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The National Energy Board's Limits in Assessing Upstream Greenhouse Gas Emissions

by

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- Canada's new federal government has pledged to count upstream emissions against pipeline projects under review by the National Energy Board.
- However, doing so would possibly intrude into an area of provincial responsibility, stretching the constitutional powers of the federal government, as well as break the new federal government's promise to defer to provincial measures for curbing emissions.
- In addition, blocking pipelines, as opposed to putting a price on emitting greenhouse gases, would hinder, rather than help, Canada to achieve promised emissions reductions at the lowest cost to the economy.

Canada's new federal government has pledged to revise the processes the National Energy Board (NEB) uses to approve pipelines (Canada 2016). It has stated that during NEB reviews, "[d]irect and upstream greenhouse gas [GHG] emissions linked to the projects under review will be assessed." Although the federal government spoke only of assessing upstream emissions and making the information public, we argue that it would be a mistake for the NEB to count upstream emissions against a pipeline project as part of its overall assessment, for two reasons. First, doing so possibly would intrude into an area of provincial responsibility, as well as break the new federal government's promise to defer to provincial measures for curbing emissions. Second, it would impair economic efficiency and hinder, rather than help, Canada to achieve promised emissions reductions at the lowest cost to the economy.

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The Constitutional Limits on Federal Emissions Policy

Mandating the NEB to weigh upstream GHG emissions in its pipeline approval process could stretch the federal government's constitutional authority. The reason the NEB has jurisdiction to approve pipelines is the federal constitutional power for "interprovincial works and undertakings." The federal government does not have specific authority for "the environment" and federal environmental assessments must be connected to other federal powers – in the case of the NEB's pipeline reviews, the power over interprovincial works. The Supreme Court has emphasized that federal environmental assessment should not be a "Trojan horse" for the federal government to inject itself into general industrial regulation, which is a provincial responsibility.¹

Nonetheless, as part of its "needs assessment" of a proposed pipeline, the NEB should consider the degree to which federal and provincial policies to reduce GHG emissions will decrease the upstream production of petroleum for the pipeline. This relates to the need for the interprovincial infrastructure. The NEB should not speculate about emissions reduction policies, but should consider only whether the projected upstream production is sufficient for a proposed pipeline to be necessary.

GHG Pricing as the Most Efficient Means to Reduce Emissions

In tackling GHG emissions, the focus of Canadian governments should be on the reduction of Canada's overall emissions, rather than targeting those of a particular industry or region. To that end, greenhouse gas pricing would ensure that Canada achieves its targeted emissions reductions at the lowest cost to the economy. If oil production remains economically viable in the face of an economy-wide GHG price, it should occur, instead of being supplanted by other, less efficient GHG-emitting companies and industries.

Pipelines are merely a means for getting profitably produced oil to market. If supply justifies a pipeline even including the upstream GHG price, the pipeline will still be needed. The NEB's "public interest" review and environmental assessment should consider the pipeline's direct environmental effects, but weighing its upstream emissions in the approval process would only penalize emissions that are permitted under an upstream GHG-pricing regime. The different regulatory processes have different – and complementary – objectives: for GHG pricing, it is to reduce Canada's GHG emissions in the least costly manner; for pipeline reviews, it is to transport petroleum in the safest and most efficient way to markets.

The Legislative Basis for Federal Pipeline Reviews

The NEB is an independent federal regulatory agency that oversees Canada's federally regulated energy infrastructure. Under Canada's Constitution, provincial governments have jurisdiction over natural resources and industrial regulation within the province. However, pursuant to the federal power under the Constitution over interprovincial and international "works and undertakings," the federal government has the authority to regulate energy infrastructure that crosses provincial or international boundaries. The NEB's mandate thus includes oversight of interprovincial pipelines and associated facilities that transport oil and natural gas.

1 *Friends of the Oldman River Society v. Canada (Minister of Transport)*, [1992] 1 SCR 3.

Before any new interprovincial or cross-border pipeline can be built, the NEB must issue a certificate of approval. The *National Energy Board Act*, R.S.C., 1985, c. N-7 [*NEBA*], mandates the Board to undertake a review to determine whether “present and future public convenience and necessity” requires the pipeline, and whether the pipeline is in the “public interest.” The *NEBA* prescribes certain criteria that the NEB must consider in making its recommendation to the federal cabinet, which will make the final decision on the proposed pipeline. These criteria include “the availability of oil, gas or any other commodity to the pipeline” and “the economic feasibility of the pipeline.”

