



PROSPECTORS &  
DEVELOPERS  
ASSOCIATION  
OF CANADA

ASSOCIATION  
CANADIENNE DES  
PROSPECTEURS ET  
ENTREPRENEURS

March 28<sup>th</sup>, 2024

**To: Hon. Steven Guilbeault  
House of Commons  
Ottawa, Ontario,  
Canada  
K1A 0A6**

**Re: “Talking Targets: Canada’s Climate Future” -- Environment and Climate Change Canada’s engagement on the 2035 emissions reduction target**

The Prospectors and Developers Association of Canada (PDAC) is the voice of Canada’s mineral exploration and development sector, an industry that employs more than 664,000 individuals in Canada and contributed roughly \$130 billion to Canada’s GDP in 2022. Currently representing over corporate and individual 7,000 members, PDAC's work centers on supporting a competitive, responsible, and sustainable mineral sector. In addition to participating in the “Talking Targets: Canada's Climate Future” virtual engagement platform, PDAC values the opportunity to offer written feedback on behalf of our members and industry.

The 2023 Progress Report on the 2030 Emissions Reduction Plan suggests that Canada's climate plan is having an effect, as the emissions curve has declined slightly over the last two decades. However, the Government of Canada must acknowledge that there is still much work to be done to make, then achieve, the 2035 targets and beyond. The future part of the curve that shows more drastic declines relies solely on the government developing new energy sources consumers and alternatives for industry. Simply relying on carbon taxation without providing viable energy and transportation alternatives dooms the strategy to fail.

The new power generation, transmission, and storage capacity needed to reach net zero, replacing millions of internal combustion engine vehicles with electrically or alternatively powered options, and integration of burgeoning emissions reduction technologies simply cannot happen without critical minerals. Therefore, we need to significantly increase support for the Canadian minerals sector to reach the goal of net zero emissions.

A key PDAC recommendation for the concept of 2035 reduction targets is that the government works to improve the public perception of the minerals industry. From a recent youth workforce aspiration study by the Mining Industry Human Resources Council (MiHR), Gen-Z ranked careers in the mining industry at the very bottom, even less desirable than oil and gas. Similarly, when conducting surveys on public perception of mining, there is minimal public understanding of the role minerals and metals must play in a net-zero future. Misperceptions of the benefits and opportunities that the mineral industry presents will hinder timelines and impugn the success of mineral projects in Canada. Identifying minerals as a critical piece of the 2035 Emissions Reduction Plans can help correct any misperceptions.

When making comparisons to 2005 emissions levels it is important to consider that Canada has only opened three nickel mines and one lithium mine since 2005; yet, by 2035 there will need to be at least 20 new nickel, lithium, and graphite mines beginning operations if Canada intends to support domestic Electric Vehicle (EV) battery production (See Figure 1). Transportation/EV

Batteries are not the only supply chain that will decarbonize with increased production of critical minerals. Clean technologies and advanced manufacturing largely require copper. Permanent magnets for electricity generators and motors largely require rare earth elements. Nuclear energy requires uranium.

Comparing the projected number of new mines (see Figure 1) with the industry’s emissions projections (see Figure 2) shows a disconnect.

