		-13.9%	-9.3%
2023 Progress Report	Legislated			192	187		-0.3%	-0.8%
	Developing			185	148		-1.3%	-5.4%
	Announced, less stringent			180	127		-1.8%	-8.5%
	Announced, more stringent			180	125		-1.9%	-8.7%
Other scenarios	No carbon policy			222	232		3.4%	1.1%
Does not meet lower CAGR		Meets lower CAGR, but not median				Meets or exceeds median CAGR		

12 Emissions in this figure are net emissions, which include 25 Mt of compliance flexibility. Gross emissions for the sector are 25 Mt higher in each scenario.

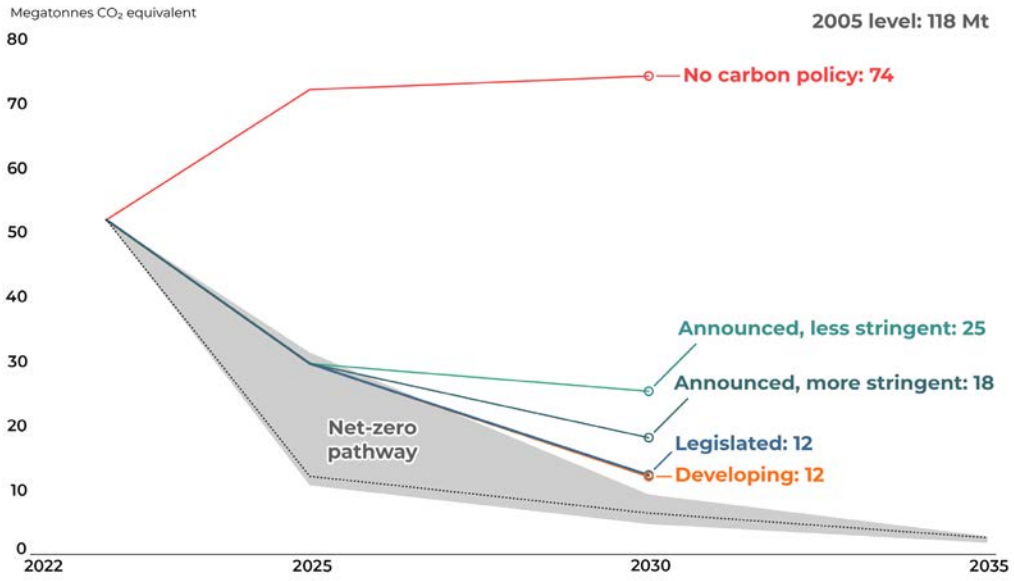
6.2 ELECTRICITY GENERATION

Policies focused on electricity include large-emitter carbon pricing, the proposed Clean Electricity Regulations, investment tax credits, and provincial and territorial policies. Emissions in this sector are on track for the 2026 net-zero pathway; however, the target in 2030 under the announced scenarios may not be achieved due to more natural gas demand from electrification policies increasing demand for electricity without corresponding reductions to emissions.

In both announced scenarios, the credit market price is weakened in Alberta (driven by an anticipated oversupply of credits and interactions with other policies, notably carbon capture subsidies) and is insufficient to deter unabated production from natural gas and coal-to-gas conversions. Both types of plants could be allowed to operate for many years under the proposed Clean Electricity Regulations to provide peak power requirements. Emissions from electricity generation increase above the developed scenario in both announced scenarios due to accelerated electrification elsewhere in the economy. This means emissions from the sector may increase after 2026, though these increases would be more than offset by reductions from electrification occurring in other sectors.

