

FULL TOOLKIT: Tell the Feds to Strengthen the Cap On Oil & Gas Emissions!

1.0 EXECUTIVE SUMMARY

On 7 December 2023, Environment and Climate Change Canada ("**ECCC**") released <u>A Regulatory Framework – To Cap Oil and Gas Sector Greenhouse Gas Emissions</u>¹ (the "**Framework**"). It sets out ECCC's current proposal for the regulations that would cap and cut GHG emissions from oil and gas production. It addresses what climate advocates have been calling the "**O&G Emissions Cap**".

The release of the Framework started an online public consultation by ECCC. "Written submissions in response to this document should be submitted by email by February 5, 2024, to <u>PlanPetrolieretGazier-OilandGasPlan@ec.gc.ca</u>."²

We hope, please, that you will make your own unique individual submissions to that consultation by 5 February 2024. Climate-concerned citizens need to act to counter-balance the power of the Oil & Gas Lobby. We made this Toolkit to help you do so.

The cap proposed by the Framework is not ambitious enough to begin with. Its potential effectiveness is then seriously weakened by reducing the scope of emissions that it would cover and by the use of what the Framework calls "compliance flexibilities" or what some climate activists have been calling "loopholes" that will allow companies to emit much more than the cap (see graph below).

• Whereas the federal government's Emissions Reduction Plan (the "**ERP**") released on 29 March 2022 suggested the cap would be 110 Mt in 2030,³ the Framework proposes "issuing a total quantity of allowances in 2030 of

¹ Environment and Climate Change Canada (ECCC), A Regulatory Framework – To Cap Oil and Gas Sector Greenhouse Gas Emissions, 7 December 2023. Retrieved on 28 December 2023 from https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/oil-gas-emissions - https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/oil-gas-emissions - https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/oil-gas-emissions - https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/oil-gas-emissions - https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/oil-gas-emissions - https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/oil-gas-emissions

² Framework, p. 2.

³ Environment and Climate Change Canada. <u>2030 Emissions Reduction Plan: Canada's Next Steps</u> for Clean Air and a Strong Economy. Released 29 March 2022. Retrieved on 14 August 2022 from <u>https://publications.gc.ca/site/eng/9.909338/publication.html</u>

between 106 and 112 Mt CO2e [carbon dioxide equivalent]".⁴ We assume the cap will be 112 Mt (2 Mt more than what the ERP proposed) because almost every time the federal government proposes a range of numbers for an emissions target, everything they do thereafter focuses on the more lenient number.

- ECCC has also made the cap more lenient by reducing the scope of oil and gas production that will be covered by the cap. Downstream oil refineries and gas pipelines, responsible for 20 Mt of annual emissions, are not covered by this cap.
- In addition, ECCC will allow oil and gas producers to emit 25 Mt annual emissions over and above the cap by buying carbon offset credits or paying into a "decarbonization fund".⁵

The net result is that, instead of reducing annual emissions from oil and gas production by 81 Mt, as called for in the ERP, ECCC will only require oil and gas producers to reduce annual emissions by 34 Mt (see graph below).

That is a reduction of 17% from total 2019 emissions of 191 Mt from oil and gas production, significantly less than half of the 42% of reductions from 2019 levels that was called for in the ERP.⁶

Do not be fooled when the Framework states that ECCC's proposal will result in emissions reductions that "would be 35% to 38% below 2019 emission levels".⁷ That is because they are not counting 45 Mt of annual emissions (20 Mt from downstream refineries and pipelines and 25 Mt of additional emissions from "compliance flexibilities").

Saying the same thing another way, ECCC is effectively saying that, since the 25 Mt of emissions from "compliance flexibilities" will be "offset" by emissions reductions elsewhere, the only emissions coming from oil and gas production is the 112 Mt. However, as will be discussed in section 6.0 below, those emissions reductions are far from certain.

At a time when the UNIPCC and International Energy Agency have both said that no new fossil fuel infrastructure should be built if we are to limit warming to 1.5°, climate-concerned Canadians might be surprised to know that the Framework is based on the assumption that fossil fuel production will *increase* between now and

⁷ Framework, p. 5.

⁴ <u>Framework</u>, p. 5.

⁵ <u>Framework</u>, pp. 5 and 7-8.

⁶ <u>ERP</u>, pp. 89-90.

2030. Constitutionally, the federal government cannot limit oil and gas production because the provinces have exclusive jurisdiction. However, the federal government must not be overly timid in the use of its power over reducing emissions. The cap level should be considerably more stringent.

In large part, this Framework is the result of enormous lobbying of the federal government by oil and gas producers. This lobbying has been excessively one-sided, and has not been balanced by anything near an equivalent number of government meetings with environmental non-profit groups ("**ENGOs**") or other climate-concerned Canadians.

Climate-concerned citizens must take this opportunity to tell the federal government that the Framework is unacceptable and that they must do better. All of us should make submissions to the online public consultation by 5 February 2024.

This Toolkit will explain how ECCC proposes to implement the O&G Emissions Cap, and its scope and size. It will discuss some issues that climate-concerned citizens might see as problems with the Framework that should be fixed before ECCC publishes draft regulations later in 2024. It will also suggest what those citizens might wish to consider including in their own submissions to the online public consultation.

We do not expect anyone to read the entire Toolkit. Just click on any of the links in the Table of Contents that interest you. Each discusses specific issues with the Framework. Learn as much or as little as you like. We also encourage you to read any commentary that may have been put out by other Institutions, such as The Canadian Climate Institute, the Pembina Institute, CAN-Rac, and Environmental Defence. Once you have done so, *please make your submissions by 5 February 2024!*

Promised vs. Actual Emissions Reductions for O&G Sector Cap

This Table		
shows 2019		
emissions		
from O&G		
Production,		
the reduction		
to those		
emissions		
called for in		
the ERP, and		
what the		
proposed		
Framework		
would		
actually		
accomplish.		

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2. BACKGROUND - THE OIL AND GAS SECTOR GHG EMISSIONS PROBLEM

2.a Production Emissions

In 2019, **26% of all of Canada's greenhouse gas ("GHG") emissions came from the production of oil and gas.** Of the 730 Megatonnes ("**Mt**") of CO2e of total Canadian GHGs in 2019, 191 Mt were from oil and gas production.⁸

The federal government's 2022 discussion paper noted that, "addressing emissions from the oil and gas sector — **the largest source of GHG emissions in Canada** — is critical to the achievement of Canada's climate goals and international commitments."⁹ Quite simply, we cannot meet our emissions reduction targets and do

⁸ Environment and Climate Change Canada, National Inventory Report, 1990-2019: Greenhouse Gas Sources and Sinks in Canada - Canada's Submission to the United Nations Framework Convention on Climate Change, Part 1. p. 10, Figure ES-7. Retrieved on 10 January 2024 from https://publications.gc.ca/collections/collection_2021/eccc/En81-4-2019-1-eng.pdf. Note that the calculations of a given year's GHG emissions for Canada can change over time. For example, this 2021 National Inventory Report for Canada stated that Canada's 2019 emissions were 730 Mt, whereas Canada's 2022 National Inventory Report revised that figure to 739 Mt.
⁹ Environment and Climate Change Canada (ECCC), Options to Cap and Cut Oil and Gas Sector Greenhouse Gas Emissions to Achieve 2030 Goals and Net-Zero by 2050 - discussion document, 18

July 2022. (Hereafter the "Discussion Document"). Retrieved on 15 December 2023 from

our part to secure a livable future for all without putting a limit on emissions from the production of oil and gas.

2.b Consumption Emissions

The emissions created by the production of fossil fuels are dwarfed by the size of the emissions from using (i.e., burning) them.

When fossil fuels are burned within Canada, the GHGs are counted toward Canada's annual GHG emissions. They are subject, one way or another, to the federal/provincial "carbon tax system" (with some exceptions and gaps in coverage that will not be discussed here). The objective of the "carbon tax" is to create, "a financial incentive for people and businesses to pollute less."¹⁰ By putting a price on GHG emissions, people will change their behaviour to find cheaper, more climate-friendly options.

But of course the climate doesn't care *where* GHG emissions take place. Canada exports a large proportion of our oil and gas. The GHGs emitted from the fossil fuels that were produced in Canada in 2019, but that were exported and consumed in other countries, totaled 954 Mt.¹¹

According to the national GHG emissions accounting rules established by the United Nations Intergovernmental Panel on Climate Change (the "**UNIPCC**"), those 954 Mt are counted as part of the annual GHG emissions of the country in which they are consumed, not in the country where the fossil fuels were produced.¹²

¹⁰ Environment and Climate Change Canada, "<u>How carbon pricing works</u>", retrieved 15 January, 2024 from

https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work/putting-price-on-carbon-pollution.html

¹¹Fraser Thompson, "To avoid climate catastrophe, Canada must account for its hidden emissions", Canada's National Observer, 27 July 2021. Retrieved from

https://www.nationalobserver.com/2021/07/27/opinion/canada-hidden-fossil-fuel-emissions-avoid-clima te-catastrophe on 5 August 2022. See also

https://ecojustice.ca/to-avoid-climate-catastrophe-canada-must-account-for-its-hidden-emissions/, retrieved 5 August 2022.

¹² UNIPCC, "Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories: Reporting Instuctions - Common Reporting Framework. Accessed via https://www.ipcc-nggip.iges.or.jp/public/gl/invs4.html. Retrieved 27 June 2022.

https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/oil-gas-emissions -cap/options-discussion-paper.html.

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3. BACKGROUND - A TRICKY JURISDICTIONAL BALANCE

Reducing emissions from oil and gas production has been notoriously difficult, in large part because the main oil and gas producing provinces, Alberta and Saskatchewan, have shown no interest in doing so and because the federal government does not have the Constitutional power to reduce oil & gas production. Section 92A of the Constitution states:

Laws respecting non-renewable natural resources, forestry resources and electrical energy

92A (1) In each province, the legislature may <u>exclusively</u> make laws in relation to

(a) **exploration for non-renewable natural resources in the province**;

(b) development, conservation and management of non-renewable natural resources and forestry resources in the province, including laws in relation to the rate of primary production therefrom; and

(c) development, conservation and management of sites and facilities in the province for the generation and production of electrical energy.¹³ [Emphasis added.]

However, s. 91(27) of the Constitution gives the federal government exclusive jurisdiction over "The Criminal Law".¹⁴ This has been interpreted by judges to include authority to regulate pollution.

ECCC, "plans to implement a national emissions cap-and-trade system through regulations to be made under the *Canadian Environmental Protection Act, 1999*"¹⁵ "**CEPA**").

While opponents, including Premier Danielle Smith of Alberta, have already stated their opinion that the O&G Emissions Cap is unconstitutional and have promised

¹⁵ <u>Framework</u>, p. 1.

¹³ s. 92A(1) <u>The Constitution Acts, 1867 to 1982</u>. Retrieved on 8 January 2024 from <u>https://laws-lois.justice.gc.ca/eng/const/</u>

¹⁴ s. 91(27) <u>The Constitution Acts, 1867 to 1982</u>. Retrieved on 8 January 2024 from <u>https://laws-lois.justice.gc.ca/eng/const/</u>

to oppose it,¹⁶ there is reason to have some confidence that the Supreme Court of Canada will ultimately determine that the use of CEPA in this manner is a valid exercise of the federal government's criminal law powers, and that the regulations for the O&G emissions cap are, therefore, constitutional. In 1997, the Supreme Court of Canada considered a similar use of CEPA and decided:

Under s. 91(27) of the *Constitution Act, 1867*, Parliament has been accorded plenary power to make criminal law in the widest sense. It is entirely within Parliament's discretion to determine what evil it wishes by penal prohibition to suppress and what threatened interest it thereby wishes to safeguard. Under s. 91(27), it is also within the discretion of Parliament to determine the extent of blameworthiness that it wishes to attach to a criminal prohibition.¹⁷

In that Supreme Court case, the "evil" that the federal federal government wished by penal prohibition to suppress was the dumping of polychlorinated biphenyls (PCBs) into a river. PCBs had been designated a "toxic substance" within CEPA. With the Framework and the forthcoming regulations, the evil that the federal government wishes by penal prohibition to suppress is the emissions of GHGs from oil and gas production. Carbon dioxide (CO₂) is listed as a "toxic substance" within CEPA, as are other GHGs.¹⁸

This creates a tricky balance for ECCC and the federal government: They can use their power over criminal law to regulate GHG emissions from oil and gas production, but the Courts – ultimately, almost certainly the Supreme Court of Canada – could decide that their regulations are unconstitutional if the Supreme Court finds that the core purpose of them is to restrict the production of oil and gas, which is the "exclusive" jurisdiction of the provinces.

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4.0 HOW THE O&G EMISSIONS CAP WORKS

The Framework proposes creating a cap-and-trade system. Covered facilities would be prohibited from releasing GHGs unless they have first registered in the system.

¹⁷ R. v. Hydro-Quebec [1997] 3 S.C.R. 213 at 215, per La Foreest, L'Heureux-Cube, Gonthier, Cory, and McLachlin JJ. (Headnote). Retrieved on 27 December 2023 from <u>https://www.canlii.org/en/ca/scc/doc/1997/1997canlii318/1997canlii318.html</u>

¹⁸ For CO₂ in particular, see Schedule I, Part 2, s. 65, <u>Canadian Environmental Protection Act, 1999</u>, S.C. 1999, c. 33. For other GHGs, see Schedule I more generally. Retrieved on 16 January 2024 from <u>https://laws-lois.justice.gc.ca/eng/acts/c-15.31/FullText.html</u>

¹⁶ Jason Markusoff, "Danielle Smith would never accept Ottawa's oil emissions rules, no matter how flexible", CBC News Online, 7 December 2023. Retrieved on 10 January 2024 from <u>https://www.cbc.ca/news/canada/calgary/danielle-smith-oil-gas-emissions-cap-reaction-unconstitutiona</u> <u>l-analysis-1.7052731</u>

They would then be prohibited from releasing any GHGs without remitting a sufficient number of "compliance units" to cover those emissions.

Compliance units can be either "emissions allowances" or "other compliance units". Allowances are like a licence to emit GHGs, and one allowance would permit the holder to emit one tonne of CO2e. O&G facilities would be able to purchase other compliance units to emit more than their allowances.

In crude terms, therefore, the O&G Emissions Cap would operate like this: The federal government says, "Together, Canadian oil and gas producers can only emit a total of X Mt of GHG emissions from their production activities in a given year, and they need allowances to do that." Then the federal government gives out those allowances and monitors each facility's emissions. If any facility emits more GHGs than it is allowed to, that facility (and some of the people in leadership positions who operate it) will be liable to criminal-like punishment (including warnings, compliance orders, fines and possibly jail sentences).

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4.a Scope of Application

4.a.i Covered Facilities

The Framework would apply to production activities at upstream oil and gas facilities, including offshore facilities, and to Liquid Natural Gas ("**LNG**") facilities.¹⁹ (Offshore facilities are offshore oil rigs that operate within Canada's national offshore boundaries.) These facilities are called "covered facilities".

Small facilities, defined as those that emit less than the reporting threshold for the federal Greenhouse Gas Reporting Program (GGRP) of 10 kilotonnes of CO2e per year, are responsible for one third of the sector's emissions²⁰ and would be included in the cap. However, the Framework seems to be worded in a way that could leave the door open to these facilities being excluded from the forthcoming draft regulations. The Framework states that provincial approaches to regulate small facilities, "are being examined to support an efficient federal approach to covering smaller emitting facilities under the emissions cap-and-trade regulations."²¹ Reading between the lines, the government may be worried about imposing reporting requirements on facilities that are currently exempt from the GGRP. Obviously, if the cap is to have any meaning at all, the one third of O&G sector emissions represented by small facilities must be covered.

²¹ <u>Framework</u>, p. 3.

¹⁹ <u>Framework</u>, p. 2.

²⁰ <u>Framework</u>, p.3.

Furthermore, the proposed Framework covers fewer oil and gas facilities than ECCC previously envisioned being covered by the O&G Emissions Cap.²² Specifically, *it removes 20 Mt of emissions from natural gas transmission pipelines and downstream petroleum refineries from the O&G Emissions Cap.*²³ The consequences of this are discussed below.

As for LNG production, this is a new fossil fuel product for the Canadian O&G sector. The Framework notes that LNG production was zero in 2019 and projects that it will grow to 3.91 billion cubic feet per day by 2030.²⁴ It is not a good thing that Canada will be expanding fossil fuel production at a time when the UNIPCC and International Energy Agency have both said that no new fossil fuel infrastructure should be built if we are to limit warming to 1.5°C.²⁵ But at least these new LNG facilities will be included under the cap.

However, the Framework does not address the expected emissions from the production of LNG or how it is possible to add an entirely new fossil fuel industry and still meet the sector's emission reduction targets under the cap. Publicly-available information from other sources is difficult to find. This makes it difficult to assess the cap's treatment of LNG facilities and provide input to the consultation on the Framework.

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4.a.ii Covered Activities

²⁴ Framework, p. 12.

²² On 18 July 2022, ECCC released Options to Cap and Cut Oil and Gas Sector Greenhouse Gas Emissions to Achieve 2030 Goals and Net-Zero by 2050 - Discussion Document. Its release started an online public consultation that lasted until 30 September 2022. The Discussion Document specifically stated "the government is seeking input on whether the cap should apply to natural gas transmission pipelines and petroleum refineries." [p. 17]. Of the 22 specific questions that ECCC asked for submissions on, Question #7 was "Should consideration be given to facility emission thresholds to set different approaches and requirements for small versus large emitters?" [p. 29]. Discussion Document retrieved on 8 January 2024 from

https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/oil-gas-emissions -cap/options-discussion-paper.html

²³ Framework, p. 3.

²⁵ International Energy Agency, "The path to limiting global warming to 1.5 °C has narrowed, but clean energy growth is keeping it open", 26 September 2023. <u>https://www.iea.org/news/the-path-to-limiting-global-warming-to-1-5-c-has-narrowed-but-clean-energy-growth-is-keeping-it-open</u>

The Framework is designed to apply only to the GHG emissions from the production of oil and gas. It does not cover the emissions from using/burning the fossil fuels produced.

The ERP describes three types of GHG emissions in the oil and gas sector:

The oil and gas sector can be subdivided into three stages of production (upstream, midstream, and downstream), with significant differences within and between them. There are 3 scopes of emissions in the sector:

- **Scope 1** emissions originate directly from sources that are owned or controlled by a sector (i.e., combustion, process, and fugitive emissions).
- Scope 2 emissions are those generated indirectly.
- Scope 3 emissions are indirect emissions resulting from an organization's operations (i.e., emissions from supply chains). These emissions are often combusted in other sectors or other jurisdictions (e.g., exported crude oil; gasoline in internal combustion engine vehicles).²⁶

The Framework states the emissions cap would apply to Scope 1 and Scope 2 emissions.²⁷ With respect to Scope 2 (indirect) emissions, it states:

The oil and gas emissions cap-and-trade system would account for transfers of thermal energy, hydrogen, CO2, and electricity to ensure that all GHG emissions that relate to the production of oil and gas are covered. This would aim to prevent GHG emissions from being shifted to unregulated facilities and to avoid creating an uneven playing field and unintended competitiveness impacts. Facilities would be required to report and quantify information related to the purchase/sale, production, use and import/export from the facility of thermal energy, hydrogen, electricity, and transfers of CO2 for storage. Where facility-specific

²⁶ Environment and Climate Change Canada, <u>2030 Emissions Reduction Plan: Canada's Next Steps</u> for Clean Air and a Strong Economy, 29 March 2022, p. 171. Retrieved on 16 January 2024 from https://publications.gc.ca/collections/collection_2022/eccc/En4-460-2022-eng.pdf.

