Cross-Jurisdictional Review of Energy Regulators

Characterization and Analysis of Mandate, Governance, Decision Making, Lifecycle Oversight, Public Participation and Indigenous Peoples Engagement

February, 2017

SUBMITTED TO:
Natural Resources Canada
For the Expert Panel on NEB Modernization

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In collaboration with
Regulatory Governance Initiative
Carleton University

Strategies to Sustainability
Our Vision

Our Mission
We work collaboratively with governments, business and civil society to address complex natural resource management and sustainability challenges.
This report was prepared for Natural Resources Canada by Stratos Inc. with expert advice and guidance from:

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<td>ACO</td>
<td>Aboriginal Consultation Office</td>
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<td>ADR</td>
<td>Alternative Dispute Resolution</td>
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<td>AECB</td>
<td>Atomic Energy Control Board</td>
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<td>AEMO</td>
<td>Australian Energy Market Operator</td>
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<td>AER</td>
<td>Alberta Energy Regulator</td>
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<td>AIEO</td>
<td>American Indian Environmental Office</td>
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<tr>
<td>ALJ</td>
<td>Administrative Law Judge</td>
</tr>
<tr>
<td>AUSER</td>
<td>Australian Energy Regulator</td>
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<tr>
<td>BCGC</td>
<td>British Columbia Oil &amp; Gas Commission</td>
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<tr>
<td>BOD</td>
<td>Board of Directors</td>
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<tr>
<td>CCA</td>
<td>Competition and Consumer Act</td>
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<td>CCP</td>
<td>Consumer Challenge Panel</td>
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<tr>
<td>CEO</td>
<td>Chief Executive Officer</td>
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<td>CFO</td>
<td>Code of Federal Regulations</td>
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<tr>
<td>CGA</td>
<td>Common Ground Alliance</td>
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<tr>
<td>CMA</td>
<td>Crown Minerals Act</td>
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<tr>
<td>CNSC</td>
<td>Canadian Nuclear Safety Commission</td>
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<tr>
<td>COAG</td>
<td>Council of Australian Governments</td>
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<tr>
<td>COAG-EC</td>
<td>Council of Australian Governments Energy Council</td>
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<tr>
<td>EAO</td>
<td>Environmental Assessment Office</td>
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<tr>
<td>EEA</td>
<td>European Economic Area</td>
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<td>EPA</td>
<td>Environmental Protection Agency</td>
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<td>EPCRA</td>
<td>Emergency Planning and Community Right-to-Know Act</td>
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<tr>
<td>FERC</td>
<td>Federal Energy Regulatory Commission</td>
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<tr>
<td>GiC</td>
<td>Governor in Council</td>
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<td>LEPC</td>
<td>Local Emergency Planning Committees</td>
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<td>LNG</td>
<td>Liquid Natural Gas</td>
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<tr>
<td>LTEP</td>
<td>Long-Term Energy Plan</td>
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<td>MBIE</td>
<td>Ministry of Business, Innovation and Employment</td>
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<tr>
<td>NEB</td>
<td>National Energy Board</td>
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<tr>
<td>NPMS</td>
<td>National Pipeline Mapping System</td>
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<tr>
<td>NRCan</td>
<td>Natural Resources Canada</td>
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<td>NSCA</td>
<td>Nuclear Safety Control Act</td>
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<td>NVE</td>
<td>Norwegian Water Resources and Energy Directorate</td>
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<td>NZP&amp;M</td>
<td>New Zealand Petroleum &amp; Minerals</td>
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<td>OEB</td>
<td>Ontario Energy Board</td>
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<tr>
<td>Oeba</td>
<td>Ontario Energy Board Act</td>
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<td>OECA</td>
<td>Office of Enforcement and Compliance Assurance</td>
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<td>OGAA</td>
<td>Oil and Gas Activities Act</td>
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<td>OGC</td>
<td>Oil and Gas Commission</td>
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<tr>
<td>OGRIS</td>
<td>Oil and Gas Research and Innovation Society</td>
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<tr>
<td>OPEC</td>
<td>Organization of Petroleum Exporting Countries</td>
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<td>OPS</td>
<td>Office of Pipeline Safety</td>
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<td>PHMSA</td>
<td>Pipeline and Hazardous Materials Safety Administration</td>
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<tr>
<td>PIPA</td>
<td>Pipeline and Informed Planning Alliance</td>
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<tr>
<td>REDA</td>
<td>Responsible Energy Development Act</td>
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<tr>
<td>RIDM</td>
<td>Risk Informed Decision Making</td>
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<td>RIT-T</td>
<td>Regulatory Investment Test</td>
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<td>SERC</td>
<td>State Emergency Response Commission</td>
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<td>TEK</td>
<td>Traditional Ecological Knowledge</td>
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<td>TK</td>
<td>Traditional Knowledge</td>
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<tr>
<td>TSSA</td>
<td>Technical Standards and Safety Authority</td>
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<td>USC</td>
<td>United States Code</td>
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Introduction

The NEB
The National Energy Board (NEB) was created in 1959 under the National Energy Board Act (NEB Act) as an independent federal, quasi-judicial regulator of pipelines, power lines, energy development and trade in Canada. The NEB has four core responsibilities:

1. Adjudicating energy projects;
2. Supporting the safety of Canadians and the environment through oversight;
3. Collecting, monitoring, analysing and publishing energy information;
4. Engaging with stakeholders throughout the lifecycle

Aside from a number of legislative changes throughout the years, the basic legislated mandate, structure and role under the NEB Act have largely remained constant since its creation.

The NEB Modernization
As part of the Government of Canada's review of environmental and regulatory processes, the Minister of Natural Resources has been mandated by the Prime Minister to: “modernize the National Energy Board to ensure that its composition reflects regional views and has sufficient expertise in fields such as environmental science, community development, and Indigenous traditional knowledge”.

To accomplish this, the Minister has established an Expert Panel to conduct a targeted review of the National Energy Board's mandate, structure and role under the NEB Act. The focus of the modernization, and the Expert Panel’s review, includes: mandate, governance, decision making roles, legislative tools for lifecycle regulation, Indigenous peoples engagement and public participation. Additional information on the Expert Panel and the NEB modernization review can be found on the Panel's website.

This Report
Stratos was commissioned by Natural Resources Canada to undertake a cross-jurisdictional review of energy regulators within Canada and internationally. The scope of this review mirrors the focus of the NEB modernization effort, examining the mandate, structure, and role of 11 energy regulators, including the NEB.

This report details the results of this cross-jurisdictional review, outlining a range of design features found across energy regulators, characterizing the regulators across these features, and highlighting interesting or unique examples. The purpose of this report is to support and inform the Expert Panel’s work. This report will be posted on the Expert Panel’s website. The report does not provide recommendations to the NEB modernization Expert Panel.

Further details on the methodology of the review and organization of the report are provided in the following section.
Methodology and Organization

SELECTION OF REGULATORS

Four main factors were considered in determining the jurisdictions and regulators to include in this review:

1. **Jurisdictions**: There is representation from a mix of Canadian (federal and provincial) and international jurisdictions.

2. **Energy segments regulated**: There is representation of regulatory authority across energy segments, including: resource extraction, energy pipelines, electricity generation, electricity transmission, and energy markets.

3. **Scope of factors considered**: There is representation in the consideration of a wide scope of factors in decision making, including: safety, environmental, social and economic factors.

4. **Special considerations**: Special consideration was given to jurisdictions and regulators where known interesting features or practices exist.

In addition to these four factors, an initial scan was completed to ensure a reasonable level of information accessibility. Further, three regulators were chosen from the US in order to better understand and appreciate this federal jurisdiction’s distributed regulatory system. Table 1 below lists the selected regulators, as well as the acronyms by which they are referred to throughout this report.

Table 1. Energy Regulators Reviewed

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<tr>
<th>Jur*</th>
<th>Acronym</th>
<th>Energy Regulator</th>
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<td>🇨🇦</td>
<td>NEB</td>
<td>National Energy Board</td>
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<td>🇨🇦</td>
<td>CNSC</td>
<td>Canadian Nuclear Safety Commission</td>
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<td>🇨🇦</td>
<td>BCOGC</td>
<td>British Columbia Oil &amp; Gas Commission</td>
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<td>Federal Energy Regulatory Commission</td>
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<td>PHMSA</td>
<td>Pipeline and Hazardous Materials Safety Administration</td>
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<td>Environmental Protection Agency</td>
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<td>AUSER</td>
<td>Australian Energy Regulator</td>
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<td>🇳🇿</td>
<td>NZP&amp;M</td>
<td>New Zealand Petroleum &amp; Minerals</td>
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*Flag icons represent the regulators’ jurisdictions
RESEARCH METHODS

Stratos worked closely with NRCan to develop lines of inquiry that align with the scope of the Expert Panel’s review. This culminated in the development of a series of research questions under each of the following six themes.

1. **Mandate**: The main purposes and functions of the regulator – the scope of its authority and what it is meant or required to do.
2. **Governance**: The way in which the regulator is structured.
3. **Decision making roles**: How decisions are taken and by whom.
4. **Tools for lifecycle oversight**: Approaches and tools that are in place across the lifecycle.
5. **Public participation**: The way in which public participation occurs around all aspects of the regulator’s mandate.
6. **Indigenous engagement**: The way in which engagement occurs with Indigenous peoples around all aspects of the regulator’s mandate.

A document review was completed for each selected regulator, examining: legislation, regulations, and other publications such as policies, information sheets, guidelines and annual reports, using web-based searches and documents provided by the regulators. This review did not include an examination of project-specific documentation. Following the document review, interviews were held with senior representatives from 10 of the 11 regulatory agencies. Interviews were used to confirm the researchers’ understanding of the regulators, fill gaps and highlight unique and interesting features. A draft report was sent to each of the reviewed regulators for review and comment prior to publication.

In addition to regulator-specific material, a brief review of international literature was conducted in order to ground the review’s findings in current academic and practitioner knowledge.

REPORT STRUCTURE

The remainder of this report is structured into the following three sections:

**International Literature – Key Concepts**

This section provides the output of a brief review of select academic and practitioner literature on the topic of regulatory excellence and reform. This includes key concepts used to ground review findings and referenced throughout the report, including: the public interest, public trust, transparency and inclusiveness, procedural and distributional justice, regulatory independence and regulatory effectiveness and efficiency.

**Report Body**

The body of the report provides details on the treatment of each of the six themes outlined above across the 11 reviewed regulators. Each theme is divided into sub-sections, outlining the range of design features found across energy regulators, characterizing the application of these features by each regulator, and highlighting interesting or unique examples.

**Case Studies**

This section of the report is comprised of concise case studies of each of the 11 regulators. These provide a high level narrative overview of the features displayed by each regulator across the six themes noted above.

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1 The US Environmental Protection Agency did not return a request for interview.
International Literature – Key Concepts

Many best practices and recommendations have been noted in the literature that can support the design and implementation approaches of regulatory systems and bodies. Recently there have been a number of initiatives that have examined academic research and regulatory practice, and put forward recommendations to inform regulatory reform in Canada and internationally. These initiatives include:

- Development of formal recommendations by internationally recognized networks, such as the Recommendation of the Council on Regulatory Policy and Governance (OECD, 2012) prepared by the Regulatory Policy Committee of the OECD through a process of public and committee engagement.
- Academic and regulator partnerships to examine and implement regulatory excellence, such as the Regulatory Excellence Initiative (undertaken in 2015 and 2016) by the University of Pennsylvania and the Alberta Energy Regulator to identify the attributes of excellent regulators and create a framework for self-assessment.
- Preparation of white papers to inform Canadian regulatory reviews underway, such as A New Era of Environmental Governance in Canada: Better Decisions Regarding Infrastructure and Resource Development Projects prepared for the Metcalf Foundation (Winfield, 2016).

While this list is not exhaustive, initiatives like these have reflected on changing societal conditions (e.g., the 2008 financial crisis, growing conflicts over resources, evolving policy environments and evolving societal expectations) in order to inform future regulatory practice. While there is no one-fits-all approach or “ideal” single model being put forward through these initiatives, there are a number of desirable objectives that have been identified for regulatory design, renewal and implementation.

Firstly, all of these initiatives have emphasized the importance of making regulatory design choices in order to build public trust and confidence in, and enhance the legitimacy of, regulatory systems, regulators, and regulatory decisions. They also highlight the importance of ensuring that regulation serves the public interest first and foremost (Coglianese, 2015), and that the public interest is informed by the legitimate needs of those interested in and affected by regulation (OECD, 2012).

Secondly, these initiatives emphasize the importance of effective and fit-for-purpose engagement and transparency in regulatory systems and processes. In particular, participation needs to be inclusive, early, frequent, give the public a voice, address imbalances in participatory voice, show respect for participants, demonstrate how input is used, and provide comprehensible reasons for choices made (Nash & Waters, 2015). These features not only apply to regulatory decision making, but also to the design of regulatory systems and bodies. For participation in decision making, an important part of public trust is whether the public believes they have been treated fairly or unfairly (procedural justice), and whether the public believes the outcomes of decisions have resulted in fair distribution of costs, benefits and risks (distributional justice) (Nash & Waters, 2015); (Winfield, 2016). Effective and transparent processes can support achievement of both of these objectives.

Finally, these initiatives identify the importance of designing effective and efficient regulatory systems. Effectiveness can include the effectiveness of delivering on a regulatory mandate or achieving certain outcomes, effectiveness in process and service delivery, and/or the effectiveness of the entire regulatory system relative to alternatives. Efficiency can include the ability to enhance consistency and coherence of regulatory systems and to reduce unnecessary regulatory burden (OECD, 2012). To assess the effectiveness and efficiency of regulatory systems, systematic program reviews are needed over time and should assess progress toward achieving coherence with economic, social and environmental policies (OECD, 2012).
Other aspects of effective and efficient regulatory systems are independence, accountability and results – the accountability of those taking regulatory decisions for overall performance of the regulator and effectiveness in serving the public interest and achieving planned results, followed by checking to determine if they were achieved and then making necessary adjustments (Slater & Presley, 2016).

Progressive regulatory regimes also recognize the interdependencies between federal regulators and their provincial/state and Indigenous government counterparts through cooperation and coordination of functions such as environmental assessment review and emergency response.

This report considers the desirable objectives noted in this section as the basis for highlighting specific examples (i.e., where they support achievement of one or more objective) and discusses differences in practices across energy regulators.

**NEB at a Glance**

This section provides a snapshot of the mandate, structure, and role of the NEB. Similar 2-page case studies are provided for each reviewed regulator at the end of this report.

The National Energy Board was established under the *National Energy Board Act* in 1959, with the Act having since been amended multiple times, and most recently in 2015. The creation of the NEB was largely based on the recommendations of two Royal Commission reports which arose from the “Great Pipeline Debate” in Parliament in 1956, which saw confrontation between the major political parties over a proposed pipeline to transport natural gas from Alberta to central Canada. Establishing the NEB was intended to move decision making power to an independent regulator whose decisions would not be based on politics.

**Mandate**

The NEB is the national energy regulator in Canada, established by Parliament to regulate, among other things, the construction, operation and abandonment of pipelines that cross provincial or international borders, international power lines and designated inter-provincial power lines, imports of natural gas and exports of crude oil, natural gas liquids, natural gas, refined petroleum products and electricity, and, oil and gas exploration and production activities in certain areas. (National Energy Board, 2016a). The NEB is also charged with providing timely, accurate and objective information and advice on energy matters. Its regulatory mandate extends over the lifecycle of a project: from the planning and application assessment phase and its authorization through construction and operations and finally abandonment and decommissioning. The NEB reports to Parliament through the Minister of Natural Resources (Government of Canada, 2016b)

While the public interest is mentioned in the NEB Act, it is not defined in the legislation. The Act does, however, provide direction about factors relevant to the NEB’s consideration in reaching its public interest determination. Such factors include ‘any public interest that in the Board’s opinion may be affected by the issuance of the certificate or the dismissal of the application’ (Government of Canada, 2016b). Given the broad nature of the NEB Act, the NEB has the discretion to consider factors other than those expressly listed in it, based on the facts of a project application, including environmental and socio-economic effects that are directly related to a project.

In absence of a legislated definition, the NEB has defined the public interest for itself, most recently in the Trans Mountain Expansion Project Recommendation Report:
The public interest is inclusive of all Canadians and refers to a balance of economic, environmental and social interests that change as society’s values and preferences evolve over time. As a regulator, the Board must estimate the overall public good a project may create and its potential negative aspects, weigh its various impacts, and make a decision” (National Energy Board, 2016c)

The NEB Act does not have a legislative provision for the government to provide policy direction to the NEB. The NEB Act does have a legislative provision for the NEB to provide advice to the Minister on energy issues, when requested.

**Governance and Decision Making**

The NEB is a “single regulator” encompassing the economic, safety and environmental authorities to approve and oversee operation and abandonment of energy projects. It functions as a quasi-judicial tribunal consisting of not more than nine permanent members who are appointed by the Governor in Council (GiC); the number of temporary members, who are also appointed by the GiC, is unlimited. A single Chairperson (also CEO and Deputy Head) is appointed by the GiC and is in charge of distributing work among Board Members and supervising and directing staff. The Chair is also responsible for deciding if the Board is to sit in a panel to review project applications, assigning Board Members to these panels and choosing one Member to preside over each panel. The CEO is responsible for the operational and administrative function of the NEB. There is a Vice-Chairperson responsible for fulfilling the functions and powers of the Chair if he/she is absent.

The NEB Act does not have a general mechanism for the Chair to delegate authorities for regulatory decisions and recommendations to NEB officers or staff. The NEB Act allows the Board to ‘designate any person as an inspection officer with powers to inspect, audit compliance and issue orders to protect the public and the environment (Government of Canada, 2016b). The NEB may also designate persons to issue notices of violation for administrative monetary penalties.

Decision making responsibility for NEB-regulated projects rests with either the NEB or the GiC, depending on project specifics and what section of the NEB Act the application falls under. For instance, in cases where a pipeline project is greater than 40 kilometers in length, the NEB makes a recommendation on the application and the GiC makes the decision with regard to both authorization and environmental assessment on recommendation from the NEB. Decisions on pipelines that are 40 kilometers or less, and pipeline facilities, are made by the NEB (National Energy Board, 2013a).

**Tools for Lifecycle Oversight**

The NEB’s mandate is broad and allows for flexibility in terms of the type of compliance monitoring and enforcement tools the Board uses. It has instituted detailed management-system requirements for pipeline operations which are audited regularly. Some of the compliance verification tools available include: inspections of facilities under construction or in operation and abandoned pipelines; reviews of post-construction monitoring reports; reviews of emergency procedure manuals; management system audits; and audits of company operations. To enforce compliance, operators found to be non-compliant are subject to prosecution and may have their certificate revoked or suspended. The NEB also makes use of orders to enforce certain requirements or restrict operations, as well as administrative monetary penalties (National Energy Board, 2015).

In 2015, *The Pipeline Safety Act* amended the NEB Act to provide the NEB with significant additional lifecycle oversight tools in the area of emergency management, including the ability to put absolute liability limits and financial requirements on pipeline companies, and give the NEB the power to take over the response to a pipeline release in certain circumstances. In the event of a significant incident, the NEB has an Emergency Management Program that can mobilize a field response. The NEB also maintains an Emergency Operations Center.
The NEB has no jurisdiction over land compensation disputes as these issues are within NRCan’s purview; NRCan oversees the appointment of a negotiator or arbitration committee and the Committee makes the decision (National Energy Board, 2013a).

**Indigenous Peoples Engagement**

There is no mention of consultation with Indigenous peoples in the NEB Act, nor of consultation requirements more broadly. The NEB process is shaped by Indigenous consultation requirements arising from section 35(1) of the *Constitution Act, 1982*, NEB Act (e.g., s.55.2 standing test, s.52 (2) consideration of all relevant issues and the public interest), CEAA 2012 (e.g., s.5 definition of environmental effects, s.19 factors to be considered), and the NEB’s Filing Manual (particularly expectations for consultation by the proponent). The NEB has identified in its Filing Manual, that proponents are required to undertake consultation with both Indigenous peoples and the general public early in the planning and design phases of the project, providing information about the project, its potential impacts and benefits. Potentially affected groups and individuals must be given opportunities to raise their concerns about the project and have them considered by the company (National Energy Board, 2016b).

Through its Enhanced Aboriginal Engagement activities, the NEB proactively contacts potentially impacted Indigenous peoples to provide information about the NEB, its Participant Funding Program and how to participate in its project review processes (National Energy Board, 2016a). The NEB provides a forum in which information on Indigenous groups’ interests, potential impacts on those interests, and possible mitigation measures could be submitted to the NEB for consideration. Efforts are made to make hearing processes accessible to Indigenous peoples and may include oral traditional evidence, ceremonies or other traditional practices. The NEB then assesses all of the information provided to it, including information on the consultation undertaken with Indigenous groups, the views of Indigenous groups, project impacts on Indigenous peoples interests, and proposed mitigation measures. The NEB determines the residual impacts on Indigenous interests and attempts to balance those with the other societal interests at play when assessing a project, which are documented in the recommendation report or reasons for decision. The Crown relies on the NEB process to the extent possible to meet its duty to consult.

If a project is approved, additional Indigenous consultation requirements for the proponent may be contained in the conditions of the project authorization. Furthermore, proponents’ consultation programs must continue throughout the lifecycle of the project. The NEB enforces proponent compliance with conditions and other regulatory requirements (e.g. *NEB Onshore Pipeline Regulations*, *NEB Pipeline Damage Prevention Regulations*) throughout the lifecycle of the project. Anyone with continuing concerns about impacts of the project, including Indigenous groups, can make those concerns known to the NEB, and the NEB can take remedial actions if warranted.

**Public Participation**

Under the NEB Act, the review of certain types of applications requires the NEB to conduct a public hearing, including: applications for the construction and operation of major international or interprovincial pipelines; applications for the construction and operation of certain international powerlines; applications to abandon a pipeline; and, landowner opposition to the detailed route of an approved pipeline (Government of Canada, 2016b). The NEB may also hold a public hearing in respect of any other matter it considers it advisable to do so.

The NEB Act sets out when the NEB will allow a person to participate in a hearing for pipeline and certain powerline applications. Prior to amendments to the NEB Act in 2012 the NEB was required to consider the “objections of any interested person”. Under the current NEB Act, the NEB must “consider the representations of any person who, in the NEB’s opinion, is directly affected by the granting or refusing of the application, and it may consider the representations of any person who, in the NEB’s opinion, has relevant information or expertise” (Government of Canada, 2016b).
To facilitate Indigenous peoples engagement and public participation in the hearing process, the NEB has established a Participant Funding Program under the NEB Act. These funds offset some of the direct costs for eligible recipients, such as legal fees and costs of gathering information. Projects are assessed to determine eligibility and the amount of funding available is calculated according to the size, location and possible effects of the project; the range of issues associated with the project; the number of Indigenous groups in the proposed project area; the level of public interest; the maximum funding allocations per recipient; and the available resources. In 2015, participant funding was extended to also support public participation in environmental assessments of designated projects under the Canadian Environmental Assessment Act, 2012 (National Energy Board, 2015). The majority of funding is provided to Indigenous groups.

