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MACKENZIE VALLEY GAS PIPELINE IN RETROSPECT

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FOREWORD

THE CANADIAN NORTHERN CORRIDOR RESEARCH PROGRAM PAPER SERIES

This paper is part of a special series in The School of Public Policy Publications, investigating a concept that would connect the nation's southern infrastructure to a new series of corridors across middle and northern Canada. This paper is an output of the Canadian Northern Corridor Research Program.

The Canadian Northern Corridor Research Program at The School of Public Policy, University of Calgary, is the leading platform for information and analysis on the feasibility, desirability, and acceptability of a connected series of infrastructure corridors throughout Canada. Endorsed by the Senate of Canada, this work responds to the Council of the Federation's July 2019 call for informed discussion of pan-Canadian economic corridors as a key input to strengthening growth across Canada and "a strong, sustainable and environmentally responsible economy." This Research Program will benefit all Canadians, providing recommendations to advance Canada's infrastructure planning and development process.

This paper *"Mackenzie Valley Gas Pipeline in Retrospect"* falls under the theme Strategic and Trade Dimensions of the program's eight research themes:

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Dr. Jennifer Winter
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SUMMARY

Canada's history is punctuated with a number of big and bold national projects, such as the Trans-Canada Highway and the Canadian Pacific Railway, that have played defining roles for the country and its citizens' prosperity.[1] However, over more recent decades, there has been much less success in bringing such projects to fruition. Indeed, the growing number of major national infrastructure projects that have been stalled or cancelled suggests some re-thinking of the factors that impact the development of these projects is required.

The lengthy regulatory and review processes to assess major infrastructure development projects and lack of long-term planning are often viewed as sources of conflict between the economic objectives and environmental conservation and culture and heritage preservation. Cancelled and stalled infrastructure projects can offer valuable insight into this and can lead to better decision-making processes around infrastructure development in Canada. For this purpose, this communiqué provides a retrospective look at the Mackenzie Valley Pipeline.

Industry proponents developed the Mackenzie Valley Pipeline project in the 1970s in response to the federal government's decision to facilitate the delivery of gas from Canada's Arctic to markets in the south (Dosman 1975, 119–124). About half a century later, the project was finally cancelled. As one of the largest infrastructure projects ever considered in Canada, the issues encountered throughout the initial development and regulatory review phases of the Mackenzie Valley Pipeline proposals can provide valuable lessons for similar major infrastructure projects.

RESOURCE DISCOVERIES IN THE ARCTIC AND THE POLITICAL SETTING

Exploration in the late 1960s resulted in the discovery of vast onshore and offshore deposits of oil and natural gas in the Beaufort-Mackenzie region (Northern Oil and Gas Directorate 1995, 65). Rising global prices following the energy crisis of the early 1970s made development and transportation of Alaskan and northern Canadian gas economically feasible. The industry developed three principal pipeline proposals in the 1970s to deliver gas from the region: the Canadian Arctic Gas proposal by the Canadian Arctic Gas Pipeline (CAGPL); the proposal by Foothills Pipe Lines Ltd. with a route along the Mackenzie Delta and no provision to carry Alaskan gas; and the alternative Foothills (Yukon) proposal (also known as the Alaska Highway Project), which evolved later in the 1970s with a Yukon and Alaska route to move only Alaskan gas (Lawrence 2004, 8). Among competing proposals to deliver northern gas to southern markets, initially the CAGPL proposal drew the most attention. The proposal was to build a

[1] Not all Canadian residents equally benefited from the completion of these major infrastructure projects. Much of the land of the Plains Indigenous nations was signed away during the constructions of the Trans-Canada Highway and the Canadian Pacific Railway. Between 1880 and 1885, about 15,000 Chinese labourers worked on the construction of the Canadian Pacific Railway in very harsh conditions for little pay.

pipeline from Prudhoe Bay, Alaska across northern Yukon, following south along the Mackenzie River Valley and through Alberta to the United States. This would be the longest pipeline project ever built and was considered "the greatest construction project, in terms of capital expenditure that private enterprise has ever undertaken, anywhere" (Berger 1977, 16).