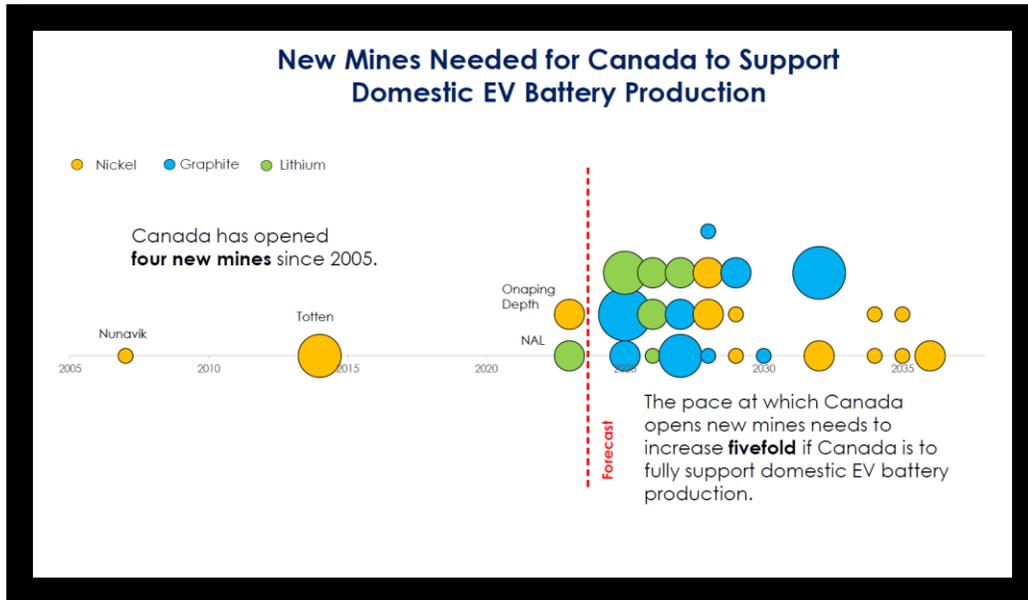


Figure 1: NRCan Presentation on Canada's Critical Minerals Strategy - Closing the Gap - Mineral Outlook Dialogue 2023

Table A.16: Heavy Industry Emissions by Sub-sector (Mt CO<sub>2</sub> eq), Reference Case and Additional Measures Scenarios, 2005 to 2035 (Selected Years)

	Historical				Projected – Reference Case				Projected – Additional Measures			
	2005	2010	2015	2021	2026	2030	2035	Change 2005 to 2030	2026	2030	2035	Change 2005 to 2030
Mining	8	9	9	11	11	11	12	3	10	8	9	0
Smelting & Refining (Non-Ferrous Metals)	15	11	11	10	9	9	9	-5	8	6	4	-8
Pulp & Paper	9	7	6	8	7	7	7	-2	7	6	6	-3
Iron & Steel	16	14	15	14	15	11	9	-5	13	9	7	-8
Cement	13	10	10	11	11	12	12	-1	11	11	11	-2
Lime & Gypsum	3	3	2	2	3	3	3	-1	3	3	3	-1
Chemicals & Fertilizers	25	22	27	21	24	24	25	0	22	20	21	-5
<b>Total</b>	<b>89</b>	<b>76</b>	<b>81</b>	<b>77</b>	<b>79</b>	<b>77</b>	<b>78</b>	<b>-12</b>	<b>74</b>	<b>63</b>	<b>62</b>	<b>-26</b>

Note: Numbers may not sum to the total due to rounding. Historical emissions data come from [NIR2023](#). [Access more data.](#)

Figure 2: Excerpt from the ECCC 2023 Progress Report on the 2030 Emissions Reduction Plan



The “additional measures scenario” sees mining’s 2030 emissions exactly matching 2005 levels. As technology continues to advance, individual mines may be able to reduce their emissions but utilizing cleaner energy sources or improving energy efficiency can be technically and economically challenging, particularly for remote or off-grid projects. Mining operations and mineral exploration in remote or rural areas may have infrastructure limitations and geographical factors that can hinder the adoption of renewable energy solutions. As the number of mines must increase, a sector-wide increase should not be viewed as counter to the broader emissions reduction targets. It is important to understand that mining operations are energy-intensive and rely on heavy machinery, transportation, and processing equipment that require high energy density power sources such as diesel.

The quality of the ground where drilling occurs is a significant factor in diesel use during exploration. Unfortunately, there are few or in many cases no alternative options for mitigating this issue. Smaller exploration programs may not exceed the 10kt CO<sub>2</sub> threshold to trigger an output-based pricing system or requirement to report under the Greenhouse Gas Reporting Program (GHGRP), but they will still be subject to the charge on fossil fuels, either as a direct tax or through an increased fuel price via fuel producers or distributors. PDAC has developed a [Greenhouse Gas Calculator](#) that measures fuel use for drilling, camp power, transportation, and travel, which covers over 75% of exploration emissions. This allows companies to estimate some of these added costs and whether an exploration program needs to be reported.