There are also opportunities for public participation outside of the hearing process. Public consultation during the project lifecycle was discussed above in the Indigenous Engagement section. Another example is the requirement for companies to develop a continuing education program for the public residing adjacent to the pipeline to inform them of the location of the pipeline, potential emergency situations involving the pipeline and the safety procedures to be followed in the case of an emergency. An application for abandonment must also include a plan that has been created in consultation with landowners and other interested parties (Government of Canada, 2016b).
Mandate

The mandate of the regulator refers to the main segments of the energy sector it regulates, the roles and functions for which it has the authority to regulate, the scope of factors to which it gives consideration in decision making, and how the public interest is prescribed or interpreted. Whether and how the regulator is directed to implement government policy is also a matter of mandate. Of the 11 regulators reviewed, all except for 3 are national-level regulators.

SEGMENTS

For the purposes of this report, the segments of the energy value chain regulated by the 11 agencies have been divided into five categories: resource extraction; oil & gas pipelines; electricity generation; electricity transmission; and energy markets. Table 2 below provides a brief description of these segments and whether each is included under the authority of the examined regulators.

About overview tables

Throughout this report, tables similar to the one below are used to provide snapshots of each sub-section by:

- Grouping the various approaches identified into clear categories; and
- Providing a high level determination of which approach best applies to each regulator.

While, regulators have been designated into binary options (YES or NO), in practice there are often caveats and nuances associated with such categorization of a particular regulator (e.g. the table may only capture a subset of the regulator’s full mandate). A YES indicates that in some form or situation, this option applies or is otherwise available to the regulator. For more detailed information for each regulator, refer to the case studies section at the end of the report.

Table 2. Energy Segments Regulated

<table>
<thead>
<tr>
<th>Segments</th>
<th>NEB</th>
<th>CNSC</th>
<th>BCOGC</th>
<th>AER</th>
<th>OEB</th>
<th>FERC</th>
<th>PHMSA</th>
<th>EPA</th>
<th>NVE</th>
<th>AUSER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource extraction</td>
<td>YES*</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
<td>YES*</td>
</tr>
<tr>
<td>Oil &amp; gas pipelines</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>Electricity generation</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>Electricity transmission</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Energy markets</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
</tr>
</tbody>
</table>

* See NEB current state description for details
The NEB regulates:

- **Resource Extraction**: Oil and gas exploration and production activities in specified areas that are not regulated under joint federal/provincial accords under the *Canada Oil and Gas Operations Act*; this includes oil and gas exploration and development in Nunavut, parts of the Northwest Territories and all of Canada’s offshore except for areas covered by a provincial or federal management agreement.
- **Oil & Gas Pipelines**: Construction, operation and abandonment of interprovincial and international pipelines for the transmission of oil, gas or other commodities.
- **Electricity Transmission**: Construction, operation and abandonment of international or designated inter-provincial powerlines.
- **Energy Markets**: Imports of natural gas and exports of crude oil, natural gas liquids, natural gas, refined petroleum products and electricity and tariffs and tolls for transmission pipelines.

The 11 energy regulators examined have mandates to regulate different segments of the energy value-chain, each with its own combination of segments. The particular suite of segments under a regulator’s mandate are generally determinations of each jurisdiction’s unique context including its energy resource base, the policy priorities of the government, and public and political discourse at the time of establishment. This can also include any number of social, technological, economic and environmental factors that exist in a jurisdiction or that shape the mandate of the regulator during its creation. PHMSA is the most specialized regulator focusing on only one energy segment – pipelines – and as discussed later in the report only for the operations and decommissioning stages of the lifecycle.

While these categories capture the vast majority of regulated segments and provide a useful snapshot, they are not fully comprehensive of the mandates of some of the regulators in this study. For example, the CNSC is the regulator responsible for the transportation and disposal of nuclear fuel. Further, some of the regulators have mandates extending beyond energy-related activities: the CNSC regulates medical and industrial uses of nuclear materials as well as Canadian international commitments (import and export controls) on peaceful uses of nuclear energy; and PHMSA regulates the transportation of hazardous substances unrelated to energy.

Arguably the greatest differences can be found between regulators that regulate energy *developments*, such as oil and gas production facilities, pipelines and power plants, and those that regulate energy *markets*. Only four of the 11 organizations have a mandate – in some form or another – to regulate both: the NEB, OEB, FERC and NVE. Beyond this difference, there is a wide range and mix of coverage across segments. This distinction between development and market regulation is drawn on in other parts of this report.
FUNCTIONS

Through the review of 11 regulators, four main functions of energy regulators were identified: resource allocation, authorizations; operational, decommissioning & abandonment oversight; and research & education. Table 3 provides a summary of the functions across the energy lifecycle and one cross-cutting function (research and education) which fall within the mandate of the examined regulators. The broadest mandate occurs with NZP&M which covers all categories from resource allocation to decommissioning. This broad coverage in mandate fosters coherence in decision making, allowing such factors as environmental protection and respect for Indigenous peoples’ rights to be addressed consistently across the value chain, starting with the granting of tenure for oil and gas resources. At the other end of the spectrum is PHMSA whose role is post-project authorization. This narrow mandate, allows specialization and greater focus in certain areas, for example safety.

Table 3. Functions of Energy Regulators

<table>
<thead>
<tr>
<th></th>
<th>Resource allocation</th>
<th>Authorizations</th>
<th>Operational, decommissioning &amp; abandonment oversight</th>
<th>Gathering and disseminating information, and/or involvement in research &amp; development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Granting rights to explore and exploit energy resources</td>
<td>Providing an authorization for a proposed energy development (D) or market activity (M) to move forward</td>
<td>Ongoing monitoring, compliance and enforcement once an energy development (D) or market activity (M) is approved</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NZP&amp;M</td>
<td>YES</td>
<td>YES</td>
<td>YES (M, D)</td>
<td>YES</td>
</tr>
<tr>
<td>CNSC</td>
<td>NO</td>
<td>NO</td>
<td>YES (D)</td>
<td>NO</td>
</tr>
<tr>
<td>AER</td>
<td>NO</td>
<td>NO</td>
<td>YES (D)</td>
<td>NO</td>
</tr>
<tr>
<td>FERC</td>
<td>NO</td>
<td>NO</td>
<td>YES (M, D)</td>
<td>NO</td>
</tr>
<tr>
<td>FERC</td>
<td>YES</td>
<td>NO</td>
<td>YES (M, D)</td>
<td>NO</td>
</tr>
<tr>
<td>EPA</td>
<td>NO</td>
<td>NO</td>
<td>YES (D)</td>
<td>NO</td>
</tr>
<tr>
<td>EPA</td>
<td>NO</td>
<td>NO</td>
<td>YES (D)</td>
<td>NO</td>
</tr>
<tr>
<td>AUSER</td>
<td>NO</td>
<td>YES (M)</td>
<td>YES (M)</td>
<td>NO</td>
</tr>
<tr>
<td>STRATOS INC.</td>
<td>NO</td>
<td>YES (D)</td>
<td>YES (D)</td>
<td>NO</td>
</tr>
</tbody>
</table>
NEB CURRENT STATE: FUNCTIONS

The NEB undertakes:

- **Authorizations & approvals:** Makes decisions and recommendations on applications for authorizations or approvals to set tolls and tariffs, import natural gas or export oil or natural gas or construct and operate a project.

- **Operational, decommissioning & abandonment oversight:** Regulates Canada’s national energy infrastructure over its complete lifecycle.

- **Research & education:** Studies and keeps under review matters over which Parliament has jurisdiction related to energy production and distribution and reports to the Minister with recommendations on measures it considers necessary or advisable in the public interest. Provides advice to the Minister on energy matters upon request.

Resource allocation

Of the 11 regulators examined, the only regulator that allocates energy resources is NZP&M. In most jurisdictions resource allocation is undertaken at the policy level by a government department. In federal nations such as Canada, the U.S. and Australia, authority for energy resource allocation is divided between the national level and provincial/state level in accordance with each nation’s constitution.

Authorizations

Seven of the examined regulators authorize energy development, three authorize both energy development and market activities (OEB, FERC and NEB) and one market activities only (AUSER) as part of their mandate. PHMSA and the EPA are the only two which do not have energy project authorization in their mandates. In federal states, development and market activity authorization are divided between the national level and provincial/state level, or rests largely at the state/provincial level, in accordance with each nation’s constitution. For example, in Australia there are no federal authorizations of energy projects outside the normal requirements for any physical work. However, energy market regulation is undertaken by AUSER, a commonwealth body that exercises state legislation. In the US, authority for energy development largely rests with the states, with the exception being hydro-power projects on non-federal lands and inter-state and inter-national natural gas pipelines that are authorized by FERC. How these functions are undertaken, including decision making on authorizations and approvals, is discussed later in this report. In Canada, the CNSC is the exclusive regulator and licensing authority for all nuclear development across the country including mining and refining, power generation and waste management. The NEB authorizes inter-provincial and inter-national pipelines and international and designated interprovincial powerlines, tolls and tariffs, energy imports and exports, as well as oil and gas development in certain federal offshore and northern areas.

Operational, decommissioning & abandonment oversight

All regulators reviewed have authority over post-project authorization oversight of energy activities. Regulators have a host of roles they play during the operation and decommissioning or abandonment phases, encompassing additional approvals for specific operational activities, monitoring, compliance enforcement, and emergency response. Further discussion on the specific tools for oversight during the operation and decommissioning or abandonment phases can be found later in this report.

Nine of the 11 regulators have oversight of operational activities for energy development, two for energy development and market activity (OEB and NVE), and one for market activity alone (AUSER). Regarding the OEB, responsibility for the bulk of monitoring and enforcement in Ontario for natural gas development is held with the Technical Standards and Safety Authority (TSSA). The OEB does monitor markets in the electricity sector and reports to the Minister of Energy on the efficiency, fairness and transparency, and competitiveness of the markets.
This separated responsibility for authorization and operational oversight is mirrored in the U.S., where FERC has authority to grant project approvals and PHMSA is charged with regulating the safety of pipelines. However, the trend in Canada and internationally in recent years has been moving towards the “full lifecycle regulator” (though in most cases this excludes resource allocation which remains a government policy function). In Canada, the AER, NEB, BCOGC and CNSC all cover the full energy lifecycle. The situation is similar for NVE and for NZP&M – with the inclusion of resource allocation at the front end of NZP&M, as noted above.

This highlights an interesting discussion of the relative merits of having a single regulator versus separate regulators along the energy lifecycle. Interviewees from U.S. regulators noted advantages to their distributed system. Principally, the notion that it affords PHMSA the ability to focus on regulating safety without needing to consider the myriad of societal and economic pressures faced by regulators with broader mandates. A full lifecycle regulator, on the other hand, puts in place the necessary compliance monitoring and enforcement mechanisms and dispute resolution processes that link the conditions of approvals (technical, safety, environmental, social) with practices and outcomes during operation and decommissioning. Lifecycle regulators may also be able to share knowledge and learnings across the organization and across the stages of the energy development, informing coherent decision making.

Research & education
All regulators have some form of information mandate, though there is considerable variation in the intended purpose, scope and audience. For example, under the NEB Act, the NEB is mandated to study and keep under review matters over which Parliament has jurisdiction related to energy production and distribution and report to the Minister with certain recommendations in the public interest. The NEB also provides advice to the Minister on request energy matters, among other topics. The NEB may provide similar advice to ministers, officers and employees of any provincial or territorial governments or agencies, upon request (Government of Canada, 2016b). Others, such as the BC Oil and Gas Commission, have a broader mandate to undertake education and communication programs focused on the public at large “in order to advance safe and efficient practices” (Government of British Columbia, 2008).

Regarding research activities, a small number of regulators have a legislatively defined mandate and robust programmes, including PHMSA and the EPA. In the case of the CNSC, Parliament gave Canada’s nuclear regulator a specific mandate “to disseminate objective scientific, technical and regulatory information to the public.” The CNSC also has its own research envelope of $4M per year, allows for research to be conducted by the nuclear industry into nuclear safety topics, and is a member of the Government of Canada’s nuclear science and technology steering committee (Canadian Nuclear Safety Commission, 2016).

**Highlight PHMSA’s Innovation Mandate**

PHMSA’s mandate extends beyond simple data collection and dissemination, to promoting innovation. Through the Protecting Our Infrastructure Of Pipelines And Enhancing Safety Act (PIPES Act) of 2016, PHMSA is mandated to “(1) create opportunities for joint research ventures with non-federal entities to leverage limited federal research resources; and (2) permit collaborative research and development projects with appropriate non-federal organizations” as it relates to pipeline facility integrity (U.S. Congress, 2016). PHMSA implements this mandate through a number of programs focused on finding new techniques and solutions. These include:

- PHMSA’s Pipeline Safety Research and Development Program, which conducts and supports research to better regulatory and enforcement activities and to provide the technical and analytical foundation necessary for planning, evaluating, and implementing the pipeline safety program. This program focuses on providing near-term solutions that will increase the safety, cleanliness, and reliability of the nation’s pipeline system.

- PHMSA’s Competitive Academic Agreement Program, which targets university students for the future pipeline safety workforce, which provides up to $2 million (USD) a year to initiatives aimed at spurring innovation by enabling academic research that focuses on high risk and high pay off solutions for wide ranging pipeline safety challenges. (Pipeline and Hazardous Materials Safety Administration, 2016)
SCOPE OF FACTORS

Scope of factors refers to the various outcomes the regulator considers in carrying out its mandate. These might include environmental protection, ensuring workplace and community safety, maximizing economic prosperity, and ensuring efficient and fair markets, among others. This report characterizes the components considered by regulators into four broad categories: safety, environmental, economic and social. Table 4 provides an overview of which of the four categories each regulator is required to consider as part of its mandate.

Table 4. Scope of Factors Considered by Regulators

<table>
<thead>
<tr>
<th></th>
<th>Safety</th>
<th>Environmental</th>
<th>Economic</th>
<th>Social</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Safety impacts of normal operation (e.g. community safety &amp; health) and risk from incidents (e.g. pipeline rupture explosions)</td>
<td>Environmental impacts of normal operation (e.g. air and water quality, and wildlife disturbance) and risk from incidents (e.g. oil spills)</td>
<td>Economic growth and financial viability of a project (e.g. resource demand, price)</td>
<td>Social impacts and benefits (e.g. employment and local business development) and impacts (e.g. Indigenous peoples culture)</td>
</tr>
<tr>
<td>NEB</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>CNSC</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td>NO*</td>
</tr>
<tr>
<td>BCOGC</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>AER</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>OEB</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>FERC</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>PHMSA</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>EPA</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>NVE</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>AUSER</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>NZP&amp;M</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
</tbody>
</table>

* While the CNSC does not look generally at socioeconomic benefits in deciding on safety of nuclear facilities and activities, as an Agent of the Crown it does look at the impact of nuclear projects and activities on Indigenous Peoples, culture and traditional ways of life. It also includes social considerations in undertaking environmental assessments as a responsible authority under CEAA 2012.

There has been a trend in Canada and internationally toward a “single-regulator” model incorporating the full range of legislative authorities involved in approvals of energy development in a single organization. The BCOGC was created in 1998 with the intention that it become the single source of all necessary permits for the conductance of oil and gas activities in BC – including First Nations consultation. Similarly, the AER was created with the purpose of having a single regulator to bring together all regulatory functions related to energy development that were previously held in a number of organizations. In Norway, the NVE has broad authority to fully incorporate environmental decision making into its decisions on large and small hydroelectric dams under its specific legislative mandate which elaborates on environmental matters.

As of 2012 the NEB became solely responsible for environmental assessments of federally regulated energy infrastructure. As well, at that time, the NEB became solely responsible for assessing project effects on navigation.
The public interest

Broadly speaking, regulatory authorities (including arm’s length regulatory bodies and government departments) are presumed to be guided by the public interest in making their decisions (Pal & Maxwell, 2004). However, it is notoriously difficult to define the public interest. Given the centrality of public interest to the work of regulators, every section of this report in some way touches on this concept. However, for the purposes of the report, the scope of factors considered by regulators when making their decisions may be the most obvious expression of how a regulator interprets the public interest and their role in furthering it.

NEB CURRENT STATE: SCOPE OF FACTORS & THE PUBLIC INTEREST

The NEB is a “single regulator” encompassing the economic, safety and environmental authorities to approve and oversee operation and abandonment of energy projects. Public interest is mentioned in the NEB Act but not defined. The NEB Act does, however, provide direction about factors relevant to the NEB’s consideration in reaching its public interest determination. The NEB has described the public interest in the following way:

*The public interest is inclusive of all Canadians and refers to a balance of economic, environmental and social interests that change as society’s values and preferences evolve over time. As a regulator, the Board must estimate the overall public good a project may create and its potential negative aspects, weigh its various impacts, and make a decision.* Given the broad nature of the NEB Act, the NEB has the discretion to consider factors other than those expressly listed in it, based on the facts of a project application, including environmental and socio-economic effects that are directly related to a project.

The view of public interest which the regulator applies is first and foremost defined in its legislation. Some regulators then provide interpretations of how they elaborate their public interest mandate in position statements or regulatory guidance documents. Inherently, beyond these documented examples of public interest definition, every decision a regulator makes – and most pointedly for authorization of new large scale energy developments – involves consideration of the public interest consistent with its legislated mandate.

On one side of the spectrum are regulators with a smaller number of factors to consider in thinking about the public interest (i.e., those mandated to make decisions based on one or two factors as characterized in Table 4). Examples of a single focus mandate include: PHMSA’s consideration of “the assignment and maintenance of safety as the highest priority” (Government of United States, 2011b) and, AUSER’s duty to “promote efficient investment in, and efficient operation and use of, energy services for the long term interests of energy consumers with respect to price, quality, safety, reliability and security of supply (Australian Competition and Consumer, 2013).

At the other end of the spectrum are regulators with extremely broad definitions of the public interest and substantive scope of authority. The BCOGC, for example has a multi-faceted and broad mandate. According to the *Oil and Gas Activities Act (OGAA)*, “the Commission is mandated with regulating oil and gas activities in a manner that: (1) provides for the sound development of the oil and gas sector, by fostering a healthy environment, a sound economy and social well-being, (2) conserves petroleum and natural gas resources, (3) ensures safe and efficient practices, and (4) assists owners of petroleum and natural gas resources to participate equitably in the production of shared pools of petroleum and natural gas” (Government of British Columbia, 2008).

For regulators with multi-faceted mandates, the question of how it assesses, weighs and makes decisions across these factors becomes germane. In these cases, regulators are asked to make decisions in the public interest,
where they have to make trade-offs between the benefits and costs of the development or market activity covering multiple factors. The most common example of trade-offs in the case of energy development is the potential tension between local and/or global environmental risks and economic benefits.

This distinction is illustrated in Figure 1 below in the context of project authorizations. The trade-offs are essentially seeking a balance where the benefits of a project outweigh the potential impacts and risks, as determined by the regulator. In the illustration below, all else equal, the summation and weighing of benefits may ‘tip the scale’ in favour of a project or activity being granted an approval. The thresholds model, on the other hand, involves a single-focus such as public safety where regulatory decisions are taken to ensure risks remain below an evidence-based acceptable level. For the thresholds model, one or more aspects of the public interest are assessed individually with respect to pre-determined threshold of risk and of benefits.

Some of the regulators reviewed tend toward a sustainable development model of public interest in which the three domains of social, environmental and economic benefits and costs are explicitly considered together. The public interest is served by regulatory decisions that reflect an optimum intersection of those three domains – i.e. the environmental, social and economic. BCOGC, NVE and NZPM have characteristics that tend toward this approach.

**Figure 1. Illustrative Example of Approaches for Implementing the Public Interest**

In practice most regulators find themselves applying both approaches to varying extents in their decision making. This is illustrated by the elaboration of several regulators’ legislative public interest mandate presented below.
Quotations: Trade-offs in Regulatory Decision Making

- “The public interest is inclusive of all Canadians and refers to a balance of economic, environmental, and social interests that changes as society’s values and preferences evolve over time. The Board estimates the overall public good a project may create and its potential negative aspects, weighs its various impacts, and makes a decision.” (National Energy Board, 2010)

- “In deciding whether to authorize the construction of major new pipeline facilities, the Commission balances the public benefits against the potential adverse consequences” (Federal Energy Regulatory Commission, 2015b)

- A licence for a regulation of a watercourse should ordinarily be issued, only if the benefits of the regulation are deemed to outweigh the harm or inconvenience to the public or private interests” (Government of Norway, 2004)

- “a process that weighs potential benefits for the community (e.g. jobs, infrastructure development) against potential impacts on the environment and other interests” (New Zealand Government, 1991)

GOVERNMENT POLICY DIRECTION

Table 5 below provides an overview of the three primary ways through which regulators are directed to implement government policy.

Table 5. Ways by Which Regulators are Directed to Implement Policy

<table>
<thead>
<tr>
<th>Legislative changes</th>
<th>Legislative provisions</th>
<th>Direct policy direction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandate can be renewed to reflect policy through legislative changes</td>
<td>Legislative provisions create space or mechanisms for policy direction</td>
<td>Policy direction to be directly implemented as per any government department, within confines of legislation</td>
</tr>
</tbody>
</table>

NEB CURRENT STATE: GOVERNMENT POLICY DIRECTION

Legislative changes: As with all regulators, the NEB may receive policy direction through legislative changes affecting its mandate.

Legislative provisions: The NEB Act does not have a legislative provision for the government to provide policy direction to the NEB. The NEB Act does have a legislative provision for the NEB to provide advice to the Minister on energy issues, when requested.

Legislative changes

Legislative changes represent the baseline mechanism through which regulators are directed to implement government policy. All regulators can have their mandates and priorities reviewed and amended through legislative changes which take two forms. The first, is amending the founding legislation that establishes and/or sets out the mandate of the regulator (e.g. the NEB Act). The second is passing new laws or amending existing laws which affect the responsibilities of the regulator (e.g. The Pipeline Safety Act, 2015 which amended the NEB Act). All 11 of the examined regulators are assigned roles in multiple pieces of legislation.
OEB’s Evolving Mandate

The Ontario Energy Board was established under the *Ontario Energy Board Act* (OEBA) in 1960 as a successor to the Ontario Fuel Board of 1954. The evolution of the OEB since its inception has been influenced in part by market conditions (e.g., assessed vis-à-vis gas market reviews), but also through public policy.

