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Pipelines or Progress: Government support for oil and gas pipelines in Canada

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Executive Summary

Calls for a green recovery from COVID-19 have begun to be heeded in Canada, including by the federal government through its recently strengthened climate plan and substantial investments in Budget 2021. In the context of the struggle to reboot economies and increasing international pressure for robust climate action, the scope of federal and provincial government support to oil and gas pipelines in Canada warrants investigation. Government support for pipeline construction can extend and expand the development of fossil fuel production sites within Canada that would not otherwise have been economically attractive. This can result in large increases in carbon emissions that last for decades, undermining climate action and Canada's own positive green recovery actions. Support for pipelines could also hinder economic recovery and transition, especially if Canadian governments are not able to recoup the full costs of their investments.

The International Institute for Sustainable Development (IISD) examined support by provincial and federal governments in Canada to three major pipeline projects, none of which have been completed to date. We found at least eight different types of financial support measures provided for Trans Mountain, two for Keystone XL, and two for Coastal GasLink. **Cumulatively, Canadian governments have provided over CAD 23 billion in government support since 2018.** Of this, over CAD 11 billion is in loans, and at least CAD 10 billion is loan guarantees or liabilities. Over CAD 10 billion in government support to pipelines was provided after the COVID-19 pandemic hit.

After the onset of COVID-19, the Government of Alberta provided billions in equity and loan guarantees for Keystone XL. Also, in 2020, the federal government announced a loan of up to CAD 500 million for the Coastal GasLink pipeline. By far the largest example of pipeline support—one that predates COVID-19 but is very much ongoing—is for the Trans Mountain Pipeline and Expansion, whose terms of purchase, ongoing operations, and increasing construction costs indicate substantial federal support.

Government support for pipelines has been made on the assumption that the projects will provide economic benefits to Canadians, even as the oil and gas sector faces challenges in coming years due to shifting investments and as the International Energy Agency has illustrated that new government investments in fossil fuel production are incompatible with a net-zero economy. The progress of recent pipeline projects in Canada at large is tepid at best, and capital spending in the oil sands has slowed in recent years. Amid these historic shifts, **project finance is increasingly being provided by the government**, even at a time of increased international calls for phasing out public finance for fossil fuels. Yet government support to pipelines places public money at financial risk for current and future generations. There is significant uncertainty surrounding the future of the projects outlined in this report, including whether pipelines will be completed or will be able to recoup costs. This is illustrated most significantly by the cancellation of the Keystone XL pipeline. There is also a risk of government losses in the case of a sale to a private buyer, including if projects are sold at less than the cost of purchase.

Support for oil and gas export infrastructure, such as pipelines, undermines Canada's commitments under the G7 and G20 to phase out inefficient fossil fuel subsidies. All of



the support measures that IISD has identified also include fossil fuel subsidy elements (the term "subsidy" having a more specific and legal definition under World Trade Organization agreements). Due to a lack of data availability, including low government transparency on public finance provided through Export Development Canada, IISD was unable to quantify the precise portion of the support that constitutes a subsidy under the official definition.¹

With the massive amounts of public funds required for economic recovery and with the costs of climate change only projected to increase, how we spend money matters.

The federal government has made moves for a green recovery, including through nearly CAD 54 billion in recent climate investments and a new commitment to reduce emissions by 40%–45% by 2030. It is critical that this positive spending is not undermined. There is a serious need to consider whether support for oil and gas pipelines is in the best interest of the economic and climate trajectories needed for Canada and its provinces, workers, and communities.

Table ES1. Overview of government support measures for Canadian pipelines, 2018–2020

Pipeline	Provider	Measure	Type of support	Amount of support (millions CAD)
	Government of Canada	Potential purchase above market price	Direct transfer	Not possible to quantify
	Government of Canada	Operational expenses and losses covered by third-party revenue sources	Direct transfer	35.3
	Government of Canada	Loans provided to the Trans Mountain Corporation and assumption of risk	Public finance	11,270°
Trans Mountain	Government of Canada	Loan-related support, including ongoing interest expenses	Public finance	At least 46.3 ^b
Mountain	Government of Canada	Underwriting of Alberta's emergency fund	Public finance	2,000
	Government of Alberta	Spending on promotional campaigns by the Government of Alberta	Direct transfer	25.75
	Government of Canada	Liability for environmental damages	Public finance	2,000
	Government of Canada	Commitment to protect the project from political liabilities and risk	Public finance, state-owned enterprise	Not possible to quantify

¹ See Annex 1 for a full discussion of subsidy definitions.



Pipeline	Provider	Measure	Type of support	Amount of support (millions CAD)
Keystone	Government of Alberta	Equity investment	Public finance; COVID-19 support	1,500
XL	Government of Alberta	Loan guarantee	Public finance; COVID-19 support	6,000
Coastal	Government of Canada	Federal loan provided to TC Energy and assumption of risk ^c	Public finance; COVID-19 support	500
GasLink	AIMCo	AIMCo equity injection to TC Energy	Public finance	Not possible to quantify
Total quantifiable support			23, 377	

^aThis represents the total amount of loans provided by Export Development Canada to TMP Finance, which includes a CAD 500 million letter of credit for environmental liabilities that has since been cancelled. Assumption of risk is not possible to quantify.

^bThis is an ongoing and increasing amount.

^c Assumption of risk is not possible to quantify.



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Abbreviations and Acronyms

AlMCo Alberta Investment Management Corporation

CDEV Canadian Development Investment Corporation

CER Canada Energy Regulator

EDC Export Development Canada

G7 Group of Seven

G20 Group of Twenty

IEA International Energy Agency

IISD International Institute for Sustainable Development

IMF International Monetary Fund

KKR KKR-Keats Pipeline Investors II (Canada) Limited

LNG liquefied natural gas

OECD Organisation for Economic Co-operation and Development

OPP Oceans Protection Plan

PBO Parliamentary Budget Office

SOE state-owned enterprise

TMC Trans Mountain Corporation

WTO World Trade Organization



1.0 Introduction

The past year has seen sustained calls for an inclusive green recovery from COVID-19 by civil society and leading experts across Canada and the globe. In Canada, these calls have begun to be heeded: in April 2021, the federal government announced a new commitment to reduce greenhouse gas emissions by 40%–45% by 2030 compared to 2005 levels (Office of the Prime Minister, 2021). This came on the heels of a federal budget with significant investments for climate action, bringing total climate-related spending since October 2020 to CAD 54 billion (Office of the Prime Minister, 2021). Ambitious climate commitments paired with smart public investments to steer the economy toward zero emissions are deeply needed, and Canada will need to increase its ambition in order to be in line with Paris Agreement targets (Taylor, 2021).

Impacts from the pandemic have also meant that provincial and federal governments have been under increased pressure to provide support to the fossil fuel sector, which lobbied heavily for financial supports and regulatory rollbacks in the wake of the pandemic (Canadian Association of Petroleum Producers, 2020; De Souza, 2020; Vigliotti, 2020). As reported by the Energy Policy Tracker (2021),² by early May 2021, Canadian governments had channelled over CAD 30 billion towards fossil energy since the onset of COVID-19. Only a handful of support measures to the fossil fuel sector have been tied to environmental outcomes. Further support has been provided via public finance through agencies such as Export Development Canada (EDC), which on average provides over CAD 13 billion per year to fossil fuels (Tucker et al., 2020). Support to fossil fuels undermines the positive efforts the Canadian government has made to act on climate change, including a strengthened climate plan and a substantial planned increase in the federal carbon price (Environment and Climate Change Canada, 2020).

One of the primary ways in which governments have chosen to support the Canadian oil and gas industry, both before and after the onset of COVID-19, is through support for export infrastructure such as pipelines. A primary rationale has been that additional export capacity is needed to get Canadian products to market (Orland & Tuttle, 2020). In the early days of the pandemic, the Government of Alberta provided billions in equity and loan guarantees for Keystone XL; shortly afterwards, the federal government announced a loan for the Coastal GasLink pipeline (EDC, 2020b; Government of Alberta, 2020). By far the largest example of pipeline support, one that predates COVID-19 but is very much ongoing, is for the Trans Mountain Pipeline and Expansion. Canada's purchase of Trans Mountain and ongoing operating support indicate substantial government support without which the project cannot be completed.

Building on the Energy Policy Tracker, which assesses government support to clean versus fossil energy in the wake of COVID-19, **this report is a deep dive into Canada's support for fossil fuels via pipelines**. The report aims to transparently document existing levels of government support for each major pipeline project (Trans Mountain Pipeline and Expansion, Keystone

² https://www.energypolicytracker.org/



XL, and Coastal GasLink). It examines the different measures that federal and provincial governments use to fiscally support pipelines, government's role in de-risking this major fossil fuel infrastructure, and what current and future government expenditures on these pipelines could amount to. In doing so, the report also builds upon recent research showing that Canada provides the most fiscal support for oil and gas production among G20 Organisation for Economic Cooperation and Development (OECD) countries and has made little progress on phasing out support for fossil fuels (Geddes et al., 2020).

Governments have supported pipelines partly on the assumption that the projects will provide economic benefits to Canadians, even as the oil and gas industry struggles with all-time losses and experiences scrutiny for investment amid momentum for climate action and green recovery. As governments face increasing demands to phase out fossil fuel subsidies and public finance (United Nations, 2020), and as the window to ensure a green recovery and minimize climate impacts gets smaller, the scope of Canada's support to oil and gas pipelines warrants investigation.

Government support for pipeline construction can extend and expand the development of fossil fuel production sites within Canada that would not otherwise have been economic. This can result in large increases in carbon emissions that last for decades, undermining emission reduction targets. The International Energy Agency's (IEA's) recent net-zero report underscores the importance of ending government support to fossil fuel production for this and other reasons (IEA, 2021). Support for pipelines could also hinder economic recovery and a transition to more economically and environmentally sustainable industries, especially if Canadian governments are not able to recoup the full costs of their investments (for example, through toll rates). By providing outsized support, government is taking on risk that the private sector is unwilling to: the private sector exercises increased caution against upstream oil projects in Canada, and international capital has continued to exit the sector in recent years.

