EXAMINATION OF THE BENEFITS OF CROSS-BORDER REGULATORY HARMONIZATION FOR U.S./CANADA NATURAL GAS PIPELINES

PHASE 1 REPORT
OPPORTUNITIES FOR ENHANCING VALUE IN U.S./CANADA NATURAL GAS PIPELINE RELATIONSHIPS

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MARCH 2005

Executive Summary

Purpose and Objectives:

Canadian natural gas supplies over 15% of United States needs through an interconnected pipeline system with 18 border points. The robust and relatively seamless North American market for natural gas that has developed around this pipeline network has been made possible by complementary energy and regulatory policies in both countries. The policies that characterize this enviable trade relationship have undergone much change in the 47 years since the Westcoast pipeline connected with Northwest Pipeline to commence the first significant natural gas exports from Canada to the United States.

To satisfy anticipated growth in demand for natural gas in both countries, particularly in power generation, investments in new and existing pipelines and storage infrastructure on the order of approximately US$61 billion in constant 2003 dollars will be required by the end of the next decade.[1] While there is the possibility of additional conventional supply, the maturity of existing North American basins suggests that growing demand will be satisfied by unconventional supplies (coal bed methane and tight gas); offshore sources as liquefied natural gas (LNG); and frontier resources from Alaska and the Mackenzie region of the Canadian Northwest Territories. In addition, cross-border pipeline operations will in the future be affected by various economic forces, security concerns, and national and international energy issues.

In these circumstances, a continental approach to these challenges, which provides for the most seamless pipeline transportation possible, will prove to be in the public interest. Accordingly, measures that can achieve greater synergy in Canadian and U.S. regulatory policies, practices and processes should be encouraged.

In late 2003, the INGAA Foundation sought proposals to study opportunities for enhancing the harmonization of pipeline regulation between the two nations. In the context of this study, harmonization may be defined as "achieving compatible or uniform regulatory requirements, standards and processes across jurisdictions." Effective initiatives to harmonize pipeline regulation should enhance the clarity, predictability, practicality, flexibility and efficiency of regulatory requirements, standards and processes and the timeliness of decisions.

The first phase of this cross-border regulatory harmonization study has been devoted to assessing issues, assigning priorities and making recommendations for further work in four broad areas of inquiry: (1) certification, (2) construction, (3) design and operations, and (4) terms and conditions of service. It is contemplated that the second phase will involve an in-depth analyses of the issues and the development of detailed recommendations for the consideration of policy makers and regulators.

[1] Energy and Environmental Analysis, Inc. An Updated Assessment of Pipeline and Storage Infrastructure for the North American Gas Market: Adverse Consequences of delays in the Construction of Natural Gas Infrastructure. (EEA Study) Prepared for the INGAA Foundation, Inc., July 2004, page 8.

Results of Phase 1

Several opportunities for cross-border regulatory harmonization were identified in the course of interviews with government officials, regulators, and participants and other stakeholders in the pipeline industry. The following are the priority areas for further assessment or action that emerged from these interviews.

Energy Policy and Legislation

In support of the development of a North American energy policy, encourage energy and trade officials from the United States, Canada and Mexico to meet on a regular basis to assess energy policy trends, identify necessary legislative and policy initiatives and address concerns arising in the energy trading relationship between the three countries.

Certification

In support of harmonizing the pipeline certification processes:

- encourage and support streamlining initiatives by regulatory leaders in Canada and the United States, such as the recent Memorandum of Understanding between the Federal Energy Regulatory Commission (FERC) and the National Energy Board (NEB), which are intended to promote the public interest through increased efficiency, and expedited and coordinated action on significant infrastructure projects;

- focus efforts on obtaining single-window regulatory processes[2] within federal jurisdictions and regulatory cooperation plans between federal and state regulatory agencies and federal and provincial regulatory issues; and

- assess specific opportunities for achieving alignment on environmental impact assessments for cross-border pipelines.

Construction

To ensure the availability of trained and qualified pipeline construction contractors and personnel, especially for major frontier pipeline projects:

- take initiatives with governments, educators and labor organizations to train and qualify workers; and

- remove obstacles to the movement of contractors, labor and equipment across borders.

[2] A unique point of access through which all regulatory requirements are coordinated.

Design and Operations

To enhance harmonization of design and operating standards:

- renew efforts to address differing design factors for pipelines at the same class locations after discussion with the Interstate Natural Gas Association of America (INGAA) and the Canadian Energy Pipeline Association (CEPA) to determine the status of this issue on their respective regulatory reform agendas; and

- encourage the U.S. Office of Pipeline Safety (OPS) and the NEB to develop a memorandum of understanding similar to the one between the FERC and the NEB noted above to enhance communication and cooperation on design and operations issues.