²⁷ <u>Framework</u>, p. 6.

information is not available, a default factor would be provided to estimate emissions.²⁸

Scope 3 emissions from the consumption (i.e., burning) of Canadian oil and gas are NOT included under the cap.

The Framework provides a more specific list of activities that would be covered by the emissions cap:

It is proposed that the following activities would be covered by the regulations:

- Bitumen and other crude oil production, including upstream oil gathering pipelines when they are part of a covered facility, other than bitumen extracted from surface mining and other than petroleum refining, including:
 - extraction, processing, and production of light crude oil (having a density of less than 940 kg/m3 at 15°C)
 - extraction, processing and production of bitumen or other heavy crude oil (having a density greater than or equal to 940 kg/m3 at 15°C)
- Surface mining of oil sands and extraction of bitumen
- Upgrading of bitumen or heavy oil to produce synthetic crude oil
- Production and processing of natural gas and production of natural gas liquids, including upstream gas gathering pipelines when they are part of a covered facility
- Production of liquified natural gas²⁹

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4.a.iii Covered Greenhouse Gasses (GHGs)

²⁸ <u>Framework</u>, p. 6.

²⁹ Framework, p. 3.

The Framework states:

The GHGs covered would include carbon dioxide, methane, nitrous oxide and others (for a complete list, see items 65 to 70 of Part 2 of Schedule 1 to CEPA).³⁰

The relevant sections of Part 2 of Schedule 1 to CEPA list the following GHGs:

- **65** Carbon dioxide, which has the molecular formula CO₂
- 66 Methane, which has the molecular formula CH4
- 67 Nitrous oxide, which has the molecular formula N2O
- 68 Hydrofluorocarbons that...
- 69 The following perfluorocarbons...
- 70 Sulphur hexafluoride...

Recommendations:

Tell the federal government (using references to the Framework and to any papers we cite here, as you may wish):

- It is good that the government plans to include small facilities, which account for one third of the sector's emissions, in the cap. The government must ensure that small facilities remain within the scope in the forthcoming regulations, despite potential reporting challenges.
- It is good that LNG facilities will be included under the cap. However, the government must address the serious lack of information on the anticipated emissions from the production of LNG and explain how it is possible to add an entirely new fossil fuel industry and still meet the cap's emission targets.
- Downstream pipelines and refineries, which account for 20 Mt of emissions annually, must be included under the emissions cap, as originally envisioned.

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4.b The Emissions Cap Level: The Starting Point

The Framework states:

There are two key values in the proposed approach: (1) the emissions cap level, which is equivalent to the total emission allowances issued by the government for a given year, and (2) the legal upper bound, which is the maximum emissions the sector will be allowed to emit that year, comprised of the total number of

³⁰ <u>Framework</u>, p. 3.

emission allowances issued plus the maximum allowable quantity of other eligible compliance units.³¹

The regulator would issue a number of emissions allowances that add up to the "emissions cap level". The regulator would provide these emissions allowances for free, under a system deemed to be fair, among oil and gas producers.

The Framework proposes that the emissions cap level for 2030 be between 106 and 112 Mt. The final cap level will be, "set based on the best available information at the time the regulations are finalized."³²

Recall that when the ERP set out "Where we could be in 2030", the government stated that we could be at 110 Mt in 2030.³³ That was 2 Mt below the top range of what the Framework is now proposing. Moreover, the ERP did not say anything about allowing more emissions above and beyond that amount by way of "compliance flexibilities" (see below).

Recommendations:

Tell the federal government (using references to the Framework and to any papers we cite here, as you may wish):

- The proposed level of the oil and gas sector emissions cap is nowhere near ambitious enough. It is not aligned with the emissions reductions being required in other sectors of the economy, with Canada's 2030 Target under the Paris Agreement (enshrined in law in the *Canadian Net-Zero Emissions Accountability Act*), or with a pathway that sees Canada reaching net-zero GHG emissions by 2050.
- Hold the federal government accountable to deliver the emissions reductions promised in their 2022 *Emissions Reduction Plan*, which suggested the cap for the O&G sector would be 110 Mt in 2030.³⁴

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4.c The Legal Upper Bound: How Much Can Really Be Emitted

³¹ <u>Framework</u>, p. 4.

³² <u>Framework</u>, pp. 3-5.

³³ <u>ERP</u>, pp. 89-90.

³⁴ Environment and Climate Change Canada. 2030 Emissions Reduction Plan: Canada's Next Steps for Clean Air and a Strong Economy. Released 29 March 2022. Retrieved on 14 August 2022 from https://publications.gc.ca/site/eng/9.909338/publication.html

The 2030 "emissions cap level", however, is not the total GHG emissions that oil and gas producers can emit.

The total they can emit is called the "legal upper bound", and it is **25** *Mt per year higher* than the cap level, i.e. between 131 and 137 Mt in 2030. Over the first five years of the cap's operation, that would amount to an extra 125 Mt of GHG emissions, more than a whole year of emissions allowances!

The Framework states that this additional 25 Mt of emissions per year would be permitted by the use of "other compliance units". It specifically states that these could be made up of domestic or international offset credits and contributions to a "decarbonization fund".³⁵ Each of the compliance flexibilities are discussed in detail later in this document.

It is by adding the 25 Mt permitted by "other compliance units" to the 106 to 112 Mt "emissions cap level" that one arrives at the Framework's "legal upper bound" of between 131 and 137 Mt in 2030.

Recommendations:

Tell the federal government (using references to the Framework and to any papers we cite here, as you may wish):

- To ensure Canada can meet our emissions reduction targets, the "compliance flexibility" allowing fossil fuel companies to pay to emit 25 Mt per year over and above the cap must be eliminated. Another way to put it is that the legal upper bound for emissions should be the same amount as the emissions cap.
- The legal upper bound for oil and gas sector emissions in 2030 should be no more than the 110 Mt promised in the *Emissions Reduction Plan.*

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5. THE PROBLEMS WITH THE FRAMEWORK

The fundamental problem with the Framework is that it simply lets too large a quantity of GHGs be emitted from oil and gas production each year.

There are three main components of the problem. The first is that the proposed "emissions cap level" and the "legal upper bound" for emissions are too high. This is discussed in detail below.

³⁵ <u>Framework</u>, p. 5.

The second is that the Framework proposes several "compliance flexibilities". They serve to let O&G producers emit more and also create the false impression that the O&G Emissions Cap is achieving much more than it really is. The compliance flexibilities also have vulnerabilities that, if not managed carefully, could result in more GHGs being emitted than the legal upper bound. Each compliance flexibility is examined in section 6.0.

Third, Canadians might be surprised to see that the O&G Emissions Cap is based on O&G production *increasing* between now and 2030. See section 5.6 for more information.

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5.a The 2030 Cap Level is Not Ambitious Enough - The Numbers

An understanding of the numbers is essential to understanding the proposed Framework.

The <u>2030 Emissions Reduction Plan: Canada's Next Steps for Clean Air and a</u> <u>Strong Economy</u> (the "**ERP**"), published by ECCC on 29 March 2022, set out in considerable detail the programs and policies that ECCC would implement to reach our pledge under the Paris Agreement of reducing Canada's GHG emissions by 40 to 45% below 2005 levels by 2030.³⁶

The ERP called for reductions in GHG emissions from oil and gas production of 31% from 2005 levels by 2030. Because emissions from oil and gas production had risen considerably between 2005 and 2019, this equated to reductions of 42.5% from 2019 levels by 2030.³⁷

However, instead of cuts of 42.5% from 2019 levels, the Framework proposes cuts of only 17.8%.

Canadians expect the federal government to keep its promise on climate change and not just follow the demands and wishes of the oil and gas industry. All Canadians who care about the climate and a livable future for all should use the public consultation to ensure that ECCC knows this.

To do so, we must arm ourselves with the facts and knowledge of how this situation has come to be.

³⁶ Environment and Climate Change Canada. 2030 Emissions Reduction Plan: Canada's Next Steps for Clean Air and a Strong Economy. Released 29 March 2022. Retrieved on 14 August 2022 from https://publications.gc.ca/site/eng/9.909338/publication.html

³⁷ Percentages obtained by the number on ERP, pp. 89-90.

In the ERP, ECCC included a long table that considered various GHG emitting sectors. For the "Oil and Gas" sector, it provided the following data:³⁸

Figure 1:	Canadian	Oil and Gas	Sector Actual	and Projected	GHG Emissions
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Sector	Where we were in 2005 (Mt)	Where we were in 2019 (Mt)	Where we could be in 2030 (Mt)	Per Cent Reduction from 2005 Levels
Oil and gas	160	191	110	-31%

According to the ERP on 29 March 2022, therefore, the O&G Emissions Cap needed to cut 81 Mt of emissions from 2019 levels by 2030:

191 -<u>110</u> 81

The first thing that ECCC is proposing to that makes the O&G Emissions Cap more lenient is to simply remove 20 Mt of emissions, which are those from downstream oil refineries and gas transmission pipelines, from the scope of the emissions that need to be reduced.

On 18 July 2022, ECCC published <u>Options to Cap and Cut Oil and Gas Sector</u> <u>Greenhouse Gas Emissions to Achieve 2030 Goals and Net-Zero by 2050</u> <u>Discussion Document</u> (the "**Discussion Document**").³⁹

The Discussion Document stated "In addition to upstream activities, the government is seeking input on whether the cap should apply to natural gas transmission pipelines and petroleum refineries."⁴⁰ Of the 22 Questions it posed, Question #8 was "Should the cap include petroleum refineries and natural gas transmission pipelines?"⁴¹

December 2023 from

https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/oil-gas-emissions -cap/options-discussion-paper.html

³⁸ ERP, pp. 89-90.

³⁹ Environment and Climate Change Canada (ECCC), <u>Options to Cap and Cut Oil and Gas Sector</u> <u>Greenhouse Gas Emissions to Achieve 2030 Goals and Net-Zero by 2050</u> <u>Discussion Document</u>, 18 July 2022. (Hereinafter the **"Discussion Document"**). Retrieved on 15

⁴⁰ Discussion Document, p. 17.

⁴¹ Discussion Document, p. 29.

Under the heading "Scope of application", the Framework states: "The emissions cap-and-trade system would apply to LNG facilities and to upstream oil and gas facilities, including offshore facilities."⁴² Petroleum refineries and natural gas transmission pipelines have now been omitted.

In 2019, emissions from (downstream) petroleum refining were 19 Mt and emissions from natural gas distribution were 1.1 Mt (which we shall round down to 1 Mt).⁴³

As such, ECCC has made the goal easier, and the required reductions smaller, simply by taking those 20 Mts out of consideration:

191 <u>- 20</u> 171

Under the heading "Emission allowances and legal upper bound on emissions in 2030", the Framework states:

There are two key values in the proposed approach: (1) the emissions cap level, which is equivalent to the total emission allowances issued by the government for a given year, and (2) the legal upper bound, which is the maximum emissions the sector will be allowed to emit that year, comprised of the total number of emission allowances issued plus the maximum allowable quantity of other eligible compliance units.⁴⁴

The <u>Framework</u> proposes that the 2030 emissions cap (the number of allowances issued) be set at between 106 Mt and 112 Mt CO_2e . It proposes that the legal upper bound in 2030 of between 131 Mt and 137 Mt.⁴⁵

From the 171 Mts of emissions still covered by the scope of the O&G Emissions Cap, therefore, we can remove the 2030 "emissions cap level" of 112 Mts:

171 Mt

⁴⁴ <u>Framework</u>, p. 4.

⁴⁵ <u>Framework</u>, p. 5.

 ^{- &}lt;u>112</u> Mt ("emissions cap level", i.e. emissions permitted by allowances)
 59 Mt

⁴² Environment and Climate Change Canada (ECCC), <u>A Regulatory Framework – To Cap Oil and Gas</u> <u>Sector Greenhouse Gas Emissions</u>, 7 December 2023, p. 2.

⁴³ Environment and Climate Change Canada (ECCC), <u>National Inventory Report – 1990-2019:</u> <u>Greenhouse Gas Sources and Sinks in Canada – Canada's Submission to the United Nations</u> <u>Framework Convention on Climate Change, Part 1</u>, p. 57, Table 2-12.

The Framework proposes that oil and gas producing companies can emit an annual total of 25 Mt of "other compliance units" in 2030.⁴⁶

Regarding those "other compliance units", the Framework states:

It is proposed that... facilities have the option to remit domestic offset credits or make contributions to a decarbonization funding program to cover a limited portion of their GHG emissions. Consideration is also being given to allowing facilities to remit compliance units that represent mitigation outcomes that have been authorized for use by Canada as internationally transferred mitigation outcomes (ITMOs) to cover a portion of their GHG emissions.⁴⁷

59 Mt

 <u>25</u> Mt ("other compliance units", i.e. offset credits or emissions reduction fund) 34 Mt

And that's how we get from 81 Mt of emissions reductions from O&G production called for in the ERP to only 34 Mt proposed by the Framework.

Returning to the 2019 emissions of 191 Mt set out, as above, in the ERP, we can see this:

<u>34</u> x 100 = 17.8% 191

So, again, instead of the 42.5% of emissions reductions from 2019 levels called for by the ERP, ECCC is now proposing less than half of that: 17.8%.

You can reach the same conclusion by starting at the other end:

Start with the 112 Mt "emissions cap level", i.e. the emissions permitted by allowances.

Add in the 25 Mt of additional emissions permitted by "other compliance units".

112 Mts <u>+ 25</u> Mts 137 Mts

Then add in the in the 20 Mts that is permitted from downstream refining and gas pipelines, because the Framework will now simply not apply to them:

⁴⁶ <u>Framework</u>, p. 5.

⁴⁷ <u>Framework</u>, p. 7.

137 Mts + 20 Mts 157 Mts

Those 157 Mts of emissions are 47 Mt, or 42.7% over the ERP's "Where we could be in 2030" of 110 Mts.



Figure 2: Promised vs. Actual Emissions Reductions for O&G Sector Cap

Do not be fooled when the Framework states that ECCC's proposal will result in emissions reductions that "would be 35% to 38% below 2019 emission levels".⁴⁸ That is because they have made the goal easier by removing the 20 Mt from downstream oil refineries and emissions from gas pipelines from the scope of emissions covered and because they are counting the 25 Mt of "compliance flexibilities" (from carbon offset credits and payments into a "decarbonization fund") as emissions reductions.

Saying the same thing another way, ECCC is not counting the 25 Mt of additional emissions that will be permitted from "compliance flexibilities". ECCC is effectively saying that, since this 25 Mt of emissions from the O&G sector will be "offset" by emissions reductions elsewhere, the only emissions coming from oil and gas production is the 112 Mt. However, as will be discussed in section 6.0 below, those emissions reductions are far from certain.

Recommendations:

⁴⁸ <u>Framework</u>, p. 5.

Tell the federal government (using references to the papers we cite here, as you may wish):

- The proposed level of the oil and gas sector emissions cap is nowhere near ambitious enough. It is not aligned with the emissions reductions being required in other sectors of the economy, with Canada's 2030 Target under the Paris Agreement (enshrined in law in the *Canadian Net-Zero Emissions Accountability Act*), or with a pathway that sees Canada reaching net-zero GHG emissions by 2050.
- Hold the federal government accountable to deliver the emissions reductions promised in their 2022 *Emissions Reduction Plan*, which suggested the cap for the O&G sector would be 110 Mt in 2030.⁴⁹ That means:
 - The "compliance flexibility" allowing fossil fuel companies to pay to emit 25 Mt per year over and above the cap must be eliminated. Another way to put it is that the legal upper bound for emissions should be the same amount as the emissions cap.
 - The legal upper bound for oil and gas sector emissions in 2030 should be no more than the 110 Mt promised in the *Emissions Reduction Plan.*
 - The scope of application of the cap on oil and gas sector emissions should be the same as envisioned in the *Emissions Reduction Plan*. Downstream pipelines and refineries were to be included, but have been omitted from the cap proposed in the Framework. They must be put back in scope.
- Despite the jurisdictional challenges discussed above, the federal government should not be excessively timid. The Oil & Gas Emissions Cap level should be considerably more stringent.

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5.b The Cap Proposed by the Framework Will Make It Almost Impossible to Meet Our Canada-Wide 2030 Target

According to Canada's latest National Inventory Report, which is the annual inventory of all of Canada's GHG emissions, Canada's GHG emissions for 2005 were 732 Mt.⁵⁰

⁴⁹ Environment and Climate Change Canada. 2030 Emissions Reduction Plan: Canada's Next Steps for Clean Air and a Strong Economy. Released 29 March 2022. Retrieved on 14 August 2022 from <u>https://publications.gc.ca/site/eng/9.909338/publication.html</u>

⁵⁰ Environment and Climate Change Canada, <u>National Inventory Report 1990-2021</u>: <u>Greenhouse</u> <u>Gases Sources and Sinks in Canada – Canada's submission to the United Nations Framework</u> <u>Convention on Climate Change – Executive Summary</u> [Hereinafter "<u>National Inventory Report 2021</u>]

Our promise under the Paris Agreement, called Canada's 2030 Target, and enacted in statute in the <u>Canadian Net-Zero Emissions Accountability Act</u>.⁵¹ was to reduce 2005 emissions by 40 to 45% by 2030.⁵²

Forty percent of 732 Mt is 293 Mt.

732 Mt -<u>293 Mt</u> 439 Mt

(This is often rounded up to 440 Mt for practical purposes. For example the Canadian Climate Institute has an ongoing project called "440 Megatonnes".)⁵³

Forty-five percent of 732 Mt is 329 Mt.

732 Mt -<u>329 Mt</u> 403 Mt

With the 47 Mt reduction "miss" that the Framework is proposing over what the ERP said Canada could do by 2030, it is hard to see how Canada can achieve our 2030 emissions reduction target. Remember, the O&G sector is the largest source of emissions in Canada.

Indeed, when ECCC released the <u>2023 Progress Report on the 2030 Emissions</u> <u>Reduction Plan</u> (the "**Progress Report**") in December of 2023, it estimated that Canada is going to emit 467 Mt of GHGs in 2030.⁵⁴ That is a miss of 28 Mt from the 40% low end of the target and a miss of 64 Mt from the 45% high end of the target.