The recovery from COVID-19 must move us toward more sustainable economies that address climate change and other social, economic, and environmental challenges. Government support for pipelines represents substantial resources that could support, among other things, economic diversification and a just transition that helps fossil fuel-reliant workers and communities benefit fully in the low-carbon global economy toward which we are accelerating. It is difficult to reconcile support for pipelines with Canada's recently boosted climate commitments, including a target to reach net-zero by 2050, or with the hard realities of global markets and investors that are signalling the need for a transition away from fossil fuels as a driver of the Canadian economy (Cosbey et al., 2021)—ever more pressing in the wake of COVID-19.



2.0 Our Approach

Like other G20 governments, Canada continues to provide various types of support to a wide spectrum of fossil fuel-related activities. This report uses a similar methodology to the report *Doubling Back and Doubling Down: G20 Scorecard on Fossil Fuel Funding* (Geddes et al., 2020).³ The G20 scorecard was the first report to look at various types of fossil fuel support across all G20 countries, including direct transfers and tax expenditures, public finance, price support, state-owned enterprise (SOE) investment, and COVID-19 fiscal responses. Here, we adapt the comprehensive G20 scorecard approach to look specifically at support for oil and gas pipelines by both federal and provincial governments in Canada.

2.1 Types of Government Support

Governments support fossil fuel production and consumption in different ways, such as through different types of public financial flows and foregone revenue, as well as through varied policies that have an impact on the sector but are difficult to quantify in financial terms (e.g., environmental regulation exceptions).

In this report, we try to give a comprehensive picture of various government policies that all support fossil fuels but are often studied separately. In this vein, we define and track government support, as far as the available data allows us, as follows:

- 1. Direct budget transfers and tax expenditures.
- 2. Price support (induced transfers) through regulated below-market prices for consumers.
- 3. Public finance (e.g., loans and guarantees) at both market and below-market value.
- 4. SOE investment (e.g., capital expenditure for projects via equity or debt) at both market and below-market value.
- 5. Public money commitments in response to the COVID-19 crisis (any kind of support measure, including the four previous types and broader government interventions that are in response to the COVID-19 crisis).

2.1.1 Direct budget transfers, tax expenditures, and price support

G20 national and subnational governments, including Canada and its provinces, provide direct budget transfers, such as direct spending on research and development for fossil fuel exploration. They also provide tax expenditures, sometimes referred to as government revenue foregone,

³ Section 4.1, *Types of Government Support* is adapted from Geddes et al., 2020, pp. 2–4. Text that is drawn directly from Geddes et al. (2020) is used with permission from the International Institute for Sustainable Development. For a full description of the methodology used in Geddes et al. (2020), please see: https://www.iisd.org/system/files/2020-11/g20-scorecard-methodology.pdf



such as through reduced rates or exemptions from value-added tax or tax breaks for diesel use in transport. Consumer price support is provided when end-user prices paid by consumers are below a reference price that reflects the full cost of supply; that is, a price that would prevail in a competitive market (e.g., when electricity prices are regulated at below-market prices) (IEA, 2020). Price support, direct budget transfers, and tax expenditure on fossil fuel use can lead to excessive and wasteful consumption and can be considered economically inefficient.

2.1.2 Public finance

G20 governments also support fossil fuel production through the public finance institutions they own and operate. This report, like our G20 scorecard (Geddes et al., 2020), focuses on public finance institutions that are owned by governments outright or through a majority stake and that have a policy-oriented rather than purely commercial mandate. These institutions include bilateral development banks, national development banks, development finance institutions, and export credit agencies. Public finance can take the form of grants, loans, equity, bonds insurance, guarantees, and technical assistance, often at a below-market value (i.e., concessional rates). Even when not concessional, the high credit ratings of publicly owned financial institutions, their signalling of government priorities, and their often greater research and advisory capacity can reduce the risk to parallel private investors and drive private investment in fossil fuel production that would not otherwise occur (OECD, 2017; Tucker et al., 2020). In Canada, EDC is the primary public finance institution providing finance for fossil fuels and pipelines.

2.1.3 SOEs

A number of G20 countries also support fossil fuel through one or more majority SOEs. The wide variety of ways in which SOEs function can have a range of impacts on government budgets, with a number of SOEs worldwide depending on budgetary transfers to remain financially viable and in operation (International Monetary Fund, 2013; Sdralevich et al., 2014). Majority government ownership of SOEs can provide a degree of control and government involvement in decision making and financing, often on conditions more favourable than market terms. While this will vary by country and institution, the impact of SOE activity on the resulting energy sector can be significant. In Canada, the Trans Mountain pipeline is now an SOE—run by a subsidiary of the Canada Development Investment Corporation (CDEV).

2.1.4 COVID-19 public money commitments

Finally, a number of G20 countries, including Canada, have made COVID-19 public money commitments to fossil fuel-intensive sectors (resources, power, mobility and buildings) in response to the COVID-19 crisis. This support ranges in form from the provision of grants and tax exemptions to the relaxing of environmental standards. G20 governments plan to spend trillions of dollars to counteract the impacts of the COVID-19 crisis, and how they do this will shape the global economy for many years to come (Energy Policy Tracker, 2020; G20, 2020).



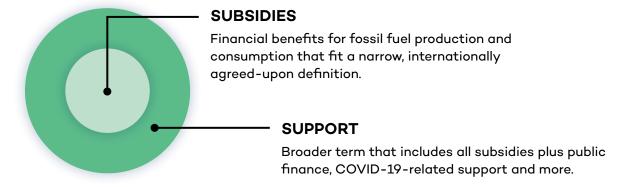
2.1.5 Subsidy elements of support

Many elements of government support to fossil fuels fall under the definition of a subsidy by the World Trade Organization (WTO). In its Agreement on Subsidies and Countervailing Measures, the WTO defines a subsidy as (paraphrased): any financial contribution by a government, or agent of a government, that confers a benefit on its recipients in comparison to other market participants (WTO, 1994, Article 1.1). This definition has been accepted by the 164 WTO member states, including all G20 countries (for more details on the WTO's definition of subsidy categories, see Annex 1). Price support, direct budget transfers, and tax expenditures for fossil fuels fall under the WTO definition of a subsidy.

Public finance and SOE investment, however, have both non-subsidy and subsidy components, which are difficult to quantify and disentangle. Non-subsidy elements of public finance and SOE investment still signal that governments are willing to prioritize support for the consumption and production of fossil fuels and associated sectors, which also propels private investment. This goes against government pledges to make "finance flows consistent with a pathway toward low greenhouse gas emissions and climate-resilient development" (United Nations, 2015, Article 2.1c).

In this report, as with our G20 scorecards (Geddes et al., 2020), we use the broader notion of "government support," as described at the start of this section, to track the public money that Canadian governments direct to oil and gas pipelines. The scope of the report is thus broader than just analyzing only subsidy elements.

Figure 1. Support versus subsidies for fossil fuels



2.2 Data and Methods

The government support measures listed in this report were identified based on research into government and private sector publications and information. To obtain data and information on financial flows for the pipelines listed in this paper, the International Institute for Sustainable Development (IISD) referred to primary government sources such as news releases, regulations,



existing laws, and program guidelines posted online, as well as Access to Information requests for the Trans Mountain pipeline.⁴ IISD also conducted a series of interviews with established experts in the fields of subsidies, SOEs, and corporate finance. In some cases, we consulted secondary sources or studies, where we could be sure of the accuracy of the information.

In this report, we document individual government support measures for each pipeline and identify the category of support (see Section 2.1) and main beneficiary. Beneficiaries from government support for pipelines include the pipeline companies themselves, other fossil fuel industry participants such as pipeline users, and, in the case of Trans Mountain, the original owner (Kinder Morgan). For each support measure listed, we also summarize available evidence of potential fossil fuel subsidies, using the WTO subsidy definition, and discuss what information would be needed to quantify the subsidy's value.

The most straightforward fossil fuel support measurement has always been governments' own estimates, such as in budgetary documents or disclosures of public finance institutions. Unfortunately, the lack of government transparency on pipeline projects poses a particular challenge to data gathering. Due to a lack of available data, the full amount of government support provided to the pipelines studied in this report is extremely difficult to quantify. This is particularly the case for Trans Mountain, for which government has released very little information, including on the terms of the sale. Of completed Access to Information requests filed by IISD, thousands of pages identified as relevant to our requests were either withheld or heavily redacted, while the pages released contained little to no information addressing the types of support listed in this report.

Ultimately, without adequate transparency from the federal government, many support-related questions remain unanswered. We argue that **the federal and Albertan governments should transparently provide details of their support to the pipelines listed in this report so the merit of support measures can be assessed.**

⁴ For the Trans Mountain pipeline, we conducted an exhaustive literature review and evaluation of primary documents and reports from the CDEV, the Canada Energy Regulator (CER) (formerly the National Energy Board), Kinder Morgan, Trans Mountain Corporation, EDC's Canada Account, and more. IISD examined existing completed Access to Information requests filed in relation to the project and submitted 13 additional Access to Information requests to several government organizations, including EDC and CDEV, to obtain more detailed information.



Box 1. Canada's commitments and transparency on fossil fuel subsidies

The Canadian government has committed to phasing out "inefficient fossil fuel subsidies" by 2025 in line with commitments made to the G20 and G7 (G7, 2016; G20, 2009), so it is crucial to understand how support for pipelines hinders meeting this commitment.⁵ Within the framework of the G20 commitment, Canada has committed to undertaking a fossil fuel subsidy peer review jointly with Argentina, which is significantly behind schedule (Mangat, 2021). Transparency regarding pipeline-related subsidies is crucial for the completeness of this review and to ensure that Canada can properly achieve deep and lasting fossil fuel subsidy reform. For example, recommendations in a 2019 report by Canada's Commissioner of the Environment and Sustainable Development asked Environment and Climate Change Canada to consider costs related to Trans Mountain in its assessments of federal fossil fuel subsidies (Meyer, 2019; Office of the Auditor General, 2019). Canada's response to the pandemic resulted in CAD 1.9 billion in fossil fuel subsidies in 2020, at least a three-fold increase compared to 2019 (Corkal, 2021).