Next Steps

To realize the potential offered by these opportunities for cross-border regulatory harmonization, first and foremost increased communication and collaboration between policy makers, regulators, the pipeline industry and other stakeholders needs to be fostered. Building on existing regulatory frameworks and initiatives should be the initial focus as a means of overcoming resistance to change, a perennial barrier to harmonization.

Committed champions will be required to advance this initiative successfully. It is therefore recommended that the INGAA Foundation confer with INGAA and CEPA before proceeding with Phase 2 of this study to determine the interest of these pipeline industry associations, individually or collaboratively, or their individual company members in championing the identified harmonization opportunities now or in the future. If such is the case, the further work contemplated in Phase 2 could be undertaken in support of their efforts.

1. Introduction

Governments in Canada and the United States today are deeply engaged in examining regulatory harmonization. From "smart border" to "smart regulation" initiatives, the challenge is to enhance effective and efficient movement of goods and people critical to the world's largest bilateral trading relationship. In 2003, total merchandise trade between Canada and the United States was US$394 billion.

Major natural gas pipelines interconnecting at the Canada/U.S. border are federally governed, cross more than one state or province, and deal with a complex web of regulation across multiple jurisdictions.

Despite the challenge of dealing with multiple jurisdictions within and across two countries, Canada/U.S. trade in natural gas has flourished and the pipeline network that supports this trade operates, in large part, seamlessly. The natural gas industry, its pipeline sector, governments and regulators have been "ahead of the curve" in removing impediments to trade and streamlining regulation. Effective free trade in natural gas predates the United States/Canada Free Trade Agreement of 1984.

One might then ask why there would be a need to discuss cross-border regulatory harmonization for Canada/U.S. pipelines. The reason is obvious: to enhance the capability of this infrastructure to meet future natural gas needs in North America effectively, efficiently and on a timely basis.

Global economic forces, continental security concerns and national energy issues have given rise to consideration of a North American energy strategy. The Canadian Council of Chief Executives, the Woodrow Wilson International Center for Scholars and the Institute for Sustainable Energy, Environment and Economy are some of the organizations examining the efficacy of initiatives to create synergistic efficiencies through continental harmonization. The pipeline industry needs to understand and assess the implications of these initiatives as well as participate in their advancement.

1.1 The Natural Gas Picture

Natural gas demand in the United States is expected to grow to approximately 30 Tcf by 2020, which is an increase of 38% or 1.9% per year.[3] It is also possible that, at sustainable pricing levels, requirements for natural gas could increase beyond this level once consumers are convinced that a long-term source of supply will maintain "real" prices at levels that justify the significant expenditures necessary to use natural gas as a base fuel. At the same time, the advancing maturity of existing natural gas supply basins represents a challenge for industry and policymakers, dictating that access to non-traditional and frontier supply sources be developed and connected in a timely manner.

[3] EEA Study, page 3.

Along with others, the INGAA Foundation has recently identified frontier areas in the Canadian Mackenzie Valley and in Alaska as central future strategic supply options. The increased use of LNG is also anticipated to assist in maintaining reliability of gas supply, forecasted to contribute over one TCF annually to meet lower 48 consumption.

Natural gas remains the fossil fuel of choice provided prices are sufficient, sustained and stable. Obviously, with increased demand and the available supply to meet those needs, significant new infrastructure in the natural gas industry will be necessary to supplement existing capacity. From gas exploration to processing to transportation, the natural gas sector, with appropriate encouragement from governments, faces the daunting task of constructing and financing major energy projects in a cost-effective, efficient manner, while having to manage potentially scarce resources in key sectors (e.g., the labor market).

1.2 The Purpose of the Study

One critical factor affecting project costs for the pipeline industry is the length and complexity of certification processes in both countries and factors which may cause delay post-certification. Seeking regulatory approval of a major facilities project can run to many months, perhaps years in some cases, and millions of dollars, with significant additional time and cost factors for northern pipelines. The prospect that the regulatory process may take an additional year or two could be a deterrent to a major project of the kind contemplated in the North American frontier. Delays and uncertainty in regulatory processes have a ripple effect on the entire project cost structure, particularly if there is demand for a specific in-service date and possible commercial penalties if this date is not met, and where alternative project development activities are proceeding in parallel. Indeed, attracting financing for a multi-billion dollar project is not likely to occur where significant uncertainty, potentially translating to substantial cost overruns, remains in the regulatory approval process. The consumer cost impacts of delay are also significant, estimated to be in excess of US$200 billion (constant 2003 dollars) in higher gas prices by 2020 assuming a two-year delay in natural gas infrastructure construction.[4]

It was this concern, along with cross-border issues related to coordinating U.S./Canadian pipeline design, construction and operating standards, that led the INGAA Foundation to invite proposals for a study focused on key cross-border harmonization issues for the natural gas pipeline sector. To ensure a timely response to these issues, the Foundation proceeded with a study in two phases, with an initial phase devoted to identifying harmonization opportunities that could be, to be assessed in-depth in a further phase. This report culminates the first phase of the study.