The Canadian Climate Institute performed an independent assessment of the Progress Report. According to their assessment, 2030 emissions for all sources in

ES"), p. 14, Table ES-2. Retrieved on 1 January 2024 from https://publications.gc.ca/site/eng/9.816345/publication.html

⁵¹ s. 7(2) <u>Canadian Net-Zero Emissions Accountability Act</u>, S.C. 2021, c. 22. Retrieved on 1 January 2024 from <u>https://laws-lois.justice.gc.ca/eng/acts/c-19.3/fulltext.html</u>

⁵² <u>NIR 2021 ES</u>, p. 2.

⁵³ Retrieved on 1 January 2024 from <u>https://440megatonnes.ca/</u>

⁵⁴ Environment and Climate Change Canada, <u>2023 Progress Report on the 2030 Emissions Reduction</u> <u>Plan</u>, December 2023. Retrieved on 11 January 2024 from <u>https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/climate-plan-over</u> <u>view/emissions-reduction-2030/2023-progress-report.html</u>

Canada are projected to be between 467 Mt and 482 Mt.⁵⁵ That is a miss of between 28 and 43 Mt of the more lenient 40% reduction target target and a miss of between 64 and 79 Mt of the more stringent 45% reduction target.

Recommendations:

Tell the federal government (using references to the Framework and to any papers we cite here, as you may wish):

- To ensure Canada can meet our emissions reduction targets, the "compliance flexibility" allowing fossil fuel companies to pay to emit 25 Mt per year over and above the cap must be eliminated. Another way to put it is that the legal upper bound for emissions should be the same amount as the emissions cap.
- The legal upper bound for oil and gas sector emissions in 2030 should be no more than the 110 Mt promised in the *Emissions Reduction Plan.*
- Downstream pipelines and refineries, which account for 20 Mt of emissions annually, should be included under the emissions cap, as originally envisioned.

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5.c The Framework's O&G Emissions Cap Will Do Less Work Than It Appears

We have seen above that, having promised 81 Mt of emissions reduction in the ERP, ECCC now proposes to deliver 34 Mt with the Framework.

However, half of that amount, 17 Mts does not even result from the Framework, but rather from other regulations.

On 16 December 2023, the draft *Methane Regulations for the Upstream Oil and Gas Sector* were published in <u>Canada Gazette</u>, Part I. The Regulatory Impact Analysis Statement ("**RIAS**") published with them stated that the amendments they propose are estimated to contribute more than 17 Mt of GHG emission reductions in 2030.⁵⁶

34 -17

⁵⁵ Dave Sawyer et. al, <u>Independent Assessment of Canada's 2023 Emissions Reduction Plan Progress</u> <u>Report</u>, December 2023. p. 5. Retrieved on 11 January 2024 from <u>https://climateinstitute.ca/news/independent-assessment/</u>

⁵⁶ Regulations Amending the Regulations Respecting Reduction in the Release of Methane and Certain Volatile Organic Compounds (Upstream Oil and Gas Sector) Regulatory Impact Analysis Statement, Canada Gazette Part I, Vol. 157, No. 50, p. 4006. Retrieved on 25 December 2023 from https://www.gazette.gc.ca/rp-pr/p1/2023/index-eng.html

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Therefore after the downstream refining and natural gas distribution emissions are removed from coverage, after the emissions by allowances are permitted, after the emissions from "other compliance units" are permitted, and after the emissions that will be reduced under the draft Methane Regs are considered, the Framework will only deliver 2030 emission reductions of 17 Mt.

If the 2030 emissions cap (the number of allowances issued) were set at the lower figure mentioned, i.e. 106 Mt instead of 112 Mt, then the Framework would deliver emissions reductions of 23 Mt. However, given the fact that ECCC rarely even mentions achieving its more stringent targets, such as the more stringent 45% reduction by 2030 instead of the 40% reduction, it is difficult to believe that the federal government will make any real effort to achieve the more stringent reduction from the O&G Emissions Cap.

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5.d The O&G Emissions Cap Has Effectively Been Dictated by the Oil and Gas Producers

On 23 July 2022, five days after the Discussion Document was released, CBC News reported:

Pathways Alliance, a group that includes six companies representing 95 percent of Canada's oilsands production, says it is working to reduce its CO2 emissions by **22 megatonnes by 2030**. Ottawa's plan wants the sector's total emissions (about 191 megatonnes in 2019) reduced to 110 megatonnes by the end of the decade.

"By 2032 you might get another two or three megatonnes," Mark Cameron, vice-president of external relations with the Pathways Alliance, told CBC News...

Cameron added that the 22-megatonne-by-2030 goal could potentially be increased if new technology becomes available or significantly more funding is infused. Either way, hitting the reductions outlined in the federal government's 2030 plan isn't feasible under current circumstances, he said.

"We would obviously need more time to get to that level. Whether or not we can achieve that by 2032, or it may take longer than that, is another question."⁵⁷ [Emphasis added.]

⁵⁷ Elise von Scheel, "Oil and gas industry could get more time to meet 2030 emissions targets, minister said", CBC News, 23 July 2022. Retrieved on 16 December 2023 from

Pathways Alliance states that its "Phase 1" goal of reducing emissions by 22 Mt by 2030 "focuses on building a proposed carbon capture and storage (CCS) network in northeastern Alberta."⁵⁸

We have seen above that what the Framework proposes will require between 17 Mt and 23 Mt of emissions reductions from the O&G Emissions Cap itself.

Pathways Alliance announced their intention to use CCS to reduce emissions from oil and gas production on 21 October 2021.⁵⁹ That was five months before ECC released the ERP, and over eight months before ECCC released the Discussion Document on the proposed O&G Emissions Cap. Now, fully two years after Pathways Alliance announced their intention, the Framework is not requiring them to do any more than they stated they were going to do anyway.

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5.e The Oil and Gas Industry's Re-investments to Reduce Emissions Has Been Contemptible

Regarding Mr. Cameron's statement about "significantly more funding" being "infused", the federal government has promised billions of dollars to oil and gas producers, in the form of an Investment Tax Credit (the "**ITC**"), to achieve reductions from Carbon Capture and Storage.

The CCUS Investment Tax Credit (ITC) announced in 2022, proposes to provide a 50 per cent credit for equipment associated with point-source CCUS projects, declining in 2030 and 2040 to incent early adoption...

Canada's federal government expects to commit C\$8.6 billion by 2030 to the announced ITC alone—double the funds that the U.S. federal government has earmarked for the extended 45Q tax credit in the Inflation Reduction Act by 2031 (about C\$4.3 billion).⁶⁰

https://www.cbc.ca/news/canada/calgary/oil-gas-emissions-reduction-guilbeault-climate-vonscheel-1.6 528307?__vfz=medium%3Dsharebar

⁵⁸ Pathways Alliance Website, Retrieved on 11 January 2024 from <u>https://pathwaysalliance.ca/net-zero-initiative/planned-phases/#phase-one</u>

⁵⁹ Retrieved on 11 January 2024 from

https://www.newswire.ca/news-releases/oil-sands-pathways-alliance-outlines-three-phase-plan-to-achi eve-goal-of-net-zero-emissions-881120319.html

⁶⁰ Janetta McKenzie & Scott MacDougall, "Comparing Canadian and American Financial Incentives for CCUS", Canadian Climate Institute and the Pembina Institute, March 2023. Retrieved on 11 January 2024 from

https://climateinstitute.ca/wp-content/uploads/2023/03/comparing-canadian-and-american-incentives-c cus-oil-sector.pdf

Meanwhile, in 2022, the oil and gas producing companies that operate in the oilsands had a combined available cashflow of \$58 billion. They returned half of that, i.e. \$29 billion, to shareholders in the form of share repurchases and increased dividends.⁶¹

According to <u>Posing as Canadian</u> by Gordon Laxer in 2021, 97% of the oil produced by the organizations on the board of the Canadian Association of Petroleum Producers came from fully or majority foreign-owned corporations.⁶² Therefore, the vast majority of that \$29 billion in 2022 was almost certainly paid to foreign shareholders.

The Pathways Alliance is an association of six oil producing companies that, together, produce almost all of the oil from the oilsands.⁶³ In the fourth quarter of 2022, it dedicated \$10 million to an engineering study on a planned carbon dioxide pipeline project. That represented 0.07% of the constituent companies' cashflow in Q4 2022. It did not announce any other spending for oilsands emissions reduction projects.⁶⁴

In its "Waiting to Launch 2023 mid-year update", the Pembina Institute stated that the oilsands producers' profits were on track to be the second highest in the last decade, "with 75% of all available cashflow returned to shareholders in the form of share repurchases and increased dividends". It also stated, "financial reports from oilsands companies show no new investments or actions to reduce emissions in the last six months".⁶⁵

It is entirely obvious what these companies are doing: They are extracting as much money as they can from their operations and returning it to their shareholders, for as long as they can, and doing as little as they can to reduce GHG emissions from production.

Recommendations:

⁶¹ Pembina Institute, <u>Waiting to Launch 2022 year-end update</u>. Retrieved on 16 December 2023 from <u>https://www.pembina.org/reports/waiting-to-launch-update-q4-infographic.pdf</u>

⁶² Gordon Laxer, <u>Posing as Canadian: How Big Foreign Oil captures Canadian energy and climate</u> policy, December 2021, p. 4. Retrieved on 16 December 2023 from <u>https://canadians.org/resource/bigforeignoil/</u>

⁶³ Retrieved on 16 December 2023 from <u>https://pathwaysalliance.ca/who-we-are/our-organization/</u>

⁶⁴ Pembina Institute, Waiting to Launch 2022 year-end update. Retrieved on 16 December 2023 from <u>https://www.pembina.org/reports/waiting-to-launch-update-q4-infographic.pdf</u>

⁶⁵ Pembina Institute, "Waiting to Launch 2023 mid-year update", Retrieved on 11 January 2024 from <u>https://www.pembina.org/reports/waiting-to-launch-update-q2-2023-infographic.pdf</u>

Tell the federal government (using references to the papers we cite here, as you may wish):

• The federal government must acknowledge that the oil and gas companies are not acting in good faith when they purport to be working to reduce their emissions from production. The government should do everything in its power to make the oil and gas producers significantly cut their emissions.

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5.f The O&G Emissions Cap is based on O&G Production Increasing by 2030

It is 2024 and the facts about climate change are well-known. The urgency to reduce GHG emissions is so well-accepted that many national and sub-national governments, including the Canadian federal government, refer to it as the "climate crisis". In 2023, the UNIPCC stated, "There is a rapidly closing window of opportunity to secure a liveable and sustainable future for all."⁶⁶ Even normally conservative institutions like the International Energy Agency have said that **no new fossil fuel infrastructure should be built** if we are to limit warming to 1.5°C.⁶⁷

The <u>2023 Production Gap Report</u>, produced by the United Nations Environmental Program, the Stockholm Environmental Institute, and other organizations, says it well:

Continued production and use of coal, oil, and gas are not compatible with a safe and livable future.

Major producer countries have pledged to achieve net-zero emissions and launched initiatives to reduce emissions from fossil fuel production, but none have committed to reduce coal, oil, and gas production in line with limiting warming to 1.5°C.

There is a strong need for governments to adopt both near- and long-term reduction targets for fossil fuel production and use to complement other climate mitigation benchmarks and reduce the risks of stranded assets. Countries with greater transition

⁶⁶ UNIPCC, AR6 Synthesis Report, Headline Statements, 2023. Retrieved January 14, 2024 from <u>https://www.ipcc.ch/report/ar6/syr/resources/spm-headline-statements/</u>.

⁶⁷ International Energy Agency, "The path to limiting global warming to 1.5 °C has narrowed, but clean energy growth is keeping it open", 26 September 2023. <u>https://www.iea.org/news/the-path-to-limiting-global-warming-to-1-5-c-has-narrowed-but-clean-energy-growth-is-keeping-it-open</u>

capacity should aim for faster reductions than the global average.

Countries should aim for a near total phase-out of coal production and use by 2040 and a combined reduction in oil and gas production and use by three-quarters by 2050 from 2020 levels, at a minimum.

Governments with greater transition capacity should aim for more ambitious reductions and help finance the transition processes in countries with limited capacities.⁶⁸

The stakes could not be higher, but regretfully Canada is one of the countries that has not committed to reduce coal, oil, and gas production in line with limiting warming to 1.5°C. In fact, **the Framework is based on the assumption that fossil fuel production will** *increase* **between now and 2030.**

	2019 Production Levels	2030 Production Levels based on the CER's Canada Net Zero Forecast	Increase
Total oil production (1000 barrels per day)	4,400	5,153	+17%
- Oil Sands (1000 barrels per day)	3,126	3,730	+19%
- Conventional oil (1000 barrels per day)	1,274	1,423	+12%
Natural gas production (petajoules per year)	7,470	7,845	+5%
LNG production (billion cubic feet per day)	0	3.91	n/a - this is a whole new

Figure 3: Production levels used to develop the proposed 2030 emissions cap (allowance levels) and legal upper bound (maximum allowable emissions)⁶⁹

https://productiongap.org/wp-content/uploads/2023/11/PGR2023_web_rev.pdf.

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⁶⁸ SEI, Climate Analytics, E3G, IISD, and UNEP. (2023). <u>The Production Gap: Phasing down or</u> <u>phasing up? Top fossil fuel producers plan even more extraction despite climate promises</u>. Stockholm Environment Institute, Climate Analytics, E3G, International Institute for Sustainable Development and United Nations Environment Programme.

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According to the Framework, the emissions cap is explicitly designed to, "make Canada a highly efficient producer [of oil and gas] supplying global demand."⁷⁰

For climate-concerned Canadians, this admission is shocking and distressing. To put it mildly, it is hard to see how this aligns with Canada's international commitments or with the reality recently acknowledged at COP28 that the world must, "transition away from fossil fuels in energy systems, in a just, orderly and equitable manner, with developed countries continuing to take the lead."⁷¹

Climate justice demands that wealthy countries like Canada, that are responsible for the vast majority of historical GHG emissions, lead the transition rather. Canada should not be enabling O&G corporations' determination to make as much money as possible supplying the products that threaten the wellbeing of all of us.

Recommendations:

Tell the federal government (using references to the papers we cite here, as you may wish):

• While it is clear that the federal government does not have authority to limit O&G production, they must get creative and use every tool in the toolbox to discourage O&G production and help Canada transition to a fossil fuel-free future.

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5.g The "Other Compliance Units" Are Mostly a Very Bad Idea

Of the 137 Mt of annual emissions that the Framework proposes to allow under the O&G Emissions Cap, 25 Mt, or 18% of them, are permitted by way of "other compliance units".

It is proposed that in addition to emissions trading, multi-year compliance periods, and credit banking, facilities have the option to remit domestic offset credits or make contributions to a decarbonization funding program to cover a limited portion of their GHG emissions. Consideration is also being given to allowing facilities to remit compliance units that represent mitigation outcomes that have been

⁷⁰ Framework, p. 1

⁷¹ United Nations Press Release, "COP28 Agreement Signals "Beginning of the End" of the Fossil Fuel Era", 13 December 2023. Retrieved on 4 January 2024 from

https://unfccc.int/news/cop28-agreement-signals-beginning-of-the-end-of-the-fossil-fuel-era

authorized for use by Canada as internationally transferred mitigation outcomes (ITMOs) to cover a portion of their GHG emissions.⁷²

Not all "other compliance units" are equal, and they are considered separately below.

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6.0 COMPLIANCE FLEXIBILITIES

The Framework envisions providing the O&G industry with several "compliance flexibilities", some of which have been briefly mentioned above. This section examines each of the six compliance flexibilities identified in the Framework, as well as a seventh that is not called a compliance flexibility but effectively functions as one.

- [a] emissions trading;
- [b] multi-year compliance periods;
- [c] credit banking, i.e., banking of emission allowances;
- [d] contributions to a decarbonization fund;
- [e] domestic offset credits;
- [f] Internationally Transferred Mitigation Outcomes (ITMOs);
- [g] delayed reporting and verification.

6.a Emissions Trading

The Framework states:

Emission allowances would be tradeable among covered facilities but would be unique to the oil and gas emissions cap-and-trade system. Likewise, surplus credits, performance credits or other permits or allowances from other regulations or carbon pricing systems, including federal and provincial output-based pricing systems or cap-and-trade systems, would not be eligible for use within the oil and gas emissions cap-and-trade system.⁷³

This is the unobjectionable and wholly legitimate "other half" of a cap-and-trade system: Once the government fixes the cap and distributes (in whatever manner is chosen) the permits to emit GHGs up to that cap, individual firms within the industry are free to use the permits to emit GHGs themselves or to sell those permits to other firms within the industry.

If one firm better employs technology, such as Carbon Capture and Storage ("**CCS**") than another firm, they may elect to use their permits to produce more oil and gas. If for some other reason they are limited in how much they can produce, they can still

⁷² <u>Framework</u>, p. 7.

⁷³ <u>Framework</u>, p. 7.

profit from their cleaner production by selling their surplus credits to a firm that has had more difficulty with its CCS technology. Doing so might, in turn, help to keep the second firm viable while it improves its CCS technology. This helps to achieve the most economically rational system possible under a cap-and-trade system.

Society does not care which firms emit the GHGs, only that no more GHGs are emitted in total than is permitted by the cap.

(This assumes that CCS will actually work in an economically viable manner in practice. CCS is one of the most expensive and least effective options to mitigate GHG emissions from the energy sector,⁷⁴ but that should be considered as a separate issue.)

Figure 4: Comparison of Energy Sector Mitigation Options and Their Costs⁷⁵



Legend for Figure 4⁷⁶

⁷⁴ United Nations Intergovernmental Panel on Climate Change, Working Group III contribution to the Sixth Assessment Report, Summary for Policy Makers, 2022, p 38.

⁷⁵ United Nations Intergovernmental Panel on Climate Change, Working Group III contribution to the Sixth Assessment Report, Summary for Policy Makers, 2022, p 38.

⁷⁶ United Nations Intergovernmental Panel on Climate Change, Working Group III contribution to the Sixth Assessment Report, Summary for Policy Makers, 2022, p 38.



The trading of emissions allowances and credits is obviously a key part of the proposed Framework, and it will be crucial to ensure the integrity of the trading system. Without reliable documentation and verification, allowances and credits could purposely or inadvertently be used twice, resulting in twice as many GHG emissions as there should have been. This could jeopardize Canada's ability to meet our GHG reduction targets.

Before a company can sell allowances or credits, the government or a third party should verify that the reported emissions reductions have actually taken place. In the case of a company selling unused allowances, an auditor should verify that the facility has not in fact emitted those allowances either intentionally or through leakage. Similarly, an auditor should verify that any reported carbon sequestration (i.e., CCS) or purchase of carbon offsets has actually resulted in the **permanent** removal of GHGs before a company can sell those credits. The trading or selling of credits where GHG removal is not guaranteed to be permanent (e.g., a reforestation project that might later be burned in a wildfire) should not be permitted, as the planet can't afford these extra GHGs.

Due to the central importance of the integrity of the trading system in delivering the promised GHG reductions, it should be regulated by the federal government rather than audited or managed by a third party. This will help create a trusted market for emissions trading that Canadians can count on.

