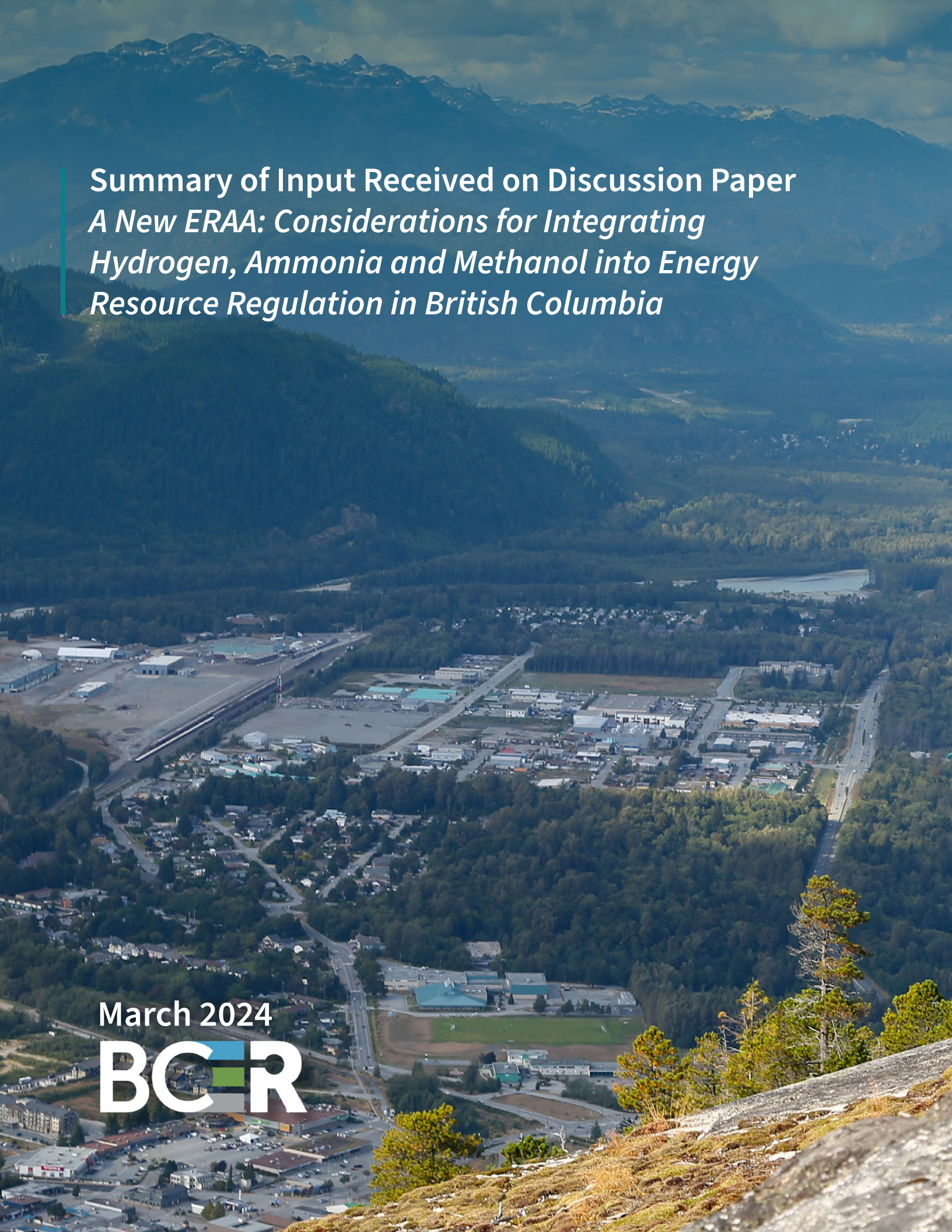
Summary of Input Received on Discussion Paper *A New ERAA: Considerations for Integrating Hydrogen, Ammonia and Methanol into Energy Resource Regulation in British Columbia*



March 2024

BCER

Project Description

Background

In 2022, the Energy Statutes Amendment Act granted the British Columbia Energy Regulator (BCER) oversight over the manufacturing, associated on-site storage and pipeline transportation of hydrogen, ammonia and methanol in the province.

Objective

As a result of our expanded mandate, we are undertaking the process of comprehensively reviewing and updating our regulatory framework to encompass these new activities. This undertaking is guided by our mandate and mission statement of "ensuring energy resource activities in the province are undertaken in a manner that protects public safety and the environment, supports reconciliation with Indigenous peoples, conserves energy resources and fosters a sound economy and social well-being."

