Beyond Reason and Accountability

Mega-Projects Gone Awry and Why

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BEYOND REASON AND ACCOUNTABILITY

EXECUTIVE SUMMARY

The Mark Carney government is now engaged in implementing a policy that will entail accelerating the regulatory approval and construction of a number of "nation-building" infrastructure projects. News reports indicate that many of the projects will involve transportation infrastructure – pipelines, ports, electricity transmission lines, highways and light and heavy rail systems. The choice as to which projects to benefit from designation as "nation-building" will be made according to criteria and a process that has not yet been published. The nomination of the projects has been entirely political – made by provincial governments and indigenous leaderships as reviewed and endorsed by the Carney government. A significant number will be promoted for climate policy reasons; that is, based on the pursuit of sharply reduced greenhouse gas (GHG) emissions. This article will review some recent experience with public funding of similar projects in the recent past.

Infrastructure megaprojects entail large risks. In one influential study, Bent Flyvbjerg, an expert in project management at Oxford University's business school, estimated that nine out of ten go over budget. They also typically take far longer to complete than initially estimated, which adds to the costs and inconveniences the public. McKinsey and Company cites several reasons why these problems arise: under-estimation of costs and timelines to make projects more appealing; poor design and execution; and weaknesses in organizational design and capabilities, among others.

The Carney government succeeded in convincing Parliament to pass the *Building Canada Act*, which authorizes priority treatment for projects deemed to be in the national interest. The government will have broad discretion as to which projects it endorses and which measures it takes both to accelerate regulatory reviews and to subsidize the projects with taxpayers' dollars.

Major infrastructure projects, including those that involve transportation infrastructure, remain vulnerable to significant cost escalation and delays, especially when they are sponsored by governments and driven by political objectives rather than commercial ones. The passage of the *Building Canada Act* has potentially reduced the time required for federal government regulatory review, although this will depend upon the extent to which the criteria in the *Impact Assessment Act* and the *Canadian Energy Regulator Act* continue to be applied.

Whether it is the federal government "picking winners" or relying on provincial governments and indigenous groups to nominate them, this replaces business case considerations with political ones. Politics inevitably engages

a wide array of stakeholders (e.g. legislators, opposition parties, agencies, non-governmental organizations, and the broader public) with vested interests who have different expectations concerning the project outcomes and the sharing of costs and benefits. With many billions of dollars at stake and the likelihood of increasing limits on federal expenditures in future, politicizing the project selection process may gravely misallocate the funds needed to assure Canada's prosperity.

BEYOND REASON AND ACCOUNTABILITY

The Mark Carney government is now engaged in implementing a policy that will entail accelerating the regulatory approval and construction of a number of "nation-building" infrastructure projects. News reports indicate that many of the projects will involve transportation infrastructure – pipelines, ports, electricity transmission lines, highways and light and heavy rail systems. The choice as to which projects to benefit from designation as "nation-building" will be made according to criteria and a process that has not yet been published. The nomination of the projects has been entirely political – made by provincial governments and indigenous leaderships as reviewed and endorsed by the Carney government.

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While some of the projects will be those proposed by private businesses, many and perhaps most will be those proposed by governments and by organizations owned and operated by governments, such as electrical utilities and public transit systems. In other words, the funding will be made available based not on the basis of commercial considerations or whether the project's economic benefits exceed its costs, but rather on the basis of political judgments. A significant number will be promoted for climate policy reasons; that is, based on the pursuit of sharply reduced greenhouse gas (GHG) emissions. This article will review some recent experience with public funding of similar projects in the recent past.

MEGAPROJECTS – SOME GLOBAL PERSPECTIVES

Infrastructure megaprojects (i.e. generally, those costing one billion or more) are increasingly viewed as integral to facilitating the growth of large cities and economically emerging regions. Like the Panama Canal or the Dubai Airport, they can make immense contributions to a country's gross domestic product. At the same time, they entail

large risks. In one influential study, Bent Flyvbjerg, an expert in project management at Oxford University's business school, estimated that nine out of ten go over budget. They also typically take far longer to complete than initially estimated, which adds to the costs and inconveniences the public. McKinsey and Company offer three main reasons for why projects falter:

OVER OPTIMISM AND OVER COMPLEXITY

In order to justify a project to the sponsors, sometimes project managers systematically under-estimate the costs and timelines so as to make them more palatable. This often happens when a projects crosses borders and/or involves a mix of private and government spending.