As the federal backstop is rapidly increasing (from \$65 to \$80 as of April 1, 2024, with continued annual increases), its impact on remote projects and communities will only grow and must be carefully considered to avoid unforeseen consequences or disproportionate impacts coming as side effects of the strategy. In Annex 1: of the 2030 Emission Reduction Plan, the Yukon has a different emissions target process for the mining industry to account for the fact mining is the largest driver of GDP in the territories. Different provinces or regions may have distinct emissions profiles, resource endowments, and economic structures, necessitating tailored approaches to emissions reduction. Flexibility allows provinces to set targets that align with their specific circumstances, considering factors such as industrial composition, energy sources, and population density. When building the emissions reduction targets the federal government must provide flexibility to both off-grid communities and a growing off-grid industry that will propel the net zero future.

2035 targets must consider that while emissions in the mineral industry may remain stable or even increase in the near-term, this would come because of consistent or accelerated mine development, and the long-term benefits realized in other sectors reliant on critical mineral supply chains will offset and work to balance mineral industry emissions. The public perception of this relationship needs to be made clear to Canadians through the 2035 Strategy.

When completing the “Talking Targets: Canada's Climate Future” virtual engagement questionnaire many of our stakeholders expressed concern about the language used. For example, the preamble to question 7 recognizes that the speed at which Canada eliminates carbon pollution may not look the same for different sectors of our economy and provides a visual breakdown of Canada’s GHG emissions in 2021 by the following seven economic sectors: Oil and Gas, Electricity, Transport,

Heavy Industry, Buildings, Agriculture, and Waste and others (see Figure 4). Mining falls under the 'Heavy Industry' category and encompasses 12% of it (see Figure 3).

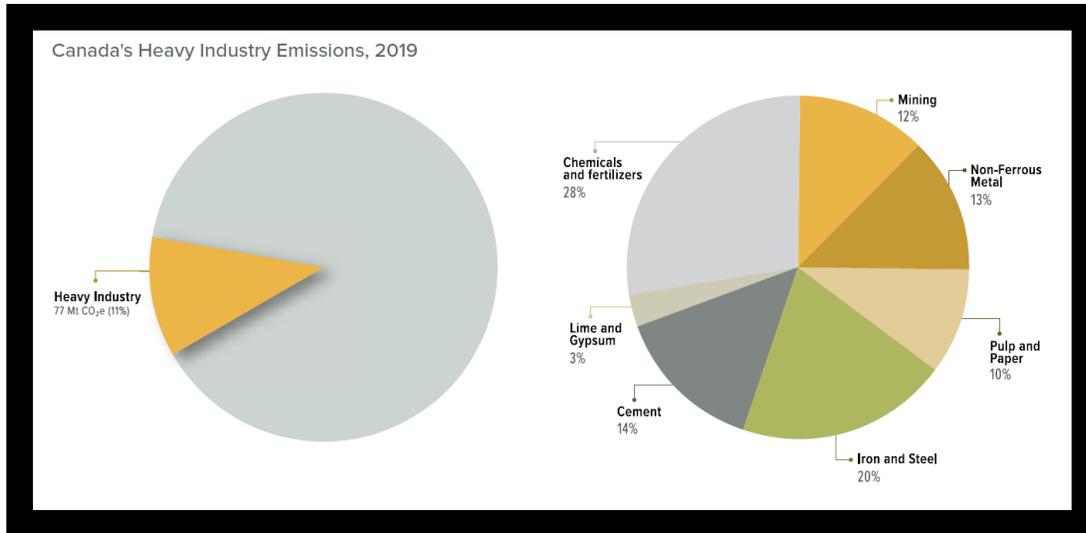


Figure 3: Excerpt from ECCO 2030 Emissions Reduction Plan: Canada's Next Steps for Clean Air and a Strong Economy