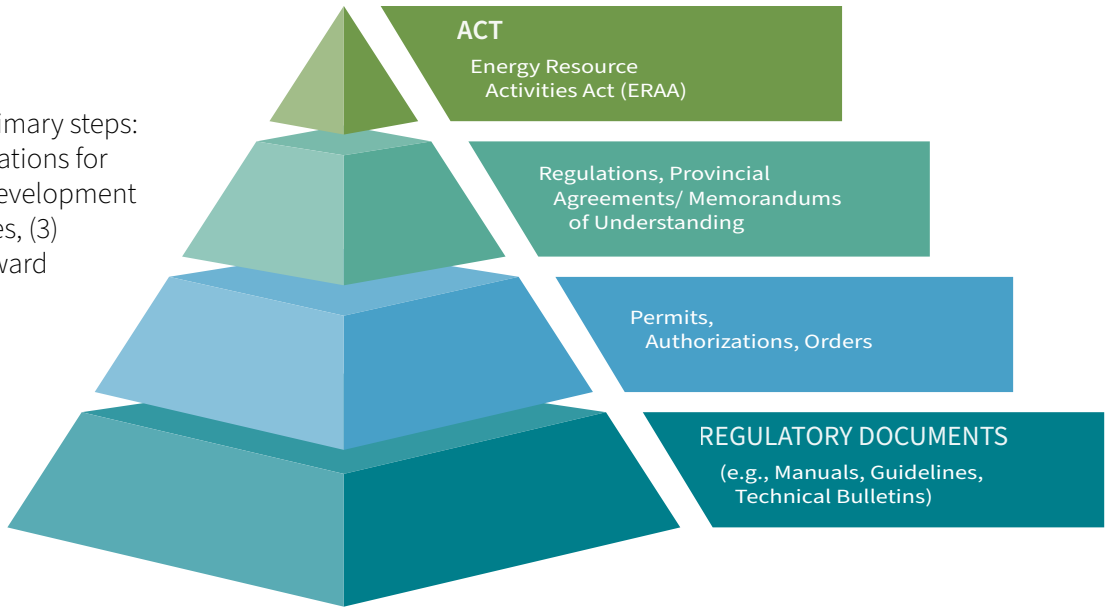
Process

The process comprises four primary steps: (1) reviewing the existing regulations for potential changes, (2) policy development of proposed regulatory changes, (3) deciding whether to move forward on regulatory change and drafting of regulations and (4) implementing the regulations. Extensive engagement will be undertaken throughout the process.

Scope

The review will consider all applicable regulations under the Energy Resource Activities Act (ERAA) - and may also result in changes to associated regulatory materials, such as manuals and guidance documents.

This review will not be considering those aspects of these energy resources' value chains that fall outside the regulatory purview of the BCER, such as distribution, end-use, transportation of dangerous goods as well as a variety of economic programs and enabling processes to support low-carbon transition.



Initial Engagement

In the fall of 2023 we undertook our initial engagement, which involved gathering input based on a discussion paper entitled A New ERAA - Considerations for Integrating Hydrogen, Ammonia and Methanol into Energy Resource Regulation in British Columbia. The discussion paper highlighted potential areas of regulatory change and key considerations for integrating these energy resource activities into the BCER's regulatory framework, posing a total of twenty-three guiding questions organized around five key themes: (1) supporting reconciliation, (2) working collaboratively, (3) fostering a sound economy and social well-being, (4) protecting public safety and the environment and (5) implementation.

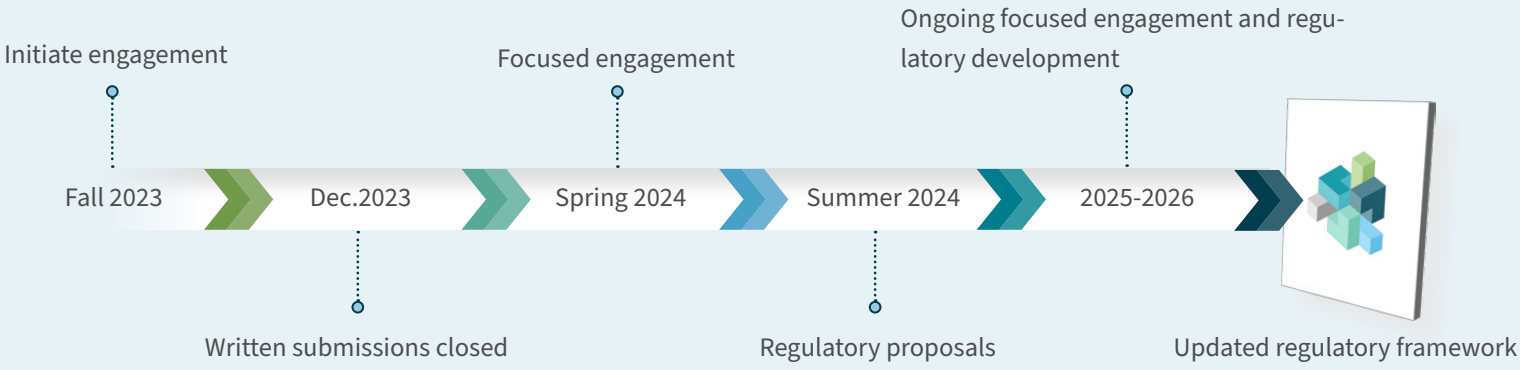
The initial engagement consisted of publicly posting the discussion paper on the BCER's website, email distribution through the BCER's external newsletter, email notifications, social media posts and hosting virtual engagement sessions targeting First Nations, industry, municipal governments, and members of the public. This document summarizes the feedback we received during the initial engagement activities.