The term "inefficient" was adopted by the G20 and does not have a clear definition, although it is intended to encompass subsidies that encourage "wasteful consumption" and "undermine efforts to deal with the threat of climate change" (G20, 2009). Based on existing literature, wasteful consumption has been defined as "where people consume in excess of any reasonable definition of need" (Hamilton et al., 2005). Determining benchmarks for reasonable needs is very difficult to do for both technical and political reasons (Lang, 2010). For the G20 commitment, individual countries must develop their own criteria for "inefficient" for domestic fossil fuel subsidy reviews and reform. It has been further demonstrated that fossil fuel production subsidies lower the costs of oil, gas, and coal to consumers and thus can also encourage wasteful consumption (Erickson, Down et al. 2017; Erickson, van Asselt et al., 2020; Gerasimchuk et al., 2017).



3.0 Support for the Trans Mountain Pipeline

Table 1. Overview of government support measures for the Trans Mountain pipeline

Measure (by Government of Canada unless otherwise noted)	Type of support	Amount of support (millions CAD)	Would this qualify as a subsidy?
Potential purchase above market price	Direct transfer	Not possible to quantify	Potential subsidy
Operational expenses and losses covered by third-party revenue sources	Direct transfer	35.3	Yes – existing subsidy
Loans provided to Trans Mountain Corporation (TMC) and assumption of risk	Public finance	11,270°	Yes – existing subsidy
Loan-related support, including ongoing interest expenses	Public finance	46.3 ^b	Yes – existing subsidy
Underwriting of Alberta's emergency fund	Public finance	2,000	Yes – existing subsidy ^c
Spending on promotional campaigns by the Government of Alberta	Direct transfer	25.75	Yes – existing subsidy
Liability for environmental damages	Public finance	2,000	Potential subsidy
Commitment to protect the project from political liabilities and risk	Public finance, SOE	Not possible to quantify	Yes – existing subsidy
Total		At least 15,377	(Subsidy amounts are not possible to quantify)

^a This represents the total amount of loans provided to TMP Finance, which includes a CAD 500 million letter of credit for environmental liabilities that has since been cancelled. Assumption of risk is not possible to quantify.

^b Potentially higher, but this is all that available data shows. This is an ongoing and increasing amount.

^c This line represents two subsidies. The first is the emergency fund from Alberta (currently active), and the second is the equity promised by the federal government (would only become active in the case of an emergency).



3.1 Project Background

The Trans Mountain pipeline is an oil pipeline that originally went into service in 1953 that runs from Edmonton, Alberta, to Burnaby, British Columbia. The Trans Mountain Expansion project aims to twin the existing line and increase capacity from 300,000 to 890,000 barrels per day, a 14% increase to total Canadian capacity (Government of Canada, 2020; Nickel & Scherer, 2021). Since the project's initial proposal in 2012, the expansion has been of significant concern to environmentalists and some First Nations situated along the pipeline route due to marine, land, and climate change-related impacts.

Previously privately owned by Kinder Morgan, the sale and transfer of the project to the federal government followed several years during which Kinder Morgan had attempted to commence construction on the expansion, facing legal and political delays. Canada eventually agreed to purchase the Trans Mountain pipeline and expansion from Kinder Morgan in May 2018 for a total price of CAD 4.5 billion (Government of Canada & Kinder Morgan, 2018). Canada's position in purchasing the project was that it did not intend to be a long-term owner and characterized the project's challenges as "exceptional non-business risks" (Minister of Finance, 2018).

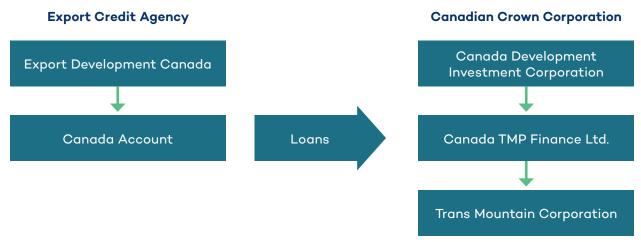
The projected cost to construct the expansion is now CAD 12.6 billion, a significant increase from the previous estimate of CAD 7.4 billion (Little, 2020). Originally aimed to be completed in 2019, the expansion is now slated to come online in 2022 (Canadian Press, 2018; Morgan, 2020).

To facilitate the purchase of the project, the federal government arranged financing through the Canada Account of Canada's export credit agency, EDC. Transactions by the Canada Account are ultimately decided by the Minister of International Trade and by Cabinet, making them discretionary and not subject to EDC's usual due diligence processes (see Box 2) (EDC, n.d.).

The Trans Mountain project was formally acquired by TMC in 2019. TMC is a subsidiary of the CDEV, a Crown corporation that manages SOEs and investments on behalf of the Crown. Finance from EDC for the project is channelled to TMC through a parent corporation, TMP Finance (Figure 2) (CDEV, 2018). TMP Finance provides financing to TMC through a mix of debt and equity financing. Neither CDEV nor TMP Finance is subject to income tax in Canada (CDEV, 2020a).



Figure 2. Current project ownership structure



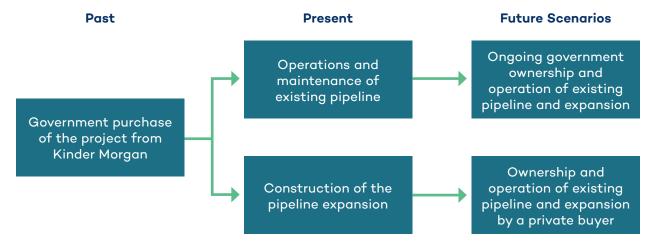
Note: All entities listed in this figure are state-owned.

Source: Adapted from CDEV, 2018.

3.2 Identification of Support Measures

In this section, we examine government support provided since 2018, including the purchase of the project, current ownership and operations, and potential future scenarios, including continued ownership or a potential sale. The extent to which government support and subsidies are provided varies over the lifetime of the project and could increase substantially in certain future scenarios (Figure 3).

Figure 3. Project phases of Trans Mountain over time





3.2.1 Potential Purchase Above Market Price

Main beneficiary:	Kinder Morgan, the previous owner
Type of support:	Direct transfer
Reasons for including this support measure:	 The market value for the Trans Market project is unknown. Normally, a market price would be determined as a result of competition, but other than the Government of Canada, there was no other party interested in the purchase in 2018. The government itself estimated the value of the asset at CAD 3.85 billion yet paid CAD 4.5 billion in the final sale.

Background:

There are signs that the government entered the sale as a buyer of last resort because there was no private interest in purchasing or owning the pipeline and expansion project, indicating that private investors did not see the purchase as a profitable market transaction at the price the government paid. The government had negotiated a six-week window to resell the project with the help of Kinder Morgan after its May 2018 purchase but was unable to find a buyer (De Souza, 2018; Wingrove et al., 2018). Part of the reason for low private interest in the project may be related to risks and uncertainty surrounding legal challenges and permitting, in addition to pipeline protests. These obstacles reflect a risk premium that would negatively impact the value of the pipeline asset.

A filed statement submitted by Kinder Morgan to the United States Securities and Exchange Commission illustrates the federal government's movement toward purchasing the project, despite their original intention not to buy the pipeline (Kinder Morgan Canada, 2018). During the government's negotiations with Kinder Morgan in 2018, it initially offered to purchase a 51% stake in Kinder Morgan's Trans Mountain subsidiary, then based on an independent financial analysis, they increased their offer to purchase 100% of the project for CAD 3.85 billion. Finally, they raised their offer to CAD 4.5 billion for the final sale after counter-offers from Kinder Morgan (De Souza, 2018; Kinder Morgan Canada, 2018). It is unclear why the government raised its final offer and what criteria was used for the decision. The original financial analysis that the government completed prior to the final purchase is not publicly available.

Of the final CAD 4.5 billion paid, the majority was for the existing Trans Mountain pipeline system and related assets, including the Puget Sound Pipeline, and the remaining was for the expansion (existing plans, approvals, and permits) (Government of Canada & Kinder Morgan, 2018; Office of the Parliamentary Budget Officer [PBO], 2019). The Share and Unit Purchase Agreement notes a CAD 2.7 billion capital gain for Kinder Morgan following the sale (Government of Canada & Kinder Morgan, 2018).

National Energy Board (now Canada Energy Regulator) toll rate documents appear to record the value of existing line assets at around CAD 1 billion (CER, 2019a). In its 2017 annual report, Kinder Morgan Canada valued all of its pipeline assets, including Trans Mountain, at CAD 1.03 billion (Kinder Morgan Canada Inc., 2017).

The markets registered an improvement in Kinder Morgan's position after the Trans Mountain Expansion sale, after which Kinder Morgan's credit rating improved; from May to June 2018, their stock price increased by 5% (Good, 2019; Mengullo, 2019; Sanzillo & Hipple, 2019a). The increase in the company's credit rating occurred directly as a result of the cash received from the sale (Good, 2019).



Does this qualify as a subsidy?	Potential subsidy
Data that would be needed to quantify this subsidy:	Determining what would constitute a "fair" price for the sale is not an easy task. However, the government's (classified) original financial analysis and its justification for raising the purchase offer would shed light on whether there was a difference between the valuation and what was ultimately paid. If the project is sold to a private buyer in the future, that sale price would also provide an indication of the asset value (however, unrelated market factors could also influence a future sale price).