- In the 1990s the Government developed a plan for restructuring the electricity industry, re-organizing Ontario Hydro into new companies, and creating competitive wholesale and retail electricity markets.
- With the passage of the *Energy Competition Act* in 1998, the Board also became responsible for regulation in the restructured electricity sector.
- In 2009, the *Green Energy and Green Economy Act*, 2009 expanded OEB’s mandate to include the promotion of renewable energy and energy conservation, and the facilitation of smart grid implementation.

Legislative provisions

Some jurisdictions allow for governments to issue policy directives providing direction to regulators as they see fit. The CNSC’s *Nuclear Safety and Control Act* (NSCA), for example, allows the Governor in Council “to by order, issue to the Commission directives of general application on broad policy matters with respect to the objects of the Commission” (Government of Canada, 2000b). This specific provision has only been used one time, in 2007 during a shortage of medical isotopes. The directive issued to the CNSC from the government reads as follows. “In regulating the production, possession and use of nuclear substances in order to prevent unreasonable risk to the health of persons, the Canadian Nuclear Safety Commission shall take into account the health of Canadians who, for medical purposes, depend on nuclear substances produced by nuclear reactors” (Government of Canada, 2007).

Alberta’s *Responsible Energy Development Act* ( REDA) has a similar provision, stating that “when the minister considers it to be appropriate to do so, the Minister may by order give directions to the Regulator for the purposes of: (a) providing priorities and guidelines for the Regulator to follow in the carrying out of its powers, duties and functions, and (b) ensuring the work of the Regulator is consistent with the programs, policies and work of the Government in respect of energy resource development, public land management, environmental management and water management” (Government of Alberta, 2012). An example is the AER’s response to the Government of Alberta’s *Lower Athabasca Region: Tailings Management Framework for Mineable Athabasca Oil Sands* (TMF). Following the government’s release of the TMF, the AER suspended the existing directive on tailings performance and developed new requirements or tailings management in line with the TMF, in the form of a new directive.

Direct policy connection

The final avenue through which regulators are directed to influence government policy is a direct connection, whereby policy direction is implemented as per any government department, within the confines of legislation. This method applies mainly to regulators situated within a ministry (conventional administrations, as defined below). Mandate letters, government strategies, public commitments, government budgets and policy speeches are all mechanisms though which governments can provide direction to such regulators. NZP&M, for example, supports the government’s Business Growth Agenda by aiming to maximize the gains to New Zealand’s economy from the development of natural resources (New Zealand Petroleum and Minerals, 2016).
Governance

ORGANIZATIONAL STRUCTURE

At the highest level there are two basic organizational types that can be used to classify each regulator: arm’s length organizations and conventional administrations. Table 6 below provides an overview of these concepts and outlines which option each of the 11 examined regulators best aligns with.

Table 6. Basic Structure of Organizations

<table>
<thead>
<tr>
<th></th>
<th>Arm’s length organization</th>
<th>Conventional administration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Separate organizational structure from government with independence over operations and for regulatory decision making or making recommendations, and final accountability for regulatory decisions</td>
<td>Organizational groups within a government administrative unit (e.g. department), with closer ties to political direction and ultimate accountability generally resting with elected officials (e.g. minister or cabinet)</td>
</tr>
<tr>
<td>NEB</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>CNSC</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>BCOGC</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>AER</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>OEB</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>FERC</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>PHMSA</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>EPA</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>NVE</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>AUSER</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>NZP&amp;M</td>
<td>NO</td>
<td>YES</td>
</tr>
</tbody>
</table>

The model of an arm’s length regulator revolves around the concept of regulatory integrity. Regulatory integrity is necessary in achieving decision making that is “objective, impartial, consistent, and avoids the risk of conflict, bias or improper influence” (OECD, 2014). The independence of regulators attempts to safeguard regulatory integrity. This independence is not absolute, but can be considered, at the most basic level, to mean that the regulator is not subject to influence or direction from government, industry or other groups on individual regulatory decisions. Indeed it is well accepted that regulators should be subject to long-term policy direction from governments (OECD, 2014).

While Table 6 presents binary options – as each regulator is fundamentally either a separate organization or internal government body – the level of independence and autonomy afforded to regulators is better understood on a spectrum, whereby conventional administrations can be granted measures of independence, and arm’s length organizations can be directed and controlled through government policy direction to varying degrees.
Further, independence should not be conflated with decision making authority on project approvals, but rather the extent to which the regulator can carry out its activities within its statutory framework. For example, in Canada the decision on whether or not to approve a major pipeline project (over 40 kilometers in length) is made by the Governor in Council on recommendation from the NEB. The fact that the federal government is the final decision maker in no way lessens the independence of the NEB, so long as the NEB’s recommendation is free of any political influence or direction.

Where decision making is highly technical and within a narrow band of public interest, the arms-length regulatory model is more sustainable. Where the regulatory body works to broadly defined public interest protection, the arms-length model may be more difficult to sustain. This report does not attempt to test the assertion that arm’s length regulators have a higher degree of regulatory integrity or are more or less appropriate. Rather it simply aims to characterize each regulator as fitting under one or the other organizational type.

**NEB CURRENT STATE: ORGANIZATIONAL STRUCTURE**

The NEB is an arm’s length organization with a government appointed Board. The Board has independence over its operations and regulatory decision making and accountability for decisions within its legislated mandate, with some recommendations subject to final decision by the GiC. The Board consists of not more than nine permanent Members who are appointed by the GiC; the number of temporary Members, who are also appointed by the GiC, is unlimited. A single Chairperson, who is a permanent Board Member, is appointed by the GiC and is in charge of distributing work among Board Members and supervising and directing staff. The Chair is also responsible for deciding if the Board is to sit in a panel to review project applications, assigning Board Members to these panels and choosing one member to preside over each. There is a Vice-Chairperson responsible for fulfilling the functions and powers of the Chair if he/she is absent. The Chair is also the CEO and Deputy Head of the NEB. The CEO is responsible for the operational and administrative function of the NEB.

**Arm’s length organizations**

Arm’s length organizations are those that have a separate organizational structure from government, autonomy over both their operations and regulatory decision making, and full accountability for regulatory decisions. Eight of the 11 regulators reviewed are characterized as arm’s length organizations, though the specifics of how they are structured and function varies from case to case.

The box below provides text from the founding legislation of arm’s length regulators that establishes them as separate entities.

**Quotations: Legislative Text Establishing Arm’s Length Regulators**

- “There is hereby established a Board, to be called the National Energy Board” (Government of Canada, 2016b)
- “The Alberta Energy Regulator is established as a corporation”…“The Regulator has the capacity and, subject to this Act and any other enactment, the rights, powers and privileges of a natural person”…The Regulator is not an agent of the Crown.” (Government of Alberta, 2012)
- “A corporation known as the Oil and Gas Commission is continued”…“The commission is an agent of the government.” (Government of British Columbia, 2008)
- “Ontario Energy Board is continued as a corporation without share capital under the name Ontario Energy Board”… “The Board has the capacity and the rights, powers and privileges of a natural person for the purpose of exercising and performing its powers and duties”…“The Board is an agent of Her Majesty in right of Ontario, and its powers may be exercised only as an agent of Her Majesty” (Government of Ontario, 1998)
Interestingly, the AER is the only Canadian regulator examined that is explicitly noted as not being an agent of the Crown. The OEB, BCOGC, and CNSC’s founding legislation all note that they are agents of the Crown, government, or Her Majesty, while the NEB Act does not state the Board’s status one way or another. An overview of the significance of the status of these four regulators can be reviewed on the Treasury Board Secretariat’s website.

The Division of Governance Functions section below addresses the related question of what separation of organizational governance from regulatory governance means.

**Conventional administration**

Only three of the 11 regulators are ‘conventional administrations’ – that is regulatory divisions or directorate within a government department with ultimate accountability resting on elected officials (minister or cabinet). As is the case with arm’s length organizations, conventional administrations vary in terms of their internal governance arrangements.

PHMSA, for example, is an administration under the Department of Transportation comprised of two safety offices: the Office of Pipeline Safety and the Office of Hazardous Materials Safety. The organization is led by a presidentially appointed Administrator (also the Chief Executive), who has legislated duty of regulatory decision making and responsibility for directing the administration’s functions. The Administrator reports directly to the Transportation Secretary, who has the primary authority to regulate key aspects of interstate pipeline safety: design, construction, operation and maintenance, and spill response planning.

As noted in the introduction to this section, however, the autonomy of regulators within ministries is often safeguarded by provisions in their founding legislation. Norway, in many ways represents a hybrid model between conventional and arm’s length organizations. While the NVE is situated within the Ministry of Petroleum and Energy, it is ultimately “an independent legal entity with its own budget adopted by Parliament and power to act in the scope of its competences” (Norwegian Water Resources and Energy Directorate, 2011).

**DIVISION OF GOVERNANCE FUNCTIONS**

A subsidiary governance question to that of organizational structure is the division of roles, function, accountabilities and responsibilities for corporate governance (organizational oversight, strategic direction) and regulatory decision making.
The NEB Act does not draw a distinction between the Board Members’ corporate governance and regulatory functions. The Board has the responsibility for governance functions such as setting strategic priorities, as well as for regulatory functions such as making orders/giving direction, holding inquiries, hearing and determining all matter within its mandate, and issuing and enforcing mandatory orders. A single Chairperson (also CEO or Deputy Head) is appointed by the GiC and is in charge of distributing work among Members and supervising and directing staff.

The governance structure of conventional administrations is generally determined by a government department or ministry’s own arrangements (OECD, 2014). For some regulators, the corporate governance and regulatory decision making roles rest with the same individual or group of individuals (board or commission members). This is the case for most of the arm’s length regulators examined, including the NEB, CNSC, OEB, FERC and AUSER. In other cases, decision making and corporate roles are separate, whereby a board is responsible for the organizational oversight, strategic guidance and operational policy functions, with regulatory decision making functions largely resting with a separate set of commissioners and/or a CEO and staff. This is the case for AER and BCOGC. In the case of the three regulators structured as conventional administrations (PHMSA, NZP&M and NVE), corporate oversight rests with the civil service head of the organization (who heads the overall department) and regulatory decision making largely rests with the position which heads the regulatory body or division – administrator, CEO or Director General respectively.

There are two broad views on the division of governance functions. On the one hand, basic governance practice is normally to separate out corporate “board” type authorities from “business” decision making (in the case of regulators this being regulatory decisions). This provides for clarity of roles and enables the position charged with regulatory decision making to focus solely on this aspect of the organization. On the other hand, there is a long standing practice of combining these two functions for stand-alone organizations – perhaps to demonstrate full autonomy of the board or commission. It can be noted that the competencies needed for organizational oversight (good governance) and for regulatory decision making (knowledge of the energy sector and regulator processes), differ.
Decision Making

This report divides decision making into three broad categories: assessment process, decision makers, and triggers. For any given project or activity:

- **Assessment process** refers to how perspectives and evidence are gathered and considered for regulatory decisions
- **Decision makers** refers to the type and level of official at which decisions are made
- **Triggers** refers to the basis for determination of the type of assessment and at what level decisions are taken

**ASSESSMENT PROCESS**

There are two primary methods through which regulatory information, evidence and perspectives are assessed: administrative and adjudicative. Table 7 identifies which of the 11 regulators use one or both assessment processes to make regulatory decisions.

**Table 7. Assessment Process**

<table>
<thead>
<tr>
<th></th>
<th>Administrative</th>
<th>Adjudicative</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEB</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>CNSC</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>BCOGC</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>AER</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>OEB</td>
<td>YES</td>
<td>YES</td>
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<tr>
<td>FERC</td>
<td>YES</td>
<td>YES</td>
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<tr>
<td>PHMSA</td>
<td>YES</td>
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<tr>
<td>EPA</td>
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<tr>
<td>NVE</td>
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<td>NO</td>
</tr>
<tr>
<td>AUSER</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>NZP&amp;M</td>
<td>YES</td>
<td>NO</td>
</tr>
</tbody>
</table>
NEB CURRENT STATE: ASSESSMENT PROCESSES

The NEB undertakes both administrative and adjudicative assessment processes. Administrative assessments may be undertaken by the NEB based on established written processes. Adjudicative assessments are undertaken through a hearing process that can be conducted solely in writing or through a combination of written and oral submissions to the NEB. The related topics of decision making and triggers for determining who takes decisions are provided in the following two sections.

Administrative

In administrative processes, assessments may be undertaken by regulators without some or all of the formalities and requirements of an adjudicative process. Administrative decision making represents the vast majority of decisions undertaken by most regulators, and all decisions undertaken by regulators that are not subject to a quasi-judicial tribunal or panel in their founding legislation, or through processes established by the regulator.

While adjudicative processes have many more procedural requirements, in practice, administrative assessments for major authorizations share many elements with adjudicative processes (e.g. evidence submitted to the regulator in the form of a project application). Further, regulators will often seek public participation and engage with a number of affected parties and Indigenous peoples to gain their perspectives and hear their concerns and, ultimately, make regulatory decisions in the public interest in accordance with their mandate.

Highlight AUSER's Flexible Assessments & Open Culture

Interviewees from the AUSER noted that its administrative decision making process allowed the Board to be more flexible in their assessments and foster an open, collaborative culture including close, informal relationships between staff and board members. This fosters honest, candid advice from staff to the board and supports the board's decision making. The Board and staff in the AUSER engage directly with stakeholders, as board members are free to meet with companies and consumer groups with no involvement of lawyers or any strict procedural requirements. Furthermore, the AUSER is able to pursue its own research in areas where it feels it needs more evidence or information on a particular topic.

From a cultural perspective, interviewees from AUSER noted that the regulator has an open structure, allowing staff and board to work closely together while respecting the boards decision making authority. Even junior staff participate in board meetings and systems such as broadcasting all board meetings over an internal radio, such that all staff can follow along from their desks, reinforce the open culture.

While it is difficult to say how much of this approach is driven by governance, this aspect — according to the interviewee — is one of AUSER’s greatest strength. While this type of approach by no means directly flows from non-judicial assessments, one could argue that AUSER’s culture and approach could not exist where adjudicative process is applied or mandated.

Adjudicative assessments

Adjudicative assessments involve hearing processes, either in person or via the review of written evidence and perspectives undertaken by a quasi-judicial tribunal. Such processes are subject to associated legal requirements, which may include, among other things, requirements for written evidence, applications for standing, and formal opportunities for participants to present arguments and ask questions.

In practice, many regulators allow for hearings to be held both orally and in writing. While each regulator has specific requirements, they all require the application of the principles of natural justice when making regulatory decisions that affect the rights, privileges or interests of individuals. Natural justice generally has two components: affected parties must have an adequate opportunity to be heard before a decision is made affecting their interests, and decision making must be made by independent and impartial decision makers. One difference
among examined regulators is the varying roles played by regulatory staff in adjudicative processes versus administrative processes.

For the OEB, when applying non-adjudicative processes, staff provide legal, technical and policy expertise and analysis to Board Members to support their decision making. In most oral hearings, the Board relies on all parties (staff, applicants and intervenors) to offer substantive input. Staff facilitate the process with the objectives of identifying and evaluating options for the Board’s consideration in a proceeding by reference to the public interest. All parties are responsible for putting forward and evaluating all options that may be considered by a panel in a proceeding. In the case of the OEB, “in the vast majority of processes at the Board that do not involve oral hearings, there is a division of responsibility within the Board that allows the expertise of the entire institution to be drawn upon to provide input respecting the identification and evaluation of options for the Board to take into account in its decision making. In oral hearings, the universe of possible solutions must come from the parties, which include staff, to the proceeding.” (Ontario Energy Board, 2006).

For licensing hearings conducted by the CNSC, on the other hand, the only party to offer input before the Commission is the licence applicant. CNSC staff experts and intervenors participate as well in public hearings, with CNSC staff providing their recommendations to the Commission and intervenors providing their viewpoints, questions and concerns. All matters are canvassed through the questioning of applicants, CNSC staff and intervenors by the Commission. A small secretariat of CNSC staff supports the President and Commission members in the hearing process (Canadian Nuclear Safety Commission, 2014).

For the NEB, during an adjudicative process, staff support Board Members by providing technical advice and support directly to the Members. NEB staff can also act as: process advisors, assisting the public and participants with understanding the hearing process; or regulatory officers, responsible for logistical arrangements (National Energy Board, 2013a).
LEVELS OF DECISION MAKING

The review of regulators identified three primary categories and levels of decision makers on energy developments and market activities: delegated, appointed and political. Individual regulators may have more than one category of decision maker mandated in legislation (refer to the “Triggers” section for a discussion of factors for determining at what level a given regulatory decision must be made). Table 8 below provides an overview of these categories and outlines which each of the 11 jurisdictions has available to them.

Table 8. Levels of Decision Making

<table>
<thead>
<tr>
<th>Category</th>
<th>Delegated</th>
<th>Appointed</th>
<th>Political</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decisions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>are able to</td>
<td>YES*</td>
<td>YES</td>
<td>YES**</td>
</tr>
<tr>
<td>be delegated</td>
<td>YES</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>to regulatory</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>staff</td>
<td>YES</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>Decisions</td>
<td>YES</td>
<td>YES</td>
<td>YES***</td>
</tr>
<tr>
<td>are taken by</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>appointed</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>commissioners</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>or Board</td>
<td>YES</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td>Members</td>
<td>YES</td>
<td>NO</td>
<td>NO</td>
</tr>
</tbody>
</table>

*In limited situations. See current state section for details. | **Board Members sitting as a panel have full authority to make the regulatory recommendation on a project application. As of 2012, Cabinet makes the final decision for major development (e.g. pipelines greater than 40km) | *** For major developments (e.g. power lines longer than 20km carrying a voltage of 300kV or more in Norway)

NEB CURRENT STATE: DECISION MAKING

Decision making responsibility for NEB-regulated projects rests with either the Board or GiC, depending on project specifics and what section of the NEB Act the application falls under.

The NEB Act does not have a general mechanism for the Chair to delegate authorities for regulatory decisions and recommendations to NEB officers or staff. The NEB Act allows the NEB to ‘designate any person as an inspection officer with powers to inspect, audit compliance and issue orders to protect the public and the environment. The NEB may also designate persons to issue notices of violation for administrative monetary penalties.
Delegated
In many cases, delegated powers account for the bulk of decisions made by regulators. Examples of commonly found delegated decisions include routine approvals, renewals, and fines and penalties handed down by inspectors. At a high level there are two ways power can be delegated to staff within an organization: through legislation or discretion. In some instances, specific positions are identified and imbued with authority through legislation. Inspectors are a commonly found example of this. For example, the NSCA allows for the CNSC to "designate as an inspector for the purposes of this Act any person whom the Commission considers qualified and any person so designated shall be provided with a certificate in the prescribed form certifying the person’s designation" (Government of Canada, 2000b).

Most delegation, however, happens at the discretion of the regulatory leadership with regulators delegating decision making to positions or individuals as they see fit. In many cases, any significant opposition or appeal to delegated decision making will trigger a higher level review.

While most regulators reviewed delegate the majority of their decision making, this is not always the case. The majority of decisions taken by the AUSER, for example, are taken by the Board itself. Interviewees site a full-time board, regular meetings, and a caseload commensurate with Board capacity for this.

Appointed
Appointed decision makers are commissioners or Board Members appointed by government. Their decisions are based on either adjudicative or administrative assessments, as outlined in the previous section. The manner through which decisions are taken by appointed groups or individuals differs based on the assessment type, unique rules, and governance structures.

The AER, for example, has different decision making authorities for adjudicative and administrative assessments. A Chief Executive Officer (CEO) appointed by the Board of Directors (BOD) is chiefly responsible for making regulatory decisions for most administrative process, while Hearing Commissioners, appointed by the Lieutenant GiC, preside over all adjudicative decisions.

For the AUSER, all decisions made by the Board require a quorum consisting of at least two of the three Board Members. Furthermore, once a quorum is achieved any decision made by the Board must be a unanimous decision.

Highlight AUSER’s Commissioner Recruitment and Appointment

The AUSER Board is comprised of three members who are jointly appointed by both levels of government – the commonwealth (federal) and states/territories. It is required that one of the three members is a commissioner of the national Australian Competition and Consumer Commission; the remaining two members are state/territory members, who do not represent a particular jurisdiction but are backed by a majority of states and territories.

The Council of Australian Governments (COAG), an intergovernmental forum consisting of the Prime Minister, state and territory Premiers and Chief Ministers and the President of the Australian Local Government Association (ALGA), has a standing, independent panel who undertakes an international recruitment processes to hire AUSER’s board. The panel provides the COAG executive committee with multiple names as recommendations through, and the executive committee then votes on them, as well as any others that may have been nominated by members.

Only representatives from the state/territories vote for the two non-federal members, while all executive committee members for the chair, with a successful vote requiring a majority.
Political
In some regimes, final decisions on major projects are taken by elected officials, often following submission of recommendations from regulators. This is true for the NVE, NZP&M and NEB. For example, at the NEB, Board Members make recommendations on pipeline projects over 40 kilometers in length, which are then subject to a decision by the GIC. By contrast, the CNSC appointed commission members make the final decision on all developments under their jurisdiction.

There are a number of reasons for why final decision making authority may rest at the political level. Where a regulatory decision involves value judgements, for example, it may be more appropriate for a minister who is directly accountable to the legislature to be making final decisions (OECD, 2014). Where human safety is the primary concern, project authorization decisions may rest with appointed bodies, as is the case with CNSC, or with PHMSA for regulation of safety of operations. Determination of whether such decisions are elevated to a political level can also be based on a defined set of factors which can be considered “triggers”. Specific triggers for having some decisions taken at the political level are provided in the following section.

TRIGGERS
Triggers refer to the basis (rules and processes) for determination of the nature of the assessment and at what level decisions are taken. Regulatory systems often use a tiered approach to decision making. In other words, some regulatory decisions that may be considered routine or that require less judgement on the part of the regulator are not directed to formal hearings and or to political sign-off. Delegated individuals within regulators may be empowered to take decisions – ranging from routine activity approvals (e.g. a single well) to enforcement actions. The following discussion largely pertains to the authorization function of regulators. Table 9 outlines the three broad types of triggers used by the 11 regulators: nature and scope of development or activity, regulator discretion, and appeals or affected party opposition.