This was a time of rapid change on the world energy scene. While demand for energy resources was rising and many Western countries faced substantial shortages, Canada had a distinct advantage with convenient access to the newly discovered deposits of oil and natural gas in Alaska and Canada's Mackenzie Delta. To co-ordinate the federal government's response to these developments in the North, an interdepartmental Task Force on Northern Oil Development was formed in 1968. Although the task force had an official mandate to assess the feasibility and desirability of northern development projects, Indigenous people and public interest groups were excluded from this process. Private enterprise's goals were favoured over public interest, giving "the most development-minded officials in Indian Affairs and Northern Development unfettered opportunity to 'open the North'" (Dosman 1975, 25).

The federal government clearly supported a pipeline. The government justified its stance by stating the potential benefits to Canada from taking advantage of rising continental demand for oil and natural gas. In 1971, Jean Chrétien, then-minister of Indian Affairs and Northern Development, declared the government's willingness to back natural gas and oil pipelines through the Mackenzie Valley: "We in Canada would welcome the building of such a gas pipeline through our country and would do everything that is reasonable to facilitate this particular development … An oil pipeline would also be acceptable. In other words, if it is felt desirable to build an oil pipeline from Prudhoe Bay direct to the mid-continent market, then a right-of-way through Canada I am sure can, and will be made available" (Laxer 1973, 15). Further support came from then-prime minister Pierre Elliott Trudeau. He described his perspective on the project as: "It is expensive, but so was the Canadian Pacific Railway a century ago. Is it too big a project for Canada? Only in the view of those who have lost faith in what Canada is all about" (Laxer 1973, 15).

Another important discussion at the time was the possibility of the Mackenzie Valley Pipeline eventually expanding into an energy and transportation corridor. In an election campaign speech in Edmonton on April 28, 1972, Trudeau announced plans for the construction of an all-weather highway along the Mackenzie Valley (El Paso Herald Post 1972); the route of the highway would be determined carefully "so that it will be indispensable when oil and gas pipelines are built along the Mackenzie Valley" (Hutchinson 1992, 26). In anticipation of official applications for pipeline permits, in 1972 the federal government tabled the Expanded Guidelines for Northern Pipelines in the House of Commons. The guidelines (which at the time formed the basis of Canada's pipeline policy in the North) envisaged a transportation corridor along the Mackenzie Valley which might include a highway, a railroad, electric power transmission lines and telecommunication facilities in addition to oil and gas pipelines in the long run.

The promotion of the Mackenzie Valley route by key cabinet members was partly in reaction to the alternative Alaska route U.S. officials were considering (Stabler and Olfert 1980, 378). While Canadian officials continued their efforts to promote the Mackenzie Valley route, the U.S. Congress passed the *Alaska Natural Gas to Transportation Act* to expedite the process for the selection and construction of a pipeline from Alaska. The shortage of natural gas and rising prices were the reasons for the pressing need in the U.S. to reach a decision on the route (NEB 1977a, 58). However, although the legislation was in place, the plans to deliver Alaskan gas to the lower 48 states along the Alaska Highway and through Canada were stalled for years. Efforts were later discontinued as the natural gas prices were too low to cover the costs of such a project (Nash 2015).

The changing political climate and rising public scrutiny of major projects proved that the construction of a pipeline through the Mackenzie Valley wouldn't be straightforward in Canada either. In the 1972 election, Trudeau's Liberals formed a minority government and were dependent on the New Democratic Party's (NDP) support, but the NDP was opposed to the construction of the Mackenzie Valley Pipeline (Dosman 1975, 183). In response to public concern over the pipeline's potential social, economic and environmental impacts, a series of inquiries were initiated (Bregha 1979, 46–47). Stabler and Olfert (1980, 381) mention that the balance of power in Parliament was likely a reason for the increased level of regulatory and political scrutiny, although there is no direct evidence that these inquiries were commissioned as part of a deal with the NDP to secure their support of the Liberals.

