Extended Brief on the Proposed Oil and Gas Cap

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My name is Andrew Leach, and I am an economist at the University of Alberta.[1] My research and teaching are focused on energy and environmental policy, with particular interests in climate change policy and the oil and gas sector. I have specific experience relevant to your current study from both my time as Chair of Alberta's Climate Leadership Panel in 2015 and my experience previous to and since that time advising governments on the implementation of policies focussed on the oil and gas sector. I also have a more recent interest in constitutional law, and in particular the powers of the federal government with respect to enacting environmental policies. My remarks to this committee draw on all of this experience.

Canada will require more stringent policies to meet commitments made in its recently-updated Nationally Determined Contribution (NDC) under the Paris Agreement,[2] and I strongly support the implementation of policies to meet these commitments. Canada's record should no longer be one of making commitments we are unprepared to support with policies. My comments below should thus not be interpreted as questioning whether we should act to meet these commitments, only how we should or should best undertake to do so.

In his speech to the 26th Council of the Parties to the UNFCCC in Glasgow in November of 2021, Prime Minister Trudeau formalized a commitment first made during the 2021 federal election campaign to cap emissions from the oil and gas sector.[3] He stated that Canada would, "cap oil and gas sector emissions today and ensure they decrease tomorrow at a pace and scale needed to reach net-zero by 2050."[4] The

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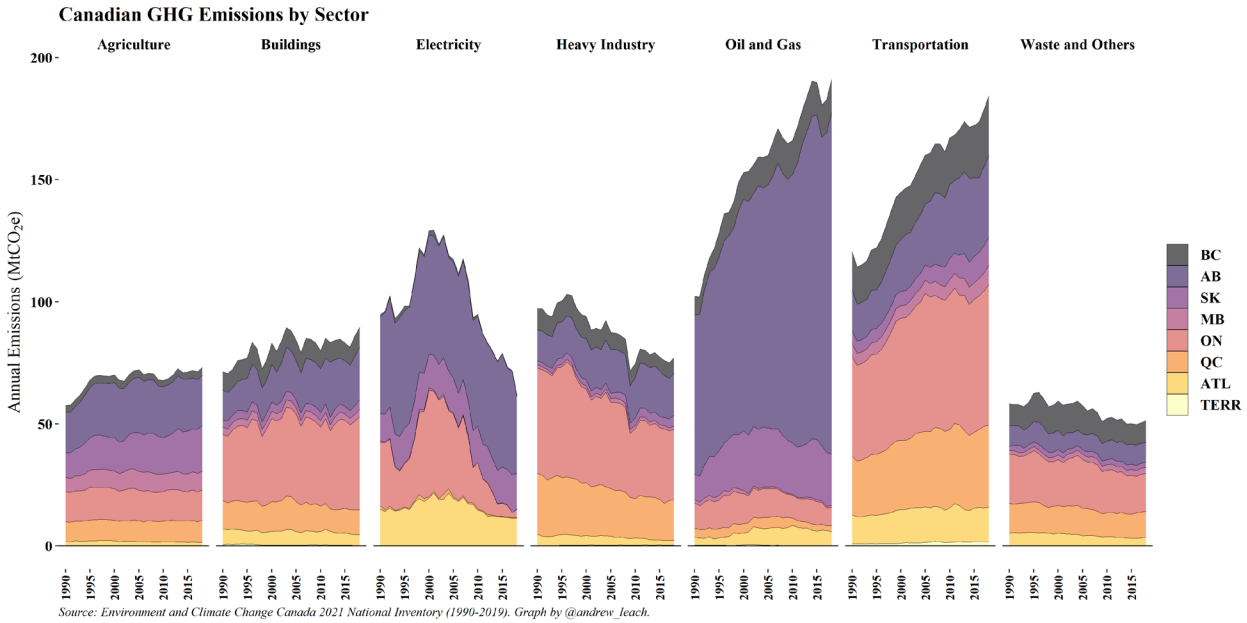
[1] My website is at http://www.aleach.ca and my academic CV is available here.

[2] Government of Canada, "Canada's 2021 Nationally Determined Contribution (NDC)", (2021), online: *UNFCCC* <https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Canada%20First/Canada%27s%20Enhanced%20NDC%20Submission1_FINAL%20EN.pdf> [perma.cc/QW3C-C7F5].