Figure 8:

Electricity emissions pathways under the 2023 Progress Report



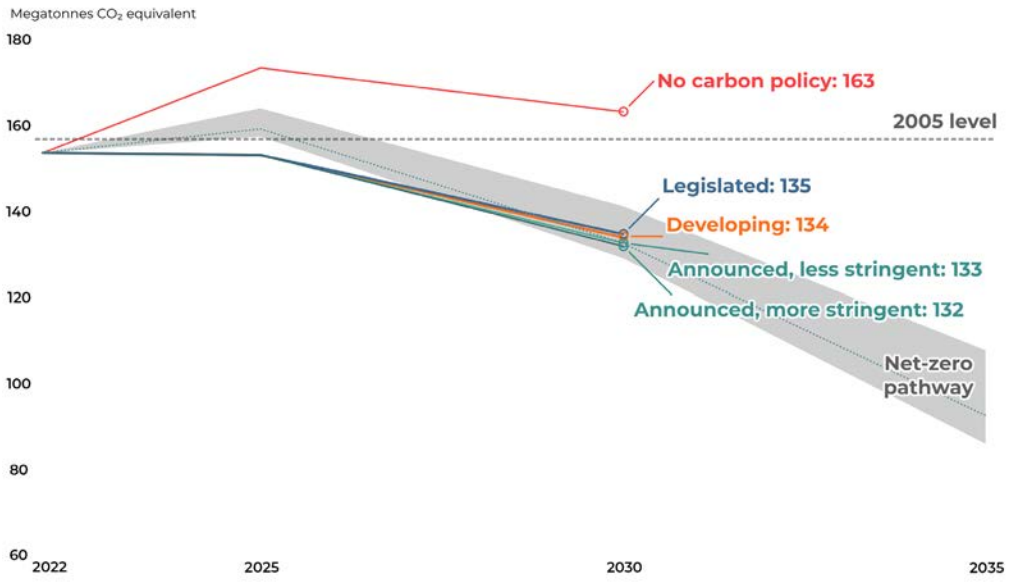
		Emissions (Mt CO_2e)				Growth rate (CAGR %)		
		2005	2022	2026	2030	2005-2022	2022-2026	2026-2030
Net-zero pathway	Lower effort	118	52	27	9	-4.7%	-15.2%	-23.2%
	Median			11	6		-32.1%	-12.5%
	Higher effort			9	5		-34.6%	-15.9%
2023 Progress Report	Legislated			26	12		-15.8%	-17.2%
	Developing			26	12		-15.8%	-17.5%
	Announced, less stringent			29	25		-13.7%	-3.2%
	Announced, more stringent			27	18		-14.8%	-9.8%
Other scenarios	No carbon policy			73	74		8.8%	0.6%
Does not meet lower CAGR		Meets lower CAGR, but not median				Meets or exceeds median CAGR		

6.3 TRANSPORTATION

Policies focused on transportation include federal and provincial fuel charges, proposed light-duty vehicle emission standards and a forthcoming zero-emission light-duty vehicle mandate, purchase subsidies, charging station infrastructure funding, announced medium- and heavy-duty vehicle emission standards, truck retrofit subsidy programs, and zero-emission medium- and heavy-duty vehicle mandates. The net-zero pathway in both 2026 and 2030 is achieved with legislated policies and reaching them will be even more likely if policies currently in development are finalized quickly. Deeper reductions look likely under all other scenarios. Emissions in the announced scenarios are 15 to 16 per cent below 2005.

Figure 9:

Transportation emissions pathways under the 2023 Progress Report



		Emissions (Mt CO_2e)				Growth rate (CAGR %)		
		2005	2022	2026	2030	2005-2022	2022-2026	2026-2030
Net-zero pathway	Lower effort			159	141		0.9%	-3.0%
	Median	157	154	154	133	-0.1%	0.0%	-3.6%
	Higher effort			152	129		-0.3%	-4.0%
2023 Progress Report	Legislated			149	135		-0.7%	-2.6%
	Developing			149	134		-0.7%	-2.7%
	Announced, less stringent			149	133		-0.8%	-2.9%
	Announced, more stringent			149	132		-0.8%	-3.0%
Other scenarios	No carbon policy			171	163		2.8%	-1.2%
Does not meet lower CAGR		Meets lower CAGR, but not median				Meets or exceeds median CAGR		