Since certain oil production may no longer be economic when facing a carbon price, GHG reductions could logically affect the economic need for a pipeline. Based on governments’ policies for reducing GHG emissions, the NEB would appropriately consider whether sufficient supplies of petroleum will be available for the pipeline to be necessary and economically feasible.

Activities regulated by the NEB are subject to a federal environmental assessment under the *Canadian Environmental Assessment Act*, 2012, S.C. 2012, c. 19, s.15. The federal environmental assessment must consider the environmental effects of the “designated project,” which include “any physical activity that is incidental to those physical activities” that trigger the environmental assessment. For reviews of pipeline projects under NEB jurisdiction, the NEB now undertakes the environmental review itself as the “responsible authority.”

Constitutional Questions

The scope of federal environmental assessments is subject to constitutional limits. Importantly, the Constitution does not assign jurisdiction for the “environment” to either the federal or provincial governments. Constitutionally, the federal government’s authority for environmental assessment requires the trigger of an effect linked to a federal head of power.² That is, the environmental assessment must be sufficiently connected to the constitutional jurisdiction under which the federal government regulates a given activity, and it cannot be used to invade areas of provincial jurisdiction that are unconnected to the relevant federal power. The Supreme Court, commenting on the scope of the NEB’s authority, observed that its environmental review must be “truly limited to matters of federal concern.”³

It is unclear how GHG emissions from upstream production are sufficiently related to the federal jurisdiction over the environmental assessment of a pipeline or any other federal “head of power.” If emissions are already subject to provincial regulation, requiring the NEB to scrutinize emissions from upstream industrial activities looks suspiciously like an intrusion into provincial jurisdiction for industrial regulation and control over natural resources.

The Supreme Court has not conclusively considered the constitutional limits on the scope of federal environmental assessments. In *Friends of the Oldman River Society v. Canada (Minister of Transport)*, [1992] 1 SCR 3, however, the majority was mindful that a federal environmental assessment not be a “constitutional Trojan horse enabling the federal government, on the pretext of some narrow ground of federal

2 *Friends of the Oldman River Society v. Canada (Minister of Transport)*, [1992] 1 SCR 3.

3 *Quebec (Attorney General) v. Canada (National Energy Board)*, [1994] 1 SCR 159 [*Hydro-Québec*].

jurisdiction, to conduct a far-ranging inquiry into matters that are exclusively within provincial jurisdiction.”⁴ Justice Gérard La Forest, for the majority, noted that an environmental assessment was “only given a mandate to examine matters directly related to the areas of federal responsibility affected.” Although allowing that an environmental assessment could “consider the environmental effect on all areas of federal jurisdiction,” Justice La Forest emphasized that an environmental assessment could not be used “as a colourable device to invade areas of provincial jurisdiction which are unconnected to the relevant heads of federal power.”⁵

The Court has also examined constitutional limits on the scope of an environmental assessment by the NEB in the context of an application by Hydro-Québec for an electricity export contract. In reference to the NEB’s conditional approval of an export contract in that case, the Court indicated that the scope of the NEB’s assessment must respect constitutional limits, requiring “that the Board’s authority is truly limited to matters of federal concern.”⁶ The Court stressed that the key feature “relates to the aspect of Hydro-Québec’s undertakings for which [the NEB] has decision-making authority, that is, the decision to grant a licence permitting export.” The Court elaborated: “That does not artificially limit the scope of the inquiry to the environmental ramifications of the transmission of power by a line of wire, but it equally does not permit a wholesale review of the entire operational plan of Hydro-Québec.”⁷

Based on the Supreme Court’s reasoning in the Hydro-Québec case, a later decision by the Federal Court held that an environmental assessment did not “authorize a Responsible Authority to environmentally assess aspects of a project unrelated to those heads of federal jurisdiction called into play by the project in question.”⁸ On this basis, the Federal Court rejected arguments that the scope of a federal environmental assessment, which was triggered by a required approval from the Department of Fisheries and Oceans, should include all environmental effects, including GHG emissions, of a proposed oil sands mine. The Federal Court of Appeal affirmed this judgment, rejecting the argument that the federal legislation could “sweep under a federal environmental assessment undertakings that are not subject to federal jurisdiction.”⁹

These decisions call into question the federal government’s authority to condition the approval of a pipeline on upstream emissions. A particular upstream producer would not be required to serve a pipeline that was subject to NEB approval. Instead, the proposed pipeline would be necessary to get oil to market. Given this relationship, it is unclear how upstream emissions are sufficiently connected to the federal jurisdiction over interprovincial and international pipelines.