[3] Prime Minister Justin Trudeau, "Prime Minister's remarks delivering Canada's national statement at the COP26 summit", (1 November 2021), online: *Prime Minister's Office* <https://pm.gc.ca/en/news/speeches/2021/11/01/prime-ministers-remarks-delivering-canadas-national-statement-cop26-summit> [perma.cc/8L33-C5Q5]. The campaign commitment can be found at: Liberal Party of Canada, "Cap and Cut Emissions from Oil and Gas", (2021), online: *liberal.ca* <liberal.ca/our-platform/cap-and-cut-emissions-from-oil-and-gas> [perma.cc/6ESY-KJMS].

[4] Prime Minister Justin Trudeau, *supra* note 3.

Liberal 2021 election platform is slightly more detailed, with commitments to "make sure the oil and gas sector reduces emissions at a pace and scale needed to achieve net-zero by 2050, with 5-year targets to stay on track to achieving this shared goal," and "ensuring that pollution from the oil and gas sector doesn't go up from current levels."[5] The platform appropriately references commitments from Canada's largest oil and gas companies to achieve net-zero emissions by 2050, although this commitment applies to the oil sands sector, not to the industry as a whole.[6] Regardless of the scope, a sector-wide, declining cap on emissions could represent a financial, technical, and constitutional challenge for industry and for Parliament. Depending on whether the government intends the cap to be implemented through new regulations or as an expression of their goals for existing regulations, each of these challenges may be more or less imposing.

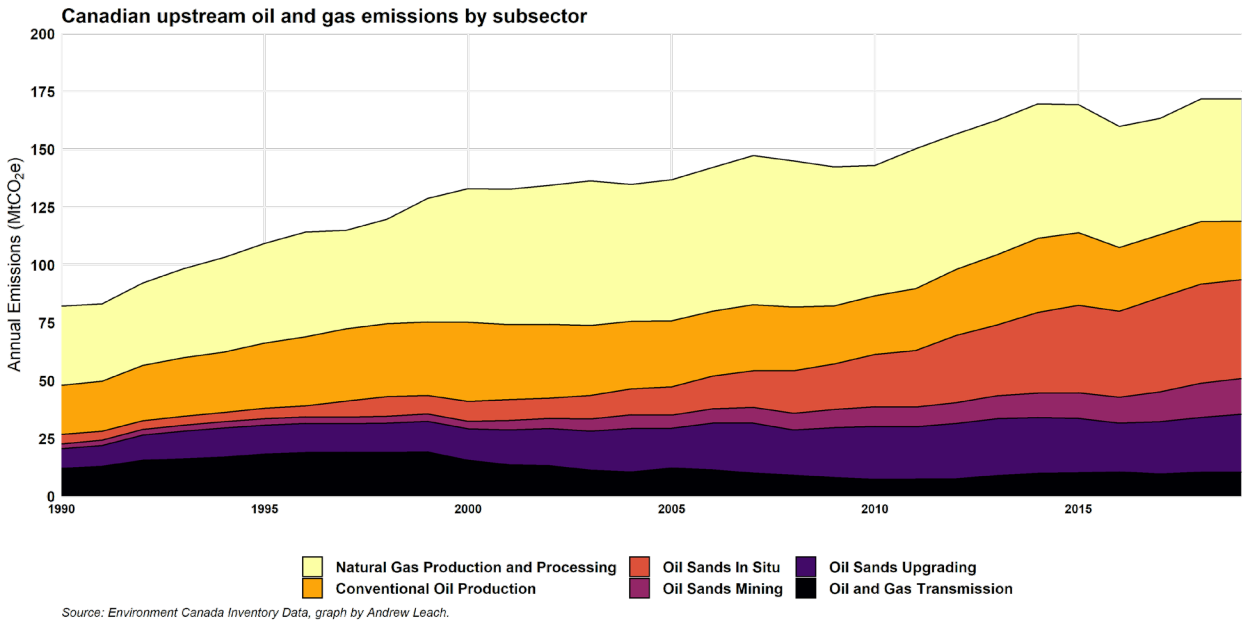


Emissions from the oil and gas sector accounted for 191Mt in the most recent National Inventory Report (NIR) for the 2019 calendar year, slightly higher than the 186Mt reported for the transportation sector. Oil and gas emissions have grown more rapidly than other sectors since 1990 (see Figure above). Emissions

[5] Liberal Party of Canada, *supra* note 3.