6.4 HEAVY INDUSTRY

Policies focused on heavy industry include large-emitter carbon pricing; grants and tax credits for renewable fuels, hydrogen, and carbon capture; the Net Zero Accelerator; and steel electrification. Both the 2026 and 2030 net-zero pathways look achievable with legislated policies, and reaching them will be even more likely if policies currently in development are finalized quickly. All our scenarios achieve the median of the net-zero pathway. Emissions in the announced scenarios range between 18 and 23 per cent below 2005 levels in 2030. Since the announced, less stringent scenario does not include adjustments to tighten performance standards, but the developing scenario does, emissions from heavy industry are higher in this scenario, compared to the developing scenario.

There is a significant risk that policy interactions and generous performance standards, especially in Alberta, erode the marginal price signal and therefore decrease the incentive to abate. Our analysis indicates that tightening performance standards can balance credit supply and demand in large-emitter markets delivering another 5 $MtCO_2e$ from large emitters. Carving out the oil and gas emissions cap from large-emitter systems also helps, to the extent that performance standards are not adjusted to balance supply and demand.

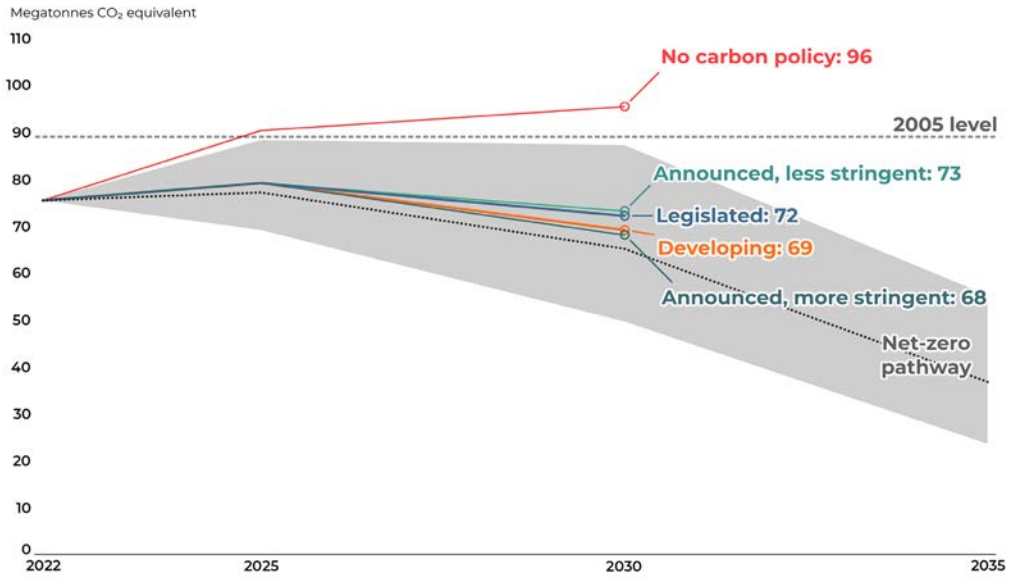
A potash mine in Saskatchewan.

At the sub-sector level:

- Cement does not stay on the net-zero pathway; emissions in the announced scenarios are 41 per cent above the net-zero pathway.
- Chemicals and fertilizers are on the net-zero pathway in the legislated scenario.
- Iron and steel stay on the net-zero pathway in the legislated scenario, even exceeding the median.
- Mining emissions in all scenarios are very close to the upper limit of the net-zero pathway.
- Pulp and paper stay on the net-zero pathway in the legislated scenario.
- Metal smelting does not stay on the net-zero pathway; emissions in the announced scenarios are 26 per cent above the net-zero pathway.