This report is not an academic work nor is it a detailed comparison of the specific requirements in each country's separate regulatory processes. Rather, by framing and

[4] EEA Study, page 10.

prioritizing the key issues and identifying potential actions that could be taken to improve regulation between Canada and the United States, it is intended to be a practical stepping stone to greater cross-border regulatory harmonization.

1.3 Methodology

The foundation of this assessment is a review of recent literature on regulatory harmonization, interviews with a broad cross-section of parties with an interest in this subject, and the author's 25 years of experience with regulatory policy and issues as a professional in the pipeline industry. Over this period, pipeline and energy regulation has evolved from a highly regimented, prescriptive system in which pipelines were often instruments of public policy. Today's mixed model, which combines elements of market-based principles with regulatory oversight, is in a state of further transition. The emerging focus on goal-oriented or result-based regulation had its genesis some time ago but is now taking hold as an accepted regulatory principle.

Meetings were held with industry associations, regulators, government officials, environmental practitioners and pipeline industry participants. As the interviews were confidential, no comments are attributed to individuals or their organizations in this report. All are owed a debt of gratitude.

1.4 Definition of Terms

For purposes of this study, **harmonization** is defined as "achieving compatible or uniform regulatory requirements, standards or processes across jurisdictions". It is differentiated from **streamlining** which is defined as "making regulatory requirements, standards and processes simpler or more efficient within individual jurisdictions". The distinction is noteworthy in that achieving harmonization may not necessarily result in simpler or more efficient regulatory requirements, standards or processes. However, it is desirable that harmonization and streamlining efforts work in tandem to enhance the regulation of pipelines. It is also desirable that least common denominator solutions are not chosen to achieve harmonization as there would be no benefit if both jurisdictions adopt the least efficient alternative. Accordingly, a form of benefit/cost analysis employing both quantitative and qualitative measures should be applied to harmonization initiatives in order to ensure real value is being created before they are pursued.

The measures of effective cross-border regulatory harmonization, as they apply to the pipeline industry, include:

- **clarity** so that requirements, standards and processes may be quickly and easily understood;
- **predictability** so that the outcome of regulatory processes may be reasonably forecast on the basis of observation, experience or reason;

- **practicality** so that the required actions are realistic and achievable with reasonable cost;

- **flexibility** so that requirements, standards and processes are adaptable to new, different or changing circumstances;

- **efficiency** so that requirements, standards and processes are productive without wasting resources and time; and

- **timeliness** in decision making so that projects, if approved, proceed opportunely.

Harmonization and streamlining are examined in the discussion which follows, as both are crucial to understanding and addressing cross-border regulatory issues. It is also a central premise of this study that, to warrant implementation, achievement of harmonization must create tangible value for the seamless movement of natural gas across the 49th parallel, measured on a cost/benefit or equivalent basis. Additionally, the achievability of harmonization initiatives is assessed, along with the time and effort likely to be required.

2. Policy and Legislative Frameworks

2.1 The Current Situation

The natural gas industry has been at the leading edge of energy policy synergy between Canada and the United States, notwithstanding that the legislative frameworks in the two countries are different in many respects. The strong natural gas trading relationship the two countries enjoy is a testament to international cooperation and the virtually free flow of natural gas across their borders. This cross-border movement of natural gas has been facilitated by simpler, quicker and more efficient regulatory processes for approval of exports and imports on both sides of the border. These harmonization and streamlining initiatives, with attendant efficiency gains, were managed by each country in its own unique manner. They serve as examples for further advances that provide value for all involved parties.

The *Natural Gas Act* of 1938 (United States) and the *National Energy Board Act* of 1959 (Canada) are the principal statutes upon which pipeline regulation is founded in each country. Amended from time to time, they have survived the test of time largely through the development of regulatory policies, practices and procedures that have given effect to legislative goals pragmatically and practically. Reasonably clear and predictable regulatory requirements and processes have developed over time, notwithstanding sometimes poorly crafted or dated legislation. Generally speaking, regulators and regulatory practitioners have been able to manage within these legislative frameworks,

however, not always without some degree of inefficiency, rigidity, higher costs and delay.

2.2 Opportunities for Harmonization

The initial question to be addressed is whether there are any cross-border harmonization issues that could be addressed through changes in statutory frameworks for pipeline regulation in Canada and the United States. While harmonization might be enhanced through the existence of a single cross-border regulatory agency, parties who were interviewed agreed that this objective was impractical and unachievable. Starting from the premise that each government would be unwilling to relinquish its sovereign rights, it is a small step to appreciate that the fundamental shifts in energy policy required to put a cross-border regulatory body in place governed by parallel legislation in both counties would meet political and bureaucratic resistance. It would also take considerable time and effort to achieve for what were seen as limited additional tangible benefits given that substantive legislative changes have not been required in the past to facilitate today's largely unfettered cross-border natural gas trade.