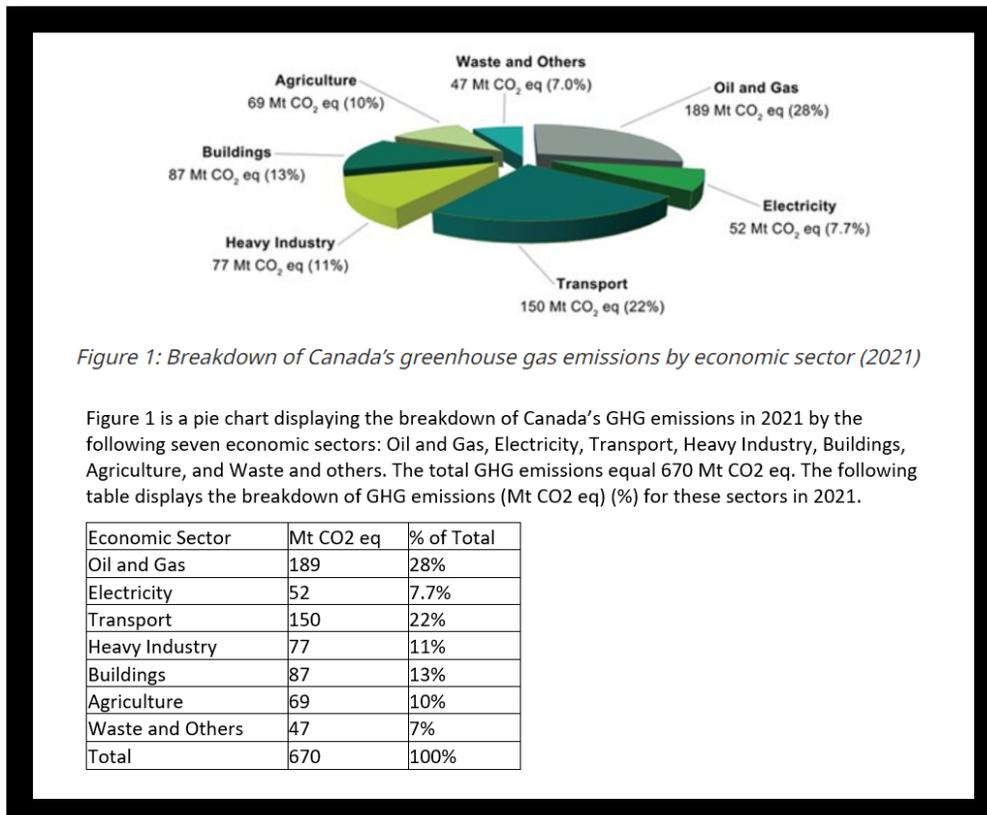


Figure 1: Breakdown of Canada's greenhouse gas emissions by economic sector (2021)

Figure 1 is a pie chart displaying the breakdown of Canada's GHG emissions in 2021 by the following seven economic sectors: Oil and Gas, Electricity, Transport, Heavy Industry, Buildings, Agriculture, and Waste and others. The total GHG emissions equal 670 Mt CO<sub>2</sub> eq. The following table displays the breakdown of GHG emissions (Mt CO<sub>2</sub> eq) (%) for these sectors in 2021.

Economic Sector	Mt CO <sub>2</sub> eq	% of Total
Oil and Gas	189	28%
Electricity	52	7.7%
Transport	150	22%
Heavy Industry	77	11%
Buildings	87	13%
Agriculture	69	10%
Waste and Others	47	7%
Total	670	100%

Figure 4: Excerpt from Talking Targets: Canada's Climate Future Consultation

We recommend separating the mineral industry as its contribution to emissions reduction is distinctly different than other Heavy Industry sub-sectors like chemicals, paper, and cement. While it may seem insignificant to add a slice to the pie chart that equates to less than two percent, spotlighting mining can show the public just how small the impact it has on emissions and support the view that minerals are critical for a decarbonized future.