3.2.2 Operational Expenses and Losses Covered by Third-Party Revenue Sources

Main beneficiary:	TMC
Type of support:	Direct transfer
Reasons for including this support measure:	There is evidence of transfers from government-owned third parties.
Background:	
that from January to Ju pension expense of CAI Consolidated Statemen	tute for Energy Economics and Financial Analysis has documented ine 2019, TMC had a CAD 10.9 million loss before taxes and a 0 24.4 million (Sanzillo & Hipple, 2019b). Based on data from CDEV's ts, the loss was covered by revenues from Canada Hibernia Holding sidiary of CDEV) and the pension expenses were covered by CDEV's anzillo & Hipple, 2019b).
Does this qualify as a subsidy?	Yes – existing subsidy
Data that would be needed to quantify this subsidy:	The full data is available for this subsidy in CDEV's financial statements (CDEV is mandated to make this transfer as a government institution). Clearer financial reporting would permit a simpler assessment of TMC's expenses and whether or how they are being covered by third-party revenue sources.



3.2.3 Loans Provided to TMC and Assumption of Risk

Main beneficiary:	TMC
Type of support:	Public finance
Reasons for including this support measure:	EDC provides loans and assumes risks related to TMC.

Background:

In 2018, a Ministerial Authorization enabled EDC's Canada Account to provide TMP Finance with up to CAD 7 billion in loans. By December 2018, CAD 6.5 billion in loan facilities had been issued (EDC, 2018). The initial loans included CAD 1 billion for expansion-related construction costs, up to CAD 5 billion for the purchase of the assets and for existing operations (of which CAD 4.67 billion was provided), and CAD 500 million for a letter of credit for environmental liabilities as required by the CER (CDEV, 2018). Later, an amended credit agreement was made that allowed TMC to cancel the CAD 500 million environmental letter of credit (CDEV, 2019b).

Subsequent authorizations from the Minister of Finance have increased the amount available for the loan for expansion-related construction costs—from CAD 1 billion in 2018 to CAD 2.59 billion in 2019, then to CAD 4 billion (CDEV, 2019b). Most recently, an October 2020 amendment raised the total available credit for construction to CAD 6.1 billion in January 2021 (CDEV, 2020b). The maturity date of existing credit facilities is August 2023. CDEV has noted in its reports that TMP Finance is in talks with the Department of Finance, as it requires additional capital to finance the construction of the expansion (costs now estimated at CAD 12.6 billion) (CDEV, 2020b). Including loans for asset purchase, construction, and the environmental letter of credit, the **total available credit provided by EDC is at least CAD 11.3 billion.**

Ultimately, the federal government assumes the financial risk on these loans (EDC, 2018), which distorts investment decisions. In addition, when a project involves a sovereign debt guarantee, the cost of debt is lowered. Under the WTO definition, the assumption of risk can be considered a subsidy even if there is never a default (WTO, 1994). Further potential for subsidy lies in the fact that forgiveness of CDEV and TMC debt is currently possible under the Export Development Act (Department of Justice, 2010). If that happens, it will amount to significant future subsidies.

Does this qualify as a subsidy?	Yes – existing subsidy
Data that would be needed to quantify this subsidy:	Multiplying the amount guaranteed by the risk of default could provide a value for the subsidy, but since the risk of default is not possible to say with a strong degree of certainty, this subsidy is particularly difficult to assess. A suggested methodology for assessing subsidy components of preferential government credit can be found in OECD (2018), based on Lucas (2017).



3.2.4 Loan-Related Support Including Ongoing Interest Expenses

Main beneficiary:	TMC, oil shippers
Type of support:	Public finance, SOE
Reasons for including this support measure:	CDEV provides loans at below-market rates in the national interest.

Background:

CDEV makes interest payments on loans provided from EDC at a rate of 4.7% (CDEV, 2018). Its subsidiary body, TMP Finance, provides financing to TMC with 55% as loans and 45% as direct cash. While TMC pays interest on 55% of the financing, TMP Finance then pays interest on 100% of the financing. This means that TMP Finance is accumulating more interest charges than it can collect in interest from its subsidiary body, TMC.

Since the arrangements for the EDC loans require that the full interest be paid, this measure represents a consistent subsidy to TMC. As an SOE, TMC receives treatment that a normal market participant would not receive. For example, in the first six months of 2019, CAD 46.3 million in interest liability was covered by a third-party government source of revenue, the Canada Hibernia Holding Corporation (a wholly owned subsidiary of CDEV) (Sanzillo & Hipple, 2019b). For reference, TMC financial statements demonstrate CAD 146 million in interest expenses for 2019 (TMC, 2020). By comparison, TMP Finance's interest expenses were CAD 248 million for 2019 (CDEV, 2019a, 2020a).

Another element of subsidy derives from CDEV's ability to provide financing at below-market rates to support projects in the national interest. The difference between the interest paid on this loan and the interest that would be paid on a loan at commercial rates is a straightforward subsidy. The financial benefits of these financing arrangements are not possible to determine, however, without knowing what the market rate for this loan would have been. That is, to calculate a subsidy related to preferential interest rates, it would be necessary to compare the interest rate of the EDC loans (4.7%) against the interest rate that would be charged on a commercial loan were the project to be owned by a private sector owner. Due to the variables involved, establishing an accurate rate of comparison is extremely difficult.⁶

Does this qualify as a subsidy?	Yes – existing subsidy
Data that would be needed to quantify this subsidy:	Transparent financial statements from TMC, CDEV, and EDC's Canada Account are needed to more explicitly identify the interest expenses accumulated. Additional detail on the conditions of the loans is required to properly compare with what would be available on the market, although, as noted above, an accurate calculation would be very challenging.

⁶ In theory, a benchmark or proxy could be developed by estimating the grade of corporate bond that a firm like TMC (or similar private peer firms) pays on debt. Due to the uncertainties inherent in this sort of analysis (i.e., finding comparable firms) and the resources required to complete this type of assessment, IISD did not pursue this analysis for this report.



3.2.5 Underwriting of Alberta's Emergency Fund

Main beneficiary:	TMC, Government of Alberta
Type of support:	Public finance
Reasons for including this support measure:	The federal government underwrites the emergency fund set up by the Government of Alberta at no cost to the province.

Background:

In 2018, the Government of Alberta announced the creation of a CAD 2 billion emergency fund to ensure the pipeline's construction. Money from this fund would only be used in the case of unforeseen circumstances preventing the construction of the expansion. If the fund were to be used, the federal government has promised equity or profit sharing for the province commensurate to its contribution (Department of Finance, 2018). In other words, all the actual costs would be borne by the federal government.

In this case, there are two types of subsidies: the first is the emergency fund from Alberta (currently active), and the second is the equity promised by the federal government (would only become active in the case of an emergency). The latter could be compared to a loan guarantee.

Does this qualify as a subsidy?	Potential subsidy
Data that would be needed to quantify this subsidy:	One way to calculate this subsidy would be to assess the market value of a similar insurance policy with a CAD 2 billion value.

3.2.6 Spending on Promotional Campaigns by the Government of Alberta

Main beneficiary:	TMC
Type of support:	Direct transfer
Reasons for including this support measure:	The provincial government allocated public money for promotional campaigns.

Background:

In an effort to garner public support for the Trans Mountain project and ensure regulatory approval, the Government of Alberta spent significant funds on promotional campaigns. Alberta initially budgeted CAD 31 million for related campaigns in their 2018/19 budget, and by January 2019 had spent CAD 23 million (Macvicar, 2019; Maimann, 2018). In June 2019, Alberta ran the "Yes to TMX" campaign at a cost of at least CAD 2.75 million (Leavitt & Li, 2019).

Does this qualify as a subsidy?	Yes
Data that would be needed to quantify this subsidy:	The value of this subsidy is what was spent on the campaign – CAD 25.75 million.



3.2.7 Liability for Environmental Damages

Main beneficiary:	TMC
Type of support:	Public finance
Reasons for including this support measure:	The Government of Canada covers the risk of environmental damages for TMC.

Background:

As part of the original loans provided by EDC's Canada Account, TMP Finance acquired access to CAD 500 million for the existing pipeline to cover environmental damages, for example, in case of an oil spill (CDEV, 2018). This amount is a requirement stemming from the Pipeline Safety Act of 2015, which places up to CAD 1 billion in liability on pipeline owners for accidental oil spills (Department of Justice, 2019). In the case of Trans Mountain, there is up to CAD 1 billion in liability for the existing line, and an additional CAD 1 billion in liability would arise for the expansion. In the case of an oil spill for which owners are at fault, there is unlimited liability (Department of Justice, 2019).

In the event of environmental damages, costs related to environmental liability could rise rapidly, especially if the government-owned TMC was found to be at fault due to negligence, and the full amount would constitute a subsidy to TMC. This measure is similar to a loan guarantee.

Does this qualify as a subsidy?	Potential subsidy
Data that would be needed to quantify this subsidy:	One way to approach this measure would be to estimate what similar insurance would cost in the private market. In some cases, levels of liability would be so expensive that private insurance would be unattainable.



3.2.8 Federal Commitment to Protect the Project From Political Liabilities and Risk

Main beneficiary:	Future owner if purchased by a third party
Type of support:	Public finance, SOE
Reasons for including this support measure:	The government has made special arrangements to cushion the political risks of the project.

Background:

The government has indicated that the purchase of the pipeline was meant to be a temporary measure to ensure the completion of the project and that it eventually intends to sell the project to a private buyer (Cryderman & Lewis, 2018). Upon purchase, Canada included a promise to indemnify the future owner of the project from costs related to "discriminatory and unjustified actions of a province or municipality in an attempt to delay or obstruct the Expansion" (Department of Finance, 2018). The government has also promised to support the new owner to address unforeseen permit delays. This measure is particularly problematic as government wording in the commitment is vague, meaning that interpretation is open-ended and costs could potentially be extremely expensive.

The indemnification arrangements could also create costs for the federal government if a new owner abandons the project due to certain judicial outcomes or if they are unable to complete the expansion by a "predetermined date" (Department of Finance, 2018). In these cases, the government may decide to re-purchase the project (Department of Finance, 2018)—likely at a loss.