Any interest in significant changes in the statutory frameworks applicable to the pipeline industry appears to be part of a broader vision of a future North American energy strategy. Discussion and assessment of such an energy strategy is happening today and is expected to continue, spurred on by the recognition that new international challenges are on the horizon. Economic forces increasingly act beyond national boundaries and global opportunities arise more regularly. These trends are expected to continue and will alter the North American energy landscape.

As noted, the energy industry and non-governmental organizations are leading discussions regarding a new North American energy policy in the near term. The governments of Canada, Mexico and the United States, through the North American Energy Working Group (NAEWG) launched at the Summit of the Americas in April 2001, are also engaged in an important collaborative dialogue on a secure North American Energy future and improved economic and trade relationships. The NAEWG's mandate is to foster communication among the governments and energy sectors on energy related matters of common interest and to enhance North America's energy and trade connections. In January 2005, the NAEWG's Experts Group on Natural Gas Trade and Interconnections identified a lack of smoothness in the regulatory interface among the three countries as a challenge currently facing the natural gas industry. It noted that "compatible guidelines and strategies among the three countries would enhance transparency and encourage a cooperative North American region, while respecting divisions of jurisdictional authority."[5] Significantly, the three nations agreed that "greater interaction among governments and with the private sector would lead to a better understanding of energy policies; endowing the industry with more effective strategies to

[5] North American Energy Working Group, Experts Group of Natural Gas Trade and Interconnections. North American Natural Gas Vision. (NAEWG Report) January 2005, page 13.

assure that supply meets demand and that there exists sufficient infrastructure to achieve this goal at the most efficient price."[6]

The success of these North American energy policy discussions will depend on the participation of champions among legislators, regulators and other appointed energy policy makers, and energy industry representatives who will stay focused on long-term objectives. The promise of public and private benefit will be essential to pursue such a major initiative. An excellent example of this kind of public and private sector commitment and effort was the development and implementation of the *Alaska Natural Gas Transportation Act* in the United States and the *Northern Pipeline Act* in Canada, originally enacted some 30 years ago to facilitate the development of a natural gas pipeline from Alaska to the lower 48 crossing Canada in response to a perceived emergency natural gas supply situation. The cooperative approach that was adopted to enact these complementary laws continued as circumstances necessitated. Flexible responses to new circumstances permitted the pre-building of certain facilities in Canada under the NPA Act which has served to enhance deliveries of Canadian natural gas to the United States.

To facilitate this emerging broader policy debate, it is recommended that the pipeline industry encourage energy and trade officials from Canada, the United States and Mexico to assess energy policy trends, identify legislative and other initiatives in support of the North American natural gas trading relationship, and address issues and concerns with the energy industry. Affected states and provinces could also be involved in such discussions as appropriate to foster policy and legislative harmonization across all boundaries.

While immediate energy policy or legislative changes were not identified as priority matters, continuous improvement of regulations affecting pipelines was supported to meet objectives of clarity and efficiency and timeliness in decision making. Potential areas for action are addressed in the following sections.

3. Certification of Pipeline Construction and Operation

3.1 The Certification Process – Opportunities for Harmonization

The need for new pipelines and the expansion of existing pipelines to meet growing natural gas demand was discussed in section 1.1. Certificates of Public Convenience and Necessity are the authorizations granted by regulators to permit the construction and operation of pipelines found to be needed and in the public interest following an application review process. A great deal of the information that is filed by pipelines in the certification processes administered by Canadian and United States is similar. Filing requirements change from time to time and, to the extent such changes may affect pipelines that interconnect at the Canada/U.S. border, they should be done on a

[6] NAEWG Report, page 13.

collaborative basis. No priority need to harmonize specific information requirements was identified at this time.

Generally, the regulatory process for certification of conventional pipeline facilities operates effectively. The FERC and the NEB procedures, while different in many respects, are well understood, predictable and major project planning can be capably managed. As discussed in section 2.2, a single regulatory agency is not believed necessary to achieve cross-order regulatory harmonization. On the other hand, the continued dedication of regulatory leaders to communication, consultation and cooperation was highlighted as essential to achieving regulatory harmonization with existing regulatory structures.

While there are formal agreements such as treaties that underpin gas trade between Canada and the United States, informal or less formal agreements can often be used to pursue regulatory harmonization. A current positive initiative is the agreement by the chairs of the national energy regulatory agencies in the United States, Canada and Mexico to meet on a regular basis to exchange information on regulatory issues, policies and processes. Such exchanges will hopefully consider processes for the review of facilities applications and means of dealing with incompatible results, especially as they can lead to project delays. Additionally, regulators may wish to discuss other matters such as common terminology, coordinated timing of review processes for border-crossing projects, and ways to facilitate common design and operation standards as well as terms and conditions of service for Canadian and United States pipeline which interconnect.