Figure 10:

Heavy industry emissions pathways under the 2023 Progress Report



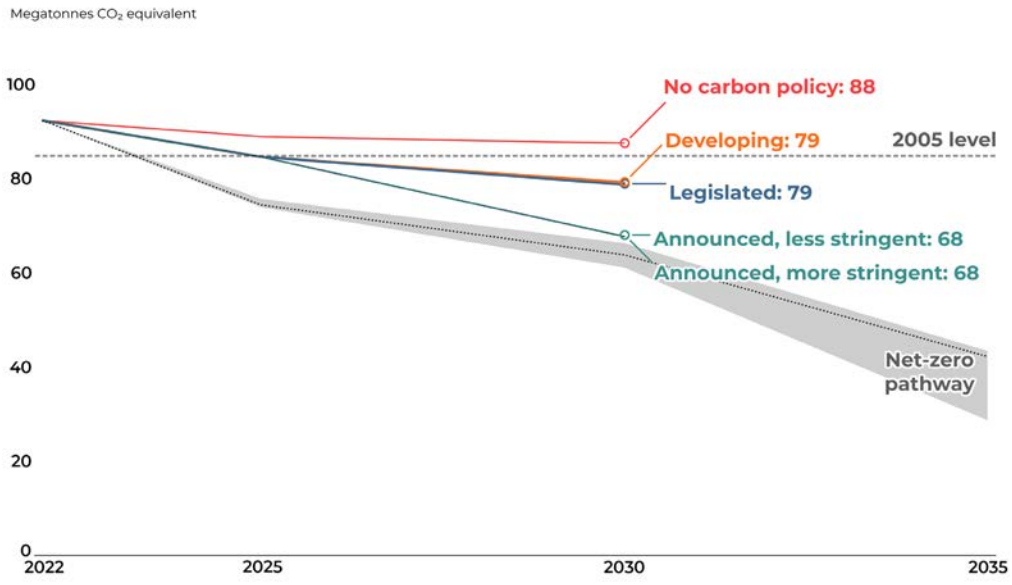
		Emissions (Mt CO_2e)				Growth rate (CAGR %)		
		2005	2022	2026	2030	2005-2022	2022-2026	2026-2030
Net-zero pathway	Lower effort			88	87		4.0%	-0.3%
	Median	89	75	75	65	-1.0%	-0.2%	-3.4%
	Higher effort			65	50		-3.6%	-6.6%
2023 Progress Report	Legislated			78	72		0.8%	-1.8%
	Developing			77	69		0.6%	-2.7%
	Announced, less stringent			78	73		0.8%	-1.6%
	Announced, more stringent			77	68		0.5%	-3.0%
Other scenarios	No carbon policy			91	96		4.9%	1.1%
Does not meet lower CAGR		Meets lower CAGR, but not median				Meets or exceeds median CAGR		

6.5 BUILDINGS

Policies focused on buildings include federal and provincial fuel charges, interest-free home retrofit loans and heat pump subsidies, a proposed Green Buildings Strategy, funding for residential retrofits and community building upgrades, and announced regulations to reduce the use of home heating oil. Emissions are not on track for the 2026 or 2030 net-zero pathway under any of our scenarios, although the announced scenario is close to reaching the net-zero pathway in 2030, with emissions declining to 68 $MtCO_2e$—just 2 $MtCO_2e$ above the net-zero pathway. However, the main policy for reducing emissions from buildings in this scenario is a Green Buildings Strategy. The 2023 Progress Report provided very few details about this announced policy, so we have had to make assumptions about its design and stringency. Given the uncertainty in the Green Buildings Strategy, these assumed reductions come with significant implementation risk but are also critical to reversing the upward emissions trend in the sector. Quick and effective implementation of policy in the building sector is especially important, given that buildings and heating systems are long lived assets. Each year without stronger policies in the sector means locking in more emissions.