Table 9. Triggers

<table>
<thead>
<tr>
<th>Nature and scope of development or activity</th>
<th>Regulator discretion</th>
<th>Appeals or affected party opposition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triggers are defined based on the type of project and its scale and/or on criteria for their potential impact or significance</td>
<td>Regulators are provided discretion to determine the assessment process (e.g. administrative or adjudicative) and assign a project application to one or the other through consideration of a number of factors including: degree of potential public concern or effect on the public interest</td>
<td>Appeals or affected party opposition elevate a project application to a higher level of assessment or sign-off</td>
</tr>
</tbody>
</table>

NEB CURRENT STATE: TRIGGERS

- **Nature and scope of development or activity**: For major pipeline projects greater than 40 kilometers in length, the NEB makes a recommendation on the application with the final decision made by the GIC. Decisions on pipelines that are 40 kilometers or less and related facilities are made by the Board. (National Energy Board, 2013a).
- **Appeals or affected party opposition**: Landowner oppositions to the detailed route of an approved pipeline require a public hearing (National Energy Board, 2010)
Nature and scope of development or activity
In many jurisdictions the nature or scope of a development or activity automatically triggers a certain type of assessment or required level of approval. For example, under the NEB Act, all international or interprovincial pipelines that are 40 kilometers in length or less can be approved by the NEB. Whereas international or interprovincial pipelines that are greater than 40 kilometers in length require approval by the GiC, on the recommendation of the NEB. (Government of Canada, 2016b).

Norway uses similar thresholds for energy projects and in fact relies on separate legislation with requirements for certain project types based on their size and potential impact. For example, a small power plant and a large power plant are subject to separate approval processes, with “small” and “large” determined by a host of factors, including their annual electricity production (Norwegian Ministry of Petroleum and Energy, 2015).

In addition to scoping considerations (such as pipeline length and power production) these triggers can be activated based on the nature of development in certain jurisdictions. In Alberta for instance, Hearing Commissioners assigned to a joint provincial-federal panel participate in regulatory decisions on any oil sands project, which then requires the approval of the Federal Minister of Environment.

Regulatory discretion
While not specified in legislation, regulatory discretion was noted in interviews as a de facto practice utilized by many regulators. Essentially, regulators delegate routine authorizations and decision making to staff within their organization. This may be on a case-by-case basis (AER) or through specified delegation of authorities (CNSC).

The CNSC, “delegates about 2,500 low-risk licensing decisions annually to designated officers qualified to make decisions on its behalf” (Canadian Nuclear Safety Commission, 2016). In other cases (NZP&M and NVE), interviewees noted controversy or interest surrounding decisions as factors in determining the path an authorization will take, with more controversial projects being ‘bumped’ up to include public hearings or higher level decision making.

Appeals or affected party opposition
In some cases, formal appeals or affected party opposition can elevate a project to a higher level of assessment or decision making. In the case of the NEB, for example, if landowners or others who anticipate their lands may be adversely affected by the detailed route of an approved pipeline file a letter of opposition, the NEB must conduct a public hearing. This hearing will determine whether the proponent has proposed the best possible detailed route and most appropriate methods and timing of construction. (National Energy Board, 2010). In other words, this opposition creates a requirement that the review proceed through an adjudicative rather than administrative assessment process. Similarly, statements of concern from affected parties (e.g. landowners) which are deemed valid by the AER will require a project application to go to Commissioner-conducted hearings. Most decisions within the NVE’s mandate are taken by the NVE (with the exception of certain types of projects where it is the King in Council who assumes the role of decision maker). If an appeal is submitted on an NVE decision, the NVE will consider it and re-examine that decision. Should they uphold their original decision, the appeal must be considered by the Ministry of Petroleum and Energy (the department under which the NVE falls). The Ministry must then either grant or reject the appeal (Norwegian Ministry of Petroleum and Energy, 2015).
Tools for lifecycle oversight

This section details the roles that energy regulators play and the tools that they have available to provide oversight of a project after an authorization has been granted. This section focuses on the following roles of regulators:

- Compliance, monitoring and enforcement
- Emergency management
- Land acquisition
- Dispute resolution and prevention

COMPLIANCE, MONITORING & ENFORCEMENT

Table 10 below provides an overview of the five broad categories of compliance, monitoring and enforcement tools utilized by the 11 regulators: inspections and audits, fines and penalties, stop orders, incentives, and public reporting.

Table 10. Compliance, Monitoring and Enforcement Tools

<table>
<thead>
<tr>
<th></th>
<th>Inspections &amp; audits</th>
<th>Fines &amp; penalties</th>
<th>Stop orders</th>
<th>Incentives</th>
<th>Public reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tools to monitor whether regulations and conditions are being adhered to</td>
<td>Tools to penalize non-compliance, including fines</td>
<td>Tools to penalize non-compliance by stopping operations or revoking permits or licenses</td>
<td>Tools to reward/provide benefits for positive performance</td>
<td>Requirements for publically reporting performance</td>
<td></td>
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<tr>
<td>NEB</td>
<td>YES</td>
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<td></td>
</tr>
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</tr>
<tr>
<td>BCOGC</td>
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<td>YES</td>
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<td>NO</td>
<td></td>
</tr>
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<td>AER</td>
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<td>YES</td>
<td>NO</td>
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</tr>
<tr>
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<td>YES</td>
<td>YES</td>
<td>YES</td>
<td></td>
</tr>
<tr>
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<td>YES</td>
<td>YES</td>
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</tr>
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<td>PHMSA</td>
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<td>YES</td>
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<td>NO</td>
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</tr>
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<td></td>
</tr>
<tr>
<td>AUSER</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
</tbody>
</table>

* Information unavailable
NEB CURRENT STATE: COMPLIANCE, MONITORING AND ENFORCEMENT TOOLS

The NEB’s mandate for lifecycle regulation is broad and allows for flexibility in terms of the type of compliance monitoring and enforcement tools the Board uses. The NEB uses a risk-based system to determine when and where to conduct compliance verifications. Each year the NEB conducts targeted compliance verification activities including six comprehensive audits and at least 150 inspections of regulated companies. This is in addition to the 100+ technical meetings and exercises conducted on an annual basis.

The NEB has instituted detailed management-system requirements for pipeline operations which are audited regularly. Some of the compliance verification tools available include: inspections of facilities under construction or in operation and abandoned pipelines; reviews of post-construction monitoring reports; reviews of emergency procedure manuals; management systems audits; and audits of company operations. To enforce compliance, operators found to be non-compliant are subject to prosecution and may have their certificate revoked or suspended. The NEB also makes use of orders to enforce certain requirements and restrict operations, and administrative monetary penalties (National Energy Board, 2015).

Highlight

EPA Next Generation Compliance

The EPA’s Next Generation Compliance strategy aims to modernize compliance by taking advantage of new tools and approaches. Next Generation Compliance consists of five interconnected components designed to improve compliance effectiveness: -

1. “Design regulations and permits that are easier to implement, with a goal of improved compliance and environmental outcomes.

2. Use and promote advanced emissions/pollutant detection technology so that regulated entities, the government, and the public can more easily see pollutant discharges, environmental conditions, and noncompliance.

3. Shift toward electronic reporting to help make environmental reporting more accurate, complete, and efficient while helping EPA and co-regulators better manage information, improve effectiveness and transparency.

4. Expand transparency by making information more accessible to the public.

5. Develop and use innovative enforcement approaches (e.g., data analytics and targeting) to achieve more widespread compliance.” (Environmental Protection Agency, 2016c)

Inspections & audits

Inspections and audits are tools that regulators use to ensure that conditions of authorizations and regulations are being followed. All 11 regulators have a mandate to undertake some form of inspections and audits. This can include on-site compliance monitoring programs, where regulators send inspection officers to assess and audit facilities and operations against regulatory requirements and license or permit conditions. Inspections can be planned or reactive, announced or un-announced. In addition to on-site inspections, many regulators perform their audit function by collecting, reviewing and assessing reporting data from authorizations.

The NEB, for example, requires companies to have comprehensive management systems, which must, among other requirements, provide for continual improvement. As part of its audit activities, the NEB reviews and evaluates regulated companies against the processes, procedures and standards that they identify as being part of their management system and protection programs (National Energy Board, 2013b).
AUSER & PHMSA’s Differing Approaches to Compliance

AUSER and PHMSA serve as interesting examples of ‘bottom-up’ versus ‘top-down’ approaches to compliance. Under energy retail law in Australia, some businesses are required to self-identify breaches against a law or regulatory requirement and report to the AUSER within a specified time period. Audits conducted by the AUSER “generally focus on whether appropriate and functioning internal controls are in place for identifying, monitoring and ensuring compliance, identifying breaches or possible breaches and reporting and correcting any such breaches” (Australian Energy Regulator, 2014).

In the U.S., PHMSA adopts a top-down approach to monitoring compliance through its inspections of facilities and construction projects; inspections of operator management systems, procedures and processes; incident investigations; and direct dialogue with operator management. PHMSA’s use of the “Pipeline Inspection Priority Program (PIPP), which ranks pipeline units on system characteristics, filed reports, and accident data” allows for resources to be allocated efficiently and effectively in a manner that maximizes compliance (Pipeline and Hazardous Materials Safety Administration, 2016).

Fines and penalties
When inspections and audits turn up non-compliances with regulatory requirements or project authorization conditions, regulators may decide to issue fines or penalties. All 11 regulators examined have a mandate to issue some form of fines or penalties on non-compliant authorization holders. Fines are generally commensurate with the severity of the contravention.

The AER may issue penalties that are higher or lower than the base amount set out in legislation dependent on a number of factors including: the degree to which the licensee is negligent; whether the licensee purposefully committed the offence; the steps taken to address the contravention or limit the extent of loss or damage; and the licensee’s history of compliance with AER requirements (Alberta Energy Regulator, 2016b). For severe offences, regulators can recommend criminal prosecution to the Crown.

Stop Orders
Another universally relied upon tool for addressing non-compliances with regulations or conditions is the authority to issue stop orders. Often these are in the form of temporary suspensions of authorizations that are in effect until regulated companies can demonstrate to the regulator’s satisfaction that the issues of non-compliance have been addressed.

Incentives
By their nature, incentives are voluntary measures for enabling regulated entities to improve their performance. Regulators can provide incentives to regulated parties to encourage some form of good behaviour. FERC, for example, encourages prompt, self-reporting of possible violations. It does this by applying what it calls a “mitigation credit” for all self-reported violations. Essentially, when a firm self-reports a violation it may either close the matter without sanction or – when an enforcement action on behalf of FERC is taken - apply the mitigation credit to the penalties, essentially lessening their severity. The size of this credit is commensurate with the promptness with which a self-report is made (Federal Energy Regulatory Commission, 2016b).
The EPA's self-disclosure incentive policies allow for significant penalty reductions of self-disclosed civil violations of environmental law. The reduction of penalties depends on how many of the policy's nine conditions are met. For example, a violation that is (1) discovered systematically; (2) promptly disclosed to the EPA; and (3) promptly corrected, are three of the conditions that determine eligibility and the degree to which the fine or other penalty can be reduced. The EPA recently also established an “e-Disclosure” portal to receive and quickly process self-disclosed civil violations of environmental law (Environmental Protection Agency, 2015).

Public reporting
Public reporting is a tool through which regulators report on the performance of operators. This can include publishing statistics around incidents, public complaints, or any other form of outcome or metric. Essentially, public reporting is a tool that regulators can use to name and shame or applaud operators. Therefore, the main impact to those regulated is one of reputation, either negatively or positively. Public reporting is used by eight of the 11 regulators.

The CNSC, for example, produces yearly reports on safety performance within the nuclear sector by assessing how licensees are meeting regulatory requirements and other program expectations such as health and safety, environmental protection and emergency management. Reports are published for the sector as a whole, as well as specific sites (e.g. uranium and nuclear substance processing facilities; uranium mines and mills). These yearly reports often include a summary of reported events and orders issued by CNSC as well as any emerging regulatory issues (Canadian Nuclear Safety Commission, 2015a).

Since 2005, the Board has published annual Yearbooks of Electricity Distributors and Yearbooks of Natural Gas Distributors which provide interested parties and the general public with financial and operational information collected from distributors. In 2012, the OEB established electricity distributor scorecards that show measures of how well the distributors are performing each year. This approach is designed to encourage electricity distributors to operate effectively, continually seek ways to improve productivity, and focus on improvements valued by their customers. Electricity distributors report their scorecard performance results annually, and the OEB makes the results available to the public.

The scorecard includes traditional metrics for assessing a distributor's services, such as frequency of power outages, financial performance and costs per customer. In addition, the reports include metrics that directly reflect the customer experience, such as how well the distributor resolves customer concerns on the first contact, the accuracy of customers’ bills, public safety and more. (Ontario Energy Board, 2016d).

EMERGENCY MANAGEMENT & RESPONSE
Regulators have multiple roles in emergency management and response. These can include setting out requirements for industry emergency preparedness and response; oversight and response during an incident; and investigation and enforcement after an incident.
NEB CURRENT STATE: EMERGENCY MANAGEMENT & RESPONSE

In 2015, the Pipeline Safety Act, amended the NEB Act to provide the NEB with significant additional lifecycle oversight tools in the area of emergency management. The NEB Act imposes absolute liability limits and financial requirements on pipeline companies, and gives the NEB the power to take over the response to a pipeline release in certain circumstance. The National Energy Board Onshore Pipeline Regulations (OPR) also requires companies to have an emergency management program. The NEB monitors and enforces compliance with the emergency management program requirements throughout the life of a project. In the event of a significant incident, the NEB has an Emergency Management Program in place that can mobilize a field response. The NEB also maintains an Emergency Operations Center.

Industry requirements are most commonly expressed as the need for emergency management programs or emergency preparedness plans and procedures for a development. The BCOGC, for example, requires permit holders to prepare and maintain an emergency response program and a response contingency plan as prescribed in their Emergency Management Regulation (BC Oil & Gas Commission, 2015). This is common practice across regulators. These plans outlined minimum requirements applicants and permit holders must adhere to in developing and implementing emergency management programs. While not required, BCOGC does recommend permit holders refer to the following standards in developing their programs:

- ISO/CSA 31000 Risk Management, Principles & Guidelines
- CSA Z731 Emergency Preparedness and Response
- CSA Z1600 Emergency and Continuity Management Program

While project-specific requirements are important, in practice, emergency management regimes are complex, involving a myriad of parties with various responsibilities and capacities. Communities, local authorities, industry responders, multiple regulators and a host of other state/provincial and federal groups may all have various roles to play in any emergency.

Often, larger planning and coordination roles are handled by umbrella groups or agencies, with participation from the regulators. For example, in the U.S. the Federal Emergency Management Agency coordinates the National Incident Management System, which provides an integrated framework that defines the roles and responsibilities of federal, state and local first responders during emergency events, including the EPA and PHMSA. Similarly, nuclear emergencies in Canada are coordinated under the Federal Nuclear Emergency Plan, led by Health Canada with support from the CNSC, Public Safety Canada and other agencies. A similar system is in place for energy emergencies in Canada, as laid out in the Emergency Management Act, where the NEB is designated as a support agency to Natural Resources Canada in the provision of energy related emergency response activities at the national level.

**Highlight**

PHMSA’s Local Emergency Response Committees

Under the Emergency Planning and Community Right-to-Know Act (42 U.S.C. 11011 et seq. (1986)), each state is required set up a State Emergency Response Commission. States are then required to establish Local Emergency Planning Committees (LEPCs) across the state. LEPCs provide a mechanism for citizens, local governments and industry to work together to plan for chemical accidents, and to reduce risk to the public from releases of toxic chemicals into the environment (Pipeline and Hazardous Materials Safety Administration, 2016).
The box below provides legislative text on provisions requiring emergency planning and strong enforcement for emergency response for pipeline operators found responsible for pipeline incidents. One example of legislation directed at public education on emergency response is also offered.

**Quotations: Legislative Text on Emergency Management and Response**

- **NEB**: “If an unintended or uncontrolled release from a pipeline of oil, gas or any other commodity occurs, all persons to whose fault or negligence the release is attributable or who are by law responsible for others to whose fault or negligence the release is attributable are jointly and severally, or solidarily, liable for (a) all actual loss or damage incurred by any person as a result of the release or as a result of any action or measure taken in relation to the release; (b) the costs and expenses reasonably incurred by Her Majesty in right of Canada or a province, any Aboriginal governing body or any other person in taking any action or measure in relation to the release; and (c) all loss of non-use value relating to a public resource that is affected by the release or by any action or measure taken in relation to the release” (Government of Canada, 2015)

- **NEB**: “If the Governor in Council designates a company under subsection (1), the Board or any of its officers or employees — or class of officers or employees — that the Board authorizes may take any action or measure that they consider necessary in relation to the release or they may authorize a third party to take any such action or measure” (Government of Canada, 2015)

- **BCOGC**: “A permit holder must do all of the following:...(b) prepare and maintain an emergency response program and a response contingency plan satisfactory to the commission or as prescribed by regulation, if any' (Government of British Columbia, 2008)

- **BCOGC**: “If costs or expenses are incurred by the commission in implementing or carrying out measures to contain and eliminate spillage or making a reimbursement under subsection (2), the commission may do one or more of the following: (a) take, deal with and dispose of the spillage, subject to section 55; (b) order (i) the permit holder, or (ii) the person who the commission believes is responsible for the spillage or for the likely source or cause of the spillage to pay the costs and expenses, or a part of them; (c) order the permit holder or person referred to in paragraph (b) to indemnify the commission for costs or expenses paid by the commission;(d) for the purpose of paragraph (b) or (c), direct the manner of payment or indemnification.” (Government of British Columbia, 2008)

- **PHMSA**: “the Secretary shall issue guidance to owners and operators of pipeline facilities on the importance of providing system-specific information about their pipeline facilities to emergency response agencies of the communities and jurisdictions in which those facilities are located”. (Government of United States, 2012)

- **NVE**: “The developer with the responsibility for measures in a river system that can cause substantial harm to people, property or the environment shall have an emergency preparedness plan. The plan shall provide guidelines for what is to be done if an accident occurs or in the event of a sudden increase of risk. The plan shall be modified or replaced as needed” (Government of Norway, 2000)
LAND ACQUISITION

Land acquisition refers to the authority to regulate the acquisition of private or public property, in some cases with compensation. Land acquisition is generally only relevant for linear projects, such as pipelines and transmission lines. Of the 11 regulators examined, three have authority to regulate land acquisition or expropriation of land for an energy project (NEB, FERC, and OEB).

NEB CURRENT STATE: LAND ACQUISITION

As is outlined in the NEB Act, “a company may acquire lands for a pipeline under a land acquisition agreement entered into between the company and the owner of the lands…” (Government of Canada, 2016). The NEB has no jurisdiction over land compensation disputes. If a landowner and proponent cannot agree on compensation, either the company or landowner may apply to the Minister of Natural Resources to request negotiation or arbitration services. The NEB Act provides the Board with the authority to grant immediate right of entry for any lands on specified terms and conditions, upon an application by a company.

For FERC-regulated pipeline projects, proponents are expected to negotiate agreements for easement and compensation with each affected landowners. This generally represents value for loss of certain uses of the land during and after construction, loss of other resources, and damage to property. If a project is approved but no agreement with a landowner is reached, a proponent may acquire an easement.

Right of eminent domain for construction of pipelines: When any holder of a certificate of public convenience and necessity cannot acquire by contract, or is unable to agree with the owner of property to the compensation to be paid for, the necessary right-of-way to construct, operate, and maintain a pipe line or pipe lines for the transportation of natural gas, and the necessary land or other property, in addition to right-of-way, for the location of compressor stations, pressure apparatus, or other stations or equipment necessary to the proper operation of such pipeline or pipelines, it may acquire the same by the exercise of the right of eminent domain in the district court of the United States for the district in which such property may be located, or in the State courts. (Government of United States, 2005b)

DISPUTE RESOLUTION AND AVOIDANCE

Dispute resolution refers to a regulator’s role in mediating, arbitrating or otherwise resolving disputes between two or more affected parties. While these disputes are often in response to land acquisition and compensation, they can also be in relation to any aspect of an energy development or market.

NEB CURRENT STATE: DISPUTE RESOLUTION AND AVOIDANCE

The NEB does not play a role in land compensation disputes, which fall under the purview of the Minister of Natural Resources as per the NEB Act. Through its Appropriate Dispute Resolution (ADR) services, the NEB can help parties work through disputes and find practical solutions to issues of disagreement without having to file a formal application. For example, ADR can be used to settle issues before a hearing and to settle disagreements about property access, land reclamation or restoration.

Other regulators, including the AER and OEB may also direct or undertake mediation through ADR processes. ADR offers aggrieved parties multiple options for managing disputes, including direct negotiation with mediation by regulatory staff, a hearing commissioner or a third party mediator.
AER and Alternative Dispute Resolution

AER's ADR program was developed in response to the desire for the regulator's stakeholders (the public, companies, government agencies, First Nations, Métis, and special interest groups) to be more directly involved and have more control in resolving energy-related disputes. Most typically, ADR is used to resolve public-to-company and company-to-company disputes.

Alternative processes might include direct negotiation, AER mediation, or independent third-party mediation. ADR helps parties come together to resolve issues and disputes between stakeholders. The goal of an AER-facilitated meeting and/or mediation is to help parties explore and understand each other's interests and, together, develop acceptable solutions. All parties are heard and all points of view considered, facilitating the creation of collaborative, mutually acceptable solutions. (Alberta Energy Regulator, 2016a)

In addition to dispute resolution, some regulators work to help interested parties to avoid disputes through regulatory processes. A notable example is FERC’s pre-application review stage.

FERC’s Pre-filing Review Process

A minimum of six months before a major pipeline or energy project application is filed, FERC staff start to work with stakeholders to identify issues that might influence the process. FERC and the proponent go through a series of scoping meetings with stakeholders to get them to flesh out their concerns. By the time a proponent has filed an application, momentum has been created to address these issues. According to FERC, the end result is a better defined project that has identified and addressed issues before a design is included in the application.
Public Participation

OVERVIEW

“Regulators are increasingly called upon to do more to engage the public and make more of their activities open to the public. These calls stem from the reality that regulatory decisions are not merely technical decisions; more often than not, these decisions necessitate the weighing of values, a task that even expert regulators do not have a privileged position in a democracy to undertake… [There are] two overarching reasons for doing so. The first reason is that public engagement and transparency can facilitate constructive information sharing that helps the regulator learn in ways that result in better regulatory decisions. The second reason is that public engagement and transparency enhance the democratic legitimacy of regulatory decisions and organizations.” (Nash & Waters, 2015)

A review of recent academic and OECD studies on regulatory governance and practice conducted for this report (see International Literature – Key Concepts section at the front of this report) identified common ground on a set of factors that foster and enable legitimacy and effectiveness in engagement of the public and affected parties. These are summarized in Table 11.

While these also apply generally for engagement of Indigenous peoples and governments, they are not sufficient to cover such essential factors as: respect for treaty, tribal and traditional rights; traditional knowledge and fundamental spiritual; and cultural ties to the land and resources. Indigenous peoples engagement and participation is addressed separately in the next section.