In this regard, the execution on May 10, 2004 of a Memorandum of Understanding between the FERC and the NEB is particularly encouraging. The principal provisions of the MOU are found in Articles 4 and 5:

> 4. The parties further recognize that appropriate coordination of their efforts could promote the public interest through increased efficiency, expedited and coordinated action on significant infrastructure projects, and cost savings to both the public and regulated entities. The parties agree that the regulatory efforts of both the NEB and FERC will benefit from increased communication and cooperation concerning the timing and other procedural aspects of related matters that may be pending before both agencies.
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> 5. The parties contemplate that coordinated reviews may be considered in cases where related matters are pending before both agencies. The parties further contemplate that the two agencies will, where practicable, coordinate the timing of related decision making, including but not limited to coordinating the submission of evidence, the timing of developing findings of fact and conclusions of law, and the ultimate resolution of related matters.

It is recommended that cooperation initiatives of this sort by regulators be encouraged and supported by pipeline industry participants and expanded where possible. For example, regulators may wish to consider post mortems of project reviews in which the views of all interested parties could be obtained as input to continuous improvement.

Interestingly, on both sides of the border, coordination among federal agencies within each country and between federal/state and federal/provincial levels of government was identified as a primary target for harmonization. The common concern was impact on project timing. Project timing is particularly critical in the context of attaching major new supply from northern frontiers through the timely coordination of in-service dates.

The streamlining of the certification process has been most dramatic in the United States, where hearings are rarely required to review new facilities. The key to the elimination of administrative litigation has been reliance on contracts as evidence of market need and incremental pricing policy. In addition, the introduction of Preliminary Findings, which determines pipeline feasibility on non-environmental issues, and the more recent introduction of a pre-filing process to identify and resolve issues at an early stage, have helped to obviate the need for public hearings. While it remains an open question as to whether pre-filings will reduce the length of the overall process from start to finish, it is clear that the less formal up-front procedure can assist in identifying and potentially enhancing understanding of issues at an early stage before positions harden. Even though this process step has not been tested in a contested forum, it is apparent from discussions that United States parties are pleased with the direction taken by the FERC.

However, it was suggested that states, often acting pursuant to delegated federal authority, now have the greater influence over the critical path for decisions particularly if they wait until the FERC has completed its review before initiating their own reviews. It is generally believed that this situation is driven by a belief on the part of state officials and affected local stakeholders that the federal authority will not consider the state's interests in its determination of the overall public interest and unwilling to cooperate in regard to overlapping boundaries of authority. It is recommended that (1) regulatory harmonization be encouraged through inter-jurisdictional task forces and inter-agency staff exchanges that will foster common understanding of issues and regulatory approaches, and (2) legislative solutions be explored. It is also recommended that the pipeline industry encourage such actions at both levels of government.

In Canada, companies are similarly confident in their ability to manage certification activities and to meet the requirements necessary to obtain regulatory approval for major facilities under the *National Energy Board Act*. In this regard, the NEB's Early Public Notification Process has the same effect as the FERC pre-filing, and pipeline companies believe that the Board has made efforts to coordinate in-service dates with the FERC.

However, two major uncertainties face pipeline projects in Canada today. The first is environmental assessment under the *Canadian Environmental Assessment Act*. While substitution of the NEB for the Canadian Environmental Assessment Agency and other Canadian federal authorities engaged in the review of the environmental impacts of

pipeline projects is contemplated under this law, such substitution has not yet occurred. More than five years have passed since the passage of this legislation and frustration is high with potentially duplicative and sequential environmental assessments by agencies in the same jurisdictional family. Efforts continue by CEPA and others to address this issue.

The second uncertainty arises from discharging the fiduciary obligation of the Crown (the federal government) to Aboriginal peoples when a decision of government abrogates or derogates from Aboriginal treaty rights. Approval of facilities applications may have such an impact. While the Canadian courts have not imposed this obligation on quasi-judicial tribunals, the NEB believes that it has a responsibility to ensure that appropriate government consultation has taken place before making a decision. It issued a memorandum of guidance which requires applicants to demonstrate that appropriate government consultation has taken place with Aboriginal peoples that could be directly affected by their proposed projects. It is unclear, however, how applicants are to make such demonstrations. Federal government departments affected by the memorandum are now conducting a pilot process to coordinate government consultation on energy projects that fall within the NEB's jurisdiction. This process is not yet complete and it is uncertain it will stand if contested. Energy industry participants in Canada continue to work with the NEB to address this concern. It is critical that application requirements on Aboriginal consultation be clarified as soon as possible so that the benefits of timely pipeline development can accrue to Aboriginal peoples as well as pipelines and consumers.