POOR EXECUTION

Having started with a low-cost estimate, the temptation is to cut corners and protect the profit margins for the engineering and construction firms that have been contracted to deliver the project. This, plus poor design, lack of clear scope, and even mathematical errors in scheduling and risk assessment makes things worse.

WEAKNESSES IN ORGANIZATIONAL DESIGN AND CAPABILITIES

Many entities involved in building megaprojects have an organizational setup in which the project director sits four or five levels down from the top leadership. This is often a problem because each layer may have a different view on how time and costs can be compressed. The authority to make final decisions is often remote from the action.

McKinsey and Company did not note some other factors that can enter into play when governments are involved and the project is one with high political sensitivity and/or controversial merits. In those cases, as projects are delayed and costs begin to rise substantially above the initial estimates, political decision makers may have a vested interest in keeping the project going in order to save face.

EXAMPLES OF PROJECTS THAT WENT WRONG

There is no shortage of "bad news" stories. Here are some that involve transportation infrastructure.

THE LOWER CHURCHILL PROJECT IN NEWFOUNDLAND AND LABRADOR – this project included hydroelectric generation at Muskrat Falls and a transmission line to Newfoundland. [1]The cost was initially estimated at $6.2 billion, but costs have increased to be around $13.4 billion. Construction has taken over a decade, far longer than the initially planned five years. This necessitated a $5.2 billion federal government bailout and has been economically ruinous for Newfoundland.

The Muskrat Falls project on the Churchill River in Labrador, in November 2023. (Danny Arsenault/CBC)

THE TRANSMOUNTAIN EXPANSION PROJECT – this oil pipeline project would have been economic if the provincial government, environmentalists and the incompetence of the Trudeau federal government had not significantly delayed its construction. Its initial estimated cost in 2013 was $5.4 billion. The federal government took over the project in 2018 and the cost rose to $7.4 billion. The final cost after commercial operations began in May, 2024 was $34.2 billion, almost six times the original cost estimate.

THE ATLANTIC LOOP. This was a major federal government project proposed to create a regional electric grid in Eastern Canada to replace coal-fired plants with renewable energy sources like hydropower from Quebec and Newfoundland and Labrador. It was originally projected to cost $5 billion. Nova Scotia pulled back from the full project in 2023 citing ballooning costs. A scaled-down version reportedly is under consideration, assuming it also does not escalate in costs.[2]

The Atlantic Loop would expand the electrical grid connections between Quebec and New Brunswick, and New Brunswick and Nova Scotia to provide greater access to renewable electricity, like hydro from Quebec. Emera said it's pausing the project after the Houston government imposed rate caps. (CBC)

EGLINTON CROSSTOWN TORONTO LIGHT RAIL TRANSIT (LRT) - The Eglinton Crosstown LRT was Initially projected to be completed in 2020 with a budget of $5.3 billion. Instead, this project has become a black hole for taxpayer dollars. Now expected to cost over $12.6 billion, with completion dates pushed back year after year, it's a project that exemplifies everything wrong with how we manage infrastructure. The procurement for the Eglinton Crosstown LRT was a Public-Private Partnership (P3). The contract was awarded to Crosslinx Transit Solutions, a consortium of Canadian companies. Ontario politicians have been criticized for blocking foreign companies from bidding—companies with the expertise and track record to deliver projects on time and on budget.

[1] https://www.cbc.ca/news/canada/newfoundland-labrador/muskrat-falls-outages-transmission-system-1.7504738

[2] https://www.cbc.ca/news/canada/nova-scotia/trudeau-government-atlantic-loop-project-pause-emera-1.6646208

HURONTARIO LRT - Mississauga's Hurontario LRT was supposed to be a transformative project. Initially promised as a comprehensive transit solution with a downtown loop, this critical feature was axed to save costs, only for the project's budget to spiral out of control anyway. Now delayed and with costs exceeding $4.6 billion, this project is yet another testament to the failures of political leadership. The people of Mississauga were promised a world-class transit system—what they're getting is another expensive, incomplete disaster.