Nonetheless, might upstream GHG emissions be considered in a federal environmental assessment if they affected another area of federal responsibility? For example, might GHG emissions be a national concern of the federal government’s regulatory jurisdiction? From current jurisprudence and commentary, this appears unlikely.

4 *Oldman*, 71.

5 *Ibid*, 72–3.

6 *Hydro-Québec*, 192.

7 *Ibid*, 94–5.

8 *Prairie Acid Rain Coalition v. Canada (Minister of Fisheries and Oceans)*, 2004 FC 1265 at para. 243.

9 2006 FCA 31 at para. 24. The Supreme Court denied leave to appeal (31370 (20 July 2006)).

Importantly, the courts have not recognized climate change or GHGs as a specific federal jurisdiction. As with federal legislation on environmental assessment, a specific federal head of power must ground any federal environmental regulation of industrial activities. The federal government has previously enacted legislation to control environmental pollutants under either its authority for “peace, order and good government” (POGG) or its “criminal” power.

For example, the Supreme Court found that control of marine pollution represents a “national concern” falling within the federal POGG jurisdiction.¹⁰ Legal scholars (Elgie 2007; Hogg 2009) have also argued that climate change represents the sort of national concern that should also come under POGG. Other commentators (Hsu and Elliot 2009; Lucas and Yearsley 2011; Newman 2013, 111-17) contend, however, that extending POGG to cover GHG regulation likely would leave POGG without meaningful limits. Moreover, the creation of GHG pricing schemes by provincial governments arguably undercuts a “provincial inability” (a precondition for the federal POGG power) to counteract GHG emissions.

Although the federal government has authority to impose a GHG emissions tax under its general taxation power, other forms of GHG regulation likely would be outside federal jurisdiction: it would seem difficult to demonstrate, for example, that a scheme for capping and trading permits represents a criminal prohibition, rather than general industrial regulation.

Again, it is doubtful, based on current jurisprudence, that the federal government would have general regulatory authority over GHG emissions.¹¹ Without another federal area of responsibility that would be affected by upstream emissions, these would seem beyond the constitutional scope for the environmental assessment of a pipeline.

A Better Way to Reduce GHG Emissions

Canada’s new federal government remains committed to an economy-wide target of reducing GHG emissions by 30 percent below 2005 levels by 2030.¹² To minimize the economic cost of achieving that emissions target, the appropriate measure is to price the right to emit GHGs. Its optimal design has been detailed elsewhere (for example, see Ecofiscal Commission 2015), but GHG pricing would ensure that GHGs are emitted by only the most economically valuable activities.