3.2 The Frontiers – Unique Challenges and Solutions that May Apply

The major regulatory challenge on the horizon in a cross-border context will be the connection of natural gas supply from Alaska to North American markets by pipeline. This existing proven reserve base exceeding 32 Tcf will help meet demand growth. The Alaska and the Mackenzie Gas pipeline projects are expected to require some $18 billion of investment in new pipelines,[7] not to mention related additional investment in gas production, processing, existing pipelines, and distribution facilities. Given the magnitude of this pipeline development endeavor and the important contribution it will make to meeting growing demand for natural gas in North America, it is important to examine, adopt and implement cross-border initiatives as soon as possible to facilitate the development of this basin.

A project of this magnitude crossing international borders will, in all likelihood, require unique approaches to regulation due to its complexity and stringent timelines. A project-specific regulatory regime can provide considerable support to this project from inception to completion, characterized by:

- a well defined and understood regulatory process;

[7] EEA Study, page 8.

- formal structures for cross-border harmonization and collaboration;
- flexible approaches to changing circumstances; and
- the development of performance standards and a focus on timely outcomes.

The classic model for this approach is the regulatory regime that was put in place for the Alaska Natural Gas Transportation System, a project approved in the late 1970s to deliver Alaskan gas to the United States. A treaty between Canada and the United States and new laws enacted in both countries enabled this harmonized regulatory structure without impairing jurisdictional sovereignty. It is characterized by the following essential elements:

- a strong collaborative component and personnel committed to effective consultation;
- authority for the single-window approach to establish and enforce timelines; and
- co-operative agencies.

As a case study, it illustrates effective regulatory harmonization. The regulatory review process is clear, understandable and predictable, as evidenced by its use in Canada to authorize new construction five times, most recently in 1998. Practicality and flexibility are the primary intent with a focus on streamlining and harmonizing requirements consistent with responsiveness to local, environmental and Aboriginal issues. Another feature is the ability to carry out detailed planning closer to construction rather than in the regulatory review phase, which provides opportunities to incorporate the latest design, environmental and construction procedures.

The recently applied-for Mackenzie Gas pipeline project will deal with eight regulatory agencies having a mandatory hearing process and six agencies with a direct interest in its certification. While a single-window agency is not being used to facilitate the review of this project, a regulatory cooperation plan has been implemented to harmonize and streamline information filing requirements and regulatory processes to the maximum extent possible while respecting the mandates and governing legislation of all involved regulatory agencies and opportunities for affected parties to exercise their rights of participation fully. This approach is expected by participants to provide timely decisions and, if the necessary approvals are received, allow project proponents to proceed with the connection of these important new reserves as soon as possible and practicable.

In October 2004, the United States Congress enacted the *Alaska Natural Gas Pipeline Act*, which outlines a specific timeline for the FERC's review and approval process for Alaska gas transportation proposals so the infrastructure may be constructed to meet rapidly increasing energy demand. Final FERC action on any Alaska gas transportation

proposal is required within 20 months after the FERC determines that an application is complete. In February 2005, the FERC issued a Final Rule on Regulations Governing the Conduct of Open Seasons for Alaska Natural Gas Transportation Projects, as required by this law.

3.3 Potential Applications of Frontier Regulatory Harmonization Models

It is recommended that regulators and pipeline stakeholders look to the pioneer Alaska model and the Mackenzie Gas regulatory cooperation plan in considering the evolution of their regulatory systems to facilitate their ability, on an optional basis, to authorize multi-jurisdictional pipeline projects in a coordinated and cooperative manner. The Alaska model permits regulators to consider initially the central issues that could affect a determination of public convenience and necessity determination at the macro level. Requirements and plans specific to post-certification may be considered later with input on site-specific matters from interested parties obtained at that time. This approach could produce an improved critical path plan for pipeline projects. It might also be more conducive to addressing local and environmental issues in a time-sensitive manner. While this approach may not be appropriate for all projects, it could usefully add to the menu of process choices available to regulators, project proponents and parties affected by the proposed project.

Although outside the scope of this study, given the frequency with which interviewees referred to issues regarding intra-governmental regulatory harmonization specific to Canada or the United States, it is recommended that a single-window approach be further examined for implementation within each federal regulatory process, using the FERC and the NEB as lead agencies. The White House Task Force on Regulatory Streamlining and the Canadian Smart Regulation initiative are ready-made platforms for the pursuit of a harmonized resolution to these issues. Indeed, in a recent report on actions and plans to achieve Smart Regulation, the Canadian Privy Council emphasized the importance of "getting the federal house in order" by promoting the development of regulation using a 'whole-of-government' approach.[8]

This single-window approach is, however, not currently suggested to promote regulatory harmonization among federal/state or federal/provincial jurisdictions given the low probability of success. Inter-jurisdictional issues at these levels are likely best addressed through collaboration and coordination models. An example is the plan achieved by the many regulators overseeing the Mackenzie Gas Project in the Canadian north.[9]

[8] Privy Council Office (Canada). Smart Regulation: Report on Actions and Plans. March 2005, page 8.
[9] Northern Pipeline Environmental Impact Assessment and Regulatory Chairs Committee. Cooperation Plan for the Environmental Assessment and Regulatory Review of a Northern Gas Pipeline Project through the Northwest Territories. June 2002.