Any government intervention that caps the risk to a private party is a subsidy. The types of contingent arrangements described here can be considered to confer a subsidy akin to that conferred by a loan guarantee. Moreover, if they were ever paid out, the full amount of the payment would be a subsidy.

Does this qualify as a subsidy?	Yes – existing subsidy
Data that would be needed to quantify this subsidy:	It is impossible to know in advance the probability of payout or the amount of payout. Ultimately, government is taking on responsibility for cost overruns and delays, so this is essentially a blanket guarantee. To attempt to quantify this measure, scenario and probability analyses would need to be undertaken. The value of potential indemnification could be higher depending on the grounds on which a firm could walk away or if there were payments for project delays in addition to full cancellation.



4.0 Support for the Keystone XL Pipeline

Table 2. Overview of government support measures for the Keystone XL pipeline

Measure (by Government of Alberta)	Type of support	Amount of support (millions CAD)	Would this qualify as a subsidy?
Equity investment	Public finance; COVID-19 support	1,500	No
Loan guarantee	Public finance; COVID-19 support	6,000	Yes – existing subsidy
Total		7,500	(Subsidy amounts are not possible to quantify)

4.1 Project Background

TC Energy's Keystone XL pipeline was originally proposed in 2005 (TransCanada, 2005). The planned capacity was 830,000 barrels per day and was intended to run 1,947 kilometres from Alberta to Nebraska to connect Alberta's crude oil supply with other facilities on its way to refiners on the Gulf Coast (CBC News, 2020). Only 269 kilometres of the line was slated to be in Alberta (Government of Alberta, 2020). The pipeline was most recently intended to be operational by 2023 (Government of Alberta, 2020), and total construction costs for the project were estimated to be USD 8 billion (TC Energy, 2020b).

As one of his first acts in office, U.S. President Joe Biden revoked the permit for this pipeline (The White House, 2021), effectively cancelling the project. In early June 2021, TC Energy confirmed that after consultation with the Government of Alberta, it was formally terminating the project (TC Energy, 2020b).



4.2 Identification of Support Measures

4.2.1 Equity Investment in Keystone XL

Main beneficiary:	TC Energy
Type of support:	Public finance, COVID-19 support
Reasons for including this support measure:	The Government of Alberta provided equity to the project.

Background:

In March 2020, the Government of Alberta announced CAD 1.5 billion in equity for Keystone XL (Government of Alberta, 2020). The province originally stated that it would be able to sell their shares at a profit once construction was completed and cited CAD 30 billion in tax and royalty revenues over the life of the project.

Does this	qualify as	a
subsidy?		

No, since Alberta would have purchased their equity stake at market value.

4.2.2 Loan Guarantee Provided to TC Energy and Assumption of Risk

Main beneficiary:	TC Energy
Type of support:	Public finance, COVID-19 support
Reasons for including this support measure:	The Government of Alberta provided loans and assumes risks on the loans.

Background:

At the same time that the Government of Alberta announced its equity investment, it also announced CAD 6 billion in loan guarantees for Keystone XL starting in 2021 (Government of Alberta, 2020). In its announcement, the province stated that TC Energy would be able to reimburse the provincial government within a year of the project going online. This was a particularly valuable loan guarantee since the provincial government effectively tied itself to the project going ahead, standing to lose significant money if the project were to be cancelled. As this is now the case, more details will be needed to assess the full financial impact on the government.

It is unlikely that TC Energy would have made a positive final investment decision in advance of the U.S. presidential election had the Alberta government not de-risked the project through its investment (Lauerman, 2020).

Does this qualify as a subsidy?	Yes – existing subsidy
Data that would be needed to quantify this subsidy:	Multiplying the amount guaranteed by the risk of default could provide a value for the subsidy inherent in the loan guarantee, but since the risk of default is not possible to say with a strong degree of certainty, this subsidy is difficult to estimate.



5.0 Support for the Coastal Gaslink Pipeline

Table 3. Overview of government support measures for the Coastal GasLink pipeline

Measure	Type of support	Amount of support (millions CAD)	Would this qualify as a subsidy?
Federal loan provided to TC Energy and assumption of risk*	Public finance; COVID-19 support	500	Yes – existing subsidy
AIMCo equity injection to TC Energy	Public finance	Not possible to quantify	No
Total		500	(Subsidy amounts are not possible to quantify)

^{*}Assumption of risk is not possible to quantify.

5.1 Project Background

Coastal GasLink is a 670-kilometre pipeline that will transport natural gas from the Dawson Creek area of British Columbia to LNG Canada's CAD 18 billion Kitimat facility for export (Coastal GasLink, 2020; Jang, 2021). It will be able to transport 2.1 billion cubic feet per day, with the potential of up to 5 billion cubic feet per day. It has been in development since 2012 and is expected to be in service by 2023 (Coastal GasLink, 2020). Originally owned by TC Energy, as of 2020, the project is now partly owned by KKR-Keats Pipeline Investors II (Canada) Limited (KKR) and a subsidiary of Alberta Investment Management Corporation (AIMCo) (TC Energy, 2019). The total cost of the project is expected to be around CAD 6.6 billion (Ballingall, 2020).



5.2 Identification of Support Measures

5.2.1 Loan Provided to TC Energy and Assumption of Risk

Main beneficiary:	TC Energy, KKR, and AIMCo
Type of support:	Public finance, COVID-19 support
Reasons for including this support measure:	The federal government provides loans and assumes risks on the loan.

Background:

In April 2020, the federal government announced a loan of up to CAD 500 million through EDC for the pipeline (EDC, 2020a). EDC has stated that the loan was approved after a "rigorous due diligence review," including impacts on Indigenous relations and environmental issues (Ballingall, 2020). EDC classified the project as a "Category A" project due to its large scale and potential for negative environmental and social impacts but ultimately determined that the project sponsors were in a position to manage environmental risks (EDC, 2020a).

Does this qualify as a subsidy?	Yes – existing subsidy
Data that would be needed to quantify this subsidy:	Additional details on the conditions of the loans are required to properly compare with what would be available on the market.



5.2.2 Equity Injection to TC Energy

Main beneficiary:	TC Energy
Type of support:	Public finance
Reasons for including this support measure:	The co-owner AIMCo has provided equity for the project and is an Alberta Crown corporation.

Background:

In December 2019, TC Energy announced that it would sell 65% equity of the project to a partnership between institutional investors KKR and AIMCo (TC Energy, 2019). KKR is a private equity firm based in the United States, and its equity purchase of Coastal GasLink was made through a partnership with South Korea's national pension fund (Yunker, 2020). The KKR-AIMCo deal was finalized in May 2020, but it is not yet clear what role the new investors will play in the project's management. As a result of the sale, TC Energy recorded an after-tax gain of USD 600 million and now holds 35% interest (Yunker, 2020).

The KKR-AIMCo transaction is particularly noteworthy because of the signal it provided to other investors. As a result of this transaction, TC Energy stated that they expected the project to "enter into a secured project financing construction credit facility with a syndicate of banks to fund up to 80 per cent of the Project during construction" (TC Energy, 2019). When the KKR-AIMCo announcement was made, TC Energy confirmed that a credit agreement had been signed with a consortium of banks who are now funding the project (TC Energy, 2020a). It appears that the KKR-AIMCo transaction de-risked the project by providing a clear signal to the other financers (Yunker, 2020).

AIMCo invests both pensions from public sector workers in Alberta and endowment and government funds. This includes Alberta's Heritage Savings Trust Fund, which are savings from the province's resource revenues (in other words, public money) (AIMCo, 2020). Since 2016, AIMCo has invested over CAD 1.1 billion in conventional oil and gas junior and intermediate companies and oilfield service companies, many of which are struggling or, in some cases, have gone bankrupt, which has led to losses of millions of dollars (Storrie et al., 2020). AIMCo previously purchased an 85% stake in TC Energy's Northern Courier pipeline for CAD 1.15 billion in 2019 (Canadian Press, 2019).

TC Energy has also stated that it is working with the 20 First Nations who hold agreements with Coastal GasLink for an opportunity to invest in the project, up to a 10% equity interest (TC Energy, 2020a). In 2019, TC Energy's credit rating was downgraded, and in early 2020, the company's outlook was changed to negative (Moody's, 2020; Yunker, 2020).

Does this qualify as a	No, assuming it was purchased at market value. However, it creates
subsidy?	conditions where future subsidies are more likely.



Box 2. Export Development Canada

Federal government support for the Trans Mountain and Coastal GasLink pipelines have something significant in common: the involvement of EDC. As an export credit agency, EDC is mandated to facilitate export growth in Canada's international industries and businesses. However, in response to the global financial crisis in 2008, EDC had its mandate expanded to support domestic businesses, and they now also provide substantial support to domestic oil and gas companies and operations (Global Affairs Canada, 2018). EDC provides, on average, over CAD 13 billion in support to oil and gas companies each year, more than five times the support categorized as "cleantech" (Tucker et al., 2020). Transparency on disbursements and individual transactions from EDC is low.

EDC's position to finance domestic fossil fuel production has increased as a result of government response to COVID-19. Through additional changes to the Export Development Act, its domestic mandate has been further expanded to provide liquidity to domestic companies, and limits on the liability that EDC can incur have increased substantially (Department of Justice, 2020). Limits on EDC's Canada Account—a discretionary account not subject to the usual due diligence processes and which provides loans for Trans Mountain—have also increased. Although some of these changes were intended to be temporary, if the previous financial crisis-related changes provide any example of precedent, they could become permanent. EDC is also a primary delivery vehicle for liquidity support to the oil and gas sector through the Business Credit Availability Program (Office of the Prime Minister, 2020).



6.0 Discussion

In this section, we provide a summary of our findings, evaluate the potential for future financial risk and rising costs to taxpayers, and examine the implications of government support to pipelines for COVID-19 recovery and climate action.