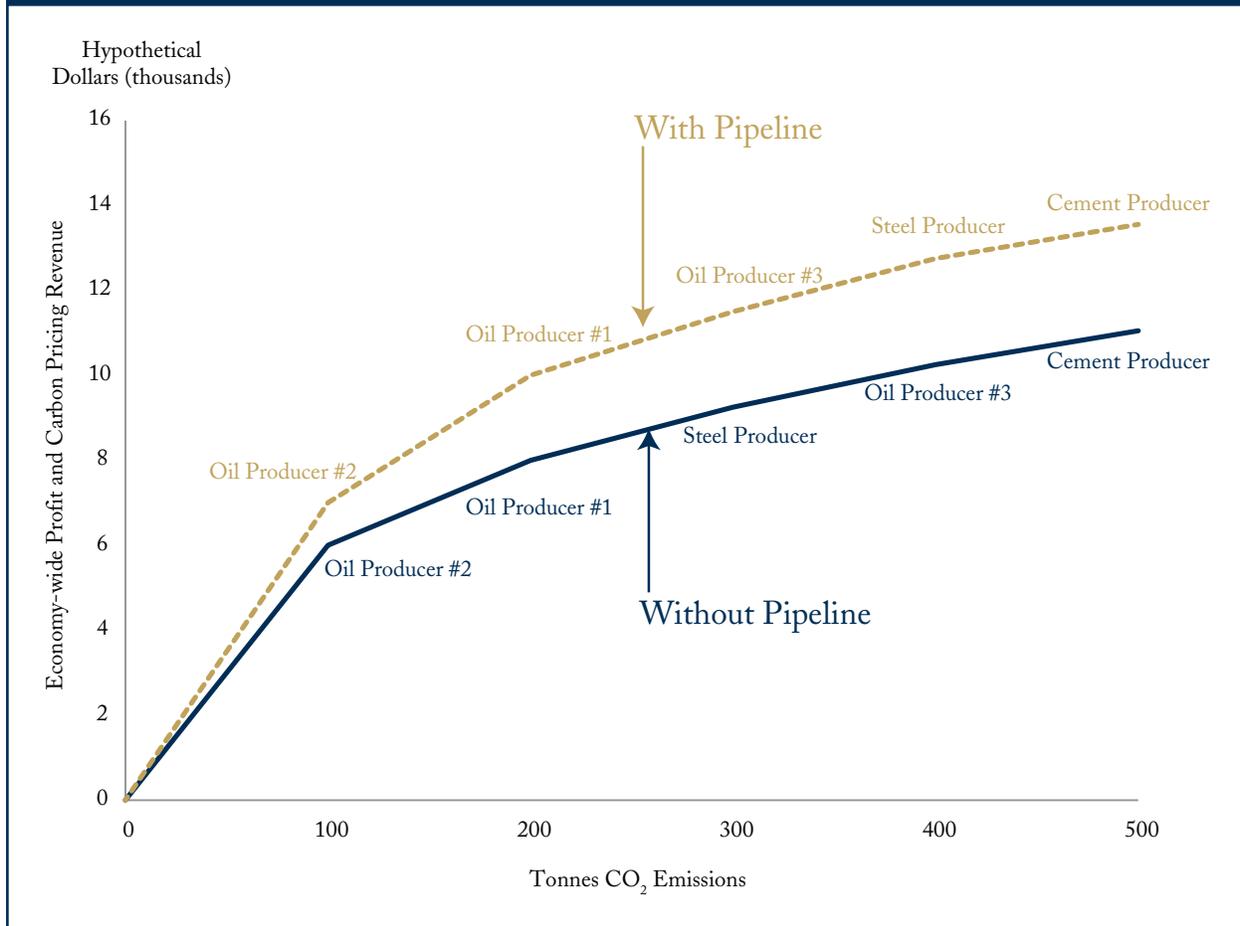
Facing an economy-wide GHG price, petroleum producers would reduce emissions to the extent that the value generated from emitting a tonne of GHG is less than the per tonne GHG price. The cost of emissions then would already be priced into the decision by an upstream producer about whether or not to produce petroleum.

10 See *R. v. Crown Zellerbach Canada Ltd.*, [1988] 1 SCR 401.

11 There might still be a federal role in “border adjustments” for GHG emissions embedded in imports and exports in order to avoid so-called leakage in which emission pricing in Canada results in production (and the related emissions) relocating elsewhere with no net reduction in global emissions.

12 Additionally, the federal government has expressed its commitment to help limit the global average temperature rise to well below 2°C, and to pursue efforts to limit the increase to 1.5°C. That commitment will require greater emissions reductions.

Figure 1: Change in Economy-Wide Profit from Adding a Pipeline



Source: Authors' calculations as calculated in Box 1.

If upstream petroleum production faced a GHG price, the NEB's considering upstream emissions as environmental effects to be weighed against the approval of a pipeline would be a form of double-counting. Indeed, rejecting a pipeline where upstream supply remained constrained would hinder market efficiency – both in the market for petroleum and in the allocation of economy-wide GHG emissions. Furthermore, rejecting a pipeline because of related upstream emissions might result in the transport of oil by other means in which upstream emissions would not be regulated, such as rail. That would make the rejection both economically costly and ineffective in reducing emissions.

Again, the goal of GHG pricing should be to achieve targeted emissions reductions while minimizing the economic cost of doing so. If upstream petroleum prices remained discounted because of transportation constraints – that is, because a pipeline had been rejected – upstream production would not receive its full value, since profitably produced petroleum would not fetch the highest price. This means that activities that generate less value for the Canadian economy would continue to emit GHGs. Allowing a pipeline, however, thus

Box 1: Maximizing Economic Costs while Reducing GHG Emissions

Suppose, in an example economy, there are three oil producers, a cement producer and a steel producer. Each producer receives a market price for its commodity and faces different production costs and emissions intensity. Without GHG pricing, economy-wide emissions are 500 tonnes of GHG per day. Then suppose a government seeks to reduce emissions by 50 percent to 250 tonnes of carbon dioxide per day and establishes a cap-and-trade regime in which companies require a permit to emit any GHGs, and that the permits are allocated by government auction.