Figure 11:

Buildings emissions pathways under the 2023 Progress Report



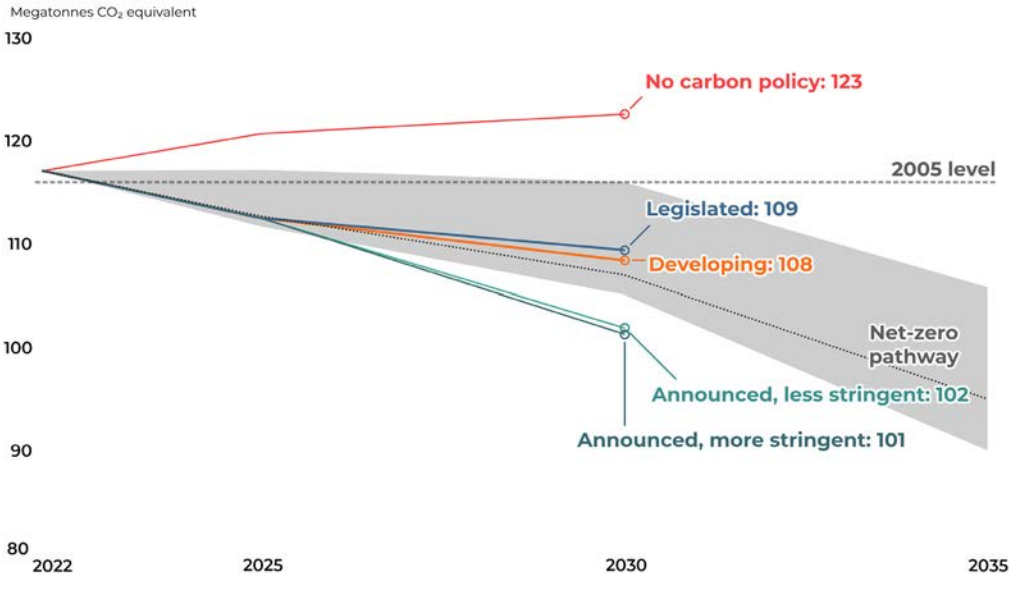
		Emissions (Mt CO_2e)				Growth rate (CAGR %)		
		2005	2022	2026	2030	2005-2022	2022-2026	2026-2030
Net-zero pathway	Lower effort			74	66		-5.4%	-2.7%
	Median	85	92	72	64	0.5%	-5.9%	-3.1%
	Higher effort			71	61		-6.2%	-3.8%
2023 Progress Report	Legislated			83	79		-2.5%	-1.4%
	Developing			83	79		-2.5%	-1.3%
	Announced, less stringent			81	68		-3.1%	-4.4%
	Announced, more stringent			81	68		-3.2%	-4.4%
Other scenarios	No carbon policy			89	88		-1.0%	-0.3%
Does not meet lower CAGR		Meets lower CAGR, but not median				Meets or exceeds median CAGR		

6.6 AGRICULTURE, WASTE, AND OTHER

Policies focused on these sectors include fuel charges, proposed waste methane regulations, and various subsidies and grants. However, the 2026 and the 2030 net-zero pathways are on-track to be achieved with legislated policies only in the agriculture sector. Waste will only meet its net-zero pathway in 2030 if the waste methane regulations are finalized and implemented, so there is significant risk for this sector. Light manufacturing and construction are not on track to meet their net-zero pathway in 2030. The main policy affecting these sectors is the federal and provincial fuel charges, which may be insufficient to incentivize decarbonization.

Figure 12:

Pathways for agriculture, waste, and other sectors under the 2023 Progress Report



		Emissions (Mt CO_2e)				Growth rate (CAGR %)		
		2005	2022	2026	2030	2005-2022	2022-2026	2026-2030
Net-zero pathway	Lower effort	116	117	117	116	0.1%	0.0%	-0.2%
	Median			112	107		-1.2%	-1.0%
	Higher effort			110	105		-1.5%	-1.2%
2023 Progress Report	Legislated			112	109		-1.1%	-0.6%
	Developing			112	108		-1.2%	-0.7%
	Announced, less stringent			110	102		-1.5%	-2.0%
	Announced, more stringent			110	101		-1.5%	-2.1%
Other scenarios	No carbon policy			121	123		0.8%	0.3%
Does not meet lower CAGR		Meets lower CAGR, but not median				Meets or exceeds median CAGR		

The sun sets over wind turbines and a pump jack in Essex County, Ontario.