6.1 Summary of Total Government Support Measures

Table 4. Overview of government support measures for Canadian pipelines, 2018–2020

Pipeline	Provider	Measure	Type of support	Amount of support (millions CAD)
Trans Mountain	Government of Canada	Potential purchase above market price	Direct transfer	Not possible to quantify
	Government of Canada	Operational expenses and losses covered by third-party revenue sources	Direct transfer	35.3
	Government of Canada	Loans provided to the Trans Mountain Corporation and assumption of risk	Public finance	11,270°
	Government of Canada	Loan-related support, including ongoing interest expenses	Public finance	At least 46.3 ^b
	Government of Canada	Underwriting of Alberta's emergency fund	Public finance	2,000
	Government of Alberta	Spending on promotional campaigns by the Government of Alberta	Direct transfer	25.75
	Government of Canada	Liability for environmental damages	Public finance	2,000
	Government of Canada	Commitment to protect the project from political liabilities and risk	Public finance, state-owned enterprise	Not possible to quantify
Keystone XL	Government of Alberta	Equity investment	Public finance; COVID-19 support	1,500
	Government of Alberta	Loan guarantee	Public finance; COVID-19 support	6,000



Pipeline	Provider	Measure	Type of support	Amount of support (millions CAD)
Coastal GasLink	Government of Canada	Federal loan provided to TC Energy and assumption of risk ^c	Public finance; COVID-19 support	500
	AIMCo	AIMCo equity injection to TC Energy	Public finance	Not possible to quantify
Total quantifiable support			23, 377	

^a This represents the total amount of loans provided by EDC to TMP Finance, which includes a CAD 500 million letter of credit for environmental liabilities that has since been cancelled. Assumption of risk is not possible to quantify.

Cumulatively, the governments of Canada and Alberta have provided at least CAD 23 billion in government support to pipelines over three years (Table 4). Of this, over CAD 10 billion⁷ was provided after the pandemic hit, including CAD 7.5 billion from the Government of Alberta for Keystone XL. Identifying the specific *subsidy* elements (using WTO definitions) of many of the measures we identified is not possible due to the lack of data and the nature of certain measures. For this reason, increased transparency from governments and completion of the G20 peer review of fossil fuel subsidies are needed to understand the effects of these measures (Corkal, 2021).

6.1.1 Trends in Increasing Government Support for Fossil Fuel Export Infrastructure

CAD 23 billion is a substantial amount of money for pipelines in an era when increased investments and smart fiscal strategies are required for both COVID-19 recovery and climate action. The question is: why did the government support pipelines with such high amounts?

It appears that the private sector has low interest in pipelines or in providing equity to existing pipeline projects. Without government intervention, industry must raise its own capital in private markets. For Keystone XL, Alberta Premier Jason Kenney stated that the project's high level of risk had scared off private investors but that it was government policy that had failed to get the project off the ground (CBC News, 2020). For Coastal GasLink, the private sector appeared unwilling to invest until government intervention (see Box 3). For Trans Mountain, Kinder Morgan walked away from the project after ongoing legal and political delays.

^b This is an ongoing and increasing amount.

^c Assumption of risk is not possible to quantify.

⁷ This includes CAD 7.5 billion for Keystone XL, CAD 500 million for Coastal GasLink, and an increase of CAD 2.1 billion in loans for Trans Mountain.



All three of the pipeline projects described in this report were proposed before the world's two major recent oil price shocks (2014 and 2020). In 2020, the oil and gas industry grappled with all-time low oil prices as a result of COVID-19 and a producer price war (Bakx & Seskus, 2020). The rate of growth in oil production in the oil sands has slowed considerably, including as some investors respond to the uncertain future of oil and gas markets (capital spending was CAD 34 billion in 2019 compared to CAD 81 billion in 2014) (Lauerman, 2020). Others have pointed to Western Canada's lack of export capacity as a barrier over past years. That said, the answer to whether new pipelines are required to increase export capacity is shifting. In the CER's 2020 forecast report, both scenarios presented show that oil for export would be below total pipeline capacity for the next 30 years, and under their main scenario, supply at its peak would still be below the additional capacity from the Trans Mountain Expansion (CER, 2020c). Gunton et al. (2021) found that the construction of Trans Mountain could create excess pipeline capacity that would ultimately impact other pipeline operators, increase toll-related costs for oil producers, and impact producer revenues, thereby reducing tax revenue for government.

In the absence of private interest but still facing political pressure, including from incumbent industry, governments are increasingly providing project finance to secure these projects. Governments in Canada continue to be of the position that oil and gas export projects will provide long-term economic benefits to Canadians (Jang, 2019; O'Regan, 2021). Yet, based on the findings in this report, the federal and provincial governments in Canada appear to be significantly more optimistic about the economic viability of growth in oil sands production, including the viability of export infrastructure, than industry itself.

Meanwhile, access to capital may pose an increasing challenge in the Canadian oil sands (Cosbey et al., 2021). As accounting for climate risk becomes increasingly mainstreamed among investors, carbon-intensive investments are becoming less attractive. Various banks (including ING, BNP Paribas, and HSBC Plc) and institutional investors (such as Norway's sovereign wealth fund) have reduced their lending to the oil sands in recent years (Morgan, 2020; Panetta & Simpson, 2020; Reuters, 2017). Declining profits in the oil and gas sector and the erratic nature of oil markets present significant risk, particularly as renewables and energy-efficient technologies grow and become more competitive every day. Decreasing private sector investment in response to these risks, whether for climate change or financial reasons, is occurring in spite of government's continued political and financial support for the sector.

⁸ The Evolving Scenario is based on increasing action on climate change, while the Reference Scenario implies no additional measures on climate change beyond what already existed at the time of the modelling (CER, 2020c).

⁹ Trans Mountain is, in theory, protected from some risks related to excess capacity due to long-term contracts for 80% of its capacity. This means that impacts will be shifted to other pipelines. Nonetheless, the remaining 20% (spot shipments) could still be impacted, and if the financial position of shippers worsens, revenue for contracted space could also be jeopardized (Gunton et al., 2021).



Insurers are also wary of risk: thanks in part to ongoing campaigns, Trans Mountain has lost four insurers¹⁰ over the past year (Woodside, 2021).

Box 3. British Columbia's role in the "web" of liquefied natural gas (LNG) support

The dynamics of government support measures shaping the market are particularly evident for LNG. Developing LNG infrastructure for export is increasingly an area where Canadian governments are putting public dollars—including but not limited to pipelines. In 2019, the federal government announced CAD 275 million for LNG Canada's infrastructure projects, alongside a steel tariff exemption valued at around CAD 1 billion (Department of Finance, 2019; McCarthy et al., 2018). In British Columbia, the provincial government made an unprecedented effort to secure the LNG Canada final investment decision by establishing a 20-year agreement on a number of subsidies and policy supports (Corkal & Gass, 2019; Government of British Columbia, 2018). After this final investment decision was made, Coastal GasLink also announced that it would proceed with construction (Coastal GasLink, 2020). In other words, subsidies from British Columbia to the LNG sector are directly connected to the Coastal GasLink final investment decision—the project would likely not have gone ahead without them.

6.2 Risky Investments and Rising Costs

Governments who have financial involvement in pipeline projects may face increased costs beyond the support measures outlined in Sections 5 to 7 of this report. In this section, we examine some of these costs and their impacts on taxpayers. As "megaprojects," pipelines often have delays that create uncertainty for investors and cost overruns that can compromise the financial viability of the project (Janzwood, 2020). Project delays increase the cash outlays that must be invested for a project to generate any return, in addition to delaying the timing at which revenues are received. They also increase the perceived risk of the project, which could increase the cost of refinancing if it is required in the future.

The history of recent pipeline projects in Canada is tepid at best. The time required for projects to come online can be substantially longer than what is often projected by companies. There have been no federally regulated oil sands pipelines completed since 2015, and the increase in legal and socio-political conflicts on pipelines has significantly impacted project results (Janzwood, 2020). Trends in the United States also illustrate the hurdles faced by pipelines—beyond just the cancellation of Keystone XL. In July 2020, project proponents cancelled the Atlantic Coast gas pipeline due to delays and cost uncertainties (Orland & Tuttle, 2020). Enbridge's Line 5 pipeline,

¹⁰ The insurers are: Argo Group, Munich Re, Talanx, and Zurich Insurance Group (Woodside, 2021). TMC responded by lodging a request to the CER to maintain the confidentiality of its insurers, which was granted in April 2021 (Tuttle, 2021).



which runs through eastern Canada, was temporarily shut down in June 2020 and later ordered to shut down in May 2021 due to environmental risks (Chase, 2021; Orland & Tuttle, 2020). In other words, pipelines are not immune to interruptions even after they have begun operating.

6.2.1 Legal and Political Risks

By supporting controversial pipelines, governments are assuming significant risks. The three pipelines explored in this report have faced legal and political issues, including significant protests by environmental and Indigenous groups. Keystone XL was previously rejected by the Obama administration, and a 2020 briefing by Rystad Energy highlighted the increased likelihood of additional delays related to environmental, social, and governance issues for the project (Liles, 2020). Ultimately, U.S. President Biden revoked the project's permit, as promised in his preelection campaign (The White House, 2021). In March 2021, the Alberta finance minister stated that the cancellation would cost Albertan taxpayers around CAD 1.3 billion (Bennett, 2021); loan-related impacts are unclear.

Coastal GasLink has been the subject of high-profile protests. The project is opposed by environmentalists and several Indigenous groups (though others support it and/or have signed benefits agreements); it has been repeatedly criticized for violating Indigenous rights (Bellrichard & Berrera, 2020). In early 2020, protests by Wet'suwet'en community members and their supporters led to a historic disruption of rail and road traffic across Canada (Wright, 2020). The protests related to disagreements related to Indigenous land and title rights and authority (Cousins, 2020). During the conflict, the federal government spent at least CAD 13 million over 15 months for policing (Bellrichard, 2020).