[6] See, for example, Oil Sands Pathways to Net Zero Alliance, "ConocoPhillips Canada joins Oil Sands Pathways to Net Zero alliance", (3 November 2021), online: *Oil Sands Pathways to Net Zero* <https://www.oilsandspathways.ca/pressrelease_nov3/> [perma.cc/2WJK-F3YB] which details the current state of the oil sands industry partnership and goals.

from upstream activities including oil and gas production, gas processing, and pipeline systems account for 172 Mt, with the balance accounted for by refining (19Mt) and natural gas distribution (1Mt). Alberta accounts for the largest share of oil and gas emissions, with 136 Mt of upstream emissions and 5.7Mt of emissions from oil refining. Production and upgrading emissions from the oil sands accounted for 83Mt of emissions in 2019 (see Figure below), approximately half of all upstream oil and gas emissions.[7]



The Reference Case in the most recent Environment Canada emissions projections (which are certainly dated at this point) showed a continued, slight increase in oil and gas emissions to 194 Mt between now and 2030.[8] More recent forecasts from the Canadian Energy Regulator do not differ markedly from these conclusions, unless more stringent policies are imposed.[9] Without significant new emissions reductions,

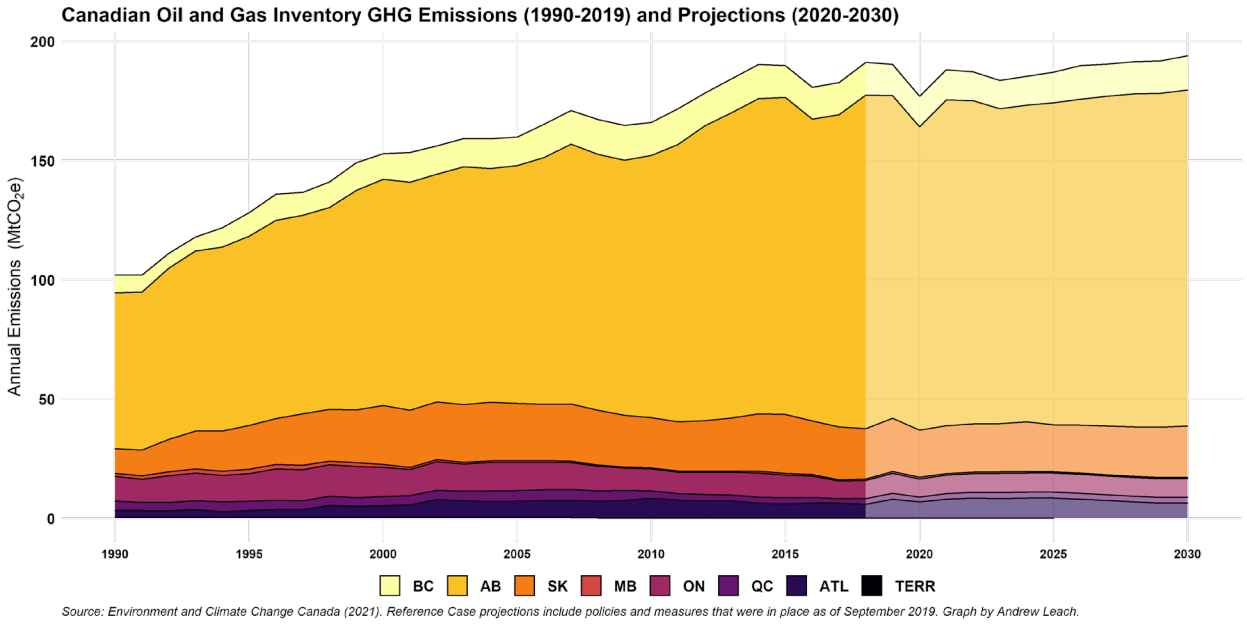
[7] Government of Canada, "2021 National Inventory Data", (20 April 2021), online: *Environment Canada* <http://data.ec.gc.ca/data/substances/monitor/canada-s-official-greenhouse-gas-inventory/>. This is the source for all values cited in this paragraph as well as for the included first two included graphics.

[8] Environment and Climate Change Canada, "Canada's Greenhouse Gas Emissions Projections (2021)", (April 2021), online: *ECCC Data Mart* <https://data.ec.gc.ca/data/substances/monitor/canada-s-greenhouse-gas-emissions-projections/Current-Projections-Actuelles/GHG-GES/?lang=en>.