7 EMISSIONS REDUCTION PLAN GOVERNANCE AND TRANSPARENCY

The federal government is required to publish a progress report on the Emissions Reduction Plan by the end of 2023, 2025, 2027, and every five years thereafter. Because these progress reports are new and important tools for assessing Canada's progress to legislated emissions reduction targets—and are only published every two to five years—it's critical that they be as effective as possible. In November 2023, the Institute identified four elements for an effective progress report:

1. Updates on policy implementation are detailed and comprehensive.
2. Emissions projections are based on concrete policies and broken down annually and by sector.
3. The progress report provides clarity and transparency about modelling assumptions.
4. Government identifies opportunities to continually improve how Canada tracks progress.

This section provides a summary of how the 2023 Progress Report meets our expectations. Overall, we find that the progress report fulfils the legislative requirements of the *Net-Zero Emissions Accountability Act* and in some cases goes further to enhance transparency. The 2023 Progress Report includes almost all of the elements we identified, as summarized below, including more detailed updates on policy implementation, more credible and robust emissions pathways, and enhanced transparency around modelling assumptions. While there is room for improvement in how the government tracks and reports on progress, this first progress report represents another important step forward for climate accountability in Canada.

Table 2:

Summary assessment of the 2023 Progress Report

Element	Indicator	Assessment	Notes
Updates on policy implementation are detailed and comprehensive	Line-by-line update for all measures from the Emissions Reduction Plan and policies introduced since	Yes	Includes a measure-by-measure update for all federal policies under the Emissions Reduction Plan and those announced since. Measures are numbered and organized by sector.
	Update includes information about policy status, timelines, costs, and responsible departments	Partially	Includes implementation status, responsible departments, and provides an update on policy progress. For most policies, the report does not identify next steps for implementation. It also does not assess whether a policy is on or off track or identify sources of implementation risk.
	Update on cooperative measures with provinces, territories, Indigenous governments, and municipalities	Yes	Includes a detailed, numbered list of cooperative measures with provinces and territories. The roles of Indigenous Peoples and municipalities are highlighted throughout the report.
Emissions projections are based on concrete policies and broken down annually and by sector	Emissions projections are based on concrete policies, not backcasting scenarios	Partially	For the most part, the report assesses progress based on the additional measures scenario, which includes only policies with enough detail to be modelled. The report does include a backcasting scenario. While the report states that the backcasting scenario is not meant to assess progress, but rather to identify economically efficient opportunities to reach the 2030 target, it is sometimes used to assess progress.
	Emissions projections are broken down annually and by sector	Yes	Includes emissions projections by economic sector, but data is only reported in five-year increments in both the progress report and the technical emissions report. However, annual projections are available online.
	If Canada is not on track to meet the 2026 and 2030 targets, the progress report identifies potential opportunities to close the gap	Partially	The progress report identifies a long list of opportunities for additional action across all sectors of the economy. However, some of these actions include implementing existing policies and plans and others are vague. Future progress reports would benefit from more detail and prioritization of potential measures to close the gap.
Progress report provides clarity and transparency about modelling assumptions	Progress report includes details about the government's modelling assumptions	Yes	The accompanying technical report includes an overview of the assumptions underlying the emissions projections, including a list of all policies modelled. Future progress reports should include more detail about the assumptions behind how policies were modelled, including stringency, coverage, and timelines. Publishing comprehensive sub-sector activity levels, such as industrial output, would help with transparency.
	Emissions projections are stress-tested against alternative pathways to 2030	Yes	The government conducts sensitivity analyses to vary key drivers of uncertainty, including the global price of oil. The results of the sensitivity analysis are included in the technical report, reported nationally and by sector. While the report also discusses other sources of uncertainty qualitatively, including technological development, it should factor those sources into future sensitivity analyses.
	Progress report includes results of independent modelling analysis	Partially	The progress report does not include the results of independent modelling analysis. However, the government conducted an independent modelling review and identified opportunities to improve the robustness and transparency of ECCC's modelling analysis.
Government identifies opportunities to continually improve	Government signals how it plans to improve its processes for tracking and reporting on progress.	Partially	The progress report assesses several indicators of progress, including emissions, emissions intensity, and policy implementation. However, it does not discuss opportunities for continuous improvement in how it tracks progress.