The Trans Mountain project has faced numerous protests and a number of legal delays, including challenges from the Government of British Columbia and from various First Nations (West Coast Environmental Law, 2020). ¹² In July 2020, the Supreme Court rejected an appeal from Squamish Nation, Coldwater Indian Band, and Tseil-Waututh Nation in regard to a previous decision by the Federal Court of Appeal (Rabson, 2020). This effectively ends a long legal battle relating to the consultation and accommodation processes, although further legal actions are possible, and the First Nations involved have stated that they will continue to oppose and challenge the project. The amount the federal government has spent on Trans Mountain-related court proceedings is difficult to determine. ¹³

¹¹ The Wet'suwet'en elected Band Council had stated its support of the pipeline, while the hereditary chiefs, whose authority is passed down through Wet'suwet'en law, were opposed. The situation raised important questions about land and title issues in First Nations territories where there is disagreement between elected band council officials (whose creation was a result of the Indian Act) and hereditary leaders, in particular in British Columbia in areas that were never ceded under treaty (Cousins, 2020).

¹² For a summary of key legal challenges, see: https://www.wcel.org/sites/default/files/publications/2020-04-tmx-legaltimeline-final.pdf

¹³ The federal government spends around CAD 30 million per year in litigation against First Nations (Crown-Indigenous Relations and Northern Affairs Canada, 2019).



6.2.2 Risks of Cost Overruns for Construction

Rising costs of construction are also common with pipelines. For Coastal GasLink, CAD 400 million was added to construction estimates in 2019 (Ross, 2019). Of course, the COVID-19 pandemic has introduced additional unforeseen delays for construction on all pipelines that are not quantified here.

For Trans Mountain, in January 2020, construction costs were announced at CAD 12.6 billion, a 70% increase from the previous figure, assuming no delays to the planned in-service date of 2022 (Little, 2020). Although TMC stated in September 2020 that construction was on schedule to be in service by December 2022, affidavits filed with the CER outline possible delays due to work not completed during the 2020 construction season (Canadian Press, 2020). Costs for permitting and land acquisition for Trans Mountain could also rise. A significant portion of the pipeline's detailed route has yet to be approved, additional land acquisition contracts remain to be signed, and there are still a number of Statements of Opposition requiring a decision (CER, 2020a, 2020b).

Previously, the PBO had estimated that a 1-year delay would reduce the pipeline's value by CAD 693 million (Office of the PBO, 2019). A more recent assessment finds that, while the pipeline was financially viable in 2020, the project's financial outlook could change significantly amid risks of rising construction costs, the potential for low pipeline demand, changes in climate policy, and pandemic-related economic impacts. The PBO also found that stronger climate policies could result in net losses to government of CAD 0.1 billion to 3.5 billion (Office of the PBO, 2020). Recent financial impact and cost-benefit analyses from Simon Fraser University that take into account current oil price forecasts and climate policy, including the updated federal climate plan, found net losses from the project would be so great that the project would best be shelved (Gunton et al., 2021).

6.2.3 Environmental Risks and Associated Costs

After a Federal Court of Appeal challenge of the Trans Mountain project by several First Nations and environmental groups, the federal government carried out additional consultations and ultimately re-approved the project in 2019. As part of government assurances, eight environmental accommodation measures related to the project were introduced to increase environmental protection and better manage relationships with Indigenous governments (Government of Canada, 2019). These accommodations are positive developments that will decrease the environmental impact of the project and build capacity for future environmental protection. However, it is possible that the programs would not have gone ahead or be needed absent the project or if the government had not purchased it.

The government also made a clear connection between the Trans Mountain project and the CAD 1.5 billion Oceans Protection Plan (OPP), indicating that the latter may have been unlikely to move forward without confirmation of the former (CBC News, 2018; Office of the



Prime Minister, 2019). The OPP is an expansive program intended to protect Canada's coasts and waterways, minimize impacts from marine shipping and developments, and improve oil spill monitoring and response (Transport Canada, 2019). Despite the positive benefits of these programs to ecosystems and communities, the environmental accommodations and the OPP also provide benefits to the fossil fuel industry at large, including but not limited to TMC.

6.2.4 Toll Rates and the Ability to Recoup Expenses

A pipeline's primary source of revenue is tolls for shipping. Toll rates are negotiated between pipeline owners and shippers (oil producers) and are approved by the CER. They are to be based on the value of pipeline assets and their operating costs to ensure that pipeline owners receive a fair return.

In the case of Trans Mountain, the nature of the government's purchase of the project (being a share purchase rather than an asset purchase) precluded a renegotiation of toll rates. In 2019, a subsidiary of TMC successfully applied to the CER for approval of a previous agreement on toll rates it had negotiated with shippers from 2018 to 2021. The "Net Rate Base" for which rates were calculated were a valuation of CAD 967.8 million for the existing assets (CER, 2019a). Since the actual costs that Canada paid for the existing assets were likely much higher (the majority of the CAD 4.5 billion purchase price), the current toll rates appear too low to cover project costs. A toll rate to cover full project costs would also need to include the cost of capital during construction and a normal rate of return for a pipeline operator. The toll rates also do not account for increased construction costs and additional project costs incurred by government entities other than TMC, such as costs borne by EDC or TMP Finance associated with the acquisition of Trans Mountain, including interest expenses. The CER has asserted that since some of these costs are "not directly borne by Trans Mountain ... it would not be appropriate for Trans Mountain or Trans Mountain's shippers to be responsible for them" (CER, 2019b, p. 5).

Current toll rate structures limit the amount of revenue that government can collect to cover Trans Mountain's project costs. As Gunton et al. (2021) note, if higher toll rates were introduced to reflect higher capital costs, using Trans Mountain would be less attractive to shippers. Likewise, future potential buyers of the pipeline will base its value on future earnings potential from toll rates—a purchase may be unattractive without higher rates in place. Project revenues from toll rates are also vulnerable and depend on the price of oil and the competition of foreign markets. Overall, increases in pipeline capacity will not necessarily be matched with higher prices for products, nor is this evidenced by existing or past market conditions (Rubin, 2017, p. 8).

Coastal GasLink, while not government-owned, may also face financial issues related to toll rates. Rising costs have prompted TC Energy to consider negotiating higher rates with shippers; however, this would likely receive pushback from the LNG Canada consortium as it would negatively impact the economics of exporting gas (Morgan, 2021). If toll rates are not sufficient to cover project costs, the ability of the company to pay back loans, including to EDC, could be jeopardized.



6.2.5 Risk of Future Support or Additional Losses for Trans Mountain

As a major government-owned project, it is worth considering what future government support could look like for Trans Mountain specifically. Government financial support could increase substantially under two scenarios:

- If, while still in government ownership, the project costs are not covered by revenue from toll rates (see Section 6.2.4)
- If the government sells its share of the project to a private buyer at a loss.

Regarding the latter, the federal government has stated that it does not wish to be a long-term owner of Trans Mountain and wishes to divest the project to a private owner, but it is prepared to own the assets until completion of the expansion or beyond (Minister of Finance, 2018). In the case of a sale, project costs and purchase terms would need to be evaluated to determine whether the government has sold at less than its full costs of purchase and subsequent expenditures.

In February 2020, a report by Stifel FirstEnergy noted that any additional cost overruns would make Trans Mountain unattractive for Canadian infrastructure companies (Bellusci, 2020). The report also noted that pension and private equity funds would be unlikely to take on the project due to increasing attention to environmental, social, and corporate governance indicators and that larger companies such as TC Energy are likely uninterested and would require equity financing to complete the sale.

No private buyer has yet been identified, but the federal government previously announced consultations with up to 129 Indigenous communities to explore potential economic participation in the project (Healing, 2020). Multiple Indigenous groups have expressed interest, with the Chinook Pathways partnership aiming for 100% ownership, and Project Reconciliation seeking initial ownership of 75%, later to increase to 100% (Stueck & Jones, 2021). ¹⁴ Alberta has provided at least CAD 600,000 through its Alberta Indigenous Opportunities Corporation and Saskatchewan has provided CAD 500,000 to Indigenous groups pursuing a stake in the project (Government of Saskatchewan, 2020; Narine, 2020). Should one of these groups successfully purchase a stake, this provided funding would represent additional subsidies to the project. Although a sale to an Indigenous buyer could enable increased oversight, including for environmental issues, it is currently unclear whether such a sale would provide tangible economic benefits for Indigenous communities. Of note, as of January 2021, only 73 of 140 First Nations along the route had signed Impact Benefit Agreements (Bellusci, 2020; TMC, 2021). There remains strong opposition to the project by other First Nations, including those involved in previous legal challenges (Stueck & Jones, 2021).

¹⁴ Project Reconciliation has stated its intention to bring 200 Indigenous communities together for a bid (Stueck & Jones, 2021). Chinook Pathways is a 50-50 partnership between Pembina Pipeline Corporation and Western Indigenous Pipeline Group, the latter comprised of First Nations and Métis representatives from communities on the pipeline's route. Pembina Pipeline Corporation had purchased assets from Kinder Morgan after their exit from Canada in 2019 (Stueck & Jones, 2021).



Gunton et al. (2021) found that if the federal government were to sell the Trans Mountain assets once operational, it would face a net loss of CAD 2.1 million to 6.9 billion (Gunton et al., 2021). The researchers also completed a full cost-benefit analysis that takes into consideration all economic costs and benefits, beyond direct financial impacts to government, to identify if completion of the project is in the public interest. In this case, they identified a net cost to Canada of CAD 11.9 billion. Ultimately, it is possible that total impacts to taxpayers could be higher than these amounts when taking into consideration the measures outlined in Section 5.

Box 4. Do subsidies to pipelines constitute export subsidies?

The WTO's Agreement on Subsidies and Countervailing Measures provides that certain types of subsidies are *prohibited*, including those that are "contingent, in law or in fact, whether solely or as one of several other conditions, upon export performance" (WTO, 1994., Article 3.1(a)). Prohibited subsidies are a special category of highly trade-distorting subsidies that do not require proof of specificity and must be immediately removed.