THE INQUIRIES

Three main official inquiries were carried out in the 1970s to assess the pipeline proposals. The Pipeline Application Assessment Group (PAAG) carried out the primary assessment of the CAGPL's application in 1974. The PAAG was composed of a group of experts assembled by the federal government. These were "sociologists, economists, engineers, and environmental scientists drawn from the federal and territorial governments assisted by outside experts" (Gamble 1978). The PAAG's task was to examine the socioeconomic, technical and environmental effects of the CAGPL proposal and prepare a report to assist other government departments and agencies concerned with the application and for the interested public (PAAG 1974). In its report, the PAAG presented detailed impact analyses on socioeconomic and environmental issues, such as potential changes during and following the completion of construction in cost of living, traditional activities, provision of social services and pollution; and evaluated potential engineering challenges related to the physical environment. In the document's final section, the PAAG made 56 specific requests related to the pipeline's design, construction and operation that the proponent would have to address. For the most part, the PAAG's requests were related to the environmental impacts, such as contingency plans to cope with the release of toxic materials and conservation of scarce natural resources required by local communities (PAAG 1974, 413–442).

The Mackenzie Valley Pipeline Inquiry was initiated concurrently with the PAAG's establishment. In March 1974, the federal government appointed Justice Thomas Berger as the commissioner of the Mackenzie Valley Pipeline Inquiry to carry out another formal investigation of the social, environmental and economic impacts of the construction, operation and subsequent abandonment of a pipeline in the region. Berger was authorized to "hold hearings, to summon witnesses and examine them under oath, to choose appropriate 'practices and procedures,' to engage expert advice — all according to what he deemed necessary, advisable or expedient apparently without either a ceiling on the costs, or a specific time limit" (Stabler and Olfert 1980, 382). Berger expanded the inquiry's scope to include a comprehensive assessment of the development of northern Canada. Bregha (1979, 115) notes that the Berger Inquiry "was much more than an inquiry into a gas pipeline, it became an inquiry into the future of the North, and finally an inquiry into the future itself."

Berger's final report was published in 1977. He recommended a 10-year moratorium on development along the Mackenzie Valley portion of the pipeline. Recognizing that postponement would not mean renouncing Canada's northern energy supplies, Berger (1977, 200) suggested that Canada could, "proceed to build a pipeline at a time of its own choosing, along a route of its own choice, by means it has decided upon, and with the cooperation of the native people of the North." He recommended the moratorium to allow sufficient time to work out the engineering and logistics challenges, settlement of Indigenous land claims and establishment of new programs and institutions in the North (Berger 1977, xxvii).

Berger also acknowledged the possibility of a transportation corridor through the Mackenzie Valley. He expressed concern over the difficulty of predicting the cumulative effect of such a complex and multi-stage development in the region and suggested that any attempt to assess the impacts piecemeal along the northern Yukon or the Mackenzie Valley corridors should be resisted (Berger 1977, 9–10).

Berger recommended that no pipeline should be built and no energy corridor should be established across northern Yukon for environmental and technical reasons. Instead, he said a national wilderness park should be created in northern Yukon in co-operation with the Indigenous communities to protect the environmentally sensitive region (Berger 1977, 46). Following these suggestions, two national parks — Ivvavik (previously Northern Yukon National Park) and Vuntut — were established in 1984 and 1995. Both were established in accordance with the terms of the Inuvialuit and Vuntut Gwich'in comprehensive land claims agreements (INAC 1984, 10; INAC 1992, 71). Berger (2001) later stated in retrospect that since both parks were part of the land claims agreements, they were constitutionally entrenched, meaning their boundaries and governance rules could not be altered without constitutional amendments, significantly lowering the possibility of infrastructure development in northern Yukon.

The results of the inquiry received mixed reactions from the public, politicians, media and other interest groups. While some parties criticized Berger for exceeding his mandate and for starting the inquiry with preconceptions about pipeline development

in northern Canada (Urquhart 1977), others commended him for his approach and for revealing that public input was essential to an assessment process (Gamble 1978). Although initially a 10-year moratorium on the construction of the Mackenzie Valley Pipeline was put in place as Berger suggested (Black 2002), in the early 1980s, not long after the completion of the inquiry, Enbridge's Norman Wells Pipeline (Line 21) was constructed in the region and has been in operation since 1985.

In April 1975, one year after the start of the Mackenzie Valley Pipeline Inquiry, the National Energy Board (NEB) appointed a panel to hear all competing applications. Following 13 months of hearings, the NEB issued a comprehensive report covering issues related to the need for a pipeline in the region, technical feasibility, financial and economic matters and the socioeconomic and environmental changes a pipeline could bring to the region (NEB 1977a, 13). The report's opening statement pointed out the issue's complex nature:

> Never before has the Board been faced with such a complex and difficult task in making a decision on applications before it. This is not only because of the immensity of the projects themselves and their importance to all Canadians, but also because of the magnitude of the potential socioeconomic impact on the peoples of the north and the critical concerns related to the protection of the Arctic environment (NEB 1977a, 57).