Table 11. Features of Effective and Credible Public Engagement

<table>
<thead>
<tr>
<th>Timely</th>
<th>Inclusive</th>
<th>Responsive</th>
<th>Procedurally just</th>
<th>Substantively just</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engage and inform the public and interested and affected parties early, often and on a continuing basis throughout the energy development lifecycle</td>
<td>Provide for participation of all interested and directly affected parties and ensure a diversity of views, expertise and experience is brought to bear</td>
<td>Give opportunity to interested and affected parties to express their views, demonstrate concerns are taken into account, and explain decisions fully and sincerely, giving comprehensible reasons for decisions and choices made</td>
<td>Demonstrate fairness, even-handedness and neutrality in regulatory processes and interactions with the public and interested and affected parties</td>
<td>Produce outcomes of regulatory decisions which are considered fair in their distribution of costs, benefits, and risks</td>
</tr>
</tbody>
</table>
Under the NEB Act, the review of certain types of applications requires the NEB to conduct public hearings, including: applications for the construction and operation of major international or interprovincial pipelines; applications for the construction and operation of certain international power lines; applications to abandon a pipeline; and, landowner oppositions to the detailed route of an approved pipeline (Government of Canada, 2016b). The NEB may also hold a public hearing in respect of any other matter it considers advisable.

The NEB Act sets out when the NEB will allow a person to participate in a hearing for pipeline and certain powerline applications. Prior to amendments to the NEB Act in 2012 the NEB was required to consider the "objections of any interested person". Under the current NEB Act, this was narrowed - the NEB must "consider the representations of any person who, in the NEB’s opinion, is directly affected by the granting or refusing of the application, and it may consider the representations of any person who, in the NEB’s opinion, has relevant information or expertise" (Government of Canada, 2016b).

There are also opportunities for public participation outside of the hearing process. Public consultation during the project lifecycle is discussed in the Indigenous Engagement section below. Another example is the requirement for companies to develop a continuing education program for the public residing adjacent to the pipeline to inform them of the location of the pipeline, potential emergency situations involving the pipeline and the safety procedures to be followed in the case of an emergency. An application for abandonment must also include a plan that has been created in consultation with landowners and other interested parties.

Nine of the regulators have a formal legislated mandate to engage with the public or interested and affected parties. The AER and PHMSA have no public participation provisions in legislation. Most provisions are quite general as shown in the text box below.

Quotations: Legislative Text on Requirements for Public Engagement

- **CNSC**: *Public Hearings*: “The Commission shall, subject to any by-laws made under section 15 and any regulations made under section 44, hold a public hearing” (Government of Canada, 2000b)
  
  “the proposed program to inform persons living in the vicinity of the site of the general nature and characteristics of the anticipated effects on the environment and the health and safety of persons that may result from the activity to be licensed;" (Government of Canada, 2000a)

- **BC OGC**: “before submitting an application under section 24, a prescribed applicant must carry out the prescribed consultations or provide the prescribed notices, or both, as applicable, with respect to the oil and gas activities and related activities, if any, that will be the subject of the prescribed applicant's application” (Government of British Columbia, 2008)

- **FERC**: to provide for, encourage, and assist public participation in the development and enforcement of national energy programs” Department of Energy Act, amended in 2004 to create FERC (Government of United States, 1977)

- **AER**: “A person who believes that the person may be directly and adversely affected by an application may file a statement of concern with the AER in accordance with the rules; and If the Regulator conducts a hearing on an application”; “a person who may be directly and adversely affected by the application is entitled to be heard at the hearing” (Government of Alberta, 2012)

- **OEB**: “The Board shall establish one or more processes by which consumers, distributors, generators, transmitters and other persons who have an interest in the electricity industry may provide advice and recommendations for consideration by the Board” (Government of Ontario, 1998)
Policy and Practice

Notwithstanding the paucity of legislative provisions, most of the regulators have policy, guidelines and/or substantive practices which reflect the set of factors above for effective and legitimate public engagement in regulatory processes – and in particular for development project review/authorizations, and for the development of regulations.

NVE, for example, is required to engage and consult with the general public and affected municipalities for all licenses – holding extensive public hearings on all matters. Beyond the specific and detailed requirements to consult Māori peoples and governments, the NZP&M has no formal requirement to consult and engage the public generally, although in practice it substantively consults with local and regional governments. AUSER engages residential consumers of electricity along with larger commercial users, and has established a Consumer Challenge Panel (CCP) to facilitate this. The CCP consists of expert members who are appointed by the Board to bring perspectives into the decision-making process (Australian Energy Regulator, 2016a). AUSER takes a principles-based approach to engagement and seeks to incorporate stakeholder views as early in the process as possible and continue to maintain engagement throughout the project lifecycle.

In the U.S., the EPA has a broad responsibility to ensure that the general public have ample information and an opportunity to participate in regulatory application review and hearing processes. A Public Participation Guide provides a number of tools that help facilitate participation (Environmental Protection Agency, 2016c).

For FERC, public participation is accomplished under the scoping requirements and public involvement process laid out in the National Environmental Policy Act. In practice, this occurs during either the pre-filing stage (six months before an application is to be filed), or during the application phase, when individuals who have an interest in the project are asked about information needs and any initial comments they have (Government of United States, 1987). Public consultation includes the right to look at project correspondence and provide comments about any aspect of the project. FERC’s procedures also allow anyone to petition to become an intervenor in the review process. If intervenor status is granted, the party has the right to appeal a decision in federal court. FERC has published the Commission’s Citizen’s Guides to facilitate this engagement when it comes to natural gas pipeline, LNG terminals or hydropower projects (FERC, 2016). While having no formal procedures for involving the public in regulatory decision making, PHMSA’s engagement with communities focuses on local education and information exchange related to damage prevention to pipelines and safety, especially with regards to the transport/transmission of hazardous substance.
For all Canadian regulators reviewed, public participation is addressed formally through right to participate or “standing” requirements with regard to energy development project review and approvals process. Beyond this, there is a rapidly growing and substantive trend among energy regulators to engage with specific groupings on matters outside of regulatory decision making. For example, the NEB provides information on its mandate and role and engages with Indigenous groups, landowners, environmental NGOs, municipalities, industry and other governments outside of formal regulatory processes such as hearings. The AER has put in place multi-interest advisory committees to inform new regulation development (Alberta Energy Regulator, 2015).

In 2014, the OEB established its framework for ongoing dialogue with stakeholders, with components including: a Chair Advisory Roundtable, electricity and natural gas forums, a consumer panel, and two standing committees to provide early advice to executive management on matters related to policy development and implementation (Ontario Energy Board, 2016e)

DEMONSTRATION OF EFFECTIVE CONSULTATION AND PARTICIPATION

Not surprisingly, no one regulator in the review demonstrates systematic and complete coverage of the five key factors for effective and legitimate consultation cited above. The following section provides examples of energy regulator policies, practices or programmes that align with these factors.

Timely
Several of the regulators have legislative provisions and/or practices for engaging the public and interested parties across the lifecycle including the NEB (authorization and abandonment), CNSC and FERC (all stages), as well as BCOGC and AUSER (pre-application through to compliance monitoring). The AUSER, OEB, FERC and BCOGC put emphasis on starting engagement and building relationships well ahead of regulatory applications being filed.

Inclusive
There is a wide range of practices for public and interested party participation across the regulators. Three of the 11 regulators reviewed (CNSC, FERC, EPA) allow general members of the public to participate through written submissions and/or in person during public hearings. NVE and NZP&M have extensive local community engagement. The former, for example, consults with the general public for all licenses and holds extensive public hearings and meetings with local municipalities on all matters to facilitate their participation. The NEB, OEB, and AER, have eligibility criteria for participation. These are elaborated below under Right to participate.

Responsive
The review did not identify any specific legislative requirements among regulators expressly demonstrating that the concerns of participating interests are to be taken into account, or which require regulators to give reasons for decisions and choices made. However, regulators work to be consistent with the common law requirements of procedural fairness when making decisions that have the potential to impact a person’s rights (unless those requirements have been expressly overridden by legislation) – see below under “procedurally just”. This may include requirements that a regulator takes the concerns of impacted interests into account or provides a written explanation for a decision. Examples of the non-adjudicative responsiveness of regulators can be seen in the participatory processes to inform new regulations by the AER, and explicitly at the project level in NZP&M which recognizes consent by local governments for environmental resources under their authority.

In its licensing process, the CNSC issues exhaustive reasons for decisions, which indicate responsiveness to participating interests. It outlines, in detail, how intervenors’ concerns and filings are taken into consideration in
the decision making process. Specific efforts are also made to outline contributions by Indigenous groups in the process.

The AER uses multi-interest advisory or technical committees, comprising Indigenous, municipal and environmental interests, among others, to inform the development of regulations (directives) or address area-based issues. Two recent examples are the use of such an advisory body to inform a new directive on tailings management (Alberta Energy Regulator, 2016c) and the use of a Hearing Commissioner-led proceeding to address concerns about odours and emissions from heavy oil operations in the Peace River area (Alberta Energy Regulator, 2014b).

The NZP&M states that for allocation of exploration blocks “if the mining activity is onshore or within 12 nautical miles of the coast, resource consents from local district and/or regional council may be required...The resource consent process weighs potential benefits for the community (e.g. jobs, infrastructure development) against potential impacts on the environment and other interests”; and for project authorizations a person or company “would likely require a resource consent from the local district and/or regional councils, or marine consent if in the EEZ” (New Zealand Petroleum and Minerals, 2014).

Procedurally just

This review scope did not include detailed assessment of regulators’ legal requirements for adjudicative processes such as hearings. The specific procedural processes used by a regulator may be the result of many considerations, including legislation, the common law requirements of procedural fairness and the specific facts of the application being assessed. The procedural processes used by a regulator can include rules for participation – who can participate and the way in which this shall occur. This comes into play during the project review and authorizations phase of an energy development or energy market application. It also applies to other parts of the regulatory lifecycle such as resource/tenure allocation, and for dispute resolution around surface land disposition and compensation/redress for damages due to incidents.

The processes of regulators that are quasi-judicial in nature are clear and transparent, but tend to be more adversarial and more costly in terms of resources of all participating parties (NEB, AER and OEB). The CNSC emphasis on science-based discussion (and less on legal-based arguments) tends to make its public proceedings less litigious than other quasi-judicial proceedings. For regulators with administrative assessment processes (BCOGC and FERC), there are also clear procedures for procedural fairness. However, in general, these non-adjudicative processes tend to be more flexible. For example, they may involve regulator agency staff engaging directly with proponents and interested parties such as landowners, municipalities and Indigenous communities.

In general terms, an overall observation can be drawn that public participation and engagement processes which allow regulators to put in place more flexible processes help bring together competing interests, resolve conflicts, and better inform decision making. For example, pre-application engagement can be used to focus on issues of greatest concern and to inform the proponent’s project design so that these issues are avoided or mitigated. This approach is used by BCOGC, FERC, NVE and NZP&M.

The AER uses processes such as ADR to directly engage affected parties in a very hands-on, structured process prior to – or in some cases as a “time out” - in adjudicative processes, to seek resolution among parties on key issues of concern.

On the other hand, processes that make limited use of pre-application engagement are less effective at bringing together competing interests and resolving conflicts. This can be seen with regards to the NEB’s pre-application
outreach which is performed by NEB staff to address only process-related topics and participant funding opportunities but not substantive issues. The NEB is limited in the pre-application engagement it can conduct as a result of, among other things, the NEB Act and procedural fairness requirements.

**Substantively just**
Substantive justice involves, among other elements, the fair distribution of safety and environmental risks and outcomes, and of economic and social impacts and benefits. While the legislation of most of the 11 regulators reviewed provides that safety and environmental risks be taken into account during decision making, there is little focus in the legislation on the distribution of social and economic impacts and benefits to affected parties and rights holders.

With regard to distribution of environmental risks and environmental outcomes, all development regulators (with the exception of PHMSA which focuses only on safety) take account of environmental risks – mostly through conditions of approval to mitigate environmental impacts. According to an NVE representative, the NVE does not allow the building of small hydro power generation in certain places because of their importance to Indigenous Sami peoples for management of the reindeer, and will ask large hydro power owners to modify the project because of Sami interests.

Only one regulator reviewed (NVE) has specific legislative requirements and programmes to ensure benefits accrue to communities that host or are affected by energy development. The interview with the NVE showed that benefit sharing between local authorities and government is seen to be very important in gaining acceptance for exploiting natural resources as their use increases – for example for large-scale hydropower plants which are very contentious. In addition, the OEB defines the public interest to include community benefits. More specifically, it states that the public interest is to be determined by considering need, safety, economic feasibility, community benefits, security of supply and environmental impacts (for gas pipeline regulation) (Ontario Energy Board, 2008).

### Highlight
**NVE Legislative Provisions for Benefit Sharing with Affected Communities**

NVE has legislated provisions for benefit sharing with communities through two mechanisms:

- It is legislated to have benefit sharing mechanisms whereby the benefits of exploiting water are shared between local communities and government. This comprises mandatory provisions on license fees, and obligatory electricity sales to the municipalities where waterfalls and regulated reservoirs are located.
- There are also provisions for development funds with the intent to compensate for disadvantages caused by the development project and to give the municipalities a part of the income generated by the power plant.
RIGHT TO PARTICIPATE (STANDING)

A key element of inclusion is the legally prescribed or procedurally defined right or ability to participate – commonly known as “standing”. Across the regulators reviewed, public participation in hearings (e.g. through submissions or intervening) is largely clustered at two poles:

Directly affected

**AER:** “A person who believes that the person may be directly and adversely affected by an application may file a statement of concern with the Regulator” (Government of Alberta, 2012)

**OEB:** “a person applying for intervenor status must satisfy the Board that he or she has a substantial interest and intends to participate actively and responsibly in the proceeding...other parties have right to object (Ontario Energy Board, 2006).

**NEB** (post-2012): the NEB must consider the representations of those it determines to be “directly affected”; it may also consider the representations of any person who, in the NEB’s opinion, has “relevant information or expertise” (Government of Canada, 2016b).

All interests and the public

**CNSC:** no legislative requirement for standing but in its Rules of Procedure: “a person who has an interest in the matter being heard; or, a person who has expertise in the matter or information that may be useful to the Commission in coming to a decision may be considered an Intervenor” (Stratos, 2013)

**BCOGC:** “a person, other than the applicant, may make a written submission to the commission with respect to an application or a proposed application” (Government of British Columbia, 2008). In practice this is interpreted as any person with an interest.

**NEB** (Pre-2012) “the Board shall consider the objections of any interested person” (Stratos, 2013)

PARTICIPANT FUNDING

Six of the 11 regulators reviewed provide participant funding support for activities ranging from intervening in an energy development or energy market application review, to participating in an advisory group, to community education around emergency response. Four of the Canadian regulators provide funding – three of which provide it for intervenors to participate in hearings (OEB, CNSC and NEB), particularly for persons or groups that are directly affected, such as consumers, landowners and Indigenous rights holders. One regulator (BCOGC) provides funding explicitly to support First Nation capacity to participate in project regulatory reviews (Auditor General of British Columbia, 2015). The NEB, CNSC and OEB funding programs for intervenors are the most robust among the regulators reviewed. One of three US regulators (EPA) provides funding for regulatory development and for Indian Tribe participation in compliance and enforcement but not for participation in project reviews. No overseas regulators provide funding. Interestingly this includes NVE and NZP&M, both of which are proactive when it comes to community and Indigenous peoples engagement activities.
Examples: Participant Funding

- **BCOGC** provides capacity funding to First Nations and also funds an Oil and Gas Research and Innovation Society (OGRIS) with funds generated and collected by the Commission through a portion of the levy on oil and gas production and well application fees (Auditor General of British Columbia, 2015).

- **EPA** provides funding for regulatory advisory group participation to ensure balance across private citizens, public interest groups, public officials, representatives of organizations with substantial economic interests. It also provides grants for tribes for education and participation in environmental monitoring – one of two examples of funding provided for post-project approval participation in the regulatory lifecycle (Environmental Protection Agency, 2016b).

- **CNSC** has a participant funding program for both project review participation and general matters of regulatory interest. An independent funding review committee administers the program, setting total funding amounts for projects and reviewing applications. These funds are available to a variety of participants who meet at least one test, for example, those with direct, local interest in the project.

**NEB CURRENT STATE: PARTICIPANT FUNDING**

To facilitate Indigenous peoples engagement and public participation in the hearing process, the NEB has established a participant funding program under the NEB Act. These funds offset some of the direct costs for eligible recipients, such as legal fees and costs of gathering information. Projects are assessed to determine eligibility and the amount of funding available is calculated according to the size, location and possible effects of the project; the range of issues associated with the project, the number of Indigenous groups in the proposed project area; the level of public interest; the maximum funding allocations per recipient; and the available resources. In 2015, participant funding was extended to also support public participation in environmental assessments of designated projects under the *Canadian Environmental Assessment Act, 2012* (National Energy Board, 2015).

**Indigenous Peoples Participation Funding**

Only the BCOGC and EPA provide separate funding for participation of Indigenous peoples in regulatory processes. EPA has programmes and funding for technical assistance and capacity building for Indian Tribes for their involvement in implementing environmental policy and undertaking enforcement activities on tribal lands, but no separate requirements for consultation with Native Americans in regulatory process.

The NEB and CNSC include Aboriginal peoples (e.g., First Nations, Métis, or Inuit) in a list of those who may be eligible for funding to participate in public hearings. The NEB and CNSC also have explicit criteria for participant funding for First Nations, Métis or Inuit with Aboriginal traditional knowledge that relates to the proposed project area, or that have an interest in how the project may affect Aboriginal lands and rights. The NEB makes funds available for honoraria to attend meetings and functions (including costs for ceremonial costs).
Indigenous Peoples Engagement and Participation

OVERVIEW

While the key characteristics for effective and legitimate engagement and participation (Table 11) apply to Indigenous peoples, these features are insufficient for describing how energy regulators engage with Indigenous peoples. The reasons for this include that Indigenous peoples:

• are governments (in the jurisdictions reviewed);
• have rights accorded in constitutions and/or treaties; and
• hold traditional knowledge which are the foundations for their laws and culture.

This means that for effective and legitimate engagement and participation of Indigenous peoples in energy development and energy markets regulation, the specific features outlined in Table 12 can be added.

Table 12. Additional Features Reflecting Effective and Credible Indigenous Peoples Engagement

<table>
<thead>
<tr>
<th>Government to government/Indigenous peoples specific engagement</th>
<th>Respect for Indigenous rights in decision making</th>
<th>Incorporation of traditional knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engagement specific to Indigenous peoples which represents or reflects government-to-government relations</td>
<td>Demonstrating respect for Indigenous rights in regulatory decision making across the lifecycle</td>
<td>Incorporation of traditional knowledge into regulatory decision making across the lifecycle, with the permission of the Indigenous peoples involved</td>
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LEGISLATED MANDATE

Six of the 11 regulators reviewed have specific legislative provisions mandating consultation and engagement with Indigenous peoples (BCOGC, PHMSA, NZP&M, NVE, NEB and CNSC). The box below provides detail on how each of these regulators is mandated to engage and consult with Indigenous peoples:
The NEB Act has no mention of consultation with Indigenous peoples. However, the NEB process is shaped by Indigenous consultation requirements arising from: section 35(1) of the Constitution Act, 1982; section 55.2 (standing test) and 52.2 (consideration of all relevant issues and the public interest) of the NEB Act; section 5 (definition of environmental effects) and section 19 (factors to be considered) of CEAA 2012; and the NEB’s Filing Manual (particularly expectations for consultation by the proponent during the planning and design phases of the project). The NEB has identified in its Filing Manual that potentially affected groups and individuals must be given opportunities to raise their concerns about the project and have them considered by the company (National Energy Board, 2016c).

Through its Enhanced Aboriginal Engagement, the NEB proactively contacts potentially impacted Indigenous peoples to provide information about the NEB, its Participant Funding Program and how to participate in its project review processes (National Energy Board, 2016a). The NEB provides an open and transparent forum in which information on Indigenous groups’ interests, potential impacts on those interests, and possible mitigation measures could be submitted to the NEB for consideration. Efforts are made to make hearing processes accessible to Indigenous peoples and may include oral traditional evidence, ceremonies or other traditional practices. The Board then assesses all of the information provided to it, including information on the consultation undertaken with Indigenous groups, the views of Indigenous groups, project impacts on Indigenous peoples interests, and proposed mitigation measures. The NEB applies its technical expertise and regulatory experience to determine the residual impacts on Indigenous interests and balances those with the other societal interests at play when assessing a project. This is documented in the NEB recommendation report or reasons for decision. The Crown relies on the NEB process to the extent possible to meet its duty to consult.

If a project is approved, additional Indigenous consultation requirements for the proponent may be contained in the conditions of the project authorization (Government of Canada, 2016b). Furthermore, proponents’ consultation programs must continue throughout the lifecycle of the project. The NEB enforces proponent compliance with conditions and other regulatory requirements (e.g. NEB Onshore Pipeline Regulations and NEB Pipeline Damage Prevention Regulations) throughout the lifecycle of the project. Anyone with continuing concerns about impacts of the project, including Indigenous groups, can make those concerns known to the NEB, and the NEB can take remedial actions if warranted.

Examples: Requirements for Indigenous Engagement, Consultation and Accommodation

- **BCOGC**: “For greater certainty, the provisions of this [Oil and Gas Activities] Act are intended to respect Aboriginal and treaty rights in a manner consistent with section 35 of the Constitution Act, 1982” (Government of British Columbia, 2008). Additionally, one of the purposes of the Commission is to “encourage the participation of First Nations and Aboriginal peoples in processes affecting them” (Government of British Columbia, 2008).

- **PHMSA**: “Not later than 1 year after the date of enactment of this [Pipeline Safety, Regulatory Certainty and Job Creation Act of 2011], the Secretary of Transportation shall develop and implement protocol for consulting with Indian Tribes to provide technical assistance for the regulation of pipelines that are under the jurisdiction of Indian Tribes” (Government of United States, 2012).

- **NZP&M**: All persons exercising functions and powers under the Crown Minerals Act shall have regard to the principles of the Treaty of Waitangi and must set out or describe how the Minister and the Chief Executive will have regard to the principles of the Treaty of Waitangi for the purposes of the minerals programme (Minerals Programme for Petroleum 2013).

- **NVE** is obligated to consult with the Sami Parliament in accordance with the Sami Act to protect the cultural interests of Sami, and to provide Sami with means in order to enable them to protect, maintain and develop their own culture, according to interview results. This includes safeguarding the material interests of Sami (e.g. special protection for livelihoods and natural resources in traditional Sami areas).