Recommendations:

Tell the federal government (using references to the papers we cite here, as you may wish):

- Allowing companies to trade emissions allowances (the "trade" part of "cap-and-trade") is unobjectionable.
- To ensure emissions reduction targets are met, the government must regulate and closely monitor the trading of allowances and emissions credits. Particularly when companies are relying on new technologies such as carbon capture and storage (CCS), it will be important to verify that the reported emissions reductions have actually taken place and result in the *permanent* removal of GHGs.

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6.b Multi-Year Compliance Periods

The Framework states:

It is proposed that compliance periods have a length of three years. This would give facilities more time to achieve GHG emissions reductions before remitting allowances or compliance units to cover all of their GHG emissions vs. an annual compliance period.⁷⁷

Multi-year compliance periods would have both an annual compliance requirement and a final "true up" at the end of each compliance period. For example, for the first and second years of a given compliance period, covered facilities would be required to remit compliance units equal to 30% of their verified GHG emissions, less any GHGs permanently stored, during the preceding calendar year. At the end of each compliance period, covered facilities would be required to remit one emission allowance or eligible compliance period, less emission allowances and compliance units remitted in interim years.⁷⁸

Under the proposed multi-year compliance periods, facilities' compliance with the cap would be assessed in three-year chunks. Facilities would have to report their emissions each year.⁷⁹ In the first and second year, they would remit a small proportion of the required compliance units (allowances or purchased credits). The full reconciliation of the books, meaning verifying that a facility has enough allowances and purchased credits to cover what they actually emitted, would take place at the end of the third year.

⁷⁹ <u>Framework</u>, p. 9.

⁷⁷ <u>Framework</u>, p. 7.

⁷⁸ <u>Framework</u>, p. 10.

Presumably, though the Framework does not address this explicitly, there would be no penalties if a facility exceeds their emissions allowance in the first or second year of a three-year compliance period. It appears that ECCC would only take enforcement action⁸⁰ if a facility is found to be in non-compliance at the end of the three-year period (i.e., their total actual emissions over three years exceeded their total allowances and purchased credits).

Multi-year compliance periods are a common feature of cap-and-trade systems. They can reduce price volatility for companies trading and purchasing emissions allowances and credits⁸¹ and give facilities more time to achieve GHG emissions reductions.⁸² The systems in Québec⁸³ and California⁸⁴, and the Regional Greenhouse Gas Initiative (RGGI) which covers eleven American states⁸⁵, have three-year compliance periods with "partial annual surrender obligations" to cover some portion of the emissions in interim years.

Incorporating multi-year compliance periods in the new cap on O&G sector GHG emissions is reasonable, particularly in the first few years as ECCC, companies, and third-party auditors work to implement the new system and the market to trade and purchase emissions allowances and credits is established. The fact that facilities will still have to report their emissions annually is important, because ECCC will know which facilities might be at risk of non-compliance.

⁸² Framework, p. 7.

https://www.environnement.gouv.gc.ca/changementsclimatiques/marche-carbone_en.asp#how.

⁸⁴ California Air Resources Board, Compliance and Transfers Guidance, "Preparing for the 2021 Annual Compliance Obligation", August 1, 2022, p 1. https://ww2.arb.ca.gov/sites/default/files/2022-08/citss_compliance_2022.pdf.

https://refresh-stg-c2es.pantheonsite.io/content/regional-greenhouse-gas-initiative-rggi/.

⁸⁰ Page 10 of the <u>Framework</u> states, "When selecting the appropriate enforcement response, ECCC officers will consider each instance of noncompliance in accordance with the <u>Compliance and</u> <u>Enforcement Policy</u> for the *Canadian Environmental Protection Act, 1999* (CEPA)." The Policy lists the following potential enforcement actions: warnings, directions to address unauthorized emissions, fines, compliance orders, court injunctions, criminal prosecution (can result in fines, imprisonment, court orders), environmental protection alternative measures, and civil suits to recover costs.

⁸¹ Center for Climate and Energy Solutions, "Cap and Trade Basics", retrieved on January 14, 2024 from <u>https://www.c2es.org/content/cap-and-trade-basics/</u>.

⁸³ Gouvernement du Québec, Ministère de l'Environnement, de la Lutte contre les changements climatiques, de la Faune et des Parcs, "The Carbon Market, a Green Economy Growth Tool!", retrieved on January 14, 2024 from

⁸⁵ Participating states include Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, Vermont, and Virginia. Pennsylvania is expected to join soon. Center for Climate and Energy Solutions, "Regional Greenhouse Gas Initiative (RGGI)", retrieved on January 14, 2024 from

However, the devil is in the details, and the details of how multi-year compliance periods will work are scarce as the two paragraphs quoted above are the only information currently available. For example, we don't know if any verification of facilities' reported emissions will be done in the interim years (years one and two of a three-year compliance period). If those interim emissions are not on track to meet the facility's emissions cap over the three-year period, we don't know if ECCC will have any authority or tools to compel or influence the company before the end of the three-year period. And as mentioned above, we don't know what the consequences for non-compliance will be. The draft regulations, expected to be released in 2024, will spell out all of these details and we will be watching with great interest.

In the meantime, we can assess the policy based on what we do know. To highlight potential issues, the following tables illustrate three scenarios that could occur given what we currently know about multi-year compliance periods. Three different facilities each have allowances to emit 1.0 Mt of CO2e per year for three years. (All the numbers in the scenarios are completely made up for ease of understanding.) The facilities take different approaches over the three year compliance period and we can see the results.

In Scenario 1 (below), Facility X emits 1.3 Mt and stores (e.g., through CCS) 0.1 Mt each year. In the first and second years, the facility remits compliance units equal to 30% of what they emitted that year, or 0.36 Mt each year.

At the end of the compliance period, the facility's net emissions are 3.6 Mt, 20% more than their 3.0 Mt allowance. They must remit compliance units for 2.88 Mt (equal to 3.6 Mt minus the 0.62 Mt they previously remitted). The facility is allowed to purchase credits through a combination of carbon offsets and contributions to a decarbonization fund (discussed in detail below) to emit up to 20% more than their allowances, in this case 0.6 Mt. So the facility emits a combination of allowances and purchased credits totalling 3.6 Mt for the three-year period, and is in compliance with the cap system.

Scenario 1 - Facility X (full compliance with offsets scenario)	2026	2027	2028	Total for 3-year compliance period
Allowances	1.0 Mt	1.0 Mt	1.0 Mt	<mark>3.0 Mt</mark>
Actual Emissions	1.3 Mt	1.3 Mt	1.3 Mt	3.9 Mt
GHGs Stored	0.1 Mt	0.1 Mt	0.1 Mt	0.3 Mt
Net Emissions (actual emissions - GHGs stored)	1.2 Mt	1.2 Mt	1.2 Mt	<mark>3.6 Mt</mark>
Interim Compliance Units Remitted (net emissions * 30%)	0.36 Mt	0.36 Mt	n/a	3.6 Mt
Compliance Units Remitted at Final	n/a	n/a	2.88 Mt	(3.0 Mt allowances + 0.6 Mt purchased

"True Up" (total net emissions - total interim compliance units)		credits ⁸⁶)

Scenario 2 (below) illustrates how a facility could save up their allowances and then ramp up production creating very high emissions in the last year of the compliance period. A facility might want to do this if they think the price of their product (oil, gas, LNG) will be higher in future years.

In the first and second years, Facility Y only emits 0.1 Mt each year. Each year they remit compliance units equal to 30% of that amount, or 0.03 Mt. In the third year, the facility emits 2.8 Mt.

At the end of the compliance period, the facility's net emissions are 3.0 Mt, exactly in line with their total allowance. They must remit compliance units for 2.94 Mt (equal to 3.0 Mt minus the 0.06 Mt they previously remitted). The facility is in compliance with the cap system. However, this scenario in which a large amount of CO2e is emitted all at once in the final year is not very good for the planet (since we have to reduce GHG emissions as quickly as possible), or for Canada meeting its GHG emissions reduction targets which decline over time.

Scenario 2 - Facility Y (compliance & carbon bomb scenario)	2026	2027	2028	Total for 3-year compliance period
Allowances	1.0 Mt	1.0 Mt	1.0 Mt	<mark>3.0 Mt</mark>
Actual Emissions	0.1 Mt	0.1 Mt	2.8 Mt	3.0 Mt
GHGs Stored	0	0	0	0
Net Emissions (actual emissions - GHGs stored)	0.1 Mt	0.1 Mt	2.8 Mt	<mark>3.0 Mt</mark>
Interim Compliance Units Remitted (net emissions * 30%)	0.03 Mt	0.03 Mt	n/a	3.0 Mt
Compliance Units Remitted at Final "True Up" (total net emissions - total interim compliance units)	n/a	n/a	2.94 Mt	(3.0 Mt allowances + 0 purchased credits)

Scenario 3 (below) shows what it might look like if a facility does not comply with the cap.

In the first and second years, Facility Z's emissions are much higher than their annual allowance at 1.5 Mt and 1.8 Mt respectively. They report these emissions so the

⁸⁶ Companies can buy credits to emit additional GHGs for an amount equal to 20% of their allowances.
government knows this facility is not on track to meet their total emissions allowance at the end of the compliance period. The facility is required to remit compliance units equal to 30% of their emissions, or 0.45 Mt in the first year and 0.54 Mt in the second year. In the third year, the facility again exceeds their allowance, emitting 1.6 Mt.

At the end of the compliance period, the facility's net emissions are 4.9 Mt, 63% over their total allowance. They must remit compliance units for 3.91 Mt (equal to 4.9 Mt minus the 0.99 Mt they previously remitted). The facility is NOT in compliance with the cap system.

Scenario 3 - Facility Z (non-compliance scenario)	2026	2027	2028	Total for 3-year compliance period
Allowances	1.0 Mt	1.0 Mt	1.0 Mt	<mark>3.0 Mt</mark>
Actual Emissions	1.5 Mt	1.8 Mt	1.6 Mt	4.9 Mt
GHGs Stored	0	0	0	0
Net Emissions (actual emissions - GHGs stored)	1.5 Mt	1.8 Mt	1.6 Mt	<mark>4.9 Mt</mark>
Interim Compliance Units Remitted (net emissions * 30%)	0.45 Mt	0.54 Mt	n/a	3.6 Mt (3.0 Mt allowances + 0.6 Mt purchased credits) 1.3 Mt over allowable emissions
Compliance Units Remitted at Final "True Up" (total net emissions - total interim compliance units)	n/a	n/a	3.91 Mt	

The main concern boils down to this: when it comes to reducing GHG emissions, speed matters.

In 2022, the United Nations Intergovernmental Panel on Climate Change (UNIPCC) said that in order to limit warming to 1.5°C or 2°C, "rapid and deep GHG emissions reductions" are required.⁸⁷ In 2023, the UNIPCC said, "There is a rapidly closing window of opportunity to secure a liveable and sustainable future for all," and noted that, "the level of greenhouse gas emission reductions this decade largely determine whether warming can be limited to 1.5°C or 2°C." ⁸⁸

⁸⁷ UNIPCC, Working Group III contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, (IPCC AR6 WG III), Summary for Policymakers, 2022, p. 17.

⁸⁸ UNIPCC, AR6 Synthesis Report, Headline Statements, 2023. Retrieved January 14, 2024 from <u>https://www.ipcc.ch/report/ar6/syr/resources/spm-headline-statements/</u>.

As explained in detail earlier in this document, the level of the proposed cap on O&G sector emissions already is not ambitious enough. We cannot afford any flexibilities or loopholes that could jeopardize the sector's ability to realize even the modest reductions required. Giving O&G companies "more time to achieve GHG emissions reductions" is hard to defend when the industry has had five years' notice that the cap was coming.⁸⁹ It's impossible to defend when we know that continuing emissions will have dire consequences for us all.

It will therefore be crucial that when the forthcoming regulations set out how multi-year compliance periods work, they include some way to hold facilities accountable during the interim years. It's good that facilities will have to report their emissions each year, but the government must be able to take action immediately if the emissions are not on track with the facility's allowances. And to be a strong enough deterrent the penalties for non-compliance must be severe, not just the "cost of doing business".

In future years the emissions cap for the sector will get stricter and stricter, increasing the need for timely monitoring, verification, and enforcement action if needed.

For all of these reasons, multi-year compliance periods should be phased out as soon as possible, and certainly by 2030. Post-2030, O&G facilities should be subject to annual compliance periods.

Recommendations:

Tell the federal government (using references to the papers we cite here, as you may wish):

- Reconciling a facility's actual emissions with their allowances and credits every three years is reasonable when the cap is first introduced.
- In implementing multi-year compliance periods, the government must have sufficient authority to ensure emissions targets are met. The requirement to report emissions annually must be retained, and the government should be able to hold facilities accountable if their emissions reductions are off-track.
- To ensure the increasingly strict emissions cap in future years can be met, multi-year compliance periods should be phased out by 2030 and be replaced by annual compliance periods.

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6.c Banking of Emissions Allowances

⁸⁹ The Minister of Environment and Climate Change's Mandate Letter included an O&G sector cap in 2021. The cap will be implemented in 2026. Retrieved 3 January 2023 from <u>https://www.pm.gc.ca/en/mandate-letters/2021/12/16/minister-environment-and-climate-change-mandate-letter</u>.

The Framework states:

Facilities would be able to bank allowances for up to two compliance periods (six years). This would be permitted for all allowances, whether allocated to a facility free of charge or purchased from another covered facility. Consideration is being given to including a limit on the total number of allowances that can be banked.⁹⁰

With an emissions cap that decreases over time, it will get harder and harder for companies to meet the required emission reductions. Some banking of emissions allowances is probably necessary to avoid perverse incentives for companies to delay the costs of implementing emission reductions. For example, if a company is able to reduce their emissions by more than they are required to do in a given year, we need them to do so rather than wait until a future year when their emissions limit is stricter.

However, it is important that allowances not be allowed to be banked forever. One of the stated principles of the Framework is that GHG emissions decline over time.⁹¹ We don't want a system where companies could wait to develop their oil and gas (for example, if they expect the price of oil to be higher in the future, as it may), then develop and sell it all, dropping a large carbon "bomb" on the world. We also don't want companies to be able to bank so many credits that Canada's emissions reduction targets in future years could be in jeopardy.

There is a real risk of creating a glut of emissions allowances. In other systems used to date this has occurred when, for different reasons, there has been an over-allocation of emissions allowances in early years that firms did not need at the time. The over-allocation could occur because the regulator estimated poorly and distributed too many. This is perhaps less of a risk for the Framework, because ECCC has stated – quite rightly – that this cap-and-trade system will be limited to only the oil and gas industry. When many industries are covered by a single cap-and-trade system, as with California's, it is difficult for the regulators to get the allocation of allowances right over all the industries, which are then allowed to trade amongst themselves.

However, there could also be an over-allocation in years such as those that were most impacted by the Covid pandemic, when the world simply could not use or need the regular amount of oil and gas, and so it was not produced. The temporary decrease in consumption, and therefore production, was an odd side-benefit from Covid. An event like the Great Recession of 2008-2009 can have the same effect of decreased oil and gas consumption, demand, and production. It would be perverse

⁹⁰ <u>Framework</u>, p. 8.

⁹¹ <u>Framework</u>, p. 2.

to let firms bank their unneeded and unused allocated credits caused by events such these to use long into the future.

Whether from poor estimating by the regulator or by a "black swan" event such as Covid, the result of permitting nearly unlimited banking is, over time, a glut of credits.

This is bad for two reasons: As discussed above, it sets the stage for a future "carbon bomb". Beyond that, though, a glut (in a classic economics 101 example of oversupply) will cause a reduction in price for credits. The cost of emitting one tonne of carbon could become vanishingly small. Firms will be incentivized to buy extremely cheap credits rather than reduce their emissions, especially given the potential overrun in costs to implement any given emission reduction technology. If it would cost a firm \$60 per tonne to retrofit its facility to reduce emissions, but it can buy allowances for \$20 per tonne, it will not retrofit its facility. This would not be a problem if the cap is always set to allow only an emissions level which leads to the targeted reduction **and** there is no non-compliance (i.e., firms emitting notwithstanding they are over the cap and have not purchased enough credits); but no regulator is capable of perfect foresight and enforcement. There needs to be a mechanism which can quickly reduce a glut when it starts to form and to adjust the cap as needed.

Experts are warning that this is exactly what is happening in California's cap and trade system,⁹² where regulated companies have banked, "a glut of credits that could allow businesses to keep polluting past state limits in later years, after the overall cap becomes more restrictive."⁹³ The California Legislative Analyst's Office has warned that because of excess allowances, actual emissions could be as much as 30% over the statewide target by 2030.⁹⁴

The 2021 Annual Report of the Independent Emissions Market Advisory Committee to the California State Senate Standing Committee on Budget and Fiscal Review explained the scope of California's problem with overallocation and credit banking:

The market's third compliance period (2018-2020) resulted in 100 percent compliance. This good news was also accompanied by noteworthy data that indicate a substantial number of allowances

⁹² California's cap-and-trade system came into force in 2013 and is currently authorized to run until 2030. Centre for Climate and Energy Solutions, "California Cap and Trade". Retrieved on 5 January 2024 from https://www.c2es.org/content/california-cap-and-trade/.

⁹³ Cart, Julie, "Experts – once again – tell Senate panel that California's key climate change strategy is flawed", in CalMatters, February 23, 2022. Retrieved on 5 January 2024 from https://calmatters.org/environment/2022/02/california-climate-cap-trade/

⁹⁴ California Legislative Analyst's Office, "Cap-and-Trade Extension: Issues for Legislative Oversight", December 12, 2017. Retrieved on 5 January 2024 from https://lao.ca.gov/Publications/Report/3719

were held (or "banked") in private accounts, raising questions about the program's ability to contain emissions from sources covered by the emissions cap to adequately support the economy-wide greenhouse gas limit in the years ahead. All told, some 321 million allowances were banked into the market's post-2020 period, equal to more than the emissions reductions expected from the program over the coming decade. An additional reserve supply of allowances totaling 274 million tons resides in public accounts and could also enter the market, depending on future prices... Whatever the explanatory factors, the number of allowances held in private and public accounts casts uncertainty over the state's ability to hit its 2030 emissions limit.⁹⁵

"One analyst likened the problem to a game of musical chairs that starts with too many chairs and allows participants to save seats for later."⁹⁶

The issue has also been a problem for the European Union's carbon-trading system and for the Regional Greenhouse Gas Initiative, a system among nine [at the time the article was written, but now 11 – see Footnote 84] Eastern American states that deals with credits for the electricity sector.⁹⁷

Learning from the California experience, and given how late the emissions cap will be implemented with respect to 2030 emission reduction targets, facilities should only be able to bank allowances for a single compliance period (three years), rather than the six years the Framework proposes.