4. Aboriginal Consultation

Some interview participants suggested that the potential for harmonization of Aboriginal consultation requirements and processes should be examined because issues of interest to Aboriginal peoples associated with pipeline projects transcend borders. Others believed that significant differences in the historical and legal context between Canada and the United States would significantly challenge such an initiative. While an alignment of Aboriginal consultation may be critical for some cross-border projects, the issues under discussion are likely to be case specific. A harmonization initiative in this area is therefore not recommended for Phase 2; however, it is recommended that pipeline industry associations encourage best consultation practices through an exchange on information and experiences between project proponents and Aboriginal peoples. It is also recommended that pipelines foster Aboriginal awareness among their employees and identify the benefits that can be mutually achieved through effective consultation and collaboration.

5. Environmental Impact Assessment

Environmental issues do not respect international borders. Examples are intuitive: air emissions, climate change potential, water quality and wildlife protection. Environmental impact assessment is a critical element of pipeline project reviews. The review processes applicable to federally regulated pipelines in both countries are similar. Environmental management procedures are also broadly similar. Responsibility for the preparation of an environmental impact assessment is a noteworthy core difference. In the United States, the FERC prepares this assessment, while in Canada it is prepared by the project proponent for review by the NEB and other responsible authorities. This difference is not sufficiently significant in relation to cross-border issues to warrant further investigation at this time.

Environmental issues can be complex, the discussion can be emotional, and the outcome of public consultation processes as part of the environment impact assessment can be uncertain. The assessment of environmental impacts of a cross-border pipeline project can further complicated by the involvement of multiple jurisdictions. For example, the GSX cross-border pipeline project to deliver gas to Vancouver Island appeared to be well understood and capable of meeting in-service targets in both countries in the normal course of events. The high level of unanticipated local participation in the NEB hearing processes lengthened the review process but the proponents nevertheless felt that the Canadian review process was the key milestone on the project's critical path. South of the border, however, the State of Washington, exercising delegated authority under the *Coastal Zone Management Act*, did not coordinate its review concurrently with the FERC Environmental Impact Statement, which extended the timeline of the review process by 14 months. The subsequent denial by the British Columbia Utilities Commission of a power plant on Vancouver Island that was to be served by the proposed pipeline created further cost and timing impacts as well as process uncertainty.

This abridged historical account illustrates the impact a lack of regulatory coordination can have on cross-border project timing, including reasonable target times for environmental impact assessments. It is recommended that specific opportunities to achieve alignment of environmental impact assessments of cross-border pipelines projects be studied in Phase 2.

6. Construction

The principal construction-related concerns identified in Phase 1 were: (1) the impending shortage of trained and qualified labor, and (2) barriers to the movement of contractors, their personnel, and equipment across borders.

There is likely to be pressure on contractor and labor availability for the Mackenzie Delta and Alaska pipeline projects. There has not been a robust market for construction contractors and labor in Canada in a number of years given the lack of large-scale construction projects. Shortages of construction workers are currently being experienced in the Fort McMurray area of Alberta where large-scale oil sands development projects are underway. Oil sands projects are expected to continue drawing on available construction labor over the next several years. To the maximum extent possible, pipeline industry associations and proponents of these frontier projects should encourage governments, educators and labor organizations, among others, to train the skilled labor required to fill current voids in the energy industry and address the needs of major frontier pipeline projects that will be manifest as these projects enter the construction phase at the end of this decade and into the next.

The movement of contractors and labor, materials and equipment across the international boundary with relative ease is also an area for concerted action by the pipeline industry. Barriers include a lack of support for the movement of workers across borders by labor organizations and perceptions among United States contractors that Canada would restrict their access to work in Canada. The recent experience of the Association of Building Trade Contractors, which includes pipeline contractors, is telling. While it achieved expedited approval processes for cross-border movement of its members, “expedited” still means a 10-week application cycle time.

Work could be undertaken in Phase 2 to overcome obstacles to the movement of contractors, labor and equipment across borders. The focus of these efforts may range from streamlined passport, work visa and security issuance procedures to reciprocal certification of contractors and their personnel.

7. Economic Regulation: Terms and Conditions of Service

Major natural gas pipelines in Canada and the United States are subject to full-scale economic regulation. While the NEB and the FERC are guided by similar objectives and

principles in carrying out their respective mandates (e.g., just and reasonable rates, no undue discrimination in services and pricing, market-based principles), the regulatory construct for terms and conditions of service, including tolls, differs between the countries. For example, tolls discounting and negotiated rates are not part of the regulatory construct in Canada as they are in the United States, which can be frustrating for U.S. customers of Canadian pipelines who are familiar with and value these approaches.