- **The CNSC** has a number of requirements for applicants/licensees to engage with Indigenous peoples if they determine that activities described in their application could adversely impact potential or established Aboriginal and/or treaty rights.
The AER is expressly excluded from having a role in the exercise of the Crown duty to consult (Government of Alberta, 2012). A separate Aboriginal Consultation Office is responsible for assessing the adequacy of Crown consultation – which is then provided to the AER to inform its regulatory decision making. Procedural aspects of duty to consult are delegated to proponents.

DEMONSTRATION OF ENGAGEMENT FEATURES SPECIFIC TO INDIGENOUS PEOPLES

For the features of effective consultation and participation specific to Indigenous Peoples, there is no one regulator that demonstrates systematic and complete coverage of the additional three features noted in Table 12 above.

Four energy regulators (NZP&M, NVE, BCOGC, FERC) stand out for their legal requirements, policies, procedures and/or practices for proactive consultation and provisions for substantive participation of Indigenous peoples in regulatory decision making. The NEB has made efforts to strengthen engagement practices with Indigenous peoples within the existing legislative framework.

Several energy development regulators incorporate Indigenous peoples engagement specifically into their engagement policies, procedures and/or practices, while no energy market regulators differentiate Indigenous interests from other interests in their consultation processes.

Government to Government/Indigenous peoples-specific engagement

The requirements and nature of programs for Indigenous peoples consultation and participation differ widely across regulators.

The Crown’s legal "duty to consult" requirements play an important role in shaping the indigenous peoples-specific engagement conducted by Canadian regulators. For example, the CNSC undertakes consultation activities with First Nations, Metis and/or Inuit as input to the Crown’s duty to consult. The Crown also relies on the NEB process to the extent possible to meet its duty to consult. While the AER has no role in the exercise of the Crown duty to consult, it receives assessments of the adequacy of consultation with First Nations and Metis from a separate Aboriginal Consultation Office within a government department.

In addition, both the NEB and the AER make efforts to engage Indigenous peoples outside of project-specific regulatory processes. For example, the NEB Chair met with numerous Indigenous groups as part of his National Engagement Initiative on Pipeline Safety. This resulted in a number of commitments with Indigenous groups to develop and deliver workshops on the lifecycle of energy infrastructure, energy literacy, safety and environmental protection, and the NEB’s role in these areas. In the case of AER, there has been participation of First Nations and Métis in multi-interest groups convened to support development of new regulations.

BCOGC employs a relationship based approach to Indigenous peoples engagement which goes beyond consultation. The Commission has a number of initiatives aimed at fostering effective working relationships and partnerships with First Nations. For example, it engaged First Nations in the development of OGAA regulations and associated guidance manuals in 2008 – 2010. In some cases the Commission provides capacity funding for First Nations to participate in the consultation process and uses agreements to support relationship building. The Commission further invests in relationships with First Nations by continuing a dialogue and engagement on issues of importance to First Nations communities which are not effectively addressed through operational consultations. The Commission has also invested heavily in initiatives in response to the interests raised by First Nations.
BC’s Innovative Indigenous Peoples Engagement

**Area-based Analysis.** The Commission assesses the impact of oil and gas activities on ecological, cultural and social values in the context of other development activities; these values include those of First Nations, as identified through proactive consultation (BC Oil and Gas Commission, 2013b).

**Aboriginal Liaison Program:** The Commission fosters Aboriginal community awareness at all stages of the project lifecycle (i.e. planning, natural resource development, safety, environmental and emergency management, restoration activities and regulatory oversight) through its Aboriginal Liaison Program (ALP). This program provides Aboriginal communities with capacity, support and the opportunity to participate in field activities (e.g. inspections, monitoring assignments, compliance and enforcement), training, and community information sessions (Government of British Columbia).

**Oil and Gas Research and Innovation Society (OGRIS)** The Commission’s Innovation Society (BC OGRIS) has also been influential in facilitating Aboriginal engagement and participation through its support for research initiatives and projects, such as the development of a spatial tool that can assist First Nations in their decision making by considering land use during the approval stage of a project and restoration activities at time of closure (BC Oil and Gas Research and Innovation Society, 2015).

The NZP&M has the most detailed and specific requirements for engagement with Indigenous peoples – with Māori tribes and communities (iwi and hapū) - of all 11 regulators reviewed. This is elaborated in the highlight box below.

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**Highlight**

**NZP&M Legislative Mandate To Have Regard to the Principles of the Treaty of Waitangi**

The Crown Minerals Act 1991 requires that “all persons exercising functions and powers under the Act shall have regard to the principles of the Treaty of Waitangi”. To give effect to this, the Minerals (and Petroleum) Programmes of NZP&M (which lays out direction for all minerals and petroleum development in New Zealand):

- Specifies the matters on which iwi and hapū must be consulted, including:
  - Iwi and hapū whose rohe [territory] includes some or all of the permit area or who may be directly affected by a permit will be consulted by the Minister or NZP&M on the following matters including prospecting and exploration permits
- Sets out principles and procedures for consulting including that the:
  - Crown will act reasonably and in utmost good faith towards its Treaty partner and will make informed decisions
  - Crown will consider whether a decision will impede the prospect of redress of any Treaty claims
  - Minister and NZP&M will have regard to the principles of the Treaty
  - Minister and NZP&M are committed to a process of meaningful consultation with iwi and hapū, which involves early consultation, ensuring that iwi and hapū are given enough information to make informed decisions and to present their views and are given enough time to consider the information provided by the Minister and NZP&M
  - Minister and NZP&M will have an open mind on the views received from those iwi and hapū who are consulted and will give those views full and genuine consideration (New Zealand Government, 1991).

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In Norway, the NVE has established special license procedures with Sami peoples (an ethnic minority in the country) and various Acts require consultation with the Sami Parliament in all cases which involve Sami interests. Practically this results in listening to Sami concerns about how energy projects will effect reindeer husbandry.

In the U.S., FERC has a broad policy to encourage and facilitate involvement by Indian Tribes in the areas over which the Commission has jurisdiction. It is committed to promoting a government-to-government relationship
between itself and federally-recognized Indian Tribes. The policy includes a commitment to hold policy level
discussions around general matters of importance to tribes and commits FERC to direct substantive consultation
with Indian Tribes on hydro-electric project licensing (Federal Energy Regulatory Commission, 2003a).
Additionally in the review of projects involving the natural gas industry, FERC works with tribes to address the
effects of proposed projects on tribal rights and resources through consultation. This is elaborated in the highlight
box below.

**Highlight**  
FERC’s Policy Statement on Consultation with Indian Tribes and Recognition

FERC’s Policy Statement on Consultation with Indian Tribes and Recognition articulates a commitment to promote a
government-to-government relationship between itself and federally-recognized Indian Tribes. The policy statement
recognizes the sovereignty of tribal nations and the Commission’s trust responsibility to Indian Tribes.

Specific provisions related to regulatory decision making include:

- “the Commission will seek to notify potentially-affected tribes about upcoming hydroelectric licensing processes, to
discuss the consultation process and the importance of tribal participation, to learn more about each tribe’s culture,
and to establish case-by-case consultation procedures”;
- “In evaluating a proposed hydroelectric project, the Commission will consider any comprehensive plans prepared
by Indian Tribes for improving, developing or conserving a waterway or waterways affected by a proposed
project”; and
- “The Commission will endeavor to work with Indian Tribes on a government-to-government basis, and will seek to
address the effects of proposed projects on tribal rights and resources through consultation pursuant to the
Commission’s trust responsibility, the Federal Power Act, the Natural Gas Act, the Public Utility Regulatory
Policies Act, Section 32 of the Public Utility Holding Company Act, the Interstate Commerce Act, the Outer
Continental Shelf Lands Act, Section 106 of the National Historic Preservation Act, and in the Commission’s
environmental and decisional documents” (Federal Energy Regulatory Commission, 2003a).

Indigenous engagement on issues under the EPA’s purview – those related to human health and the environment
– is governed by the EPA’s 1984 Indian Policy, and a number of other policies (e.g. the Policy on Consultation
and Coordination with Indian Tribes, the Enhancing State and Tribal Programs). The EPA relies on the American
Indian Environmental Office to assist it in realizing these policies and programs and ensuring that federally-
recognized tribes are consulted and engaged and that government-to-government relationships are being
maintained (Environmental Protection Agency, 2016b).

According to an interview with a PHMSA representative, the regulator has no formal processes in place to engage
with Indian Tribes, as it sees its primary mandate – to determine safety of pipeline operations on the basis of
science and technical evidence – as paramount. However, PHMSA has a policy to inform tribes on how they can
engage, and is starting to engage on individual pipeline projects on tribal lands.

According to an interview with an OEB representative, the OEB undertakes Indigenous peoples engagement as
part of its overall public engagement. It has recently been given specific policy direction by the government to
undertake consultation with Indigenous peoples and ensure their participation in the energy sector, as part of
provincial energy plan development.

**Respect for Indigenous Rights in decision making**

Three of the 11 regulators reviewed demonstrate respect for Indigenous rights in decision making in their
legislation or policies (BCOGC, NZPM, FERC). The NEB and CNSC are required to consider Indigenous
interests in decision making in accordance with the Constitution Act (s.35).
In New Zealand, “the Crown will consider whether a decision will impede the prospect of redress of any Treaty claims”, with “the Minister and NZP&M having an open mind on the views received from those iwi and hapū who are consulted” (New Zealand Government, 1991).

NZP&M is also unique among regulators reviewed in its specific provisions to exclude areas of land of particular importance to Māori tribes from mineral and petroleum exploration and development permitting. While not a legislative or policy requirement in Norway, NVE follows a similar practice as noted above.

**Highlight**

**NZP&M's Requirement to Not Issue Permits on Indigenous Lands on Request of Māori Tribes**

The Minerals and Petroleum Programmes have a requirement to respect and act on the interests of Māori tribes in its decisions. Specifically it states that “certain land that has been identified as being of particular importance to the mana of - iwi or hapū must not be included in a permit” (Ministry for Culture and Heritage, 2016).

The BCOGC is required in legislation to respect Aboriginal and treaty rights of Indigenous peoples in conducting its work. Its legislation places its relationship with regard to Aboriginal and treaty rights within the Canadian constitution: “For greater certainty, the provisions of this Act are intended to respect aboriginal and treaty rights in a manner consistent with section 35 of the Constitution Act, 1982” (Government of British Columbia, 2008).

With regards to benefits of energy development accruing to Indigenous peoples through energy regulation, no regulators have explicit regulatory decision making criteria for this purpose. However, one regulator (BCOGC) does have a specific agreement in place which specifies both consultation requirements and benefits. BCOGC’s agreement with First Nations goes beyond its Treaty 8 Agreement and is consistent with broader provincial government policy under which the government has entered into a number of Economic Community Development Agreements with First Nations that are sector or project specific for mineral developments. These agreements provide a negotiated percentage of resource revenues paid to governments of the First Nation involved.

**Traditional Knowledge**

There are no references to Indigenous traditional (ecological) knowledge (TK/TEK) in the legislation governing any of the 11 energy regulators reviewed. The NEB and CNSC are the exception to this rule in regards to their role as responsible authorities under CEAA 2012, whereby “the environmental assessment of a designated project may take into account community knowledge and Aboriginal traditional knowledge” (Government of Canada, 2012).

However, TK is beginning to be factored into processes used by a few regulators, including for intervenor participation and funding as noted above for NEB and CNSC. TK is also being used in research to inform understanding of environmental and social issues related to energy development for BCOGC and NVE. BCOGC provides administrative services for an Oil and Gas Research and Innovation Society (OGRIS) fund that supports and facilitates research concerning practical ways of addressing environmental and social issues related to oil and gas exploration and development in B.C. This review did not delve into the documentation on individual project assessments and decisions made by the regulators – which may contain specific examples of consideration of TK.
Case studies

The following section provides case studies summarizing the mandate, structure and role of each of the reviewed regulators. They are guided by, and deliver key information on, the six main themes examined through this report: mandate, governance, decision making, tools for lifecycle oversight, public participation and Indigenous engagement. Additionally, each case study begins with a short, contextual introduction that identifies the primary act in which the regulator is based (and any additional acts affecting mandate, responsibility and/or power of the regulator) and the societal factors that have shaped the design of the regulator.
The Canadian Nuclear Safety Commission (CNSC) was established under the Nuclear Safety and Control Act (NSCA) in 2000, replacing the former Atomic Energy Control Board (AECB). The AECB was founded in 1946 and initially concerned with matters of national security in atomic substances and technology. After some time, the AECB began to focus more on health and safety, at which point it became clear that there was a need for a more transparent regulatory regime. What followed was a major overhaul of Canada’s nuclear regulatory regime, whereby new legislation (the NSCA) strengthened regulations, increased enforcement powers, and paid more attention to the fields of health, safety, security and environmental protection.

**Mandate**

The CNSC is a national regulator responsible for the development, production, and use of nuclear energy, as well as the production, possession and use of nuclear substances, prescribed equipment, and prescribed information in Canada, including development and activity on provincial and territorial lands. CNSC’s regulatory responsibility extends across the whole lifecycle of nuclear energy – from mining, transportation, refinement, and storage through construction and operation and ultimately decommissioning. Other roles of the CNSC include disseminating objective scientific, technical and regulatory information to the public concerning the activities of the Commission, and implementing international nuclear regulatory agreements and working international nuclear safety standards into all of its activities (Government of Canada, 2000b). On top of its responsibilities under NSCA, the CNSC is mandated under the Canadian Environmental Assessment Act 2012 to undertake environmental assessments for all nuclear facilities and activities (Government of Canada, 2012).

Although the CNSC is an independent body set up at arm’s length from the government, it is still expected to submit annual reports to Parliament through the Minister of Natural Resources Canada and the President of CNSC appears before parliamentary committees as needed. The CNSC has also been directed at times to respond directly to public policy priorities, for example when Canada faced a shortage of medical isotopes related to a regulated shutdown of a nuclear reactor the CNSC was directed to take into account the health of Canadians (Canadian Nuclear Safety Commission, 2015b).

**Governance and Decision Making**

CNSC is a quasi-judicial administrative tribunal consisting of not more than seven permanent members appointed by the GiC, although currently there is only one full-time commission member; temporary members may also be appointed at any time by the GiC at her/his discretion. The members make decisions on the licensing of major nuclear facilities, establish legally binding regulations and set regulatory policy related to the CNSC’s mandate as per the NSCA. One of the seven permanent members is appointed by the GiC to act as President/CEO and has the responsibility of supervising and directing the work of CNSC members and employees. The Commission’s powers can be delegated to specific officers or employees of the CNSC for specific licensing decisions; decision making powers may also be delegated, by the President, specifically to panels (sub-sets of the full Commission) that may perform any or all of the functions of the Commission with the exception of making by-laws, regulations or reviewing a decision/order. Decisions are made solely by the Commission with no review or additional level of decision by Cabinet. Commission decisions can only be reviewed by a federal court.

When evaluating licence applications, the CNSC adopts a Risk Informed Decision Making process to ensure that managers know of the risks associated with the decision and the appropriate risk control measures (Canadian Nuclear Safety Commission, 2010). While the CNSC has no definition of public interest in its legislation, in determining whether to issue a license CNSC considers whether or not safety measures are technically and scientifically sound, all requirements are met, and the appropriate safety systems are in place to protect people and the environment.
Tools for Lifecycle Oversight

The CNSC is a full life-cycle regulator. From the start of the project to its decommissioning, the CNSC is the exclusive regulator of nuclear projects in Canada. Accordingly, it has a Compliance Program (backed by policy) to ensure that those who are regulated carry out activities in accordance with legally binding requirements. Tools available to the CNSC to promote compliance include: discussions; written notices; regular site inspections and evaluations; investigations of unplanned events or accidents; the collection and analyzing of samples; and, increased regulatory scrutiny. License holders are also required to submit an annual compliance report, and routinely report on performance data and unusual occurrences to the public and in Commission proceedings. CNSC uses a graduated approach to enforcement to encourage and compel compliance and deter future non-compliances. However, those found to be non-compliant may be subject to orders, license revocations, and/or prosecution; if convicted, proponents may face fines or imprisonment. Another tool of enforcement used by the CNSC is administrative monetary penalties, which do not involve the courts (Government of Canada, 2014).

The CNSC ensures proper emergency management and response through its Emergency Orders, which can be enacted in case of an emergency to protect the environment, health and safety of persons, or maintain national security. The CNSC has broad legislative authority to issue such Emergency Order: “in case of emergency the Commission may, without conducting any proceedings, make any order that it considers necessary to protect the environment” (Government of Canada, 2000b). The CNSC Nuclear Emergency Response Plan is also a tool used across regulated activities/facilities (e.g. nuclear fuel cycle, nuclear reactors, nuclear substances and prescribed equipment, and nuclear non-proliferation). These plans are established under the authority of the federal Emergency Management Act and are comprised of a bank of information about individuals that can be used by the CNSC to contact appropriate staff and other federal, international, provincial and/or municipal emergency response officials if a radiological/nuclear emergency should occur (Government of Canada, 2014).

Indigenous Peoples Engagement

There are a number of provisions under the NSCA that inform CNSC’s approach to and requirements regarding Indigenous peoples consultation and broader consultation. The CNSC often conducts a preliminary determination to decide if engagement activities are required by the Crown and what the scope of these activities should be. Proponents may be required to adopt the following administrative tasks on this matter: identifying and engaging with potentially impacted Aboriginal groups; submit Aboriginal engagement reports; submit material change updates to the Aboriginal engagement report; and, include a summary of Aboriginal engagement activities to the Commission.

Public Participation

The general public is also given space to participate in the approval process as the CNSC conducts public hearings, including transparent online posting of decisions and hearing transcripts. The Commission allows members of the public to comment in the review of applications. This is specified in the Commission’s Rules of Procedure: “a) a person who has an interest in the matter being heard; or b) a person who has expertise in the matter or information that may be useful to the Commission in coming to a decision” may be considered an Intervenor (Government of Canada, 2016a). Intervention may be written or oral, depending on what is allowed by the Commission. The CNSC also welcomes public input on draft regulatory documents and discussion papers. The CNSC has a participant funding program for both project specific funding and funding for general matters of regulatory interest. There is an independent funding review committee who administers the program: setting total funding amounts for projects and reviewing applications. These funds are available to a variety of participants who meet at least one test (e.g. those with direct, local interest in the project, those with Indigenous traditional knowledge, those whose potential or established Aboriginal and/or Treaty rights are impacted) (Canadian Nuclear Safety Commission, 2011).
The British Columbia Oil & Gas Commission was established in 1998 under the Oil and Gas Commission Act, now the Oil and Gas Activities Act 2008 (OGAA). The creation of the Commission was meant to stimulate growth within the industry by simplifying the permitting and approval process. The province looked to neighboring Alberta and its “one window” approach to regulating as a model and built upon it.

In addition to the OGAA, the Commission has regulatory responsibility through specified enactments - Forest Act, Heritage Conservation Act, Land Act, Environmental Management Act, and Water Act.

Mandate
The Commission operates as a single regulator of energy development in the province of British Columbia, covering the lifecycle of oil and gas projects: from authorizations, to operations, to decommissioning. The Commission’s core roles include reviewing, assessing and approving applications for oil and gas activities such as the exploration, development, production, gathering, processing, storage and disposal of petroleum and/or natural gas, as well as the overseeing the construction of pipelines. The Commission is also responsible for regulating methanol production and LNG facilities and refineries (Government of British Columbia, 2008). The Commission is expected to play a role in public education and research as well; for example, providing administrative services for the Oil and Gas Research and Innovation Society (OGRIS) Fund which “supports and facilitates research concerning practical ways of addressing environmental and social issues related to oil and gas exploration and development in B.C.” (BC Oil & Gas Commission, 2016b)

The Commission gets strategic and policy direction from the provincial government as outlined in the Minister of Natural Gas Development’s Mandate Letter. An example of such direction is the Minister’s request that the Commission align its activities to support the BC Jobs Plan and the BC Natural Gas Strategy (BC Oil & Gas Commission, 2016b).

Governance and Decision Making
The role of the Commission’s BOD is mainly corporate governance, with powers to make regulations respecting aspects of carrying out oil and gas activities. The Board provides the Commission with strategic direction; ensures organizational performance; establishes appropriate accountability and transparency mechanisms; and, approves budget and regulatory initiatives. The Commissioner of the Board (also the CEO and Vice Chair of the Board) is appointed by the Lieutenant GIC. The Commissioner has full legislative decision making authority on proposed oil and gas activities, which can be delegated to staff of the organization. He/she also supervises the management of operations of the organization. Staff are responsible for undertaking technical reviews (i.e. engineering, archeology, natural resource and environmental values and impacts) of applications and assessing any potential impacts on First Nations interests (Government of British Columbia, 2008).

When reviewing new projects, the Commission does not hold hearings but does consider whether an application for permit is in the public interest. Public interest is defined in the OGAA as ‘having regard to environmental, economic and social effects’ and is served by protecting public safety (including health effects resulting from noise, traffic, and air quality), conserving the environment, and ensuring equitable access to natural gas and petroleum resources (Government of British Columbia, 2008). The Commission relies on an Area-based Analysis framework for managing the environmental and social impacts of oil and gas development including cumulative effects (BC Oil & Gas Commission, 2016a). The Commission has turned down applications because of social and cultural issues brought up by First Nations.

A coordinated review process with the B.C. Environmental Assessment Office (EAO) also sees that recommendations from the Environmental Assessment are taken into consideration. For major projects (e.g. LNG related infrastructure) the Commission and EAO have entered into a Memorandum of Understanding in order to
'enhance the effectiveness and efficiency of the two agencies in fulfilling their respective roles by reducing duplication, improving timeliness and strengthening compliance and enforcement' (Government of British Columbia and BC Oil & Gas Commission, 2013).

Tools for Lifecycle Oversight
The Commission has a variety of tools available for compliance monitoring and enforcement, including: inspections of permit holder activities and conduct of audits. Whenever appropriate, alleged non-compliances are managed through deficiency notices and correction processes that provide industry with an opportunity to correct an alleged issue within a specific timeline. However, if this process proves unsuccessful, the OGAA provides two streams for proceeding with enforcement action: quasi-criminal law, which allows the Commission to forward the alleged non-compliant proponent to Crown Council for court prosecution consideration or issue a ticket for offences under specified enactments; and administrative law, which allows the Commission to restrict or prohibit a proponent from carrying out an action or suspend or cancel permits or levy a penalty (BC Oil & Gas Commission, 2015a). The OGAA also gives the Board power to create regulations in respect to emergency response programs and response contingency plans (e.g. the Emergency Management Regulation). This regulation outlines the various components that are to be included in the plans/programs a permit holder must prepare and maintain (BC Oil & Gas Commission, 2013a).