It is troubling that a limit on the total number of allowances that can be banked is described only as being under consideration⁹⁸ rather than a definite element of the Framework. Unlimited banking of allowances should be a non-starter if the oil and gas emissions cap is to be effective. The Framework does not propose what the limit on banking allowances could be, leaving that to the draft regulations expected to be released in 2024. It also does not propose what the emissions allowances will be for

https://sbud.senate.ca.gov/sites/sbud.senate.ca.gov/files/2021-IEMAC-Annual-Report.pdf

⁹⁵ <u>2021 Annual Report of the Independent Emissions Market Advisory Committee</u> to the California State Senate Standing Committee on Budget and Fiscal Review, 4 February 2022. Retrieved on 17 January 2024 from

⁹⁶ Julie Cart, "Checking the math on cap and trade, some experts say it's not adding up", Cal Matters, 22 May 2018. Retrieved on 17 January 2024 from

https://calmatters.org/environment/2018/05/checking-the-math-on-cap-and-trade-some-experts-say-its-not-adding-up/

⁹⁷ Julie Cart, "Checking the math on cap and trade, some experts say it's not adding up", Cal Matters, 22 May 2018. Retrieved on 17 January 2024 from

https://calmatters.org/environment/2018/05/checking-the-math-on-cap-and-trade-some-experts-say-its-not-adding-up/

⁹⁸ <u>Framework</u>, page 8.

each of the years before 2030. Taken together, we cannot determine the risk of an emissions credit glut being created in even the first few years. ECCC should have included information both on the credit allowances in the first few years and the limit on credit banking in the Framework. Since they have not, they should provide it immediately, or at least shortly after the close of this online public consultation, so that people can comment on both issues. In any event, ECCC must include a clear limit in the draft regulations, with the percentage set at a low level that takes into account the declining emissions cap in future years.

Furthermore, the flexibility to bank allowances should be phased out over time, and be completely eliminated well before the Canadian economy reaches net-zero in 2050. This phase-out should have been discussed in the Framework. Since it was not, ECCC should announce it as soon as possible rather than planning to amend the regulations later, so companies can plan ahead and concerned citizens can hold companies and the government accountable.

Together, these recommendations would reduce loopholes and help ensure the oil and gas cap's GHG emissions reductions are actually achieved.

In terms of preventing and/or fixing the problem of a glut of emissions allowances, the European Union has developed an effective solution for its cap-and-trade system known as the EU ETS. The solution is called the "Market Stability Reserve":

It works as follows. The European Commission measures the number of surplus allowances in circulation based on an objective formula. If that number is less than 400 million, the Market Stability Reserve injects an additional 100 million allowances into circulation. If the number exceeds 833 million, the Market Stability Reserve absorbs up to 24% of the total by deducting this amount from future years' auction budgets. IF the number is between 400 and 833 million, no action is taken.

The practical effect of the Market Stability Reserve is to clear a significant excess buildup of allowances in the EU ETS. When the EU began its reporting, the number of surplus allowances in the program has hovered in the range of 1.6 to 1.7 billion, close to a full year's worth of covered emissions...As of the 2019 program year – the most recent available as of this writing – an additional 994 million allowances have been transferred or scheduled for transfer to the Reserve on top of the original 900 million removed under the initial "backloading" initiative [which was an earlier attempted solution that was found to be much less effective]. More will soon follow.

In essence, the Market Stability Reserve provides a kind of central banking function that aims to stabilize prices by altering the supply

of money – a Goldilocks strategy for managing allowance supplies. If the EU market has too many allowances, prices will fall to unacceptably low levels; to prevent that outcome, the Reserve absorbs excess allowances to nudge prices back up. If the market is too tight, then prices could rise to unacceptable levels; in this case, the Reserve injects new allowance supplies to moderate prices. If the market's supply-demand balance remains within a desired range, then all is well and the market is left alone to do its work.⁹⁹

The ECCC should either include a system similar to the Market Stability System in the draft regulations or should include a provision permitting them to do so as they may deem fit.

Recommendations:

Tell the federal government (using references to the papers we cite here, as you may wish):

- To ensure emissions are reduced as fast as possible and the 2030 target is met, banking of allowances should be limited to a single three-year compliance period, rather than six years.
- To prevent the accumulation of a glut of emissions credits in the industry, unlimited banking of allowances should not be allowed. A clear limit on the total quantity of credits that can be banked must be included in the regulations, with the percentage set at a low level that accounts for the declining emissions cap in future years.
- To ensure the increasingly strict emissions cap in future years can be met, the regulations should phase out the ability to bank allowances, and completely eliminate it well before Canada reaches net-zero in 2050.
- To help prevent a glut of emissions allowances, the government should ensure this cap-and-trade system continues to cover only the O&G sector going forward. Expanding the cap-and-trade system to cover more industries could lead to an over-allocation of emissions allowances.
- To regulate the quantity of credit allowances on an ongoing basis, in order to prevent either a deficit or a glut, the draft regulations must either include a market regulatory mechanism similar to the EU ETS Market Stability Reserve or a provision that the government may implement such a system without further consultation if it sees fit to do so.

⁹⁹ Danny Cullenward and David G. Victor. <u>Making Climate Policy Work</u> (Cambridge, UK: Polity Press, 2020), pp. 125-126.

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6.d Making Contributions to a Decarbonization Fund

The Framework is proposing the introduction of a "Decarbonization Fund":

The government is exploring options to include a decarbonization funding program as a compliance option. If included, covered facilities would have the option to make contributions into the fund in exchange for decarbonization fund units, which would be recognized as an eligible compliance unit. Use of decarbonization fund units for compliance under the regulations would be limited to 10% of a facility's GHG emissions. *Contributions to the decarbonization fund would be used to support oil and gas sector decarbonization and would help decrease emissions at facilities that receive support from the fund.*

It is proposed that the contribution rate to be issued a decarbonization fund unit would be set in the regulations at the estimated allowance price needed for the sector to reduce GHG emissions in-line with the legal upper bound. For example, modelling suggests when emission reduction incentives from other policies are taken into account (e.g., carbon pricing), *the 2030 allowance price in an emissions cap-and-trade system to achieve a legal upper bound of 131 Mt to 137 Mt could be around \$50 per tonne CO2e.*¹⁰⁰ [Emphasis added]

This is quite simply a bad proposal that should be opposed. There are five reasons for this.

The first reason is that we need to cut emissions from the production of oil and gas, not create excuses, in the form of "compliance flexibilities", for oil and gas producers to emit more GHGs.

Policies employed to date to reduce GHGs from oil and gas production have been a patent failure: Emissions from Canadian oil and gas production were 103 Mt in 1990. They rose to 171 Mt in 2005 (which is the base year for the Paris Agreement national emissions targets and for Canada's Emissions Reduction Plan). By 2019, at 203 Mt, emissions from oil and gas production had almost doubled from 1990 levels.¹⁰¹ In

¹⁰⁰ <u>Framework</u>, p. 8.

¹⁰¹ Environment and Climate Change Canada, <u>National Inventory Report 1990-2020: Greenhouse Gas</u> <u>Sources and Sinks in Canada – Canada's Submission to the United Nations Framework Convention</u> <u>on Climate Change</u>. p. 67, Table 2-12. Retrieved on 7 January 2024 from <u>https://publications.gc.ca/site/eng/9.506002/publication.html</u>

2020, they were the biggest single source of Canadian GHG emissions, at 28% of the total, $^{\rm 102}$ up from 26% in 2019. $^{\rm 103}$

The total GHG emissions from Canada's other industry sectors – Electricity, Transport, Heavy Industry, Buildings, Agriculture, and "Waste and Others" – fell from 565 Mt in 2005 to 565 Mt in 523 Mt in 2019. In stark contrast to this trend, emissions from oil and gas production rose from 168 Mt in 2005 to 201 Mt in 2019.¹⁰⁴

A "compliance flexibility" that lets oil and gas producers pay into a "decarbonization fund" is not a way of reducing emissions from oil and gas production; it is simply a way of *not* reducing emissions from oil and gas production while making it *look like* the government has done something about emissions from oil and gas production.

The second reason why paying into a "Decarbonization Fund" is a bad policy proposal is because it is absurd to permit oil and gas producers to emit more GHGs as long as they pay into a fund that will benefit themselves. This is exactly what the Framework is proposing: "Contributions to the decarbonization fund would be used to support oil and gas sector decarbonization and would help decrease emissions at facilities that receive support from the fund."¹⁰⁵

Even worse, the design of the proposed Framework would *give companies credit twice under the cap for spending the same funds*. To illustrate, if a company contributes \$1,000 to the decarbonization fund, they get credit equivalent to 20 tonnes of CO2e. They can either emit that 20 tonnes themselves, or sell the credit to someone else who will emit it. Then later, when they access money (say \$1,000) from the decarbonization fund to reduce their GHG emissions (e.g., through CCS), they would get credit again for whatever amount of GHGs they reduce.

Oil and gas firms are already at liberty to reinvest as much of their profits as they wish into reducing leakage, finding efficiencies, and technical innovations such as CCS that will reduce their GHG emissions. Indeed, beyond merely being at liberty to

¹⁰⁵ <u>Framework</u>, p. 8.

¹⁰² Environment and Climate Change Canada, <u>National Inventory Report 1990-2020</u>: Greenhouse Gas <u>Sources and Sinks in Canada – Canada's Submission to the United Nations Framework Convention</u> <u>on Climate Change</u>. p. 12, Figure ES-6. Retrieved on 7 January 2024 from <u>https://publications.gc.ca/site/eng/9.506002/publication.html</u>

¹⁰³ Data Source: <u>Environment and Climate Change Canada, National Inventory Report: 1990-2019:</u> <u>Greenhouse Gas Sources and Sinks in Canada – Canada's Submission to the United Nations</u> <u>Framework Convention on Climate Change</u>, Part 3, p. 11, Table A10-2. Retrieved on 7 January 2024 from <u>https://publications.gc.ca/site/eng/9.506002/publication.html</u>

¹⁰⁴ Environment and Climate Change Canada, <u>National Inventory Report 1990 to 1921: Greenhouse</u> <u>Gas Sources and Sinks in Canada – Canada's Submission to the United Nations Framework</u> <u>Convention on Climate Change</u>. p. 12, Table ES-2.

do so, the federal government has already provided "compliance flexibility" by way of an investment tax credit with which to support the development of CCS (despite their pledge to eliminate "inefficient" subsidies to the fossil fuel sector). This program is expected to cost Canadians \$2.6 billion in the first five years, reaching up to \$8.6 billion by 2030.¹⁰⁶ It is perverse to reward them further by letting them emit more GHGs if they put money into a fund that will benefit themselves.

Despite significant government financial support and the industry's own record profits, Canadian O&G companies have failed to reduce their GHG emissions. If the decarbonization fund proposal is not eliminated, the funds should go to organizations with a proven track record of reducing GHG emissions, such as the renewable energy sector.

The third reason why paying into a "Decarbonization Fund" is a bad policy proposal is because the federal government has already proven itself to be incompetent to design and successfully implement such a funds. This was made clear in the Auditor General of Canada's <u>Report 4—Emissions Reduction Fund—Natural Resources</u> <u>Canada</u>, released in November 2021:

4.5 In November 2020, the government launched the Onshore Program of the Emissions Reduction Fund, which was part of Canada's COVID-19 Economic Response Plan. The government saw the Onshore Program as a way to help the energy sector deal with lower oil prices during the pandemic. The program was designed to support emission reduction efforts by providing financial support to struggling companies in the sector. It offered up to \$675 million to help onshore (that is, land-based) oil and gas companies maintain employment, attract investments, increase global competitiveness, **and accelerate their deployment of equipment to reduce greenhouse gas emissions**, with a particular focus on methane...

4.14 Overall, Natural Resources Canada did not design the Onshore Program of the Emissions Reduction Fund to ensure credible and sustainable reductions of greenhouse gas emissions in the oil and gas sector or value for the money spent.

4.15 ... We found that, when designing the Onshore Program, Natural Resources Canada did not apply greenhouse gas accounting principles or the concept of additionality—that is, emission reductions attributed to the program should be in addition to what would have happened without it. As a result, more than half of the

¹⁰⁶ Meghan Potkins, "Trudeau proposes tax credit to cover 50% of carbon capture technology cost", <u>The Financial Post</u>, 7 April 2022. Retrieved on 7 January 2024 from <u>https://financialpost.com/commodities/energy/oil-gas/trudeau-proposes-tax-credit-to-cover-50-of-carbo</u> <u>n-capture-technology-cost</u>

total reductions targeted by the program had already been accounted for under the federal methane regulations. Even though the Onshore Program enables companies to comply with regulatory requirements, the department should not have attributed regulated reductions to the program and misstated what the program could achieve.

4.16 Natural Resources Canada did not require that companies apply greenhouse gas accounting principles or the concept of additionality as defined in recognized standards when estimating projects' expected emission reductions. For two thirds of the 40 submissions to the first intake period of the program, the department made funding decisions on the basis of overestimates of expected reductions. For 27 funded projects, companies had indicated in their submissions that these projects would also accommodate an increase in oil or gas production. However, companies excluded from their final estimates the increases in emissions that would result from such increases in production. Had these increases in emissions been accounted for, they would have lessened or even outweighed the emission reductions expected from these projects...¹⁰⁷ [Emphasis added.]

There is no good reason to create such a "Decarbonization Fund" in the first place. In light of the fact that the federal government has already demonstrated incompetence at designing and implementing such a program, it is unacceptable that they would be allowed to try again.

The fourth reason why permitting more GHG emissions if the producers pay into a "Decarbonization Fund" is a bad policy proposal is because it unfairly distorts the cost of carbon. In 2030, regular citizens who must pay the "carbon tax" on consumer fuels such as gasoline for cars and "natural" (methane) gas for home heating will be paying it at a rate of \$170/tCO2e. Meanwhile the Framework proposes to let oil and gas producers emit additional tonnes of CO2e for \$50/tCO2e in 2030.¹⁰⁸

The fifth reason is that, depending on what ECCC does or does not do to prevent a glut of emissions allowances, and the corresponding drop in the cost for one tonne of emissions allowance, the \$50 allowance price of "around \$50 per tonne CO2e" could be entirely undermined.

The only way that the price of \$50/tCO2e can be conceived of as reasonable is if one recalls that, under the federal Output-Based Pricing System (commonly referred to as the **"OBPS"**), the "carbon tax" – be it at today's rate or at the 2030 rate of

¹⁰⁷ Office of the Auditor General of Canada, Reports of the Commissioner of the Environment and Sustainable Development to the Parliament of Canada, Report 4, <u>Emissions Reduction Fund</u> <u>Natural Resources Canada</u>, November 2021, pp. 2-5. Retrieved on 7 January 2024 from <u>https://www.oag-bvg.gc.ca/internet/English/parl_cesd_202111_04_e_43912.html</u>

¹⁰⁸ <u>Framework</u>, p. 8.

\$170/tCO2e – applies to only a very small fraction of an oil and gas producer's emissions. ECCC has determined that to be a necessary evil, in order to prevent the oil and gas producers from leaving Canada and producing the oil and gas – and creating their GHG emissions – somewhere else, which is referred to as "carbon leakage". However, a major reason why we need the O&G Emissions Cap is because the OBPS has been singularly useless at reducing emissions from oil and gas production, as described above.

Recommendations:

Tell the federal government (using references to the papers we cite here, as you may wish):

- Contributions to the decarbonization fund would go to the oil and gas industry to help them reduce GHG emissions. This "double dipping" is absurd, giving the industry credit for the same funds twice under the cap.
- In November 2021, the Auditor General released a report outlining how, when the federal government tried to design and implement an emissions reduction fund, it failed badly. They should not try again.
- The decarbonization fund should be eliminated, or at the very least the funds should be given to organizations with a proven track record of reducing GHG emissions rather than the O&G industry.

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6.e Domestic Offset Credits

The Framework states:

Covered facilities would have the option to remit offset credits from Canada's GHG Offset Credit System and provincial offset credits recognized for use under the federal Output-Based Pricing System Regulations for up to the percentage of GHG emissions between the cap (total allowances issued in a given year) and the legal upper bound, net of contributions to the decarbonization fund. Based on current estimates, this is a maximum of approximately 20% of a facility's GHG emissions. The percentage would decrease for any contributions made to the decarbonization fund, for example, a facility that made contributions to the decarbonization fund up to the maximum limit of 10% of their GHG emissions, could only remit offset credits for up to another 10%.

ECCC defines offset credits as follows:

Offset credits are tradeable units representing verified GHG reductions achieved by a project either by reducing GHG emissions or increasing GHG removals from the atmosphere. Each offset credit is equivalent to one tonne of carbon dioxide reduced or removed from the atmosphere. Federal offset credits can be sold and used for compliance by facilities covered in the federal Output-Based Pricing System or sold and used by others who are looking to meet voluntary climate targets or commitments.¹⁰⁹

The basic operation of an offset credit is that you are allowed to emit one tonne of GHGs by paying someone else to reduce their emissions by one tonne of GHGs, or to sequester one tonne of GHGs to prevent it from being released into the atmosphere. Examples of projects that are currently sold as offsets around the world include those focused on reforestation and conservation, renewable energy, energy efficiency, waste and landfill management, and carbon capture and storage (CCS).¹¹⁰

Offset credits have been aptly likened to Indulgences in the Medieval Church.¹¹¹ Would you like to have an extramarital affair but don't want to go to Hell for it? No problem! Pay a sufficient quantity of money for an Indulgence and receive a guarantee for no time in Hell!

While there are some limited situations where offset credits are a good idea, the concept in general, like Medieval Indulgences, is extremely vulnerable to abuse. Carbon offsets have been linked to human rights abuses such as Indigenous people being displaced from their lands (e.g., for reforestation and conservation projects).^{112,113} They also facilitate "greenwashing" by allowing Canadian oil and gas companies to claim to be more climate-friendly than they actually are.

¹⁰⁹ ECCC, "Canada's Greenhouse Gas Offset Credit System". Retrieved on 4 January 2024 from <u>https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-i</u>t-will-work/output-based-pricing-system/federal-greenhouse-gas-offset-system.html

 ¹¹⁰ Gurgel, Angelo, "Carbon Offsets", Massachusetts Institute of Technology Climate Portal, November 8, 2022. Retrieved January 7, 2024 from <u>https://climate.mit.edu/explainers/carbon-offsets</u>.
¹¹¹ Richard Conniff, "Carbon Offsets: The Indispensable Indulgence", YaleEnvironment360, 26 September 2008. Retrieved on 4 January 2024 from https://e360.yale.edu/features/carbon_offsets.

¹¹² Gabbatiss, Josh, Daisy Dunne, Aruna Chandrasekhar, Orla Dwyer, Molly Lempriere, Yanine Quiroz, Ayesha Tandon and Dr Giuliana Viglione, "In-depth Q&A: Can 'carbon offsets' help to tackle climate change?", CarbonBrief, 24 September 2023. Retrieved January 15, 2024 from https://interactive.carbonbrief.org/carbon-offsets-2023/?utm_content=buffer9c29a&utm_medium=socia https://www.source=twitter.com&utm_campaign=buffer

¹¹³ Arthur Neslen, "Green' dam linked to killings of six indigenous people in Guatemala", <u>The Guardian</u>, 26 March 2015. Retrieved 15 January 2024 from https://www.theguardian.com/environment/2015/mar/26/santa-rita-green-dam-killings-indigenous-people-guatemala

Most importantly, *carbon offset credits are extremely ineffective at actually reducing the world's GHG emissions* and the quantity of GHGs in our atmosphere.