It is possible that some of the measures described in this report could fall into this category and constitute illegal export subsidies. However, there have been more than a dozen WTO cases involving alleged prohibited subsidies contingent on exports, and none of them gives clear guidance on this specific context: the subsidization of export-geared infrastructure represented by pipelines, in particular, the Trans Mountain project. The main issue is whether any of the subsidies described above are, in fact, "contingent" on export performance. Nothing in the written law of the measures described above establishes any conditions of export performance, which would mean a de facto contingency would have to be established. In this case, the connection is clearly that the infrastructure at the centre of the support is geared to the export of the transported product.

The fundamental test for export contingency boils down to this central question: *Is the granting of the subsidy geared to induce the promotion of future export performance by the recipient?* The case law is clear that satisfying this condition requires more than just the granting of a subsidy to an export-oriented firm. According to the Appellate Body, "merely knowing that a recipient's sales are export-oriented does not demonstrate, without more, that the granting of a subsidy is tied to actual or anticipated exports." Rather, "the export orientation of a recipient may be taken into account as a relevant fact, provided that it is one of several facts which are considered and is not the only fact supporting a finding" (WTO, 1999, para. 173). Lawmaker attestations that the support is to help the export of Canada's crude oil may be another one of the considered factors, but inferred intent—like export orientation—would not be determinative by itself (WTO, 2011, para. 150).

In the end, any WTO panel would consider the total range of factors surrounding the granting of the subsidy, including "the design and structure of a measure, its modalities of operation and relevant factual circumstances that provide context for an understanding of the measure's design, structure and modalities of operation" (WTO, 2017, para. 1019). It is possible that some of the subsidies considered above, such as the low toll rates by TMC, might constitute prohibited export subsidies—a serious violation of Canada's multilateral



obligations. This possibility should instill caution in policy-makers as they design and implement the various forms of support for both the existing pipeline and the expansion. However, a final determination as to whether that support was both a subsidy under the Agreement on Subsidies and Countervailing Measures and prohibited could only be delivered by the WTO's dispute settlement mechanism.

6.3 Government Signals for Fossil Fuels and Implications for Climate Action

Government support to pipelines, whether providing outright subsidies, public finance, or covering rising costs, mean that projects continue to move forward when they would not necessarily have a future without state intervention. Not only does this prop up these projects themselves, but government support also signals to the private sector that oil and gas projects can expect bailouts in the future.

Support for fossil fuels is incongruent with positive government climate policies—such as Canada's improved 2030 and 2050 emission reduction targets, the recently strengthened climate plan, and robust carbon pricing. The IEA, the world's most authoritative energy body, has made it clear in its recent report modelling net-zero that **there is no room for additional government investments in oil, gas, and coal** (IEA, 2021).

The government's position that fossil fuel exports are critical for Canada's economic growth is frequently used to justify financial support to the sector (Jang, 2019). But are funds for pipelines truly the best use of public money? Amid declining fossil fuel sector jobs and the reality that the oil and gas sector's contribution to GDP continues to decline, it is clear that Canada needs a new economic model for workers (Corkal et al., 2020; Stanford, 2021). By intervening in the market, government has the power to choose winners and influence the future of the economy. Fossil fuel support measures, including those described in this paper, can ultimately distort energy markets and affect investment decisions and can lead to a lock-in of high-carbon infrastructure (Erickson et al., 2020).

Governments have also taken the position that fossil fuel exports are aligned with Canada's "low-emissions energy future" (Jang, 2019; O'Regan, 2021). Yet, the oil and gas sector has the highest sectoral emissions in Canada, and absolute emissions are growing, even with improvements in emissions intensity (Environment and Climate Change Canada, 2021). It bears asking whether other sectors can achieve the deep emission reductions needed to account for increasing emissions in oil and gas, especially given the challenge of decarbonizing areas such as transportation and agriculture. Canada's projected oil and gas production would use up 16% of the remaining global carbon budget, and Canada has not moved to limit or phase out fossil fuel exploration and production as other countries have started to do, including Denmark, New Zealand, Ireland, and France (Carter & Dordi, 2021).



An interesting argument government has made in the case of Trans Mountain is that profits will be reinvested into clean energy projects (Office of the Prime Minister, 2019). It is highly unlikely that this approach is as cost-effective as directly funding clean energy projects out of the regular budgetary process. It is also unclear if there will be substantial profits from the project available for reinvestment. There are significant opportunity costs when governments directly support fossil fuels over social development and the development of cleaner energy sources.

In contrast to funds directed to the fossil fuel sector, which is capital intensive, green stimulus and funding for climate action have significantly higher job returns (Hepburn et al., 2020). Investments in areas like clean energy and transportation, nature, and building retrofits cut pollution, create jobs, and improve quality of life. Investments in fossil fuel production encourage the very same pollution we are trying to stop and contribute to the rapidly rising costs of climate change.

Once governments become fiscally involved in pipeline projects, they may feel incentivized to continue to take steps to protect their investments. This has already been seen with Trans Mountain in the increase in loans provided for construction. For Keystone XL, the Government of Alberta has outlined its intention to pursue legal action through NAFTA against the United States (Cryderman & Keller, 2021), which could represent substantial costs to taxpayers. Even if new and additional government support measures are not introduced, there is a significant risk that levels of support could increase in the future.



7.0 Conclusion

Support for fossil fuel production, including through pipelines, heavily undermines our ability to achieve our climate goals, as is starkly illustrated by recent net-zero modelling from the IEA (2021). While recovery from COVID-19 presents an opportunity to reset the direction of the Canadian economy to align with long-term public interest goals, CAD 10 billion of the support measures outlined in this report were announced *after* the onset of the pandemic. Only strong and deliberate green recovery policies will keep us on track for a 1.5°C warming scenario. Despite positive announcements made so far, research has shown that countries, including Canada, are still behind on what is needed for an inclusive, green recovery (O'Callaghan & Murdock, 2021).

In addition to climate change implications, governments must consider whether providing support for fossil fuels makes economic sense, in particular as renewable-energy and energy-efficiency technology accelerates and becomes cheaper. Government support to pipelines may place public money at significant financial risk for current and future generations. The cancellation of Keystone XL illustrates the risks that governments take on when financing such infrastructure, at large costs to taxpayers. There is additional uncertainty surrounding the future of Coastal GasLink and Trans Mountain, including whether they will be able to recoup costs. Recent events, such as the closure of multiple oilsands companies and Teck Resources' withdrawal of the application for the Frontier mine project, raise significant questions about the economic viability of long-lived, costly infrastructure like pipelines.

Lastly, support for fossil fuel export infrastructure clearly undermines Canada's commitments to phase out fossil fuel subsidies. The Canadian government has commitments under the G20 and G7 to phase out inefficient fossil fuel subsidies (G7, 2016; G20, 2009) and has committed to completing a peer review of fossil fuel subsidies jointly with Argentina. The G20 peer review is significantly behind schedule based on the precedent set by countries to undertake this process (Mangat, 2021). The Office of the Auditor General (2019) has highlighted the government's lack of transparency on fossil fuel subsidies as a significant challenge to achieving its G20 commitment.

The federal government should commit to completing the G20 review without further delay with a strong focus on transparency and include within the scope of the review all relevant information on the potential federal subsidies outlined in this report. Fossil fuel subsidy reform should be a core component of Canada's updated Nationally Determined Contribution under the Paris Agreement. Canada and its provinces should implement robust fossil fuel subsidy reform and should end public finance for fossil fuels, including through EDC, in line with international calls to action (Corkal, 2021; United Nations, 2020). Any support to high-carbon sectors should adhere to strict principles and conditions to incent a low-carbon transition (Corkal et al., 2020).

The sectors and projects that Canada and its provinces support in the coming months will have far-reaching implications on whether we can truly build back better and achieve a prosperous low-carbon economy that puts people and the planet first. Let's get it right.



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Annex 1. Defining Subsidies

Many elements of government support to fossil fuels fall under the definition of a subsidy by the World Trade Organization (WTO). In its Agreement on Subsidies and Countervailing Measures, the WTO defines a subsidy as (paraphrased) any financial contribution by a government, or agent of a government, that confers a benefit on its recipients in comparison to other market participants (WTO, 1994, Article 1.1). This definition has been accepted by the 164 WTO member states, including all G20 countries, and encompasses the following subsidy categories:

- 1. Direct transfer of funds (e.g., budgetary transfers, grants, loans, and equity infusion) and potential direct transfers of funds or liabilities (e.g., loan guarantees) at below their market value.
- 2. Government revenue that is otherwise due, foregone, or not collected (e.g., fiscal incentives such as tax credits).
- 3. Government provision of goods or services other than general infrastructure or the purchase of goods at above their market value.
- 4. Income or price support.

The WTO definition of subsidies also underpins the methodology for measuring and reporting fossil fuel subsidies under Sustainable Development Goal indicator 12.c.1 (United Nations Environment Programme et al., 2019). Price support, direct budget transfers, and tax expenditures for fossil fuels all fall under the WTO definition of a subsidy.

Public finance and state-owned enterprise investment, however, have both non-subsidy and subsidy components, which are difficult to quantify and disentangle. Due to the lack of transparency and robust reporting from public finance institutions like Export Development Canada, it is impossible to separate out the portion of public finance that is considered to be a subsidy component. Specifically, we report the face or gross value of public finance from majority government-owned financial institutions for fossil fuels.

Non-subsidy elements of public finance and state-owned enterprise investment still signal that G20 governments are willing to prioritize support for the consumption and production of fossil fuels and associated sectors, which also propels private investment. This goes against government pledges to make "finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development" (United Nations, 2015, Article 2.1c).

In this report, as with our G20 scorecards (Geddes et al., 2020), we use the broader notion of "government support," as described at the start of this section. The scope of the report is thus broader than just analyzing only subsidy elements.

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