[9] Canadian Energy Regulator, "Canada's Energy Future 2021", (2021), online: *Canadian Energy Regulator* <https://www.cer-rec.gc.ca/en/data-analysis/canada-energy-future/2021/canada-energy-futures-2021.pdf> [perma.cc/2ZV8-GNW2], fig ES-8, and generally pages 11-12.

either due to changes in policies, markets, and/or production technology, shared government and industry emissions goals will not be met (see Figure below).

These numbers referenced to this point include only production and processing emissions, and omit eventual emissions from combustion. There should be no question that oil and gas emissions contribute substantially to Canada's emissions, and that emissions embodied in Canadian hydrocarbon production are a significant source of global emissions. Absent significant decreases in emissions from this sector, Canada's goals will become increasingly challenging and eventually effectively impossible to meet.



Statements about increasing oil and gas emissions are often accompanied or countered by claims that emissions-intensity is improving.[10] In the oil sector, that has not been consistently true: the average Canadian barrel has become more emissions-intensive over the past 3 decades. Why? Because an increasing share of our barrels are produced in the more emissions-intensive oil sands, and an increasing share of oil sands barrels are produced using more emissions-intensive *in situ* processes. So, while it's true that we've

[10] For one example among many, see Deborah Jaremko, "Oil sands on path to total emissions reductions", (1 February 2022), online: *Canadian Energy Centre* <https://www.canadianenergycentre.ca/oil-sands-on-path-to-total-emissions-reductions-new-analysis/> [perma.cc/3WS9-D4UP].

seen substantial emissions-intensity improvements within upstream subsectors, particularly in oil sands mining, this has not translated to a cleaner Canadian barrel overall. On the contrary, as reported in the NIR, the emissions-intensity of the average Canadian barrel increased by about 10% between 1990 and 2019, from 59 to 65 kg CO_2 equivalent per barrel, although there has been a slight decline from 67 to 65 kg CO_2 equivalent per barrel since 2005.[11] The story is slightly better for natural gas production and processing, with the NIR showing a slight decrease in emissions intensity.[12]

The main driver of the increase in upstream emissions is increased production, with oil production more than double what it was in 1990, and oil sands production having increased by a factor of more than seven over the same time period. Emissions have increased slightly more than proportionally with total production, but oil sands emissions have increased less than proportionally due to significant emissions intensity improvements compared to early facilities, and a reduced dependency on domestic upgrading.[13]

The most important drivers of production and thus emissions from the oil and gas sector in Canada come from beyond our borders in the form of commodity prices. Over the past year, we've seen oil and gas prices increase dramatically. Compared to commodity price fluctuations, the potential costs of carbon pricing are vanishingly small. For example, Suncor estimates that compliance with a $170 per tonne carbon price, with the output-based allocations and offsets offered through the *Technology and Innovation Emissions Reduction Regulation* (*TIER*) and the *Greenhouse Gas Pollution Pricing Act* would be less than $1 per barrel.[14] This means that, at least for the time being, there will be a much higher value to production than there has been and a larger willingness to invest to maintain production in spite of policy changes. This

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[11] Government of Canada, "2021 National Inventory Report, Part 1", (April 2021), online: *Environment and Climate Change Canada* <https://publications.gc.ca/collections/collection_2021/eccc/En81-4-2019-1-eng.pdf> [perma.cc/9BJT-PDHE] at 55.

[12] *Ibid* at 56.

[13] *Ibid* at 55.

[14] Suncor Energy, "2021 Q2 Investor Presentation", (28 July 2021), online: *Suncor.com* <https://sustainability-prd-cdn.suncor.com/-/media/project/suncor/files/investor-centre/investor-relations-presentations-2021/2021-q2-suncor-energy-investor-presentation-en.pdf> [perma.cc/52NM-CGGX] at 13. Referenced policies are Alberta's *Technology Innovation and Emissions Reduction Regulation*, 2019, Alta Reg 133-2019 [*TIER*], and the federal *Greenhouse Gas Pollution Pricing Act*, SC 2018, c 12, s 186 [*GGPPA*].

begs the question of whether oil prices, combined with a regulatory cap on emissions, would lead to sufficient investment to decouple emissions from production. My belief is that it will not because of the investments required and the uncertain returns, transforming a cap on emissions to one on production.