Wind turbines flank a fish processing plant in Dennis Point, Nova Scotia.

8 FINDINGS AND RECOMMENDATIONS

Based on our quantitative and qualitative assessment of the 2023 Progress Report, four key findings emerge:

1. **Canada has come a long way.** While it's easy to look at progress towards Canada's 2030 emissions reduction target as a pass-or-fail test, a more nuanced assessment shows Canada is making progress. Absent the range of climate policies introduced since 2015, our analysis shows that Canada would be on track to reach 775 $MtCO_2e$ of carbon emissions in 2030—41 per cent above projected 2030 emissions levels under our legislated policy scenario, and 6 per cent above 2005 levels. Second, as our Early Estimate of National Emissions for 2022 showed, climate policy is beginning to deliver in Canada, and we can expect progress to accelerate further as more policies are implemented and take effect. Finally, in the last 20 months, major policies have progressed through the policy process, with the number of legislated policies almost doubling in that time.

2. **Despite significant policy efforts at all orders of government, current policies—announced, developing, and implemented—do not put Canada on track to meeting its 2030 emissions reduction target.** While our assessment shows signs of progress in emissions reductions and policy implementation, we ultimately find that the Emissions Reduction Plan does not put Canada on track for meeting the 2026 objective or 2030 target. Even if the federal government implements the full suite of policies outlined in the 2023 Progress Report plus additional announced policies we modelled, we project that net emissions in 2030 would be 34 to 36 per cent below 2005 levels, compared to the minimum target of a 40 per cent reduction.

3. **Policy implementation remains a risk.** Critically, our assessment that emissions will decline to between 467 and 482 $MtCO_2e$ in 2030 depends on quick and effective implementation of the full suite of policies. And, given the number of key policies that are still under development, implementation remains a major risk. Failure to follow through on announced and developing policies would result in a 109 $MtCO_2e$ gap to the 2030 target. Looking at the big five priority policies identified in our independent assessment of the 2030 Emissions Reduction Plan, only two of the five policies—the carbon price schedule to 2030 and the Clean Fuel Regulations—have progressed to the legislated stage. The other three, namely the oil and gas emissions cap, the proposed Clean Electricity Regulations, and land-use policies, remain under development.

   In addition, success doesn't just depend on speed, but also on effective implementation. In short, policy design matters a lot. As we noted in our 2022 Independent Assessment, overlapping policies can result in unintended consequences, like reduced effectiveness or higher costs. Our analysis points to the potential for interactions between several policies in the 2023 Progress Report, including the large-emitter carbon pricing systems, the proposed Clean Electricity Regulations, the oil and gas emissions cap, and the carbon capture investment tax incentives. Together, these policies risk creating a glut of carbon credits in the large-emitter carbon markets that would drive down credit prices and undermine the incentives for industry to decarbonize.

4. **The report enhances transparency and accountability, but there is room for improvement in future progress reports.** Emissions Reduction Plan progress reports are important opportunities to assess progress and identify opportunities to increase stringency if emissions have fallen off-course. To do so effectively, however, progress reports must be detailed and transparent. Our assessment finds that the 2023 Progress Report makes important strides in enhancing transparency around emissions projections and policy implementation, but that there is room for continuous improvement.