There are at least five serious problems with carbon offset credits:

First, carbon offsets rarely deliver the benefits they promise. In order for carbon offsets to cancel out their buyers' emissions, they must accurately reflect additional climate benefits that go beyond business-as-usual outcomes. In contrast, non-additional or over-credited carbon offsets increase net emissions...

Second, most carbon offsets claim to avoid emissions, such as building a wind farm instead of a coal power plant, rather than remove CO_2 from the atmosphere. The distinction matters because reaching and sustaining near-net-zero CO_2 emissions requires unabated CO_2 emissions to be matched with carbon removal and durable storage...

Third, carbon storage must be durable enough to mitigate the near-permanent warming effects of CO_2 , but nearly all credited carbon storage is only temporary. Although the warming effects of fossil CO_2 emissions persist on geologic time frames, carbon storage in forests and soils is credited on much shorter time frames that range from one to one hundred years. This is a problem because offsetting the effectively permanent consequences of CO_2 with temporary carbon storage necessarily leads to higher temperatures at the end of the temporary carbon storage period...

Fourth, buyers of imperfect carbon credits are making unsubstantiated claims. When a company or government uses an offset to report lower net CO_2 emissions, it is making a compensatory claim that is premised on the equivalence of the harms of CO_2 emissions and the benefits of the carbon credit. Such a claim is physically inaccurate if the carbon credit is non-additional or based on non-durable storage...

Fifth, even the most robust [international] carbon offsets are poised to be double-counted. Under the Paris Agreement's emissions accounting rules, governments must report greenhouse gas emissions and removals that arise within their borders. This creates a dilemma whenever a carbon offset is traded across borders: should the buyer or the seller's host country get to book the credit's climate benefits? Absent an intervention, both parties could claim the same benefits. Under Article 6.2 of the Paris Agreement, trades between governments must include a corresponding adjustment in which the seller country increases its climate mitigation efforts for every carbon offset transferred abroad. But under Article 6.4, trades between private parties do not require the seller's host country to make a corresponding adjustment. If private buyers make international

offsetting claims without a corresponding adjustment, they will double-count the same benefits the seller's host country reports under the Paris Agreement.¹¹⁴ [Footnotes omitted.]

Almost every action that an emitter could pay someone else to do to reduce or sequester emissions elsewhere could be better accomplished by a government statute or regulation, even by an extension of the "carbon tax".

For example, ECCC's most recent <u>Compendium of Federal Offset Protocols</u> includes "Landfill Methane Recovery and Destruction" and "Reducing Greenhouse Gas Emissions from Refrigeration Systems" as GHG-reducing projects that can be sold as carbon offsets.¹¹⁵ Both of these sources of GHG emissions could be better dealt with with rules prohibiting these types of unabated emissions and requiring that the emissions be trapped at source and sequestered or otherwise rendered less harmful, rather than by letting oil and gas producers pay money to emit more GHGs from oil and gas production as long as someone else reduces emissions from old garbage dumps or refrigeration systems. Moreover, to the extent that the methane currently being emitted from old garbage dumps is due to the fact that we did not have a sufficient collective understanding of this problem back when we created it, it is an issue that should be fixed by a combination of a future prohibition and the spending of tax money to fix the current problem.

As noted above, there are also serious problems about whether any given offset credit worth, say, one tonne of GHG emissions truly removes one tonne of actual GHG emissions. In a notorious example, "[t]he British band [Coldplay] claimed to have rendered a concert tour carbon-neutral by planting 10,000 mango trees in India. Then the trees died."¹¹⁶

Importantly, offset credits used for oil and gas production are fundamentally different from offset credits used in almost any other industry, because the very product that is being produced – fossil fuels – is the precise source of our climate change crisis. By far the largest cause of climate change is that we burn fossil fuels. *We need to stop*

¹¹⁴ Cullenward, Badgley, and Chay, "Carbon offsets are incompatible with the Paris Agreement", <u>One</u> <u>Earth 6 (Cell Press Open Access)</u>, 15 September 2023, pp. 1085-1086. Retrieved on 13 January 2024 from

https://www.cell.com/one-earth/fulltext/S2590-3322(23)00393-7?_returnURL=https%3A%2F%2Flinkin ghub.elsevier.com%2Fretrieve%2Fpii%2FS2590332223003937%3Fshowall%3Dtrue

¹¹⁵ Environment and Climate Change Canada, <u>Compendium of Federal Offset Protocols</u>. Version 3.0, December 2023, pp. 2-3. Retrieved on 6 January 2024 from <u>https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-i</u> <u>t-will-work/output-based-pricing-system/federal-greenhouse-gas-offset-system/compendium-protocols.</u> <u>html</u>

¹¹⁶ Richard Conniff, "Carbon Offsets: The Indispensable Indulgence", YaleEnvironment360, 26 September 2008. Retrieved on 4 January 2024 from <u>https://e360.yale.edu/features/carbon_offsets_the_indispensable_indulgence</u>

burning fossil fuels! If we don't, no amount of tree planting or carbon capture and storage (CCS) will save us.

In 2022, for the Canadian Oilsands, 67 kg of carbon dioxide equivalent ("**CO2e**") GHGs were emitted to produce one barrel of oil.¹¹⁷ When that barrel of oil is burned, it emits 430 kg of CO2e¹¹⁸.

Based on those numbers, an oil producer can buy an offset credit and then emit one extra tonne of GHGs to produce approximately 15 extra barrels of oil. The offset activity used for the one tonne credit will almost certainly not reduce one tonne of CO2e GHGs. Still, for offset credits used to produce most goods, that would be the end of the analysis.

However, based on those numbers, when those 15 extra barrels of oil are consumed (i.e. burned), *they will produce an extra 6,450 kg, or 6.45 tonnes of extra CO2e GHG emissions*. It does not matter if some or all of those 6.45 tonnes of extra emissions are accounted for within Canada or in other jurisdictions: The damage will be experienced by the entire world, including Canada.

The federal government cannot restrict the production of oil and gas (see section 3.0). Under s.92A of Canada's Constitution, the exploration for, and development and management of, non-renewable natural resources, including oil and gas, is under the exclusive jurisdiction of the provinces.¹¹⁹ The federal government does have Constitutional authority to regulate pollution under its exclusive jurisdiction over the criminal law power.¹²⁰ That is why the Framework takes the approach of limiting GHG emissions.

Despite this delicate balance, in exercising its wholly legitimate jurisdiction over the criminal law power, there is no need for the federal government to bend over

¹¹⁸ United States Environmental Protection Agency, "Greenhouse Gases Equivalencies Calculator -Calculations and References". Retrieved on 5 January 2024 from <u>https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references#:</u> <u>~:text=The%20average%20carbon%20dioxide%20coefficient.gallon%20barrel%20(EPA%202022).</u>

¹¹⁷ S&P Global, "Absolute Greenhouse Gas Emissions from Canadian Oil Sands Did Not Increase in 2022 Even as Production Grew", 9 August 2023. Retrieved on 5 January 2024 from <u>https://press.spglobal.com/2023-08-09-Absolute-Greenhouse-Gas-Emissions-from-Canadian-Oil-Sand</u> <u>s-Did-Not-Increase-in-2022-Even-as-Production-Grew#:~:text=The%20S%26P%20Global%20Commo dity%20Insights.Commodity%20Insights%20estimates%20are%20available</u>.

¹¹⁹ The *Constitution Acts* of Canada, 1867-1982, s. 92A. Accessed at <u>https://laws-lois.justice.gc.ca/eng/const/page-3.html#h-19</u> on 11 August 2022.

backward in using "compliance flexibilities" to help oil and gas producers produce as much oil and gas as possible.

We need to directly reduce emissions from oil and gas production itself, not let it remain at current or higher levels and use offsets in other areas to pretend we've dealt with O&G.

There is a growing body of research showing that, the majority of the time, offset credit systems do not work.

"Carbon Plan" is a non-profit that analyzes climate solutions. Its team includes several academics with PhDs. They analyzed California's forest carbon offsets program. They stated:

By digitizing and analyzing comprehensive offset project records alongside detailed forest inventory data, we provide direct evidence that comparing projects against coarse regional carbon averages has led to systematic over-crediting of 30.0 million tCO2e... or 29.4% of the credits we analyzed... These excess credits are worth an estimated \$410 million (90% CI: \$280–\$528 million) at recent market prices. Rather than improve forest management to store additional carbon, California's forest offsets program creates incentives to generate offset credits that do not reflect real climate benefits. The scale of the problem is enormous: 29% of the offsets we analyzed are over-credited, totaling 30 million tCO₂e worth approximately \$410 million."¹²¹

A recent academic study that is currently in the pre-publishment phase (meaning that it is awaiting the completion of peer review) found that **only 12% of existing carbon offset credit systems worldwide create real emissions reductions**:

Net-zero targets have significantly increased carbon offset demand. Carbon offsets are issued based on ex-ante estimates [meaning based on forecasts rather than actual results] of project emissions reductions, though systematic evidence on ex-post evaluations [meaning based on actual results rather than forecasts] of achieved emissions reductions is missing. We synthesized existing rigorous empirical studies evaluating more than 2,000 offset projects across all major offset sectors. Our analysis shows that offset projects achieved considerably lower emissions reductions than officially claimed. *We estimate that only 12% of the total volume of existing credits constitute real emissions reductions*, with 0% for renewable energy, 0.4% for cookstoves, 25.0% for forestry and

 ¹²¹ Badgley et al, "Systematic over-crediting of forest offsets", <u>Global Change Biology</u>, 21 October
2021. (Abstract). Retrieved on 6 January 2024 from https://onlinelibrary.wiley.com/doi/10.1111/gcb.15943

27.5% for chemical processes. Our results thus indicate that **88% of the total credit volume across these four sectors in the voluntary carbon market does not constitute real emissions reductions.** This offset achievement gap corresponds to almost twice the annual German CO2 emissions.¹²²

An investigation by the Guardian, the German weekly Die Zeit and SourceMaterial, a non-profit investigative journalism organisation, found that more than 90% of rainforest offsets sold by a major supplier are "worthless".

The research into Verra, the world's leading carbon standard for the rapidly growing 2bn (£1.6bn) voluntary offsets market, has found that, based on analysis of a significant percentage of the projects, more than 90% of their rainforest offset credits – among the most commonly used by companies – are likely to be "phantom credits" and do not represent genuine carbon reductions.¹²³

Recommendations:

Tell the federal government (using references to the papers we cite here, as you may wish) that:

- Offsets do nothing to meet the objective of this Framework to reduce GHG emissions from oil and gas production.
- Offsets do not work. They create almost no emissions reductions in the real world.
- Offsets are linked to human rights abuses and greenwashing,¹²⁴ and the federal government should not promote their use.

¹²² Probst et al, "Systemic review of the actual emissions reductions of carbon offset projects across all major sectors", Research Square, 27 July 2023. (Abstract.) Retrieved on 6 January 2024 from https://assets.researchsquare.com/files/rs-3149652/v1/27c5b6ec-75a0-4a5a-84c6-e3e5e30e1cb8.pdf? https://assets.researchsquare.com/files/rs-3149652/v1/27c5b6ec-75a0-4a5a-84c6-e3e5e30e1cb8.pdf? https://assets.researchsquare.com/files/rs-3149652/v1/27c5b6ec-75a0-4a5a-84c6-e3e5e30e1cb8.pdf? https://assets.researchsquare.com/files/rs-3149652/v1/27c5b6ec-75a0-4a5a-84c6-e3e5e30e1cb8.pdf? https://assets.researchsquare.com/files/rs-3149652/v1/27c5b6ec-75a0-4a5a-84c6-e3e5e30e1cb8.pdf?

https://interactive.carbonbrief.org/carbon-offsets-2023/?utm_content=buffer9c29a&utm_medium=socia l&utm_source=twitter.com&utm_campaign=buffer

¹²³ Weston, Phoebe and Patrick Greenfield, "Revealed: more than 90% of rainforest carbon offsets by biggest certifier are worthless, analysis shows", The Guardian, January 18, 2023. Retrieved January 15, 2024 from

https://www.theguardian.com/environment/2023/jan/18/revealed-forest-carbon-offsets-biggest-provider -worthless-verra-aoe

¹²⁴ Gabbatiss, Josh, Daisy Dunne, Aruna Chandrasekhar, Orla Dwyer, Molly Lempriere, Yanine Quiroz, Ayesha Tandon and Dr Giuliana Viglione, "In-depth Q&A: Can 'carbon offsets' help to tackle climate change?", CarbonBrief, September 24, 2023. Retrieved January 15, 2024 from https://interactive.carbonbrief.org/carbon-offsets-2023/?utm_content=buffer9c29a&utm_medium=socia https://www.source=twitter.com&utm_campaign=buffer

• It's not fair to allow oil and gas companies to pay to keep polluting rather than doing their part to reduce Canada's GHG emissions.

Tell the federal government (using references to the papers we cite here, as you may wish) to:

- Eliminate the use of offset credits in the cap-and-trade system and force companies to directly reduce GHG emissions from oil and gas production instead.
- If offsets are not eliminated, reduce the percentage of a facility's allowable emissions that could be covered by offset credits.
- If offsets are not eliminated, develop a credible system to confirm with certainty that offset projects have *permanently* removed or prevented the promised GHG emissions *beyond* what would have resulted if the offset had not been purchased.

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6.f Internationally Transferred Mitigation Outcomes (ITMOs)

The Framework advises that Internationally Transferred Mitigation Outcomes ("**ITMOs**") are being considered as a compliance option:

To provide additional flexibility, consideration is being given to allowing the use of ITMOs as a compliance option. The use of ITMOs would be limited to a portion of the percentage of GHG emissions that can be covered by offset credits (i.e., a portion of the 20% of a facility's GHG emissions that can be covered by offset credits), to ensure that investment in domestic offset projects continues to be prioritized. Options for including ITMOs within a potential offsets fund are also under consideration.¹²⁵

ITMOs are similar to the domestic offsets described above, but with an international scope. ITMOs allow a company to reduce or sequester GHGs in one country and then sell the credits for those emission reductions to a company in another country. The second company then uses the ITMOs as a credit towards their own emission reduction obligations.¹²⁶

¹²⁵ <u>Framework</u>, p. 9.

¹²⁶ United Nations Framework Convention on Climate Change (UNFCC) Secretariat, "Article 6.4 Mechanism", Retrieved 7 January 2024 from <u>https://unfccc.int/process-and-meetings/the-paris-agreement/article-64-mechanism</u>.

ITMOs were established under Article 6.4 of the Paris Agreement as a mechanism for countries to meet their voluntary emission reduction targets. The parties to the Paris Agreement have agreed on rules and procedures for ITMOs and have established a 12-member supervisory body.¹²⁷ However, ITMOs are only just starting to be implemented. The first-ever authorized transfer of ITMOs took place in 2022 when, "the Government of Ghana officially authorized the transfer of mitigation outcomes to Switzerland as a result of the climate-smart rice project that supports the training of over thousands of rice farmers."¹²⁸

ITMOs have all the same problems as domestic offsets (described above) plus a few additional concerns.

First, it is very unlikely that ITMOs will result in any actual emissions reductions anywhere in the world. In the case of the Ghana-Switzerland deal noted above, what if increasingly-likely climate-fueled storms wash away the rice fields? Or in the case of a reforestation project, what if wildfires burn it all down and release the GHGs into the atmosphere? Between problems with verification, incentives for dishonesty, and the changing climate wiping out any gains made, it's no wonder that as little as 12% of offset projects end up creating real emissions reductions.¹²⁹ There is no substitute for directly eliminating GHG emissions at the source.

In addition, carbon offsets have been linked to human rights abuses such as Indigenous people being displaced from their lands (e.g., for reforestation and

¹²⁷ United Nations Framework Convention on Climate Change (UNFCC) Secretariat, "Article 6.4 Mechanism", Retrieved 7 January 2024 from <u>https://unfccc.int/process-and-meetings/the-paris-agreement/article-64-mechanism</u>.

¹²⁸ United Nations Development Programme (UNDP), "How Article 6 powers global climate cooperation?, October 11, 2023. Retrieved 7 January 2024 from <u>https://www.undp.org/kazakhstan/news/how-article-6-p</u>.

¹²⁹ Probst et al, "Systemic review of the actual emissions reductions of carbon offset projects across all major sectors", Research Square, 27 July 2023. (Abstract.) Retrieved on 6 January 2024 from https://assets.researchsquare.com/files/rs-3149652/v1/27c5b6ec-75a0-4a5a-84c6-e3e5e30e1cb8.pdf? c=1690482609 via

https://interactive.carbonbrief.org/carbon-offsets-2023/?utm_content=buffer9c29a&utm_medium=socia l&utm_source=twitter.com&utm_campaign=buffer

conservation projects).^{130,131} They facilitate "greenwashing" by allowing Canadian oil and gas companies to claim to be more climate-friendly than they actually are.

These concerns about offsets in general are magnified for ITMOs. The system is brand new and unproven, so there is even less certainty that the emissions reductions will actually materialize. And, given the international nature of ITMOs, Canada would have absolutely no control over the offset projects in other countries, including whether they are operated ethically and effectively. There is even a potential moral hazard involved with richer countries paying poorer countries for emissions offsets, some of which can be generated by limiting economic development to avoid GHG emissions. Climate justice demands that rich countries like Canada, that are responsible for the vast majority of historical GHG emissions, reduce their own emissions at home.

As an international offset credit system, ITMOs, are prone to "double counting", meaning that the emissions reductions are counted in both the selling country and the purchasing country. Transactions between private parties without government oversight are particularly vulnerable:

[E]ven the most robust [international] carbon offsets are poised to be double-counted. Under the Paris Agreement's emissions accounting rules, governments must report greenhouse gas emissions and removals that arise within their borders. This creates a dilemma whenever a carbon offset is traded across borders: should the buyer or the seller's host country get to book the credit's climate benefits? Absent an intervention, both parties could claim the same benefits. Under Article 6.2 of the Paris Agreement, trades between governments must include a corresponding adjustment in which the seller country increases its climate mitigation efforts for every carbon offset transferred abroad. But under Article 6.4, trades between private parties do not require the seller's host country to make a corresponding adjustment. If private buyers make international offsetting claims without a corresponding adjustment, they will double-count the same benefits the seller's host country reports under the Paris Agreement.¹³²

¹³⁰ Gabbatiss, Josh, Daisy Dunne, Aruna Chandrasekhar, Orla Dwyer, Molly Lempriere, Yanine Quiroz, Ayesha Tandon and Dr Giuliana Viglione, "In-depth Q&A: Can 'carbon offsets' help to tackle climate change?", CarbonBrief, 24 September 2023. Retrieved January 15, 2024 from https://interactive.carbonbrief.org/carbon-offsets-2023/?utm_content=buffer9c29a&utm_medium=socia https://www.source=twitter.com&utm_campaign=buffer

¹³¹ Arthur Neslen, "'Green' dam linked to killings of six indigenous people in Guatemala", <u>The Guardian</u>, 26 March 2015. Retrieved 15 January 2024 from https://www.theguardian.com/environment/2015/mar/26/santa-rita-green-dam-killings-indigenous-people-guatemala

¹³² Cullenward, Badgley, and Chay, "Carbon offsets are incompatible with the Paris Agreement", One Earth 6 (Cell Press Open Access), 15 September 2023, pp. 1085-1086. Retrieved on 13 January

Because of the "double counting" problem , if the Oil & Gas Emissions Cap permits ITMOs at all, it must ensure that private transactions between a Canadian oil and gas producer and foreign nation are not permitted. ITMOs should only be permitted if managed by the Canadian government so that Article 6.2 of the Paris Agreement applies.