CALIFORNIA RAPID RAIL SYSTEM - Perhaps the worst example of government-sponsored failure with respect to transportation infrastructure is in the United States. The State of California proposed a rapid rail system that would run 800 miles and connect Sacramento, Los Angeles and San Diego. The project, approved by voters in 2008 for about USD 33 billion to connect San Francisco and Los Angeles, has seen its estimated costs escalate to over USD 128 billion by 2025, with no operational miles of track completed. The original plan has been scaled back to a 171-mile segment in the Central Valley (Merced to Bakersfield). Unfortunately, that's not where the population is. The project has had to rely heavily on federal government funding, but that may be cut off by the Trump Administration. Assuming a scaled-down version is completed, there is no way that fares will cover the costs of building and operating the system, leaving California taxpayers on the hook for billions of dollars per year in subsidies.

https://www.cagw.org/california-high-speed-rail-still-multi-billion-dollar-boondoggle/

THE CARNEY GOVERNMENT'S PLAN

The Carney government succeeded in convincing Parliament to pass the *Building Canada Act*. This Act authorized the government to designate a lead Minister who can recommend to Cabinet whether or not it should designate projects as being of national interest. The Minister will do this on the advice of the Major Projects Office which also will serve as proponents' source of information and point of contact. One key function of the office will be to serve as a single point of federal government regulatory review; it will be mandated to complete the regulatory review stage within 24 months.

Section 6 of the Act lists the factors, or criteria, that the Governor in Council may consider in deciding whether to designate a project as warranting designation as one to be accelerated. The Act also makes clear that the Governor

in Council, while considering the selection of "nation-building" projects, may "*consider any factor that the Governor in Council considers relevant*". In addition, it is to be guided by the extent to which the project will:

- *Strengthen Canada's autonomy, resilience, and security;*
- *Provide economic or other benefits to Canada;*
- *Have a high likelihood of successful execution;*
- *Advance the interests of indigenous peoples; and*
- *Contribute to clean growth and to meeting Canada's objectives with respect to climate change.*

In a previous article[3], I described the various ways in which the "national interest" criteria might be applied. The government will have broad discretion as to which projects it endorses and which measures it takes both to accelerate regulatory reviews and to subsidize the projects with taxpayers' dollars.

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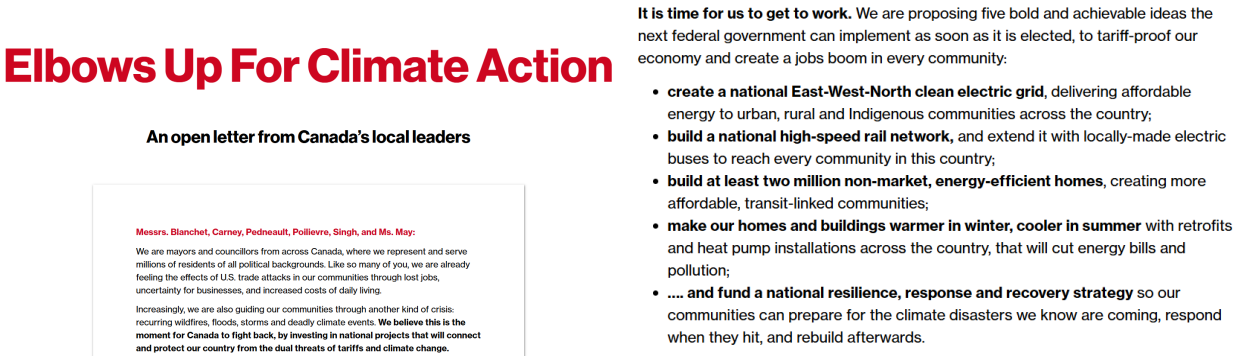
Pet projects like climate resilient infrastructure may have exaggerated cost-benefit claims

In theory, this legislation will greatly shorten the amount of time required for regulatory review of a major pipeline (or other) project. The current timelines for regulatory review range from 43 to 104 months, with an average of 70 months[4]. So, in theory, designation as a project of national interest will reduce the time a projects spends in regulatory review, on average, by 46 months. That's if everything works out well. However, there are a few things that will not change.