In recent years, the oil sands sector has seen a major decline in upstream investment, driven largely by declining interest in long-cycle fossil fuel projects globally, along with a declining interest in investment in emissions-intensive projects.[15] Recent analysis has also shown the Canadian oil sector to be particularly vulnerable to global action on climate change.[16] The technologies which offer the most promising avenues to decouple emissions from production in the oil sands, and thus to decarbonize the average Canadian barrel, face some of the same challenges as oil sands investment: small modular nuclear reactors (SMNR) or carbon capture, utilization, and storage (CCUS) both require large up-front capital investments with multi-decade payback horizons, and so demand a long-term bet on both oil prices and GHG emissions policies. It's true that Canada's largest oil and gas companies have publicly committed to achieving net-zero emissions by 2050,[17] but they have also made it clear that the adoption of the technologies required to make this happen will not be undertaken by private-sector capital alone.[18] On the basis of private returns alone, even in the presence of stringent carbon prices, it's plausible that companies will choose to reduce production rather than decoupling emissions from production. But, it's certainly the case that greater investment certainty will be required to generate major investments in abatement, and a regulatory cap does not meaningfully change that certainty since legislated requirements are always subject to change.

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[15] See, for example, Aaron Brady, "Global crude oil cost curve shows 90% of projects through 2040 breaking even below $50/bbl", (10 September 2021), online: *IHS Markit* <https://ihsmarkit.com/research-analysis/global-crude-oil-curve-shows-projects-break-even-through-2040.html> [perma.cc/A6RZ-ZE4B].

[16] See, for example, International Energy Agency, "World Energy Outlook 2021", (13 October 2021), online: *IEA* <https://www.iea.org/reports/world-energy-outlook-2021> at 219 where Figure 5.7 shows Canadian production declining in a scenario in which countries adopt their current pledges to reduce emissions. Canada is the only listed country which see a reduction in production from current levels in this scenario.

[17] Oil Sands Pathways to Net Zero Alliance, *supra* note 6.

[18] Consider, for example, the interview given by Alex Pourbaix, CEO of Cenovus, on West of Centre, "'Walking the walk': A major oil CEO on emissions targets, COP26 and new ministers", (29 October 2021), online: *CBC Podcasts* <https://www.cbc.ca/listen/cbc-podcasts/407-west-of-centre/episode/15875444-walking-the-walk-a-major-oil-ceo-on-emissions-targets-cop26-and-new-ministers>.

There is also an economic policy question with respect to using a sector-specific regulatory cap. In arguing for the *GGPPA* before the Supreme Court of Canada, the Attorney General for Canada claimed that "[e]xperts around the world, including the vast majority of Canadian economists, agree that carbon pricing is one of the most cost-effective ways to reduce emissions," and cited my own testimony before the Finance Committee of the House of Commons to support their claim.[19] In that context, the Crown was arguing that ensuring a comparable carbon price across provinces was important because such a policy would yield the most cost-effective emissions reductions. The same is true when we consider how policies are applied across sectors. With that in mind, I would ask two questions: first, why would we want more stringent policies applied on some sectors than on others, and even if we did, do we need another mechanism or another policy to do so?

My answer to both of these questions is no. We should strive for comparable, effective carbon prices across sectors in the same way we strive for this across provinces. Greenhouse gas emissions do not affect the climate (or Canada's national inventory) differently if they come from the oil sands or from the manufacture of cement any more than they have different effects if they come from New Brunswick instead of from Alberta. Our policies should strive to treat emissions similarly as well, across provinces and across sectors. And, the government already has, in the *GGPPA* and the *Clean Fuel Standards*, the only tools it needs to apply consistent price and regulatory signals across the fossil energy value chain in Canada. It does not need another regulation. Those of us who fought so hard for carbon pricing did not do so only to turn around and implement a less efficient *sector-by-sector regulatory approach*.