A big United Nations and World Bank-sponsored offset credit system, REDD+, has been shown to not work. "REDD' stands for 'Reducing emissions from deforestation and forest degradation in developing countries. The '+' refers to additional forest-related activities that protect the climate, namely sustainable management of forests and the conservation and enhancement of forest carbon stocks."¹³³ "ART" is the "Architecture for REDD+ Transactions". TREES is "ART's standard for the quantification, monitoring, reporting and verification of...GHG emission reductions and removals from REDD+ activities at a jurisdictional and national scale."¹³⁴ Verra is a non-profit organization that creates and monitors standards in various environmental and social markets, including markets for certain international carbon offset credit systems.¹³⁵

A study looked at this combined scheme, which is used by some of the world's largest polluters:

Research by the Rainforest Foundation UK into Verra, the World Bank's Forest Carbon Partnership Facility (FCPF), the UNFCCC REDD+ Results system and the ART-TREEs standard has found that all of them fell short against a set of 13 social and environmental criteria developed for the study. Among the report's key findings are that:

- All, to a greater or lesser extent, allow or actively rely on inflation or artificial 'adjustment' of baselines in order to create the impression of, or to increase, the claimed emissions reductions.
- The systems are susceptible to conflicts of interest. For example, Verra receives significant commissions on every project verified, which leaves limited incentive to carry out thorough verification and validation processes.

2024 from

https://www.cell.com/one-earth/fulltext/S2590-3322(23)00393-7? returnURL=https%3A%2F%2Flinkin ghub.elsevier.com%2Fretrieve%2Fpii%2FS2590332223003937%3Fshowall%3Dtrue

¹³³ United Nations Climate Change, "What is REDD+?", Retrieved on 12 January 2024 from <u>https://unfccc.int/topics/land-use/workstreams/redd/what-is-redd#:~:text=%27REDD%27%20stands%2</u> <u>0for%20%27Reducing.enhancement%20of%20forest%20carbon%20stocks</u>

¹³⁴ ART website. Retrieved on 13 January 2024 from <u>https://www.artredd.org/trees/</u>

¹³⁵ Verra website. Retrieved on 15 January 2024 from <u>https://verra.org/about/overview/</u>

- Verification and Validation bodies who exist to check projects are delivering what the developers and certifiers say they are – are, in many cases, completely ignoring 'red line' problems with the emissions reductions claims being made.
- None of the schemes fulfils the UN requirement for 'predictable, continuous and equitably distributed benefits'. An oversupply of credits is leading to a price crisis in the voluntary markets where carbon prices have crashed to below \$2 per tonne far less than is needed to keep forests standing.¹³⁶

Most importantly, though, ITMOs do nothing to accomplish the Framework's objective to reduce GHG emissions from oil and gas production. By allowing companies to pay to keep emitting GHGs instead of reducing them, they actually detract from that objective.

Regarding ITMOs, the Canadian Climate Institute has stated:

"While ITMOs and low-carbon exports have the potential to reduce global emissions, *they do not provide Canada with an excuse for having weaker climate policies at home*. In fact, article 6 (of the Paris Agreement) is explicit that *ITMOs should be used to increase "ambition" — to promote greater efforts to cut emissions*. To meaningfully contribute to global GHG mitigation, Canada must not only look abroad but also examine its own GHG emissions."¹³⁷ [Emphasis added.]

Clearly there is no place for ITMOs in a "Framework To Cap Oil and Gas Sector Greenhouse Gas Emissions."

Recommendations:

Tell the federal government (using references to the papers we cite here, as you may wish):

• Not to include ITMOs as a compliance flexibility option for the Oil and Gas Emissions Cap.

¹³⁶ Summary of Rainforest Foundation UK, Credits Where They Are Not Due: A Critical Analysis of the Major REDD+ Schemes, July 2023. Document and Summary retrieved on 6 January 2024 from <u>https://www.rainforestfoundationuk.org/new-analysis-finds-leading-global-carbon-offset-schemes-are-f</u> <u>ailing-forests-people-and-the-climate/#:~:text=A%20first%2Dof%2Dits%2D,not%20represent%20real%</u> <u>20emissions%20reductions</u>

¹³⁷ Dion, Jason, "<u>No. Canada cannot get credit for its low-carbon exports</u>", Canadian Climate Institute, December 1, 2022. Retrieved 7 January 2024.

- Note that ITMOs are an even less effective instrument than domestic offsets and do nothing to accomplish the Framework's objective to reduce GHG emissions from the oil and gas sector.
- Note that the Paris Agreement, which created ITMOs, states they are intended "to allow for higher ambition in their mitigation and adaptation actions and to promote sustainable development and environmental integrity",¹³⁸ not to create an excuse to permit emissions in any given industrial centre.
- If ITMOs are included as part of the Oil and Gas Emissions Cap, the federal government must manage the transactions in order to avoid the emission reductions being "double counted" in both Canada and the foreign country.

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6.g Delayed Reporting and Verification

With respect to *existing* oil and gas facilities, the Framework states:

Facilities would be required to register before the end of 2025, or before releasing GHGs as a result of carrying out a covered activity after January 1, 2026. Annual reporting of verified information using the specified quantification methods would be required for calendar years as early as 2026. Consideration will be given to how to phase in the system between 2026 and 2030...¹³⁹

Publication of the final regulations is targeted for 2025, with the first reporting obligations starting as early as 2026 and full system requirements phased in between 2026 and 2030.¹⁴⁰

Saying that reporting of GHG emissions will be required "as early as 2026" leaves the possibility open that it could begin later. This is unacceptable given the urgency to reduce GHG emissions as fast as possible. How could the oil and gas sector meet the 2030 emissions target if they don't even begin tracking and reporting their emissions right away?

The Framework goes on to say, "Consideration will be given to how to phase in the system between 2026 and 2030." This very broad and very vague sentence could be used to create all kinds of loopholes in the forthcoming regulations that would put the 2030 emissions target in jeopardy. For example, is the government considering

¹³⁸ Article 6.1, <u>Paris Agreement</u>, United Nations, 2015. Retrieved on 15 January 2024 from <u>https://www.un.org/en/climatechange/paris-agreement</u>

¹³⁹ <u>Framework</u>, p. 9.

¹⁴⁰ <u>Framework</u>, p. 11.

phasing in reporting requirements so that only partial reporting is required in the first few years? We don't even know if "the system" refers only to reporting and verification of emissions, or to the entire cap-and-trade system for GHG emissions from the oil and gas sector. Much more clarity is needed on what exactly would be "phased in" and how to allow stakeholders to be meaningfully consulted.

Oil and gas companies would likely argue they will need time to implement the new reporting requirements. However, the oil and gas sector has already known for more than two years that an emissions cap is coming.¹⁴¹ They have been heavily consulted on the development of the currently-proposed Framework, and will continue to be involved as the regulations are developed. They will likely have a year between the planned publication of the draft regulations in 2024 and the final regulations coming into force in 2025.¹⁴² That's over four years (2021 - 2025) to prepare. Furthermore, most facilities covered by the cap are multi-billion dollar companies, with record profits, that have existing divisions focused specifically on regulatory compliance. Given the urgency of the climate crisis and the ample resources of the oil and gas sector to comply with regulatory requirements, it seems appropriate that full reporting and verification of GHG emissions begin immediately.

With respect to new facilities, the Framework states:

New facilities would have to register before emitting GHGs from a covered activity. Reporting and verification obligations would start on January 1 of the following year. Consideration is being given to delaying the first compliance period until after a new facility reaches a set proportion of its design capacity, or two years after first producing a product, whichever comes first.¹⁴³

Under this rule as it is described, new facilities would be allowed to emit GHGs for up to one year before they even have to begin reporting their emissions, and they might not have a limit on their emissions for up to two years. This is a massive loophole that should absolutely not be permitted.

The International Energy Agency recently said, "no new long-lead-time upstream oil and gas projects are needed."¹⁴⁴ The International Institute for Sustainable

¹⁴¹ Mandate Letter dated 16 December 2021 from Prime Minister Justin Trudeau to Minister of Environment and Climate Change Steven Guilbeault, p. 4. Retrieved on January 5, 2023 from <u>https://www.pm.gc.ca/en/mandate-letters/2021/12/16/minister-environment-and-climate-chang</u> <u>e-mandate-letter</u>.

¹⁴² <u>Framework,</u> p. 11.

¹⁴³ <u>Framework</u>, p. 7.

¹⁴⁴ International Energy Agency, "The path to limiting global warming to 1.5 °C has narrowed, but clean energy growth is keeping it open", 26 September 2023.

Development went further, saying, "Governments should prevent the development and licensing of any new oil and gas fields. Developing any fields beyond those already in operation or under development would pose substantial risks of either not meeting the 1.5°C target or creating stranded assets..."¹⁴⁵

So at a time when international experts unequivocally state that new oil and gas projects are both not necessary and are fundamentally incompatible with 1.5°C, the Framework proposes to allow new facilities to pollute unregulated for up to two years.

New oil and gas facilities will be operated by well-financed (absurdly including public subsidies), sophisticated, and long-established companies. They have ample capacity and should be required to report their GHG emissions and be subject to the sector's cap immediately upon commencing operations. This should be a basic requirement of doing business, like passing a building inspection or paying taxes.

If this is not done, the oil and gas sector could use this loophole to get around the sector-wide cap on GHG emissions. They could operate their existing facilities up to the maximum GHG emissions allowed, and set up an unlimited number of new facilities whose GHG emissions would not be subject to the cap for two years.

Recommendations:

The loopholes created by the proposed delayed reporting and verification of GHG emissions should be closed. Specifically,

- Existing oil and gas facilities should be required to begin reporting and verification immediately when the regulations come into force;
- New oil and gas facilities should be required to begin reporting and verification immediately when operations commence;
- New oil and gas facilities should be subject to the emissions cap immediately when operations commence; and
- The federal government should clarify exactly what parts of the cap-and-trade system it is considering "phasing in" between 2026 and 2030 and how, so stakeholders can be consulted in a meaningful way.

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¹⁴⁵ International Institute for Sustainable Development, "Navigating Energy Transitions: Mapping the road to 1.5°C", October 21, 2022, page xi. Retrieved from <u>https://citizensclimatelobby.uk/wp-content/uploads/2022/10/navigating-energy-transitions-mapp ing-road-to-1.5.pdf</u>.

https://www.iea.org/news/the-path-to-limiting-global-warming-to-1-5-c-has-narrowed-but-clean-energy-growth-is-keeping-it-open

7. SUGGESTED RESPONSES TO THE FRAMEWORK'S DISCUSSION QUESTIONS

Page 10 of the Framework poses questions for public consultation. Individuals can respond to these discussion questions and also provide feedback on other elements of the Framework by sending an email to <u>PlanPetrolieretGazier-OilandGasPlan@ec.gc.ca</u> by February 5, 2024.

Suggested responses are shown beneath each question. You are welcome to use any or all of our ideas, without attribution to us. In fact, we do not want attribution: If you think it is a good idea, adopt it as your own. Also, modify the words to make the point in a way that you like better. Importantly, this also serves to make your submission unique.

The nine discussion questions posed by ECCC do not allow us to address all of the input we want to provide, so please also see the suggestions for other matters you may wish to address under the section "8.0 I don't have time to read this long document. What should I do?"

How should allowances be allocated? What should be taken into account? How should changes in production and new projects be considered?

Allocation of allowances:

- Emission allowances should not be given to O&G companies for free. This ignores the costs of GHG emissions to society and sends the wrong signal to the industry and to the economy as a whole. Also, the cost of administering the system should be borne by those being regulated by the system: the oil and gas producers. The cost should not be borne by taxpayers.
- O&G companies, who are well-resourced organizations making record profits, should be required to meet conditions to be eligible for allowances. For example:
 - give up all direct and indirect government subsidies (federal and provincial).
 - submit a realistic plan, verified by a third party, to wind down their O&G production operations to zero by 2050.
 - establish and fully fund a trust to cover the estimated \$123 billion needed to clean up the environmental liabilities created by oil and gas companies in Canada¹⁴⁶ so taxpayers aren't stuck with the bill.
- O&G companies should then have to buy emission allowances at the current price of carbon. Funds from selling emissions allowances should go towards climate change adaptation and a just transition.

Changes in production:

¹⁴⁶ Environmental Defence, "PAST DUE: Tallying the Costs of Oil and Gas Cleanup in Canada" July 2023. Retrieved January 11, 2024 from:

https://environmentaldefence.ca/report/past-due-tallying-the-costs-of-oil-and-gas-cleanup-in-canada/.

- The priority when considering how to respond to changes in production must be to ensure the total annual cap level for the sector is not exceeded.
- The Framework would allow facilities to trade emissions allowances under the cap. This process is sufficient to deal with increases or decreases in production at particular facilities.
- The government should not play any role in adjusting a facility's allowances in response to production. Attempts to do so in a way that all players would consider fair would require negotiation. For example, if one facility's production increases and they want more allowances, that means someone else would have to give up allowances to maintain the cap level. Given the effectiveness of the O&G industry's lobbying efforts in general, it seems likely the government would be pressured to issue new allowances over and above the cap, rather than rescinding allowances from some facilities.
- The Framework notes that the "cap-and-trade" model is a market-based instrument. The market should be allowed to work without interference. Let facilities trade allowances with each other without government involvement, except to ensure the cap is not exceeded.

New projects:

- New O&G facilities should be *subject to the emissions cap immediately*, not after 2 years as planned under the Framework.
- New O&G facilities should be required to *begin reporting and verification immediately*, not after 1 or 2 years as planned under the Framework.
- Under no circumstances should the creation of new facilities lead to new allowances being issued that exceed the annual cap level for the sector.

What process should be established to review the emissions cap trajectory for the post-2030 period?

Review of emissions cap trajectory:

- The only factor considered when reviewing the trajectory of the emissions cap post-2030 should be whether the sector is meeting their emissions reduction targets, and how to reduce those emissions more quickly.
- The profitability of the Canadian O&G sector should not be a factor. This sector must be wound down by way of a just transition for us all to survive.

If, when and to what extent some compliance flexibilities should be phased down or phased out?

Compliance flexibilities:

• To ensure Canada's increasingly ambitious emissions targets are reached, all <u>compliance flexibilities should be phased out</u> well before we reach net-zero in 2050. Banking of emissions allowances:

- To ensure emissions are reduced as fast as possible and the 2030 target is met, <u>banking of allowances should be limited to a single three-year</u> compliance period, rather than six years.
- Unlimited banking of allowances should not be allowed. A clear limit must be included in the regulations, with the percentage set at a low level that accounts for the declining emissions cap in future years.
- The regulations should <u>phase out the ability to bank allowances</u>, and completely eliminate it well before Canada reaches net-zero in 2050.

"Pay to pollute" compliance flexibilities:

- The compliance flexibilities that allow companies to pay to emit 25 Mt more than the sector emissions cap must be eliminated. Specifically, <u>domestic and international</u> <u>carbon offsets and contributions to a decarbonization fund should not be</u> <u>allowed</u>.
- Companies should collectively not be allowed to emit more than the sector cap, full stop. The "legal upper bound" should be set at the same level as the cap. In other words, the extra 25 Mt of emissions flexibility must be eliminated.

How should the proposed approach to indirect GHG emissions be implemented?

- It is good that ECCC plans to include indirect emissions (emissions generated when O&G producers use purchased energy such as natural gas, diesel, or coal-fired electricity to produce oil and gas) under the cap.
- It will be crucial that the "third parties" responsible to verify emissions, including indirect emissions, are independent and are not captured by the oil and gas industry. Timely and accurate verification of emissions reductions will be crucial to ensuring the annual sector cap is not exceeded.
- The oil and gas production firms must then be required to include these indirect emissions on a strict tonne-per-tonne basis as part of their emissions output, and every tonne of them must be included in the quantity of the cap.

What measurement protocols or quantification methods most accurately estimate methane emissions at the facility level?

• Currently, nobody in the Climate Messengers has the technical expertise to provide a useful suggestion for answering this question. We do not believe in "faking it". There is no need for anyone to address all of the questions ECCC has posed. If anyone using this Toolkit has the technical knowledge to answer this question, we encourage you to do so.

What administrative approaches can be used to define and regulate facilities with GHG emissions below 10 kt CO_2e per year?

- It is good that ECCC plans to include small facilities, which account for one third of the O&G sector's emissions, in the cap.
- ECCC *must ensure small facilities remain in scope* in the forthcoming regulations, despite potential reporting challenges or resistance from the oil and gas industry.

How should the proceeds from the decarbonization funding program be distributed? How should contributions be used to support decarbonization of the oil and gas sector?

- Contributions to a decarbonization fund would go to the oil and gas industry to help them reduce GHG emissions. This "double dipping" is absurd, giving the industry credit twice under the cap for spending the same funds.
- In November 2021, the Auditor General released a report outlining how, when the federal government tried to design and implement an emissions reduction fund, it failed badly. They should not try again.
- **The decarbonization fund should be eliminated**. If it is not eliminated, the funds should be given to organizations with a proven track record of reducing GHG emissions. Under no circumstances should the funds be given to the O&G industry.
- If the decarbonization fund is not eliminated (although it should be eliminated), the money should be used to build up Canada's renewable energy sector, and not be given back to the oil and gas sector.

What are the advantages and disadvantages of a federal offsets fund? How should a federal offsets fund operate?

- Carbon offsets allow a company to pay money to continue polluting in exchange for someone else reducing emissions somewhere else.
- Carbon offsets are extremely problematic:
 - Offsets do not work. Offset schemes have been proven to be completely ineffective, with as little as 12% of offset projects creating real emissions reductions.
 - The world will become less stable and less predictable in the future due to climate change, making offsets even less likely to work. For example, an offsets project to restore a forest will actually emit more GHGs if a climate-fueled wildfire burns that forest down.
 - Offsets do nothing to meet the objective of this Framework to reduce GHG emissions from oil and gas production. In fact they allow companies to avoid reducing emissions by shifting responsibility to someone else.
 - Offsets are linked to human rights abuses and greenwashing, where companies claim to be more climate-friendly than they actually are.