Projects can come forward from different sources, including private companies, government departments or wholly-owned organizations like most electrical utilities, or public-private partnerships. Most of the projects that are being advanced because of their potential to reduce GHG emissions are being made by governments or publicly-owned utilities. This means that the rationale for the projects is not their profitability or even necessarily a judgment that their benefits exceed their costs. Rather, they may be proposed because a provincial government

[3] https://blog.friendsofscience.org/2025/06/13/the-federal-plan-to-accelerate-pipeline-building-lets-pretend/
[4] Kurtis Reed et.al, *Timing of Canadian Project Approvals: A Survey of major Projects*. Alberta Law Review Society. April 15, 2021

sees significant political benefits that it could derive from having a project implemented that will be funded by federal rather than provincial taxpayers.



Elbows Up For Climate Action

An open letter from Canada's local leaders

Messrs. Blanchet, Carney, Pedneault, Poilievre, Singh, and Ms. May:

We are mayors and councillors from across Canada, where we represent and serve millions of residents of all political backgrounds. Like so many of you, we are already feeling the effects of U.S. trade attacks in our communities through lost jobs, uncertainty for businesses, and increased costs of daily living.

Increasingly, we are also guiding our communities through another kind of crisis: recurring wildfires, floods, storms and deadly climate events. **We believe this is the moment for Canada to fight back, by investing in national projects that will connect and protect our country from the dual threats of tariffs and climate change.**

It is time for us to get to work. We are proposing five bold and achievable ideas the next federal government can implement as soon as it is elected, to tariff-proof our economy and create a jobs boom in every community:

- **create a national East-West-North clean electric grid**, delivering affordable energy to urban, rural and Indigenous communities across the country;
- **build a national high-speed rail network,** and extend it with locally-made electric buses to reach every community in this country;
- **build at least two million non-market, energy-efficient homes**, creating more affordable, transit-linked communities;
- **make our homes and buildings warmer in winter, cooler in summer** with retrofits and heat pump installations across the country, that will cut energy bills and pollution;
- **.... and fund a national resilience, response and recovery strategy** so our communities can prepare for the climate disasters we know are coming, respond when they hit, and rebuild afterwards.

*This pitch **Elbows Up for Climate Action** from 180 mayors et al. "We are mayors and councillors from across Canada, where we represent and serve millions of residents of all political backgrounds." https://elbowsupforclimate.ca/ It is unlikely their constituents would be able to bear the burden of billions of dollars associated with this urban-desired, uncosted wish list.*

A proponent's internal planning process for a major project can easily take 18 to 36 months. Before any meaningful project description is filed, a further 18 to 36 months can be required for analytical work, preliminary engineering and design and environmental field studies. By the time the initial filing of an application for a pipeline certificate is made, a company may have spent up to five years or more investigating and analyzing the project. It also will have had to prepare a Consultation Paper to use with land owners, communities and indigenous groups. The Consultation Paper, in fact, will come near the end of a lengthy and expensive process.

The information in the Consultation Paper may lead to changes in the time allowed for internal "review" as the response to it may identify the need for supplemental information by the regulators or the interested parties; these may require increased analysis, disclosure or even change in project design or routing. That could add three to six months.

It remains unclear to what extent the designation of a project as "in the national interest" will exempt it from all or some of the existing federal government review process. That process includes two parts, review under the *Impact Assessment Act*, often by a public panel, and review by the Canada Energy Regulator (CER).

The IAA panel's terms of reference are established by the Minister of Environment and Climate Change. There are five phases in the IAA process: pre-planning; planning; impact statement; impact assessment; and decision-making. Almost all the projects that have been submitted to the IAA for review are still in the early phases and there is still

no way to assess how long it will take for most projects to pass through all phases.[5] There are five factors to be considered, all of which relate to environmental effects or Indigenous rights; economic considerations are not taken into account. Based on the review of the public panel's report, the Minister of the Environment and Climate Change may decide that a certificate should not be issued.

The CER is responsible to carry out a review of the project on the basis of 21 considerations, any one of which potentially cause it to recommend against certification[6]. After this review, the CER issues a report to the Governor in Council (i.e. the Cabinet) through the Minister of Natural Resources. Based on the Minister's recommendation, the Cabinet makes a final decision on whether or not to issue a certificate. It is unclear how the IAA and CER processes will be changed or possibly amalgamated as a result of the *Building Canada Act*.