We should anchor our policies in our carbon pricing system and, insofar as we find that emissions trajectories are higher than our goals allow, we should adjust our carbon prices or be prepared to adjust our goals. That emissions in one sector are more resilient to carbon pricing is indicative of higher value per

[19] *References re Greenhouse Gas Pollution Pricing Act*, 2021 SCC 11 [*GGPPA References*], Factum of the Attorney General of Canada at para 48, citing FINA No 151 (7 May 2018) at 1.

tonne of carbon emitted, which is exactly what carbon pricing should drive us to seek.[20] There should be scope to add certainty to our carbon prices, perhaps through long-term contracts for differences or tax credits for investments like those required to bring CCUS or SMNRs online. We may also choose to expand the reach of our carbon pricing regimes through border adjustments or other mechanisms. But the goal should be broadening the base for consistent carbon prices, not abandoning the application of consistent carbon prices in favour of sector-level targets. Having a vastly different value placed, implicitly or explicitly, on emissions reductions in one sector is contrary to the commitment of this government to "ensure a consistent approach to carbon pricing across Canada."[21]

Complexity also makes investment more challenging. How should industry value an investment in abatement in the presence of a carbon pricing system, clean fuel regulations, a regulatory cap on oil and gas emissions, and a tax credit regime for carbon capture and storage? If we expect companies to invest to reduce emissions, our policies should clearly define how such investments will generate returns.

Finally, the Constitution and, and specifically section 92A, should be considered here too.[22] The federal government has specific subjects of legislative responsibility as defined in section 91, while the management of natural resources is assigned to the provinces implicitly in section 92 and explicitly in section 92A.[23] We know, pursuant to the ruling of the SCC in the *GGPPA References,* that ensuring consistent emissions pricing across Canada falls within the ambit of Parliament, but this surely does not extend to establishing inconsistent pricing of emissions from different sectors. Many have argued that the criminal law affords Parliament the scope to cap emissions from the oil and gas sector.[24] Perhaps it does,

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[20] I've made this argument in multiple forums for more than a decade. See, for example, Andrew Leach, "When it comes to carbon pricing, you have to take the good with the oil sands.", (31 January 2011), online: *Rescuing the Frog* <http://andrewleach.ca/oilsands/when-it-comes-to-carbon-pricing-you-have-to-take-the-good-with-the-oil-sands/> [perma.cc/P975-6WVA].

[21] *GGPPA References*, *supra* note 19, Factum of the Attorney General of Canada at para 30.

[22] *The Constitution Act, 1867*, 30 & 31 Vict, c 3 (UK) [*The Constitution Act, 1867*], generally, with specific reference to s. 92A and the Sixth Schedule.

[23] William D Moull, "Section 92A of the Constitution Act, 1867" (1983) 61:4 Can Bar Rev, online: <https://cbr.cba.org/index.php/cbr/article/view/3292>.

[24] See, for example, testimony of Professor Martin Olszynski before this committee.

but an interpretation as such would imply an expansion of federal authority to engage in selective economic policy via the criminal law, and would detract from the efficacy of national carbon pricing.

Parliament has other means to ensure that the carbon prices established through the *GGPPA* are reflected investment and production decisions. Production emissions are covered by carbon pricing, as is domestic combustion of produced hydrocarbons, and the output-based allocations can be adjusted as needed to provide an appropriate signal for the value we place on continued investment and production. The *Clean Fuel Regulations* provide an additional, regulatory curtailment of emissions embodied in fuels.[25] Section 91(2), the trade and commerce power, affords more than sufficient jurisdiction to extend carbon prices to eventual emissions from exported hydrocarbons, should that be deemed desirable, through border carbon adjustments. The tax system and/or the exercise of the broad federal spending power allows the government to establish either promissory notes or tax credits to ensure that investments in future abatement, including through CCUS or SMNRs, have more certain long-term returns. The major project impact assessment powers in the *Impact Assessment Act* and the *Canadian Energy Regulator Act* respectively provide substantial authority to constrain the development of new and expanded hydrocarbon production and transportation.[26] A sector-specific emissions cap need not be a part of this solution – the federal government already has all of the tools it needs to reach its emissions goals and more.

In conclusion, if the proposed oil and gas *cap* serves only as an expression of the expected outcome of extant policies and the exercise of other federal powers, so be it. But, I question the need for and the efficacy of a new, regulatory mechanism aimed at this sector despite the sizeable emissions footprint of oil and gas production and the embodied emissions embodied in produced hydrocarbons.

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[25] *Clean Fuel Regulations*, Government of Canada, 19 December 2020, Canada Gazette, Part I, Vol 154, N 51 [*CFS Regulations*].

[26] *Impact Assessment Act*, SC 2019, c 28, s 1 [*IAA*]; *Canadian Energy Regulator Act*, SC 2019, c 28, s 10 [*CERA*].