As the majority of subsurface petroleum and natural gas resources in British Columbia are owned by the Province, the Commission does not issue sub-surface tenures. Proponents enter into a tenure agreement with the Province in order to gain the rights to explore for or produce petroleum and natural gas. The Commission does not deal with private land access decisions or compensation issues as this is the responsibility of the Ministry of Natural Gas. It may, however, use Landowner Liaisons (within its Community Relations Department) to assist with dispute resolution during the pre-application stage as well as post-permit. Other disputes, not related to land, are resolved through informal processes rather than formal arbitration. The Commission handles all access decisions on public lands (BC Oil & Gas Commission, 2016c).

Indigenous Peoples Engagement
The Commission employs a relationship based approach to Indigenous peoples engagement which goes beyond consultation. The Commission has a number of initiatives aimed at fostering effective working relationships and partnerships with First Nations. It engages First Nations in regulatory development, for example in the development of OGAA regulations and associated guidance manuals in 2008 – 2010. In some cases the Commission provides capacity funding for Nations to participate in the consultation process and uses agreements to support relationship building. The Commission further invests in relationships with First Nations by continuing a dialogue and engagement on issues of importance to First Nations communities which are not effectively addressed through operational consultations. Examples include:

- Area-based Analysis – landscape level, cumulative effects
- Aboriginal Liaison Program – participation in regulatory and emergency management
- Oil and Gas Research and Innovation Society (OGRIS) - community research and reclamation

Public Participation
The Commission’s Consultation and Notification Regulation indicates that within an applicable notification or consultation distance, applicants must consult with landowners, local authorities and the Government of Canada (if existing building or structure is within applicable consultation distance of the project), and rights holders. The OGAA states that anyone with an interest or concern over an activity may make a written submission, and these can be made at any time during the application review process. However, only those within a predetermined distance will receive notification or invitation to consult. Generally, the distances for notification are designed to include a larger population than for consultation (Government of British Columbia, 2008; Government of British Columbia, 2010).
The Alberta Energy Regulator (AER) was created in 2013 through the Responsible Energy Development Act (REDA), as the result of a major review of energy regulation in the province. The creation of the AER was, in large part, a response to ensure that Alberta remained competitive in the face of the 2008 financial crisis and the need to streamline and simplify energy regulation in the province.

**Mandate**

The AER is the “single regulator” of energy development under provincial jurisdiction, covering oil, gas and coal as well as provincial pipelines. It is responsible for regulating activities across the project lifecycle: authorizations, monitoring/compliance/enforcement, and decommissioning. The regulator is arm’s length from government, but works with a network of other departments and agencies to implement the Integrated Resource Management System in Alberta. The AER's mandate, as set forth in the REDA is:

- “to provide for the efficient, safe, orderly and environmentally responsible development of energy resources in Alberta through the Regulator’s regulatory activities -
- to regulate (in respect of energy resource activities): the disposition and management of public lands; the protection of the environment; and, the conservation and management of water, including the wise allocation and use of water” (Government of Alberta, 2012)

These authorities are granted under environmental and land legislation called "specified enactments".

The Minister of Energy has the authority to give directions to the AER for the purposes of:

- providing priorities and guidelines for the regulator to follow; and
- ensuring the work of the AER is consistent with programs, policies and work of the Government in respect of energy resource development and activities.

An example of the AER taking government policy direction occurred in 2015 when the Government of Alberta released its *Lower Athabasca Region: Tailings Management Framework for Mineable Athabasca Oil Sands*. In response to this, the AER developed a new Directive (regulation) to implement the tailings management policy.

**Governance and Decision Making**

The Board of Directors of the AER operates as a corporate board, providing strategic direction, approving regulatory change and setting performance expectations for the organization and the CEO. The Board does not have any role in regulatory decision making processes for project authorizations or lifecycle management. The CEO is appointed by the Board and is accountable for the day-to-day operations of the organization, reporting to the Chair of the Board.

The CEO's responsibilities include making decisions on applications, investigating activities for compliance, and closure of energy developments, including remediation. Applications are reviewed by an Executive Committee which decides how non-routine applications should be handled. This can include directing the application to be handled by Hearing Commissioners or through delegated authority, where the AER has specified what matters can be handled by what level in the organization. If an application does not proceed to a hearing, the AER must publish its decision (Government of Alberta, 2012; Alberta Energy Regulator, 2014a).

Hearing Commissioners are responsible for conducting hearings into regulatory appeals and into certain major energy project applications. They are also involved in developing the organization’s hearing procedures, rules, and processes for Alternate Dispute Resolution (ADR). Commissioners are independent adjudicators, whose decisions may only be reviewed by the Court of Appeal of Alberta. Both the Commissioners and Board of Directors are appointed by the Lieutenant GIC.
In accordance with REDA and its General Regulation, when the AER is to consider an application or regulatory appeal it is required to consider:

- the social and economic effects of the energy resource activity
- the effects of the energy resource activity on the environment; and
- the impacts on a landowner as a result of the use of the land on which the energy resource activity is or will be located (Government of Alberta, 2013).

**Tools for Lifecycle Oversight**

The AER has a variety of compliance and enforcement tools available under REDA and specified enactments to compel compliance and to correct and deter future noncompliance. These include: notice of noncompliance, warning, orders, administrative sanctions, fees, administrative penalties, prosecution and declaration of a named individual. The AER uses an Integrated Compliance Assurance Framework to outline its approach to assuring compliance. The regulator also has a number of requirements related to emergency management established through directive. As enabled by REDA, the AER uses ADR throughout the full life cycle of energy development and may use it for the purpose of resolving any issue or matter in dispute (Government of Alberta, 2012; Alberta Energy Regulator, 2016d).

**Indigenous Peoples Engagement and Public Participation**

In Alberta, the Aboriginal Consultation Office (ACO), a separate entity from the AER, assesses the adequacy of consultation undertaken by government departments and the AER. Under REDA, the AER works closely with the ACO to ensure that any needed consultation occurs for decisions on energy project applications within the AER’s mandate. A Joint Operating Procedure for First Nations Consultation on energy resource activities sets out the nature of the relationship between the AER and the ACO (Alberta Energy Regulator & Government of Alberta, 2015).

In accordance with REDA, any person that may be directly and adversely affected by an application may file a statement of concern. If the AER decides to conduct a hearing on the application, this person is entitled to participate. Any person wishing to participate in a hearing that has not filed a statement of concern may make the request; however, to participate they must be determined to be directly and adversely affected. The AER has discretion as to whether or not it conducts a hearing when considering an application (Government of Alberta, 2012). An individual who wishes to participate in a proceeding may make a request to the AER for an advance of funds, an award of interim costs incurred, or a final award of costs in accordance with the REDA Energy Cost Claims Directive (Alberta Energy Regulator, 2016e).

In addition, the AER uses a Stakeholder Engagement Framework to outline its approach to engagement, including principles for engagement and identifying who it will engage with on what issues (Alberta Energy Regulator, 2015). Outside of regulatory applications, the AER uses other engagement mechanisms to inform the development of regulations (directives) or address area-based issues. Two recent examples include the use of a multi-interest technical advisory committee to inform a new Directive on tailings management (Alberta Energy Regulator, 2016c) and the use of a Hearing Commissioner-led proceeding to address concerns about odours and emissions from heavy oil operations in the Peace River area (Alberta Energy Regulator, 2014b).
ONTARIO ENERGY BOARD, ONTARIO

The Ontario Energy Board (OEB) was established under the Ontario Energy Board Act (OEB Act) in 1960 as a successor to the Ontario Fuel Board of 1954. The evolution of the OEB since its inception has been influenced in part by market conditions (e.g., assessed vis-à-vis gas market reviews), but also through public policy. Initially, the OEB regulated in the natural gas sector but with the passage of the Energy Competition Act in 1998, the Board also became responsible for regulation in the restructured electricity sector.

Mandate

The Board’s mandate is determined by the provincial government and is embodied in legislation, regulation and directives. The OEB has a broad mandate that covers varied aspects of the two energy sector segments, operating as an energy development regulator in both sectors with a market monitoring role in the electricity sector.

In the natural gas sector, the OEB regulates Ontario’s natural gas utilities, including franchise agreements, pipeline construction, and the rates they charge to their customers. The OEB is required to determine if the construction of a pipeline is in the public interest and does this by considering need, safety, economic feasibility, community benefits, security of supply and environmental impacts. As well, the OEB approves geological formations that are suitable to store natural gas and determines landowner compensation if agreement cannot be reached. In the electricity sector, the OEB licenses all market participants including the Independent Electricity System Operator (IESO), generators, transmitters, distributors, wholesalers and retailers. The Board sets transmission and distribution rates, and approves the IESO budget and fees. The Board also sets the rate for the Standard Supply Service for distribution utilities that supply electricity (commodity) directly to consumers. Board approval is required for the construction of transmission lines longer than two kilometres. The Board also monitors markets in the electricity sector and reports to the Minister of Energy on their efficiency, fairness and transparency, competitiveness as well as on any market power matters. In both sectors, the OEB licenses gas marketers and retailers; however, it does not regulate competitive services. As well, the Board is responsible for approving specific business arrangements involving the regulated parts of the sectors.

Under the OEB Act, the Minister of Energy may issue to the OEB directives in relation to certain matters. For example, a directive received in 2014 required the OEB to amend the licenses of electricity distributors regarding conservation and demand management activities and to develop a demand-side management policy framework for natural gas distributors. The Minister may also require the OEB to examine, report and advise on any question respecting energy. Two examples are as follows. In one recent request, the OEB was asked to report on an appropriate electricity rate (or rate assistance) for on-reserve First Nations electricity consumers; and in a separate request the OEB was asked to examine and report on retail transportation fuel prices (Ontario Energy Board, 2016c).

Governance and Decision Making

The OEB is composed of at least five (full and part-time) members, of whom two act as vice chairs and one as Chair/CEO. These three individuals together make up the Management Committee, which is tasked with corporate functions and is responsible for making rules governing practices and procedures on behalf of the OEB. The Management Committee may delegate certain powers and duties, but only to a member of the Management Committee. The Chair may assign one or more members of the Board to a panel that has all the jurisdiction and powers of the Board to hear or determine any matter (Government of Ontario, 1998). As an independent adjudicative tribunal, the OEB has a statutory mandate to carry out its responsibilities through both adjudicative (e.g. public hearings) and non-adjudicative assessment (e.g. creation and enforcement of rules/codes, policy and guidelines) and to exercise its expertise in both types of decision making. In non-adjudicative processes and
written hearings, OEB staff provide legal, technical and policy expertise and analysis, and Board Members take
that into account when making a decision. In most oral hearings, the OEB relies on parties (applicants and
intervenors) to provide substantive input; staff facilitates this input (Ontario Energy Board, 2006).

Tools for Lifecycle Oversight
The OEB has a process for compliance monitoring and enforcement that includes: determining through audits and
compliance reviews whether regulated companies adhere to statutory and regulatory obligations; monitoring
various aspects of financial operating performance; investigating any allegation of non-compliance; and, where
appropriate, taking enforcement actions. If a company is found to be non-compliant, the OEB seeks to facilitate
informal resolution (i.e. matters are resolved between the company and OEB staff). If issues cannot be resolved,
the OEB may hold an enforcement hearing. Depending on the Board’s findings, it may make an order requiring
the person to come into compliance, make an order suspending or revoking a licence, or make an order requiring
a person to pay an administrative penalty. Financial penalties can be as high as $1,000,000 for each day on
which the contravention occurred or continues (Ontario Energy Board, 2016b).

There are other entities in Ontario whose specific mandates relate to safety, including the Ontario Technical
Standards & Safety Authority and the Electrical Safety Authority. In the gas sector, the Ontario Pipeline
Coordinating Committee coordinates the Ontario government’s review of natural gas facility projects in Ontario
that require approval from the Board. Planning and information requirements for new hydrocarbon projects, which
come before the OEB for approval, are set out in guidelines. When granting a leave to construct, the Board may
impose conditions of approval. These conditions are subject to monitoring and reporting. Similar requirements
exist, as appropriate, for certain electricity infrastructure approvals. The OEB may hear matters in relation to
infrastructure abandonment in cases where disputes are raised in a hearing between landowners and the utility.
With respect to emergency management and response, the OEB can require that an applicant proposing the
construction of a pipeline have in place contingency plans to prevent a delayed or ineffective response to
unexpected events of conditions that may occur during construction (Stantec, 2008).

With respect to dispute resolution, the Board may direct a settlement conference to be held in any proceeding. An
OEB practice direction provides guidance on settlement process, including the rights and obligations of
participants, the role of the facilitator and the role of OEB staff. It also sets out how the Board may deal with a
settlement proposal.

Public Participation and Indigenous Peoples Engagement
The OEB has issued guidelines for both electricity and gas proponents to ensure they demonstrate in their
applications that they have satisfied the public participation component. This early engagement
(during the project planning stage) is meant to provide communities with sufficient time to review materials and
understand how projects may affect their rights, and give the applicant sufficient time to identify options for
mitigating, avoiding, or accommodating these effects. The OEB Act also requires that there be one or more
processes by which consumers, distributors, generators, transmitters and other persons who have interest in the
electricity industry may provide advice and recommendations for consideration by the Board. It is required by law
that public notice be made of applications received by the OEB in order to provide this opportunity for input
(Government of Ontario, 2016). Any person may send a letter of comment on a proceeding to the OEB. However,
to actively participate in hearings as an intervenor, a person “must satisfy the Board that he or she has a
substantial interest and intends to participate actively and responsibly in the proceeding…other parties will be
notified of applications received and may object to a person applying for intervenor status” (Ontario Energy Board,
2014). Any person may apply to the Board for eligibility to receive cost awards in Board proceedings in
accordance with the OEB’s Practice Direction on Cost Awards (Ontario Energy Board, 2016a).
The Federal Energy Regulatory Commission (FERC) was formally established in 1977 under the Department of Energy Act after a reorganizing of the Federal Power Commission, of which it was a part since the 1930s. This reorganizing came as a result of chronic brownouts in the 1960s and the Organization of Petroleum Exporting Countries embargo in the 1970s, which left the US vulnerable to increased prices and fuel shortages; in response, the government introduced a new energy strategy to boost domestic production. FERC was also shaped by the 1978 National Energy Act which brought about a unification of intrastate and interstate gas markets and saw the development of simpler approval procedures and elimination of direct oversight of utilities. FERC's mandate was updated in the Department of Energy Act, 2004 and with the passing of the Energy Policy Act in 2005 (a clear signal from Congress' confidence) the Commission began to play a major role in implementing energy legislation.

**Mandate**

FERC is an independent energy development and market regulator with responsibility for electricity, hydropower, natural gas and oil in the United States. Specifically, FERC is charged with: regulating the transmission and wholesale sales of electricity in interstate commerce; reviewing certain mergers and acquisitions by electricity companies; regulating the transmission and sale of natural gas for resale; regulating the transportation of oil by pipeline in interstate commerce; approving the siting and abandonment of interstate natural gas pipelines and storage facilities; licensing and inspecting private, municipal, and state hydroelectric projects; and, protecting the reliability of the high voltage interstate transmission system. FERC is also responsible for overseeing environmental matters related to natural gas, hydroelectricity projects and other matters (Government of United States, 1977; Government of United States, 2005a).

Under the National Environmental Policy Act it is FERC's responsibility to conduct environmental reviews at the same time that it conducts its economic review of applications (Government of United States, 1969). FERC considers whether a "project is in the public convenience and necessity by balancing the public benefits against the adverse effects of the project. These public benefits could include, among other things, meeting unserved demand, eliminating bottlenecks, access to new supplies, lower costs to consumers, providing new interconnects that improve the interstate grid, providing competitive alternatives, increasing electric reliability, or advancing clean air objectives" (Federal Energy Regulatory Commission, 2000).

In carrying out its mandate, FERC and its employees are not subject to the supervision or direction of any other official. FERC is not obligated to implement Presidential executive orders, but is required to adhere to any policies or laws passed.

**Governance and Decision Making**

FERC functions as a neutral, quasi-judicial body, rendering decisions on applications filed with it and resolving issues among parties appearing before it. It is comprised of five members (commissioners) appointed by the President and confirmed by the Senate; all five members have equal say in the decision making process, and at least three are needed to make a decision. One of the commissioners is designated by the President to be Chairman/CEO and is responsible for all of the executive and administrative functions of FERC as well as participating in regulatory decisions. As FERC's organizational structure consists of 12 offices housed within the agency, responsibilities may be delegated to these offices in accordance with the Code of Federal Regulations. For example, the Office of Energy Projects is delegated the responsibilities of project siting and construction, balancing environmental and other concerns, ensuring compliance, and safeguarding the public (Government of United States, 1999; Federal Energy Regulatory Commission, 2016a).
Tools for Lifecycle Oversight
FERC has been provided with a number of tools and increased authority for monitoring and enforcing compliance over the years. Office of Enforcement staff conduct investigations using information they obtain through internal sources (e.g. from the office’s Division Analytics and Surveillance team) or external sources (e.g. self-reporting, enforcement hotline, referral from another government agency) (Federal Energy Regulatory Commission, 2016a). These staff also conduct audits of various types, with different scope and objectives for the wholesale electric power, natural gas pipeline and oil pipeline industries. FERC also has various practices and procedures in place for emergency management and response, including its Emergency Action Plan guidelines for dams. On the issue of land acquisition, FERC encourages applicants to try to negotiate with landowners. However, “if the company and a landowner cannot reach an agreement, the company may acquire an easement under eminent domain” and “a court, either state or federal, will determine the compensation that a company must provide the landowner” (Federal Energy Regulatory Commission, 2007). If disputes over land or other issues arise, FERC has a Dispute Resolution Division which is tasked with promoting timely and high quality resolutions of disputes through consensual decision making. FERC can also make use of Administrative Law Judges to conduct settlement negotiations, or mediation, facilitation, and arbitration, as well as evaluate and certify settlements. Trial staff may also prove useful in helping parties to resolve disputes and settle cases (Federal Energy Regulatory Commission, 2016a).

Indigenous Peoples Engagement
As articulated in its Tribal Policy Statement, FERC is committed to promoting a government-to-government relationship between itself and federally-recognized Indian Tribes, and has established a tribal liaison to assist in this effort. As a result, when evaluating proposed hydroelectric projects, the Commission considers any ‘comprehensive plans prepared by Indian Tribes or inter-tribal organizations’ for improving, developing and/or conserving a waterway or waterways affected by a proposed project. Regarding the regulation of the natural gas industry, FERC works with tribes to address the effects of proposed projects on tribal rights and resources through consultation. Although not part of the policy, FERC recently established a tribal coordinator position to assist in actions related to natural gas reviews. FERC also seeks to engage tribes in policy level discussions around general matters of importance (Federal Energy Regulatory Commission, 2003b).

Public Participation
Public participation is required for project permits. There is an open filing process where any individual or party can comment on projects, though there are criteria to become a party to the proceeding (i.e. to being granted intervenor status). The Commission enables stakeholder participation across the lifecycle, including before a project application is filed when FERC staff work with the applicant to engage in meetings with stakeholders to get them to flesh out concerns. Further down the lifecycle, FERC offers several alternatives to encourage the public to assist in monitoring, FERC has published the Commission’s Citizen’s Guides to deal with a natural gas pipeline, LNG terminal or hydropower project (Federal Energy Regulatory Commission, 2016a).
The Pipeline and Hazardous Materials and Safety Administration (PHMSA) was established in 2004 by the Norman Y Mineta Research and Special Programs and Improvement Act, following a reorganization of a predecessor organization. However, its mandate and authorities remained the same. The role of the federal government in pipeline safety was shaped significantly by the Natural Gas Pipeline Safety Act 1968 which signalled a greater need for oversight.

**Mandate**
PHMSA is the energy development regulator responsible for ensuring the safety and security of interstate and international pipelines, LNG facilities, and transportation of hazardous nuclear materials in the United States, through the issuance of safety regulations for construction, operation, maintenance, and decommissioning. PHMSA's authority pre-empts any state authority on pipeline safety; although, a state can take regulatory authority by entering into an agreement with PHMSA and demonstrates that it meets PHMSA's safety standards. PHMSA is not involved in review and approval of pipeline projects. Its safety mandate begins during pipeline construction and extends through to pipeline abandonment. PHMSA primarily focuses on safety of people and the environment; supply and reliability are also important factors in its regulatory functions (Pipeline and Hazardous Materials Safety Administration, 2016; Pipeline101, 2016).

PHMSA has the power to establish national policy and set and enforce standards. An example of this is the Department of Transportation and PHMSA's development of the Pipeline Safety Action Plan which is aimed at accelerating rehabilitation, repair and replacement programs for high-risk pipeline infrastructure and to requalify that infrastructure as fit for service (Government of United States, 2011a). Since PHMSA is part of the Department of Transportation, it is expected to follow political lead and direction from the federal level; a new president's policies can mean changes to PHMSA's mandate. PHMSA has a strong innovation mandate in legislation, including to undertake pipeline safety research in partnership with public and private organizations (Government of United States, 2004).

**Governance and Decision Making**
PHMSA is not an independent organization, it is an operating administration under the Department of Transportation comprised of two safety offices: the Office of Pipeline Safety and the Office of Hazardous Materials Safety. The organization is led by an Administrator (also the Chief Executive), who is appointed by the President, confirmed by the United States Senate and expected to have professional experience in pipeline safety, hazardous materials safety or other transportation safety. The Administrator has the legislated duty of regulatory decision making as well as providing direction to PHMSA employees, and is supported by a senior leadership team that includes a Chief Safety Officer. The Administrator reports directly to the Transportation Secretary, and has the primary authority to regulate key aspects of interstate pipeline safety: design, construction, operation and maintenance and as well as spill response planning. Regulatory oversight decision making is made first by the Office of Pipeline Safety and, if necessary, directed to the Chief Safety Officer and then the Administrator. PHMSA's enabling legislation allows for the delegation of authority (excluding enforcement) to intrastate pipeline safety officers and allows state officers to administer programs for sections of the pipeline within their boundaries (Government of United States, 2004; Pipeline and Hazardous Materials Safety Administration, 2016).