These are not the only factors that may affect the time it will take to get a decision on a project.

Although the *Building Canada Act* is passed, it will be necessary to approve the regulations that implement it. This could take up to six months.

The Major Projects Office will need to be staffed. Competent managers need to be recruited and appointed. Regardless of how the new office is staffed and the review processes it will follow, the federal government will have to meet the requirement of consulting with the affected indigenous groups. The project sponsor will, too, especially if it takes time to settle on the "indigenous benefits agreements". There may be several dozen groups along the proposed right of way, and attaining their consent may require extended negotiations.

Many environmental non-governmental organizations remain opposed to the construction of all pipelines and long-distance electricity transmission lines. One of the tactics they commonly use is to have dozens, if not hundreds, of intervenors apply for "standing" before the regulatory body. The CER , unlike its predecessor National Energy Board, cannot deny standing on the grounds that those requesting it are not "directly and adversely affected". Hearing all the intervenors may be very difficult within the 24-month timeframe, but refusing to hear them may expose the subsequent panel recommendations and Cabinet decision to court challenges.

Finally, a federal government decision to accelerate review of a project deemed in the national interest does not eliminate the requirement for the project to be reviewed and approved by provincial and often local governments.

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[5] Marla Orenstein, *Federal Impact Assessment Act under Review: Measuring Projects and Timelines*. Canada West Foundation, May 2023

[6] Alastair Lucas, *A Guide to the Canada Energy Regulator*. CIRL Occasional Paper #78, May 2022

CONCLUSION

Major infrastructure projects, including those that involve transportation infrastructure, remain vulnerable to significant cost escalation and delays, especially when they are sponsored by governments and driven by political objectives rather than commercial ones. The passage of the *Building Canada Act* has potentially reduced the time required for federal government regulatory review, although this will depend upon the extent to which the criteria in the *Impact Assessment Act* and the *Canadian Energy Regulator Act* continue to be applied.

The process introduced by the *Building Canada Act* is not the same as the federal government "picking winners". Government-directed channeling of tax payer funds to the industries that are deemed to be strategically important has too often failed. Still, relying on the provincial governments and indigenous groups to identify the preferred projects is not much better. Both approaches replace business case considerations with political ones. Politics inevitably engages a wide array of stakeholders (e.g. legislators, opposition parties, agencies, non-governmental organizations, and the broader public) with vested interests and who have different expectations concerning the project outcomes and the sharing of costs and benefits. There is sometimes an increased risk of misuse of funds either by incompetence or corruption. With many billions of dollars at stake and the likelihood of increasing limits on federal expenditures in future, politicizing the project selection process may gravely misallocate the funds needed to assure Canada's prosperity.

It is one thing to facilitate faster regulatory reviews and another to select projects that genuinely serve the Canadian public interest. Governments also need to be held accountable for their use of scarce public funds and for ensuring that projects, once approved and funded, can be completed on time and on budget. The risk is that the only projects that are accelerated under the Carney regime may be the ones favoured for political reasons and thus more vulnerable to the pressures exerted by interest groups and lobbyists, not the ones Canada needs.

ABOUT THE AUTHOR

Robert Lyman is an economist with 27 years of experience as an analyst, policy advisor and manager in the Canadian federal government, primarily in the areas of energy, transportation, and environmental policy. He was also a diplomat for 10 years. Subsequently he has worked as a private consultant conducting policy research and analysis on energy and transportation issues as a principal for Entrans Policy Research Group. He is a frequent contributor of articles and reports for Friends of Science, a Calgary-based independent organization concerned about climate change-related issues. He resides in Ottawa, Canada. Full bio.

ABOUT FRIENDS OF SCIENCE SOCIETY

Friends of Science Society is an independent group of earth, atmospheric and solar scientists, engineers, and citizens that is celebrating its 23rd year of offering climate science insights. After a thorough review of a broad spectrum of literature on climate change, Friends of Science Society has concluded that the sun is the main driver of climate change, not carbon dioxide (CO2).

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