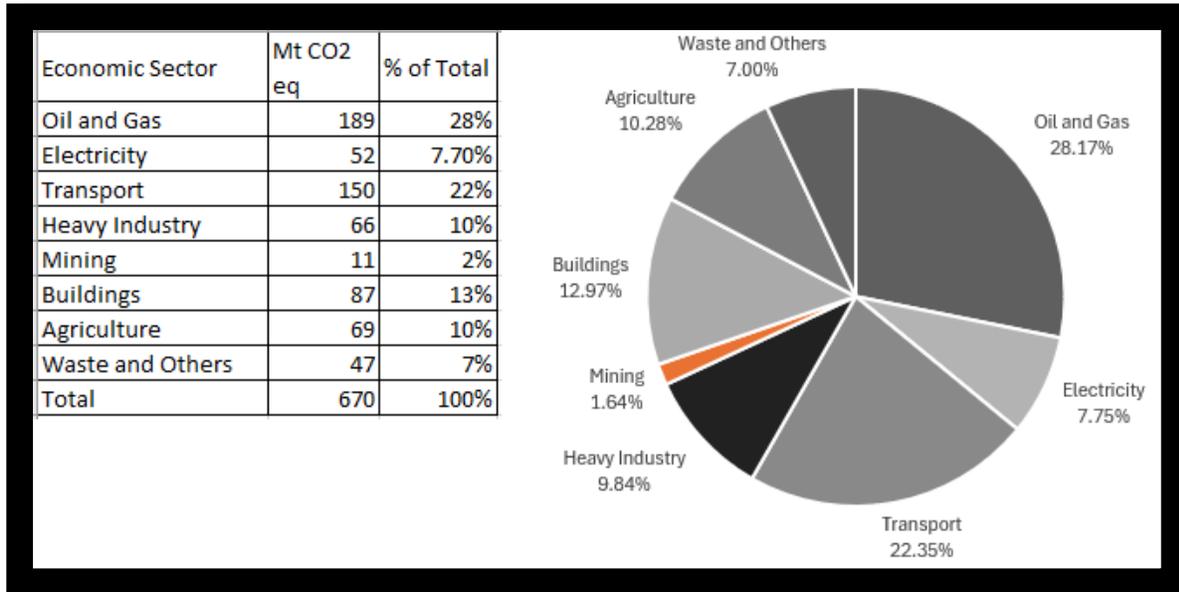


Figure 5: PDAC Suggestion to separate Mining from Heavy Industry in future iterations of Figure 4

Regarding question 7, (*What do you think is the most important when it comes to the following economic activities?*) the prompts provided do not reconcile with the provided visual. The question groups separate industries together i.e. “Gathering natural resources, such as oil, natural gas, minerals, and wood”. The treatment of oil, natural gas and wood is not necessarily the same treatment of critical minerals when planning for emissions reduction. Asking the question in this manner can presuppose implications that are unrelated to mineral industry best practices.

To answer the question considering mining as a separate category: “It’s most important to be consistent and limit material changes”. The mineral industry needs long-term predictable targets for a host of reasons such as strategic planning and risk management.

It is important to reflect that for every 1,000 advanced exploration projects, only 1 viable mine is likely discovered and developed. Combine this high level of risk with the significant, 15-to-25-year timelines associated with developing a new mine in Canada and it is easy to see why understanding the trajectory of emission reduction requirements over the long term is necessary. Long-term regulatory certainty allows companies to develop proactive strategies and adapt operations to mitigate risks, improve competitiveness in attracting investors, and build stronger relationships with stakeholders by aligning future expectations. Further context and clear matching between economic activities and economic sectors (ideally listed in the same order) should be provided to solicit more concise responses for question 7 and PDAC welcomes additional engagement to facilitate this exchange.



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The government's engagement efforts in the "Talking Targets: Canada's Climate Future" consultation frame not only the government's priorities and direction but also encourage the public to question their priorities. In the future, the questions and data provided need to be phrased such that the average Canadian can learn about and respond to the realities of emissions reductions. Future public engagements should strongly consider bias when developing the survey language.

Furthermore, 6 weeks is not sufficient time for nationwide public consultations and future iterations should reconsider the length of time provided to the public. A short timeframe minimizes or bypasses stakeholder consultation processes, thereby preventing the public and industry from properly informing outcomes. This approach can erode relationships, lead to backlash from affected stakeholders and undermine the legitimacy and effectiveness of the 2035 Emissions Reduction Plan.

Since the timeline of this consultation was quite short, we encourage further engagement with the PDAC to discuss key concerns and considerations. Collaborative goal setting will help ensure the targets are both ambitious and achievable. Realistic targets will consider industry-specific challenges, opportunities, and technological advancements. The inclusion of the mineral industry's role in the 2035 Emissions Reduction Plan will help contribute to the positive perception of mineral exploration, development, and mining, which will in turn increase the success of mineral projects and the realization of a net zero future. Please contact Jeff Killeen ([jkilleen@pdac.ca](mailto:jkilleen@pdac.ca)) to discuss these considerations in more detail.