**Tools for Lifecycle Oversight**
Under the United States Code (U.S.C), PHMSA is given authority to monitor compliance in a variety of ways such as: conducting field inspections of facilities and construction projects; inspections of operator management systems, procedures and processes; incident investigations; and direct dialogue with operator management...
To promote compliance, PHMSA also has a number of tools it can use under the Pipeline Enforcement Program and the Hazardous Materials Enforcement Program, including: corrective action orders, notices of probable violation, and warning letters. If an operator is found to be in a state of non-compliance, PHMSA may issue a compliance order, civil penalties, or criminal penalties. PHMSA also has a range of resources available to ensure proper emergency management and response. Specifically, there is the National Pipeline Mapping System (NPMS) which is a free online tool for locating gas pipelines in the US; the Pipeline Emergencies Training Program, which is a manual for emergency response; and the Hazardous Materials Emergency Planning Grant, which encourages a comprehensive approach to emergency training and planning through risk based analyses (U.S. Congress, 2016). PHMSA encourages operators to incorporate parts of the national contingency plans into their emergency response plans. Community involvement in emergency planning is mandated through States having to establish Local Emergency Planning Committees (LEPCs). LEPCs provide a mechanism for citizens, local governments and industry to work together to plan for chemical accidents, and to reduce risk to the public from releases of toxic chemicals into the environment (Government of United States, 2010).

Indigenous Peoples Engagement
The most common form of public participation used by PHMSA - the posting of rulemaking on the federal registry for comment - is not the most suitable option for Native Tribes. In recognizing this, Congress mandated in 2012 that PHMSA make policy on how it would engage and support Native Tribes, especially those tribes who own and operate pipeline facilities.

Public Participation
Although engagement has been primarily one directional, (composed mostly of educational training and outreach), in PHMSA’s 2021 Strategic Plan there is a clear priority to ‘build stakeholder and public trust through proactive and targeted outreach, engagement, responsiveness, and transparency’ (Government of United States, 2016a). In working toward this strategy, PHMSA maintains a relationship with the Common Ground Alliance (CGA) which is an independent stakeholder member driven association focused on shared responsibility and the promotion of best practices that lead to a reductions in damages to underground facilities (Common Ground Alliance, 2016). PHMSA has also established a Pipeline and Informed Planning Alliance (PIPA) to ensure communities understand proper land use planning around pipelines.
ENVIRONMENTAL PROTECTION AGENCY, UNITED STATES

The Environmental Protection Agency (EPA) was established under the EPA Order 1110.2 in 1970, as a result of mounting concern around pollution and the condition of the physical environment in the United States. At the time, President Nixon called for a reorganization that would ‘pull together into one agency a variety of research, monitoring, standard-setting and enforcement activities’ that were currently ‘scattered through several departments and agencies’ (Nixon, 1970).

Mandate
The EPA is the agency responsible for administering legislation and executive orders related to human health and the environment in the United States and has a very broad mandate. Specifically, it is the EPA’s role to ensure that: all Americans are protected from significant risks to human health and the environment; national efforts to reduce environmental risk are based on the best available scientific information; federal laws protecting human health and the environment are enforced fairly and effectively; environmental protection is an integral consideration in U.S. policies concerning natural resources, human health, economic growth, energy, transportation, agriculture, industry, and international trade, and these factors are similarly considered in establishing environmental policy; and, all parts of society -- communities, individuals, businesses, and state, local and tribal governments -- have access to accurate information sufficient to effectively participate in managing human health and environmental risks (Environmental Protection Agency, 2016a). The EPA is not the lead agency for the review and approval of energy projects. However, it does have a role in monitoring, compliance, and enforcement under the various pieces of environmental legislation that it administers.

Governance and Decision Making
The EPA is an independent agency that is not part of Cabinet departments. As an independent agency the EPA is not required to ‘report to any higher official in the executive branch such as a department secretary’ and ‘there is no layer of organization between the agency and the President’ (Lewis & Selin, 2012).

The EPA is headed by an Administrator who is nominated by the President and confirmed by Senate. The Administrator sits as a Cabinet-level official but is not part of the Cabinet itself and therefore is not subject to political direction, particularly removal by the President (Lewis & Selin, 2012). The Administrator is supported by a Deputy, Associates, Assistants and Regional Administrators and is responsible for enforcing each of the environmental statutes under the EPAs purview, through its Office of Enforcement and Compliance Assurance (OECA).

It is EPA’s policy ‘to transfer the administration of national programs to state and local governments to the fullest extent possible, consistent with statutory intent and good management practices’, as it is ‘considered less and less appropriate for EPA to directly carry out day-to-day operations which overlap state and local activities’ (Environmental Protection Agency, 1985).

Tools for Lifecycle Oversight
Under the OECA, the EPA uses a variety of compliance monitoring tools under 44 compliance programs. These compliance tools include: auditing; conducting on-site inspections, evaluations and investigations; conducting off-site data collection, reviews, reporting, program coordination, oversight and support; and, providing inspector training, credentialing and support. Cases of alleged non-compliance are discovered by the EPA through inspections/audits or divulged by the public using the EPA’s Report Environmental Violations web-tool. Those accused of violating regulatory requirements are subject to: civil administrative actions, which are non-judicial and include such things as a notice of violation, settlements, or an order with or without penalties; civil judicial actions, which are formal lawsuits; or criminal actions, which could result in a court conviction and fines or imprisonment. The EPA may also use administrative monetary (and non-monetary) penalties as a means of enforcement;
Administrative Law Judges (ALJs) conduct hearings to make liability and penalty determinations. The EPA seeks to improve the effectiveness of their compliance program using Next Generation Compliance, an integrated strategy that consists of five interconnected components: regulation and permit design, advanced monitoring, electronic reporting, transparency and innovative enforcement (Environmental Protection Agency, 2016a).

The EPA makes use of ADR techniques to prevent and resolve issues related to rulemaking, policy development, permit issuance, stakeholder involvement and more; this process is supported by legislation, policy and guidance documents developed by the EPA’s Conflict Prevention and Resolution Centre (Environmental Protection Agency, 2016a).

**Indigenous Peoples Engagement**

Indigenous peoples engagement on issues under the EPA’s purview – those related to human health and the environment – is governed by the EPA’s 1984 Indian Policy, and a number of other secondary policies and programs that provide details on the consultation process including when and how consultation should take place, and the provision of technical and financial support (e.g. the Policy on Consultation and Coordination with Indian Tribes, the Enhancing State and Tribal Programs). The EPA relies on the American Indian Environmental Office (AIEO) to assist it in realizing these policies and programs and ensuring that federally recognized tribes are consulted and engaged and that government-to-government relationships are being maintained (Environmental Protection Agency, 2016a).

**Public Participation**

It is the EPA’s responsibility to ensure that the general public has ample information and an opportunity to participate in application and hearings processes. The Public Participation Guide provides a number of tools that help facilitate this, including in-person tools such as meetings or workshops and remote tools such as written surveys or websites. The guide also helps to identify stakeholders and the appropriate level of participation (Environmental Protection Agency, 2014).
NORWEGIAN WATER RESOURCES AND ENERGY DIRECTORATE, NORWAY

The Norwegian Water Resources and Energy Directorate (NVE) was established in 1921 under the predecessor to the Ministry of Petroleum and Energy (MPE). The NVE has been assigned tasks by the Energy Act, the Water Resources Act, the Water Course Regulation Act and Industrial Licencing Act. At the same time as the Energy Act entered into force in 1991, there was a liberating of energy markets and a separation of the regulator from the Transmission System Operation.

Mandate

The NVE is the national energy regulator in Norway, responsible for managing domestic energy resources. The NVE cooperates with the Norwegian Competition Authority in supervising both the end-use (retail) market and the wholesale market (Norwegian Water Resources and Energy Directorate, 2012). Furthermore, the NVE is responsible for security of supply in the energy supply system and preparedness. NVE is also responsible for managing Norway’s water resources (including hydroelectric projects) and for central government functions as they relate to flood and avalanche/landslide risk reduction. The NVE has the authority to grant licenses and carry out environmental impact assessment for projects such as the construction of power plants, dams and other installations in water courses as well as major power lines and other energy installation (Norwegian Water Resources and Energy Directorate, 2016).

As a signatory to the Agreement on European Economic Area 1992 (EEA Agreement) Norway is subject to the EU rules within the energy sector which are made a part of the EEA Agreement. This means that the NVE and the MPE are responsible for implementing the Directives and Regulations issued, including but not limited to the Renewable Energy Directive, which promotes the use of energy from renewable sources; (Bartes & Wasenden, 2014).

The NVE considers the public interest by promoting ‘social and economic development through efficient and environmentally sound energy production, as well as efficient and reliable transmission, distribution, trade and efficient use of energy’ (Norwegian Water Resources and Energy Directorate, 2016). The NVE also ensures that the range of energy activities efficiently promotes the interests of society, which includes taking into consideration any public and private interests that will be affected. NVE recognizes conflicts between users and environmental interests as part of public interest in the following way: ‘conflicts may arise between various user and environmental interests in connection with the planning, construction and operation of generation or transmission facilities for electrical energy and district heating and in water resource management. For example, biological diversity, landscapes and outdoor recreation, fishing, tourism, cultural heritage, local communities and reindeer husbandry may all be affected’ (Norwegian Ministry of Petroleum and Energy, 2015).

Governance and Decision Making

As a directorate under the MPE, the NVE is led by a Director General and includes departments for energy market regulation, energy systems, licensing, supervision and contingency planning, hydrology, landslides, flood and river management and administration. The directorate is comprised of staff who are delegated a variety of responsibilities including: issuing regulations on economic and technical reporting; market access and tariffs; settlement and billing; and, energy planning and emergency preparedness. NVE staff are delegated the authority to approve licensing for smaller generation projects and transmissions lines. The NVE is expected to provide recommendations on larger projects to the Ministry, for both generation and transmission. Decisions on these larger projects are made by the King in Council on recommendations from the Ministry, which is informed by submissions from the NVE and input from public consultation. Decisions made by the King are final and cannot be appealed (Norwegian Water Resources and Energy Directorate, 2016).
When the NVE and Ministry consider an application, focus is on whether or not the ‘generation, conversion, transmission, trading, distribution and use of energy is being conducted in a way that efficiently promotes the interests of society’ which include: biological diversity, landscapes and outdoor regulation, fishing, tourism, cultural heritage, local communities and reindeer husbandry (Norwegian Water Resources and Energy Directorate, 2014). These consequences are then balanced against the positive consequences of producing energy (Norwegian Water Resources and Energy Directorate, 2014).

**Tools for Lifecycle Oversight**
To ensure compliance, the NVE expects that an applicant will have produced a detailed plan prior to application, which is then approved and used as a tool to monitor the company during construction and operation. Violation of the terms set out in this plan could result in – among other things – the issuance of administrative fines or penalties (Norwegian Water and Energy Directorate, 2010). The NVE exercises natural hazard management through open communication with dam owners; this enables the NVE to mitigate risks by asking, for instance, that water level be reduced in anticipation of increased snow in the mountains (Norwegian Water Resources and Energy Directorate, 2016).

**Indigenous Engagement**
The NVE and the MPE are obligated to consult with the Sami Parliament in accordance with the *Sami Act*. Furthermore, according to the Agreement on consultation, the NVE and the MPE are obliged to consult with the Sami Parliament and the affected reindeer migration district. This ethnic minority engagement is meant to protect the cultural interests of Sami, and ‘to provide Sami with means in order to enable them to protect, maintain and develop their own culture’, which ‘includes safeguarding the material interests of Sami, e.g. special protection for livelihoods and natural resources in traditional Sami areas’ (Brantenberg, 1995).

**Public Participation**
The NVE is required to engage/consult with the general public for all licenses and to hold public hearings on all matters to facilitate this participation: ‘a public announcement of the application, a brief description of the plans, information about where the application has been distributed for comment and the deadline for submitting comments shall be posted in the Official Norwegian Gazette and in one or more newspapers that are commonly read in the district’ (Government of Norway, 1990). In addition to the mechanism regarding refunding costs for necessary legal assistance in licencing cases in order to support public participation, the NVE is legislated to have benefit sharing mechanisms whereby the benefits of exploiting water are shared between local communities and government. This comprises mandatory provisions on licence fees and obligatory electricity sales to the municipalities where the waterfalls and regulation reservoir are located. Furthermore, it includes provisions on development funds. The intention of such funds is to compensate for disadvantages caused by the development project and to give the municipalities a part of the income generated by the power plant.

In addition to the mechanism regarding refunding costs for necessary legal assistance in licencing cases in order to support public participation, the NVE is legislated to have benefit sharing mechanisms whereby the benefits of exploiting water are shared between local communities and government.
The Australian Energy Regulator (AER) was established in 2005 under the *Competition and Consumer Act* (CCA) following micro-economic reforms in the 1990s that included a reform of energy markets. The creation of the AER was part of a new national governance structure aimed at having greater integration of state by state markets and consistent national energy regulations, developed by the Council of Australian Governments (COAG) comprising the Commonwealth and all States and Territories. The Council then made the COAG-Energy Council (COAG-EC) of Energy Ministers responsible for overarching policy and direction for energy markets in the country and for putting in place overarching legislation (e.g. the National Electricity Law, National Gas Law and National Energy Retail Law).

**Mandate**

The AER operates as a national energy market regulator, responsible for: monitoring wholesale electricity and gas markets in Eastern and Southern Australia; regulating retail energy markets in those states that have adopted the National Energy Costumer Framework; and, regulating energy network infrastructure (e.g. transmission lines and gas pipeline) in jurisdictions other than Western Australia and Tasmania (Government of Australia, 2016b).

The AER is not directed to implement government policy but is expected to ‘regularly comment on major policy matters and contribute to reviews’. One example of this is the AER’s submission to the Department of Industry’s Energy White Paper, which was to set out the Australian Government’s position on energy policy (Australian Energy Regulator, 2014).

**Governance and Decision Making**

The Board of the AER operates as an administrative decision maker having no judicial function. It is comprised of three members who are jointly appointed by both levels of government – commonwealth and state/territory – in the COAG-EC. It is required that one of the three members also be a commissioner of the national Australian Competition and Consumer Commission; the remaining two members are state/territory members, who do not represent a particular jurisdiction but are backed by a majority of states and territories. Commissioners are recruited through an international competition. The AER Board operates as a commission, with members being responsible for both regulatory decision making under legislation and for ensuring organizational oversight. The CEO is accountable to the Board and responsible for ensuring members have the support and advice needed to make good decisions. Staff also play a significant role in supporting decision making by providing timely, quality advice to both the CEO and the Board. As enabled by the CCA, the Board can delegate decision making to senior staff. All decisions made by the Board must have the unanimous support of those present at the meeting, and are subject to judicial review by the federal court (Government of Australia, 2010; Australian Energy Regulator, 2016).

The AER does not approve specific projects, focusing on market regulation. It does have transmission network service providers conduct a regulatory investment test (RIT-T) to ‘identify the credible option that maximizes the present value of net economic benefit to all those who produce, consume and transport electricity in the market (the preferred option)’ (Australian Energy Regulator, 2010). The AER considers efficiency objectives such as price, quality, safety, reliability and security of energy supply and national energy systems when making regulatory decisions. Pipelines are regulated only if they meet tests set out under the National Gas Law (Government of Australia).

**Tools for Lifecycle Oversight**

The AER adopts a risk based approach to monitoring and enforcing compliance and has a number of tools to facilitate this, including: engaging with other regulators and agencies to identify compliance issues; conducting regular targeted compliance reviews; reviewing public information of energy businesses; exception reporting...
(whereby regulated entities track and notify the AER of their own breaches); conducting general audits of compliance; and, rolling annual audits. If a proponent is found to have been in breach, the AER will look for cooperative solutions, impose infringement notices or take court action (Australian Energy Regulator, 2014). The AER has an MOU with the Australian Energy Market Operator (AEMO) to address emergency management and response; this agreement states that the AEMO will notify the AER whenever an emergency situation in the electricity or gas sector arises (Australian Energy Regulator, Australian Energy Market Operator, Government of Australia, 2011).

There are a set of dispute resolution mechanisms that are overseen by the AER. Specifically, the AER is tasked with: making determinations on customer connection disputes with electricity distribution businesses; assuming the role of resolution body for access disputes between a user or potential user of a pipeline and the service provider; and, resolving disputes in transmission businesses. The AER appoints independent dispute resolution advisors to administer provisions in wholesale energy market (Australian Energy Regulator, 2008; Australian Energy Regulator, 2016).

**Indigenous Peoples Engagement**

There is no mention of Aboriginal peoples engagement, consultation or participation in the CCA. The AER ‘considers the term “residential consumers” adequately encompasses the groups identified in the submissions, including general energy consumers, as well as those with particular needs and interests’ (Australian Energy Regulator, 2013).

**Public Participation**

In recognizing that regulatory determinations are technical and complex, the AER established a Consumer Challenge Panel (CCP) to make engagement easier; expert members who are appointed by the Board bring consumer perspectives into the decision making process. The AER also holds meetings three times a year with the Customer Consultative Group which is comprised of residential, small and medium sized businesses, and large energy customers (Government of Australia, 2016b).

The AER seeks to incorporate stakeholder views as early in the process as possible and continue to maintain engagement throughout the project lifecycle: from the planning phase to review and closure.
NEW ZEALAND PETROLEUM AND MINERALS, NEW ZEALAND

The New Zealand Petroleum and Minerals (NZP&M) operates under the Crown Minerals Act (CMA) 1991 legislation administered and applied using Minerals Programmes for Petroleum and Minerals. The NZP&M has been shaped in a number of ways but most importantly through change in government in 2008 that saw an increased focus on job generation and long-term sustainable business. The national government’s Petroleum Action Plan in 2009 that proposed annual competitive Block Offers (beginning in 2012) was also an important factor in the shaping of the NZP&M as it ‘allows for more proactive and strategic management of the resource estate with all stakeholders’ (New Zealand Petroleum and Minerals, 2011).

Mandate
The NZP&M is an energy development regulator in New Zealand, responsible for governing oil, gas (conventional and nonconventional), and Crown-owned minerals (e.g. gold, silver, and uranium/thorium) across the project lifecycle: from resource allocation, to assessment and authorization, through to oversight of operations and decommissioning and restoration. Authority to allocate oil and gas resources also rests with the NZP&M as the petroleum sector regulator. This is a unique feature among energy regulators, as resource allocation decisions are often made by a government department as a policy matter (New Zealand Government, 2016). Another notable feature is the Minerals Programmes (for both Petroleum and non-Petroleum); these comprehensive documents elaborate the set of factors and requirements for petroleum and mineral development – providing guidance to prospective operators – and stakeholders. The Minerals Programmes are periodically updated (Ministry of Business, Innovation and Employment, 2013a; Ministry of Business, Innovation and Employment, 2013b).

Governance and Decision Making
Given that the NZP&M is a group within a government ministry - the Ministry of Business, Innovation and Employment (MBIE) - formal decision making authority rests with the Minister. The Minister may, however, choose to delegate his/her function to the Chief Executive who may then further delegate these duties and his/her own duties to NZP&M officials. This is normally done for most regulatory decisions, with the Manager of Petroleum for the CEO making such decisions. Projects of importance (e.g. LNG scale discovery) remain with the Minister for decision. In accordance with CMA, the functions of the Minister include: attracting permit applications; granting, changing or revoking permits; co-operating with regulatory agencies; collecting and disclosing information related to petroleum and mineral resources; and, improving the working of related markets. The functions of the Chief Executive are as follows: requiring and monitoring compliance with permits; investigating alleged non-compliance; keeping a register of permits and permit holders; and, co-operating with other regulatory agencies (New Zealand Government, 1991).

At the resource allocation stage of the energy development lifecycle, NZP&M considers the economic benefits a project will bring to the country, and factors into its decision a variety of other components found in the Minerals Programmes, including: the operator’s understanding of the petroleum resource; their technical and financial capacity; and, their compliance history. It also undertakes a preliminary, high level assessment of an operator’s capability and systems that are likely to be required to meet applicable health, safety and environmental legislation such as those related to hazardous materials management and nature conservation (New Zealand Petroleum and Minerals, 2014).

Tools for Lifecycle Oversight
The NZP&M is unique in its approach to lifecycle management in that it is active prior to the authorization or permitting stage through its Block Offer regime, which ultimately allocates access to New Zealand’s’ oil, gas and Crown-owned minerals. This approach to resource allocation is different from most other jurisdictions whereby
industry is asked to nominate areas of interest and these areas are then considered, if after consultation with Indigenous Māori tribes in the proposed area and with regional and local government Councils these areas are determined to be in the commercial interest they are put up for bid. Once projects are approved, the NZP&M encourages voluntary compliance through education, persuasion, explanatory letters, or on site meetings. To comply, ‘permit holders must pay certain fees/royalties, have annual summary reporting, adhere to good industry practices and carry out an agreed upon work program. To deter proponents from being in a state of non-compliance, the NZP&M has an online system that allows permit holders to view their cumulative state of non-compliance (on a scale of seriousness). Those found to be deserving of enforcement action could see their applications for new permits declined, existing permits revoked, or they may be subject to financial penalties (New Zealand Petroleum and Minerals, 2016a; New Zealand Petroleum and Minerals, 2016b).

The NZP&M prefers that proponents sort out their own affairs. In the case of land access, the permit holder must provide a ten-day notice before entering for minimum impact projects (or enter into agreement with each owner and occupier of the land if the project will be greater than minimum) (New Zealand Government, 1991). If the parties cannot agree then the proponent is responsible for contacting the landowner/occupier and appointing an arbitrator to assist with resolution. Should the dispute concern Indigenous populations then the Ministry is responsible for consulting with the appropriate governance entity, including local/regional councils and Māori tribes/organizations (Ministry of Business, Innovation and Employment, 2013b).

**Indigenous Peoples Engagement**

All activities pursued under the CMA are required to be in accordance with the Treaty of Waitangi: a ‘broad statement of principles on which the British and Māori made a political compact to found a nation state and build a government in New Zealand’ (New Zealand Government, 1991; Ministry for Culture and Heritage, 2016). Keeping in line with the principles of this Treaty and its statutory responsibility to engage with Indigenous populations (notably two of the three levels of Māori tribal groups: the iwi and the hapū) the NZM&P follows practices and procedures for consulting set out in the Minerals Programmes. These practices include: early consultation with iwi and hapū during the decision making process; confirming that iwi and hapū are given enough information to make informed decisions and present their views; and, ensuring that these views are received with an open mind and are given genuine consideration. Under these programmes it is also the case that, at the request of an iwi or hapū, certain land that has been identified as being of particular importance to their authority/power must not be included in a permit area. Permit holders are required to report annually to the NZP&M on their engagement with iwi and hapū whose tribal territory/boundary includes some or all of the permit area or who otherwise may be directly affected by the permit (Ministry of Business, Innovation and Employment, 2013a; Ministry of Business, Innovation and Employment, 2013b).

**Public Participation**

Engagement with the general public, as opposed to Māori governments, is not a legislative requirement for the NZM&P. Nevertheless the regulator undertakes similar engagement with regional councils and local councils, as well as broader community engagement activities. It also provides advice to permit holders on which stakeholders to approach (New Zealand Government, 2016). At the broader level, if there are proposed changes to be made to the Mineral Programmes, the public is also provided with opportunity to make a submission of concern within 40 days of notice.
References