To support the successful implementation of effective climate policy, we make the following **recommendations**:

1. **Rapidly implement developing and announced policies.** The priority for the federal government should be to follow through and legislate the policies laid out in the 2030 Emissions Reduction Plan, as well as those announced in the last 20 months. While the federal government should continue to focus its attention on the most critical policies—including the proposed Clean Electricity Regulations, the oil and gas emissions cap, land use policies, and a national Green Buildings Strategy—full implementation of the policies laid out in the 2023 Progress Report, including policies in place at the provincial and territorial level, is ultimately needed to reduce emissions by 34 to 36 per cent below 2005 levels by 2030.

2. **Identify opportunities for strengthened or additional policies to close the gap.** While the federal government should focus on implementing existing policies to reduce emissions by 34 to 36 per cent below 2005 levels, more work is needed to close the gap to Canada's 2030 target. The government should identify opportunities to strengthen existing policies, or add new measures, to drive additional emissions reductions—at the federal level, but also by, and in collaboration with, other orders of government

   Our analysis finds that identifying and addressing interactions between the existing suite of policies could improve emissions outcomes. Increasing the stringency of the large-emitter performance standards so that the marginal carbon price binds, and separating the emissions cap from the large-emitter credit markets, could reduce greenhouse gas emissions by an additional 15 $MtCO_2e$ in 2030—achieving 36 per cent reductions below 2005 levels, as opposed to 34 per cent. One option to minimize interactions is to amend current policies in the electricity sector—for example, reforming large-emitter pricing in the electricity sector—to ensure emitting facilities are paying the full carbon price. Governments should pay careful attention to the design of major policies to ensure that they work together to reduce emissions in the most cost-effective way possible.

   In addition to fixing interactions to improve policy effectiveness, the federal government could explore options to increase the stringency of existing policies or introduce new ones to close the gap to the 2030

target. Some clear candidates for deeper emissions reductions include further strengthening methane regulations in the oil and gas sector beyond the proposed 75 per cent target, applying an interim, pre-2035 performance standard under the proposed, Clean Electricity Regulations, including incentives or mandates for heat pump installations, and strengthening sectoral performance standards in the large-emitter credit trading systems.

Furthermore, while the federal government is responsible for setting Canada's climate targets, achievement of those targets requires action from all orders of government. Provinces and territories, in particular, have a critical role to play in implementing and strengthening their own policies and collaborating with the federal government to advance effective climate policy throughout the federation.

Finally, the federal government should consider the potential of Internationally Transferred Mitigation Outcomes to cover any remaining gap to 2030. While credit purchases should be a last resort to meeting the 2030 target, they may be necessary to fulfil Canada's international commitments under the Paris Agreement.

3. **Improve how Canada tracks progress on emissions reduction targets.** While the 2023 Progress Report takes several steps to enhance transparency around Canada's emissions reduction progress, more work is needed to improve how Canada transparently tracks and assesses progress towards its climate targets. For example, future progress reports should include more detailed updates on policy progress, including next steps for policy implementation and an assessment of whether a policy is on or off track. In addition, while the progress report assesses three indicators of progress—emissions, emissions intensity, and policy implementation—the federal government should track a more comprehensive set of leading indicators of progress, including technology deployment, infrastructure build-out, and investment. Doing so would enable more timely stock taking, decision making, and course correction. These indicators could be included in future progress reports or tracked more regularly outside of the formal *Net-Zero Emissions Accountability Act* process.

   Provincial, territorial, and municipal governments also have a major role to play in setting emissions reduction targets, implementing climate policies and plans, and tracking progress within their borders.

Yet many provinces and territories still don't have emissions reduction targets, let alone systems to track progress towards them. The combined total of formal provincial and territorial targets adds up to just half of the emissions reductions needed to reach Canada's 2030 target. Transparent planning and reporting processes at all orders are critical for assessing where governments are making progress and identifying opportunities to course correct and increase ambition.

A wind turbine dwarfs a coal-fired generating station in Lingan, Nova Scotia.

A spring bike ride in David Lam Park in Vancouver, British Columbia.

ACKNOWLEDGMENTS

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