Consider two scenarios, one with and one without a pipeline, in which oil companies are more profitable with a pipeline. In the scenario without a pipeline and a cap of 250 tonnes of GHG emissions per day, the most profitable producers – two oil producers and the steel producer – acquire permits for their emissions and continue to produce profitably. The most emissions-intensive oil producer and the cement producer cease production. In the scenario with the addition of a pipeline, however, market access is enhanced and the profitability of all three oil producers is increased. The third oil producer now has a higher profit per tonne of emissions than does the steel producer and outbids the steel producer for emissions permits. The steel producer shuts down.

Note that total emissions are the same with or without the pipeline, since the example assumes a hard cap on emissions. In the scenario with a pipeline, however, economy-wide profits and government permit revenue are 25 percent greater than in the scenario without a pipeline.

Table 1A: Hypothetical Economy Without Pipeline

Producer Characteristics	Oil Producer #1	Oil Producer #2	Oil Producer #3	Cement Producer	Steel Producer	Economy-Wide Total
Producer price per barrel	\$50.00	\$50.00	\$50.00	\$90.00	\$700.00	
Production cost per barrel	\$40.00	\$20.00	\$40.00	\$80.00	\$675.00	
CO ₂ tonnes per barrel	0.5	0.5	1	1.25	2	
Profit/CO ₂ tonne	\$20.00	\$60.00	\$10.00	\$8.00	\$12.50	
Barrels/day	200	200	100	80	50	
CO ₂ tonnes/day	100	100	100	100	100	500
CO ₂ emissions	100	100			50	250
Permit price/CO ₂ tonne = \$10.00						
Companies that produce						
Profit	\$1,000	\$5,000			\$125	\$6,125
Permit revenue	\$1,000	\$1,000			\$500	\$2,500
Profits + permit revenue	\$2,000	\$6,000			\$625	\$8,625

Table 1B: Hypothetical Economy With Pipeline (10 Percent Higher Oil Price)

Producer Characteristics	Oil Producer #1	Oil Producer #2	Oil Producer #3	Cement Producer	Steel Producer	Economy-Wide Total
Producer price per barrel	\$55.00	\$55.00	\$55.00	\$90.00	\$700.00	
Production cost per barrel	\$40.00	\$20.00	\$40.00	\$80.00	\$675.00	
CO ₂ tonnes per barrel	0.5	0.5	1	1.25	2	
Profit/CO ₂ tonne	\$30.00	\$70.00	\$15.00	\$8.00	\$12.50	
Barrels/day	200	200	100	80	50	
CO ₂ tonnes/day	100	100	100	100	100	500
CO ₂ emissions	100	100	50			250
Permit price/CO ₂ tonne = \$12.50						
Companies that produce						
Profit	\$1,750	\$5,750	\$125			\$7,625
Permit revenue	\$1,250	\$1,250	\$625			\$3,125
Profits + permit revenue	\$3,000	\$7,000	\$750			\$10,750
Source: Authors' calculations.						

ensuring market access for petroleum, would maximize the economic value from economy-wide reductions in GHG emissions.

Distorting prices by keeping oil from getting to world markets is not an efficient way to reduce Canada's overall emissions. A gram of carbon dioxide has the same effect in the atmosphere whether it is emitted from oil extraction or other activities. If Canada is to achieve its emissions target while minimizing the economic cost, the most efficient way to reduce GHG emissions is to do so across all activities, not focus on particular industries or regions (see Box 1 for an example of this). If there are not enough pipelines, oil companies will see low profits. Adding a pipeline improves the profitability of oil producers, and makes society as a whole better off without increasing total emissions. For any level of GHG emissions, economy-wide profits are greater with a pipeline than without a pipeline (Figure 1).

Conclusion

Requiring the NEB to consider upstream emissions of GHGs in its pipeline approval process could exceed the constitutional basis for federal environmental review and intrude into provincial jurisdiction. Moreover, including upstream GHG emissions as environmental effects that weigh against the approval of an inter-provincial pipeline would be economically costly without actually resulting in a reduction of emissions.

A more efficient means of achieving target GHG emissions reductions would be through GHG pricing. Current case law on the constitutionality of environmental legislation also indicates that the federal government should defer to provincial leadership in implementing GHG pricing.

The NEB approval process should be limited to considering the economic effects of GHG emissions reductions policies that governments have put in place on the upstream supply of oil. Specifically, the NEB should consider, in light of regulatory measures for GHG reductions, whether there will be sufficient upstream supply for a particular pipeline to remain necessary. The process should not extend to speculating on possible strategies to meet emissions targets. The goal should be to maintain a tractable NEB process that respects the policies and processes of other federal agencies and provincial governments.

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