Adding to these complexities, as the NEB mentioned, was the U.S. government's intention "to move expeditiously on a decision to connect Alaska gas to United States markets in the south." While the Board asserted that "undue delay in reaching a decision in Canada would have the effect of foreclosing the opportunity for Canadians to choose a course of action which would be beneficial" to Canadians, it also acknowledged the conflict between the need for a prompt decision and the time required for the Indigenous land-claim settlements (NEB 1977a, 58). The report mentioned this "incompatibility between the urgent US need to reach a decision on the connection of Alaska gas and the Canadian need to take more time to reach wise decisions in resolving the difficult and complex problems of northern land claim settlements" as a factor in creating the "highly-charged" climate in respect of land-claim settlement processes (NEB 1977a, 59).

In its report, the NEB reviewed the three applications and explained the grounds for decision for each application (NEB 1977a, 164–173). The Board found that the Foothills pipeline was not economically justified and not the lowest cost alternative available (NEB 1977a, 164). The CAGPL proposal was denied because the route along the coast of northern Yukon and the Mackenzie Delta was environmentally unacceptable (NEB 1977a, 164). The Foothills (Yukon) project was considered the best alternative. It was issued a conditional certificate requiring further engineering design and the applicant's commitment to carry out additional socioeconomic and environmental studies (NEB 1977a, 165–169). However, the Board emphasized the uncertain estimates of oil and gas reserves in the Mackenzie Delta and observed that "five years later, the expectation

of large finds of oil and gas in the Delta and Beaufort Sea are much reduced … at this time, the prospect of an oil pipeline and hence an energy corridor appear to be somewhat remote" (NEB 1977b, 187).

THE IDEA'S DEMISE

Despite losing momentum, the idea of a pipeline along the Mackenzie Valley was not scrapped completely. Resource explorations continued in the 1980s and 1990s. During this period, a number of major land claims in the Northwest Territories were settled as Berger recommended in the Mackenzie Valley Pipeline Inquiry.[2] In 2003, the idea for a pipeline along the Mackenzie Valley was revived once more as the Mackenzie Gas Project. A large joint venture of oil and gas companies submitted their proposal to the NEB. The project proponents included several large oil and gas companies such as Imperial Oil Resources Ventures Ltd., Exxon Mobil Canada Properties, Shell Canada Ltd., ConocoPhillips Canada Ltd. and the Aboriginal Pipeline Group (Mackenzie Valley Aboriginal Pipeline Limited Partnership), formed by a consortium of Indigenous governments and organizations. The Aboriginal Pipeline Group was created in 2000 to represent the interests of the Indigenous people of the Northwest Territories in the Mackenzie Gas Project and became a full participant in the project with a 34 per cent share after three years of negotiations.

The proposed project included three natural gas fields: 1) the "Anchor Fields," in the Mackenzie Delta; 2) the Mackenzie Gathering System, consisting of gathering pipelines from the Anchor Fields to a processing facility near Inuvik and a natural gas liquids (NGLs) pipeline from Inuvik to connect with the existing Norman Wells oil pipeline at Norman Wells; and 3) an approximately 1,200-km pipeline to transport gas through the Mackenzie Valley to northern Alberta.

A joint review panel was established with members from the federal, territorial and Indigenous governments in 2004 to hold public hearings and assess the Mackenzie Gas Project proposal's environmental, social and economic aspects. The panel's review took several years, from 2004 to 2009. The panel approved the project in its final report, considering its cumulative impacts with related future developments. The panel concluded that "the Mackenzie Gas Project and the associated Northwest Alberta Facilities would provide the foundation for a sustainable northern future" and "without the project, the opportunities for economic and social improvement would be missed, without any corresponding improvement in the prospects for environmental stewardship" (Joint Panel Review 2009, vi). However, the panel emphasized that approval was conditional on the implementation of 176 recommendations, including establishment of project targets for greenhouse gas emissions, appropriate spill

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[2] The Dehcho First Nations land claim and self-government agreement negotiations remain unsettled and present a significant barrier to resource development in the area. For more information on the outstanding terms of the agreement, see Dehcho First Nations (2017). The Dehcho negotiation process began in 1999. In 2019, the Dehcho First Nations lands and resources negotiations were put on hold to focus on other outstanding terms on education, health and governance (Brockman 2019). The Pehdzeh Ki First Nation in Wrigley, NWT, left the Dehcho First Nations in 2020 to start a separate land-claim negotiation process (Bird 2020).

response procedures and plans for monitoring wildlife. The project received federal approval on March 11, 2011.