- It's not fair to allow oil and gas companies to pay to keep polluting rather than doing their part to reduce Canada's GHG emissions.
- We urge the government to *eliminate offset credits* from the proposed cap-and-trade system and force companies to directly reduce GHG emissions instead.
- If offsets are not eliminated, the government should:
 - Reduce the percentage of a facility's allowable emissions that could be covered by offset credits.
 - Phase out the use of offsets as soon as possible.
 - Ensure that no money from an offset fund goes to an O&G company under any circumstances.

What role should ITMOs play in compliance flexibility?

- We urge the government *not to include ITMOs* as a compliance option for the oil and gas emissions cap.
- Internationally transferred mitigation outcomes (ITMOs) are essentially the same as domestic carbon offsets, but happen between countries rather than within a single country.
- ITMOs are an even less effective instrument than domestic offsets and, having only started in 2022, have no track record.
- ITMOs only shift the responsibility for reducing emissions, and do nothing to accomplish the Framework's objective to reduce GHG emissions *from the oil and gas sector.*
- ITMOs should not be used as an excuse for Canada to have weaker climate policies at home. As a wealthy country, Canada should be a global leader in reducing GHG emissions rather than paying other countries to do it while we keep polluting.

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8. I DON'T HAVE TIME TO READ THIS LONG DOCUMENT. WHAT SUBMISSIONS SHOULD I CONSIDER MAKING?

It is important that we do not confine ourselves to submitting on ECCC's discussion questions. This section covers suggested responses on both the discussion questions and many other significant issues raised by the Framework.

The Climate Messengers do not want to dictate to anyone what they should say in their submissions, but if you are pressed for time, please feel free to consider using some of these suggestions. They are a consolidation of the recommendations that we have made in the various sections of this Toolkit. The links below will take you to the detailed discussions of each issue if you are interested. If you wish to use any of these suggestions, please adopt them as your own and do not attribute them back to us. If you want to use any information that we have cited from other sources, we hope that you will please consider citing that source.

Whatever you do, please try to put things into your own words. *Unique, individual submissions are the most valuable submissions to make to the online public consultation.*

Remember that you must make your submissions by sending an email to <u>PlanPetrolieretGazier-OilandGasPlan@ec.gc.ca</u> by 5 February 2024.

HOW THE O&G EMISSIONS CAP WORKS: Scope of Application, Covered Facilities, Covered Activities

Tell the federal government (using references to the Framework and to any papers we cite here, as you may wish):

- It is good that the government plans to include small facilities, which account for one third of the sector's emissions, in the cap. The government must ensure that small facilities remain within the scope in the forthcoming regulations, despite potential reporting challenges.
- It is good that LNG facilities will be included under the cap. However, the government must address the serious lack of information on the anticipated emissions from the production of LNG and explain how it is possible to add an entirely new fossil fuel industry and still meet the cap's emission targets.
- Downstream pipelines and refineries, which account for 20 Mt of emissions annually, must be included under the emissions cap, as originally envisioned.

The Emissions Cap: Not ambitious enough. Keep your promise!

- The proposed level of the oil and gas sector emissions cap is nowhere near ambitious enough. It is not aligned with the emissions reductions being required in other sectors of the economy, with Canada's 2030 Target under the Paris Agreement (enshrined in law in the *Canadian Net-Zero Emissions Accountability Act*), or with a pathway that sees Canada reaching net-zero GHG emissions by 2050.
- The federal government must deliver the emissions reductions promised in their 2022 *Emissions Reduction Plan*, which suggested the cap for the O&G sector would be 110 Mt in 2030.¹⁴⁷

¹⁴⁷ Environment and Climate Change Canada. 2030 Emissions Reduction Plan: Canada's Next Steps for Clean Air and a Strong Economy. Released 29 March 2022. Retrieved on 14 August 2022 from <u>https://publications.gc.ca/site/eng/9.909338/publication.html</u>

The Legal Upper Bound: Don't allow "compliance flexibilities" to inflate emissions!

- To ensure Canada can meet our emissions reduction targets, the "compliance flexibility" allowing fossil fuel companies to pay to emit 25 Mt per year over and above the cap must be eliminated. Another way to put it is that the legal upper bound for emissions should be the same amount as the emissions cap.
- The legal upper bound for oil and gas sector emissions in 2030 should be no more than the 110 Mt promised in the *Emissions Reduction Plan.*

The 2030 Cap Level is Not Ambitious Enough - The Numbers

- Hold the federal government accountable to deliver the emissions reductions promised in their 2022 *Emissions Reduction Plan*, which suggested the cap for the O&G sector would be 110 Mt in 2030.¹⁴⁸ That means:
 - The "compliance flexibility" allowing fossil fuel companies to pay to emit 25 Mt per year over and above the cap must be eliminated. Another way to put it is that the legal upper bound for emissions should be the same amount as the emissions cap.
 - The legal upper bound for oil and gas sector emissions in 2030 should be no more than the 110 Mt promised in the *Emissions Reduction Plan*.
 - The scope of application of the cap on oil and gas sector emissions should be the same as envisioned in the *Emissions Reduction Plan*. Downstream pipelines and refineries were to be included, but have been omitted from the cap proposed in the Framework. They must be put back in scope.
- Despite the jurisdictional challenges discussed above, the federal government should not be excessively timid. The Oil & Gas Emissions Cap level should be considerably more stringent.

The Cap Proposed by the Framework Will Make It Almost Impossible to Meet Our Canada-Wide 2030 Target

Tell the federal government (using references to the Framework and to any papers we cite here, as you may wish):

• To ensure Canada can meet our emissions reduction targets, the "compliance flexibility" allowing fossil fuel companies to pay to emit 25 Mt per

¹⁴⁸ Environment and Climate Change Canada. 2030 Emissions Reduction Plan: Canada's Next Steps for Clean Air and a Strong Economy. Released 29 March 2022. Retrieved on 14 August 2022 from <u>https://publications.gc.ca/site/eng/9.909338/publication.html</u>

year over and above the cap must be eliminated. Another way to put it is that the legal upper bound for emissions should be the same amount as the emissions cap.

- The legal upper bound for oil and gas sector emissions in 2030 should be no more than the 110 Mt promised in the *Emissions Reduction Plan.*
- Downstream pipelines and refineries, which account for 20 Mt of emissions annually, should be included under the emissions cap, as originally envisioned.

The Oil and Gas Industry's Re-investments to Reduce Emissions Has Been Contemptible

• The federal government must acknowledge that the oil and gas companies are not acting in good faith when they purport to be working to reduce their emissions from production. The government should do everything in its power to make the oil and gas producers significantly cut their emissions.

The O&G Emissions Cap is based on O&G Production Increasing by 2030

• While it is clear that the federal government does not have authority to limit O&G production, they must get creative and use every tool in the toolbox to discourage O&G production and help Canada transition to a fossil fuel-free future.

Emissions Trading

- Allowing companies to trade emissions allowances (the "trade" part of "cap-and-trade") is unobjectionable.
- To ensure emissions reduction targets are met, the government must regulate and closely monitor the trading of allowances and emissions credits. Particularly when companies are relying on new technologies such as carbon capture and storage (CCS), it will be important to verify that the reported emissions reductions have actually taken place and result in the *permanent* removal of GHGs.

Multi-Year Compliance Periods

- Reconciling a facility's actual emissions with their allowances and credits every three years is reasonable when the cap is first introduced.
- In implementing multi-year compliance periods, the government must have sufficient authority to ensure emissions targets are met. The requirement to report emissions annually must be retained, and the government should be able to hold facilities accountable if their emissions reductions are off-track.

• To ensure the increasingly strict emissions cap in future years can be met, multi-year compliance periods should be phased out by 2030 and be replaced by annual compliance periods.

Banking of Emissions Allowances

- To ensure emissions are reduced as fast as possible and the 2030 target is met, banking of allowances should be limited to a single three-year compliance period, rather than six years.
- To prevent the accumulation of a glut of emissions credits in the industry, unlimited banking of allowances should not be allowed. A clear limit on the total quantity of credits that can be banked must be included in the regulations, with the percentage set at a low level that accounts for the declining emissions cap in future years.
- To ensure the increasingly strict emissions cap in future years can be met, the regulations should phase out the ability to bank allowances, and completely eliminate it well before Canada reaches net-zero in 2050.
- To help prevent a glut of emissions allowances, the government should ensure this cap-and-trade system continues to cover only the O&G sector going forward. Expanding the cap-and-trade system to cover more industries could lead to an over-allocation of emissions allowances.
- To regulate the quantity of credit allowances on an ongoing basis, in order to prevent either a deficit or a glut, the draft regulations must either include a market regulatory mechanism similar to the EU ETS Market Stability Reserve or a provision that the government may implement such a system without further consultation if it sees fit to do so.

Making Contributions to a Decarbonization Fund

- Contributions to the decarbonization fund would be funnelled back to the oil and gas industry to help them pay to reduce GHG emissions. This "double dipping" is absurd, giving the industry credit for the same funds twice under the cap.
- In November 2021, the Auditor General released a report outlining how, when the federal government tried to design and implement an emissions reduction fund, it failed badly. They should not try again.
- The decarbonization fund should be eliminated, or at the very least the funds should be given to organizations with a proven track record of reducing GHG emissions rather than the O&G industry.

Domestic Offset Credits

- Offsets do nothing to meet the objective of this Framework to reduce GHG emissions from oil and gas production.
- Offsets do not work. They create almost no emissions reductions in the real world.
- Offsets are linked to human rights abuses and greenwashing,¹⁴⁹ and the federal government should not promote their use.
- It's not fair to allow oil and gas companies to pay to keep polluting rather than doing their part to reduce Canada's GHG emissions.
- ECCC should eliminate the use of offset credits in the cap-and-trade system and force companies to directly reduce GHG emissions from oil and gas production instead.
- If offsets are not eliminated, ECCC should reduce the percentage of a facility's allowable emissions that could be covered by offset credits.
- If offsets are not eliminated, ECCC should develop a credible system to confirm with certainty that offset projects have *permanently* removed or prevented the promised GHG emissions *beyond* what would have resulted if the offset had not been purchased.

Internationally Transferred Mitigation Outcomes (ITMOs)

- Do not include ITMOs as a compliance flexibility option for the Oil and Gas Emissions Cap.
- Note that ITMOs are an even less effective instrument than domestic offsets and do nothing to accomplish the Framework's objective to reduce GHG emissions from the oil and gas sector.
- Note that the Paris Agreement, which created ITMOs, states they are intended "to allow for higher ambition in their mitigation and adaptation actions and to promote sustainable development and environmental integrity",¹⁵⁰ not to create an excuse to permit emissions in any given industrial centre.

¹⁴⁹ Gabbatiss, Josh, Daisy Dunne, Aruna Chandrasekhar, Orla Dwyer, Molly Lempriere, Yanine Quiroz, Ayesha Tandon and Dr Giuliana Viglione, "In-depth Q&A: Can 'carbon offsets' help to tackle climate change?", CarbonBrief, September 24, 2023. Retrieved January 15, 2024 from https://interactive.carbonbrief.org/carbon-offsets-2023/?utm_content=buffer9c29a&utm_medium=socia l&utm_source=twitter.com&utm_campaign=buffer.

¹⁵⁰ Article 6.1, <u>Paris Agreement</u>, United Nations, 2015. Retrieved on 15 January 2024 from <u>https://www.un.org/en/climatechange/paris-agreement</u>
• If ITMOs are included as part of the Oil and Gas Emissions Cap, the federal government must manage the transactions in order to avoid the emission reductions being "double counted" in both Canada and the foreign country.

Delayed Reporting and Verification

The loopholes created by the proposed delayed reporting and verification of GHG emissions should be closed. Specifically,

- Existing oil and gas facilities should be required to begin reporting and verification immediately when the regulations come into force;
- New oil and gas facilities should be required to begin reporting and verification immediately when operations commence;
- New oil and gas facilities should be subject to the emissions cap immediately when operations commence; and
- The federal government should clarify exactly what parts of the cap-and-trade system it is considering "phasing in" between 2026 and 2030 and how, so stakeholders can be consulted in a meaningful way.

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9. ACRONYMS

- CEPA Canadian Environmental Protection Act, 1999
- CO₂e carbon dioxide equivalent

COP - Conference of the Parties (to the Paris Agreement). There is a conference almost every year in November or December. Each year, the number of the COP is one higher than for the previous COP. The Paris Agreement was made at COP 21, in Paris in 2015.

ECCC - Environment and Climate Change Canada

- ERP 2030 Emissions Reduction Plan
- GHGs greenhouse gasses
- **ITMOs Internationally Transferred Mitigation Outcomes**
- LNG liquid natural gas

Mt - Megatonne

O&G - oil and gas

UNIPCC - United Nations Intergovernmental Panel on Climate Change

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10.0 GLOSSARY

Absolute emissions refers to the total measured quantity of greenhouse gases emitted.

Cap-and-trade is a market-based system where the regulator issues a quantity of emissions allowances that is less than the quantity of emissions expected in the absence of the policy, creating emissions scarcity under a cap. Since each regulated entity must remit one allowance for each tonne of emissions, and the total number of allowances is less than the business-as-usual emissions in the system, the scarcity drives demand in an allowance market designed by the regulator and thus prioritizes low cost abatement first. In Canada, cap-and-trade systems are currently in place in Quebec and Nova Scotia.

Carbon capture and storage (CCS) and carbon capture, utilization and storage (CCUS) are similar processes that use a suite of technologies to capture carbon dioxide (CO2) from facilities that would otherwise be directly released to the atmosphere. Using CCS technologies, the captured CO2 is compressed and transported to be permanently stored in long-term geological formations underground (e.g. saline aquifers, oil reservoirs). CCUS is a form of CCS that utilizes the captured carbon to create products, such as concrete and low-carbon synthetic fuels, or for injection into oil reservoirs for Enhanced Oil Recovery, where the injected gas helps facilitate the flow of oil to a well for further extraction after primary and secondary production. CCS and CCUS are also critical enabling technologies for carbon dioxide removal solutions such as direct air capture.

Carbon dioxide equivalent (CO₂e) is a measure used to compare the emissions from various greenhouse gases on the basis of their global-warming potential, by converting amounts of other gases to the equivalent amount of carbon dioxide with the same global warming potential.

Carbon leakage can occur when carbon costs cause companies or investors to move production to jurisdictions with lower or no carbon costs. The result is that emissions are not reduced; they are just emitted in a different location.

Direct emissions, referred to as **"Scope 1" emissions**, originate directly from sources that are owned or controlled by an organization.

Downstream emissions are the greenhouse gases emitted during the use, end-of-life treatment, and disposal phases of a product or service. In essence, these emissions occur after the product has been sold to the consumer. The Greenhouse Gas Protocol breaks down downstream emissions into seven distinct categories:

- Downstream transportation and distribution This includes emissions linked to the delivery and distribution of company products.
- Processing of sold products Emissions related to the processing of products sold by third parties.
- Use of sold products Emissions stemming from the final use of the goods and services.
- End-of-life disposal and treatment Any emissions related to waste disposal or treatment of the company's products.
- Downstream leased assets Emissions stemming from a company's leased assets to organizations or individuals.
- Franchises Any emissions created by the operation of franchises that do not fall under scope 1 or 2 emissions.
- Investments Emissions linked to the operation of investments, including the financing of projects.

Emissions intensity is a measure of the greenhouse gas emissions released per unit, for example per GPD, per barrel of oil, or per capita. Emissions intensities are used to compare the environmental impact of different fuels or activities.

Flaring emissions are controlled emissions of gases from industrial activities as a result of the combustion of a gas or liquid stream produced at a facility, the purpose of which is not to produce useful heat.

Fossil fuels are materials such as coal, oil, and natural gas that contain hydrocarbon from the remains of dead plants and animals. These materials are extracted and burned as a fuel.

Fugitive emissions are unintentional releases of GHGs from the production, processing, transmission, storage and delivery of fossil fuels. Released hydrocarbon gases that are disposed of by combustion (e.g., flaring of natural gases at oil and gas production and processing facilities) and post-production emissions, including those from abandoned coalmines and abandoned oil and gas wells, are also considered fugitive emissions.

Greenhouse gasses (GHGs) are a group of gases contributing to global warming and climate change. The 1997 Kyoto Protocol covers seven greenhouse gases:

- non-fluorinated gases:
 - carbon dioxide (CO2)
 - methane (CH4)

nitrous oxide (N2O)

0

- fluorinated gases:
 - hydrofluorocarbons (HFCs)
 - perfluorocarbons (PFCs)
 - sulphur hexafluoride (SF6)
 - nitrogen trifluoride (NF3)

Indirect emissions, are emissions generated indirectly from the consumption of purchased energy such as natural gas, diesel, or coal-fired electricity generation (referred to as **Scope 2 emissions**), or other indirect emissions (referred to as **Scope 3 emissions**) associated with an organization's operations (i.e. emissions from supply chains) or products. Scope 3 emissions can occur in other sectors or other jurisdictions (e.g., the use of exported crude oil or of gasoline in internal combustion engine vehicles).

Offset credits or 'offsets' are GHG emission reductions or removal enhancements generated from project-based activities that compensate for emissions made elsewhere. Offset credits can be generated in both regulatory and voluntary programs. In regulatory programs, offsets allow regulated emitters to use emission reductions from projects undertaken by project developers on a voluntary basis to fulfil their emissions reduction obligations.

Paris Agreement is a legally binding international treaty on climate change that came into force in 2016. Its overarching goal is to hold "the increase in the global average temperature to well below 2°C above pre-industrial levels" and pursue efforts "to limit the temperature increase to 1.5°C above pre-industrial levels."

Upstream emissions are the greenhouse gasses that stem from the production of goods or services that a company purchases or uses. The Greenhouse Gas Protocol outlines eight upstream emissions categories. These are:

- Purchased goods and services This includes emissions arising from the extraction, manufacturing, and transportation of any items or services purchased by the company.
- Capital good This is emissions arising from the extraction, manufacturing, and transportation of a company's purchased or acquired assets.
- Fuel and energy use Emissions arising from the extraction, manufacturing, and transportation of fuels and energy that are not already included under scope 2 or 3 emissions.
- Upstream transport and distribution This covers emissions linked to the transportation and distribution of the company's purchased products. This category also includes logistics and transportation such as supply chain services, outbound logistics, and transportation between company facilities.

- Operational waste Emissions produced as a result of the disposal or treatment of operational waste. This excludes emissions linked to in-house waste management facilities.
- Business travel Emissions resulting from employee transportation for business-related activities in vehicles not belonging to the company.
- Employee commuting This covers emissions resulting from an employee's commute between their home and office where the vehicles used don't belong to the company.
- Upstream leased assets This includes any assets leased by the company that fall out with scope 1 and 2 emissions.

Venting emissions are controlled emissions that occur due to the design of a facility, to procedures used in the manufacture or processing of a substance or product or to pressure exceeding the capacity of the equipment at the facility.

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