There are also often differences in service offerings between pipelines interconnected at the border as well as the terms and conditions of service (e.g., renewal rights and financial assurances). This is less of an issue for newer gas pipelines such as Alliance Pipeline and Maritimes and Northeast Pipeline. Harmonization of their tolls and tariffs was accepted by the FERC and the NEB, a hopeful sign for tackling similar harmonization on "older" pipelines.

While these are important commercial issues, they have not been identified for further investigation in Phase 2. It would appear that these issues are best advanced by the interconnected pipelines and their affected customers, with the support of their respective pipeline industry associations, as appropriate.

8. Design and Operating Standards

There appears to be significant room for harmonization of design and operating standards. For example, in the area of pipeline design, Canada and the United States differ in respect of the maximum allowable operating pressure for the same pipe in the same class location. For example, pipelines in Canada in undeveloped areas are allowed to operate at up to 80% of the Specified Maximum Yield Strength (SMYS) of the pipe, whereas the same pipe in a similar location in the United States can only operate up to 72% of SMYS. The result is an increase in pipe costs in these locations in the United States, a cost factor that could be significant to an Alaska pipeline project. The 80% SMYS limit has been in place in Canada since 1973 and there is no evidence of greater failure frequency on pipeline operating under the Canadian standards.

Efforts to harmonize this design requirement have not been successful. Given the planning horizon for an Alaska pipeline project, it would be timely to bring this issue forward again. It is recommended that further work be undertaken in Phase 2 that would support a joint request by INGAA and CEPA to the OPS and the NEB to engage in a collaborative review of this issue. It may be necessary first to promote and achieve consensus between ASME and CSA. However, before undertaking further work on this issue, it is also recommended that discussions occur with INGAA and CEPA to ascertain the status of this issue on their respective regulatory reform agendas.

On the operations side of the business, the OPS has instituted an Operator Qualification (OQ) Rule. While Canadian pipelines would meet the base standard under the OQ Rule by virtue of compliance with the NEB requirements, they have had to revise their data collection and reporting capacity to conform to the rule. One continuing issue of concern is the requirement for drug and alcohol testing under the OQ rule, because this type of program is contrary to the Canadian Charter of Rights and Freedoms.

The experience with the OQ Rule suggests a need for the development of a memorandum of understanding between the OPS and the NEB similar to the one between the FERC and the NEB to achieve increased communication and cooperation on pipeline design and operations issues.

9. Recommendations

Several opportunities for cross-border regulatory harmonization were identified in the course of interviews with government officials, regulators, and participants and other stakeholders in the pipeline industry. The priority areas for further assessment or action that emerged from these interviews are as follows:

Energy Policy and Legislation

In support of the development of a North American energy policy:

- encourage energy and trade officials from the United States, Canada and Mexico to continue meeting on a regular basis to assess energy policy trends, identify necessary legislative and policy initiatives and address concerns arising in the energy trading relationship between the three countries.

Certification

In support of harmonizing the pipeline certification processes:

- encourage and support streamlining initiatives by regulatory leaders in Canada and the United States, such as the recent Memorandum of Understanding between the Federal Energy Regulatory Commission (FERC) and the National Energy Board (NEB), that are intended to promote the public interest through increased efficiency, expedited and coordinated action on significant infrastructure projects;

- focus on obtaining single-window regulatory processes within federal jurisdictions and regulatory cooperation plans between federal and state regulatory agencies and federal and provincial regulatory issues; and

- assess specific opportunities for achieving alignment on environmental impact assessments for cross-border pipelines.

Construction

To ensure the availability of trained and qualified pipeline construction contractors and personnel, especially for major frontier pipeline projects:

- take initiatives with governments, educators and labor organizations to train and qualify workers; and

- remove obstacles to the movement of contractors, labor and equipment across borders.

Design and Operations

To enhance harmonization of design and operating standards:

- renew efforts to address differing design factors for pipelines at the same class locations after discussion with the INGAA and the CEPA to determine the status of this issue on their respective regulatory reform agendas; and

- encourage the OPS and the NEB to develop a memorandum of understanding similar to the one between FERC and the NEB noted above to enhance communication and cooperation on design and operational issues.

Realizing the potential offered by these opportunities for cross-border regulatory harmonization is first and foremost about increased communication and collaboration between policy makers, regulators, the pipeline industry and other stakeholders. Building on existing regulatory frameworks and initiatives should be the initial focus as a means of overcoming resistance to change, a perennial barrier to harmonization.

Committed champions will be required to advance this initiative successfully. It is therefore recommended that the INGAA Foundation confer with INGAA and CEPA before proceeding with Phase 2 of this study to determine the interest of these pipeline industry associations, individually or collaboratively, or their individual company members in championing the identified harmonization opportunities now or in the future. If such is the case, the further work contemplated in Phase 2 could be undertaken in support of their efforts.

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