Construction was supposed to begin by the end of 2015. In 2015, citing the challenging natural gas market conditions, Imperial Oil Resources Ventures Ltd. applied for a six-year extension for the project's conditional approval, which gave the proponents until the end of 2022 to begin construction. Despite receiving the NEB's approval, the joint venture partnership led by Imperial Oil decided not to proceed with the project and dissolved the partnership in December 2017. In a news release, the members of the joint venture explained the reasons for this decision as the changing market conditions, such as the decline in natural gas prices and the growth of unconventional gas supplies made possible by advances in new technologies like hydro-fracking.[3]

CONCLUSION

A combination of factors caused the Mackenzie Valley resource corridor to be shelved in the 1970s. Due to the urgency that the energy crisis created, the federal government initiated the regulatory processes for the project's development without considering solutions for long-standing issues like the Indigenous land-claim settlements. Initially, the federal government pushed a single routing option for the project without alternatives or a proper evaluation of the risks associated with the route. The Mackenzie Valley Highway was extended in the 1960s and 1970s to support resource explorations in the Beaufort Sea and pipeline construction before the assessment of the development projects was complete (Berger 1977, 15). This created public opposition to the project. The federal government also failed to develop trust among Canadians that it had the public's best interests in mind by going forward with the project. Berger (1977, 11) explains this as "[t]he risk is in Canada. The urgency is in the United States." After years of consultations, inquiries and assessments, the project was revived again in the 2000s, only to be cancelled later, this time due to unfavourable market conditions.

It is also important to recognize and acknowledge the patterns that shape and lead debates around major infrastructure investments in Canada's history. Describing the complex history behind the creation of the TransCanada mainline, Kilbourn (1970, 11) provides a striking list of these:

> Any account of its (TransCanada Pipeline's) long struggle to be born inevitably raises most of the classic issues in Canada's survival as a nation: American economic influence and the nature of Canadian-American relations; the debate between north-south continentalism and east-west nationalism; the questions of transportation and national unity, of energy and national growth, of control over natural resources and their exploitation; the latent conflict between western producer and eastern consumer … the problem of public versus private

[3] Imperial Oil, "Mackenzie Gas Project Participants End Joint Venture," News Release, December 22, 2017, https://news.imperialoil.ca/news-releases/news-releases/2017/Mackenzie-gas-project-participants-end-joint-venture/default.aspx.

> enterprise … the connections between business and politics and the role of regulatory bodies between them; and the place of popular feelings, pressure groups and the press in the difficult matter of making decisions on complex issues of great national importance.

Years after this quote, the same dilemmas and issues still dominated the Mackenzie Valley Pipeline debate until it became no longer viable.

Some important lessons from the history of the Mackenzie Valley Pipeline are applicable to infrastructure development today in Canada. Although regulatory scrutiny is important for major infrastructure projects, long delays between project proposal, review and approval discourage private capital investments by driving up costs for project proponents. Long delays are particularly crucial in determining whether a project with a small profit margin is constructed or abandoned. Technological progress doesn't pause during lengthy regulatory processes. Innovation may increase competition and make a project economically unfeasible before being implemented. Another issue that leads to long delays in project approvals is the multiplicity of approval requirements from different levels of government, all of which are subject to different political cycles. In addition to the political, economic and technological uncertainties created by lengthy processes, the unsettled Indigenous land claims present another important barrier to long-term planning of infrastructure in Canada. The inquiries on the Mackenzie Valley Pipeline proposals emphasized the importance of settling the land claims before moving forward. All of these factors at play in determining the final outcome of the Mackenzie Valley Pipeline idea still present ongoing challenges for infrastructure development. Without resolving these issues, there are limited windows of opportunity for major infrastructure projects in Canada.

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