Input Received

We received written and oral input from members of First Nations, municipalities, industry, industry associations and other interested parties.

We collated and summarized the input by each of the five themes, below. Following the five thematic summaries, we note some global, cross-cutting themes that also emerged from the responses. Additionally, respondents raised particular matters that fell outside of the specific questions posed in the Discussion Paper - these are summarized after the thematic summaries, as "Additional Topics." Finally, we also summarized information received that fell outside of the BCER's regulatory purview, which we will share with our relevant government partners.

Working Timeline



Issues for Engagement

1. Supporting Reconciliation

Guiding Question

- Tell us what issues are important to you and how you would like to engage?

Summary of Responses

Awareness building

Many respondents desired more education materials to raise awareness and contextualize these emerging industries, which could also contribute to more timely and meaningful engagement with First Nations, individuals and communities. Providing accessible and informative educational materials is necessary to ensure meaningful engagement on regulatory development and also address the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) issues specifically related to accessible information and awareness of risks and hazards.

Capacity building

Some respondents highlighted the importance of resources, including funding mechanisms, to ensure First Nations can meaningfully engage in the consultation process in alignment with UNDRIP. These respondents highlighted the impact of capacity constraints on advancing reconciliation. Potential strategies to address these constraints could include the use of common forums for consultation and taking a regional approach to engagement with First Nations.

Issues for Engagement

2. Working Collaboratively

Guiding Questions

- What criteria and triggers should be considered for Consultation and Notification requirements regarding hydrogen, ammonia, and methanol manufacturing facilities and pipelines?
- How can pre-engagement requirements better support consultation with First Nations and align with the Declaration on the Rights of Indigenous Peoples Act?
- What type of notifications are most important for those who live and work near manufacturing facilities or pipelines?

Summary of Responses

First Nations consultation and decision-making

Some respondents emphasized the BCER must ensure consultation processes allow Indigenous communities to have meaningful input and consider collaborative decision-making processes throughout the entire life cycle of a project.

Pre-engagement

Additional guidance was identified by most respondents as necessary to ensure the BCER's framework for pre-engagement between First Nations and proponents is clear on expectations and outcomes. Considerations for additional guidance on pre-engagement include: First Nations capacity, determining appropriate scope, timelines and follow-up requirements based on the proposed activity, establishing clear objectives incorporating UNDRIP, managing non-responses, required records, and transparency.

Notification

Most respondents suggested criteria and triggers for notification should consider current land use, the risks associated with the specific energy resource or manufacturing processes, and the scale of the proposed activity. Considerations include: suitability of existing municipal and provincial notification processes; communication plans for the full scope and life cycle of the project rather than only individual notifications at each project stage; differences between industrial sites and non-industrial sites and possible exemptions where suitable municipal processes already exist.

Issues for Engagement

3. Fostering a Sound Economy & Social Well-Being

Guiding Questions

- How can application and permitting requirements enable scalability, promote innovation, and yet ensure transparent, predictable and timely outcomes?
- Tell us what issues are important to you and how you would like to engage?

Summary of Responses

Socio-economic

Some respondents expressed concern regarding the methodologies used for socio -economic assessment. Concerns include: the loss of land and access for First Nations to protect food security, ways of life and culture; incorporation of Environmental, Social and Governance outcomes; the impact to provincial electricity supply of projects and the impacts of vehicle traffic, noise, odours, vibrations and light.

Jurisdictional alignment

Some respondents suggested the BCER ensure the regulatory framework is competitive by seeking alignment with existing provincial regulatory frameworks and leveraging regulatory and non-regulatory tools, including adoption of similar technical standards and management systems that have already been ground-tested.

Issues for Engagement

4. Protecting Public Safety and the Environment

Guiding Questions

- Is the existing approach appropriate for hydrogen, methanol, and ammonia facilities? If not, how should it be adjusted?
- How can the existing approach be appropriately scaled, streamlined, or enhanced to allow flexibility for the scope and complexity of projects?
- How can national and internationally recognized engineering and design standards be incorporated in a regulatory framework to manage a nascent industry and the range of manufacturing pathways?
- Are there specific areas of concern that should be addressed via specific regulatory requirements or the adoption of codes and standards?
- Should CSA Z767 be required to manage process safety at hydrogen, methanol or ammonia facilities? Is there another standard or approach that should be adopted to address process safety risks?
- How should process safety requirements be appropriately scaled, streamlined, or enhanced to allow flexibility for the scope and complexity of projects?
- Are any integrity management program components required beyond those required in CSA Z767?
- Is there another standard or approach that should be adopted to address integrity management?
- What specific environmental aspects and mitigations associated with the manufacturing facilities, associated on-site storage and pipeline transportation of hydrogen, ammonia and methanol resources are of concern to you?
- How can the existing approach to environmental protection be appropriately scaled, streamlined, or enhanced to allow flexibility for the scope and complexity of projects?
- Is CSA Z246.2 appropriate for hydrogen, methanol and ammonia facilities?
- Is there another standard or approach that should be adopted to address emergency management?
- Is CSA Z246.1 appropriate for hydrogen, methanol and ammonia facilities?
- Is there another standard or approach that should be adopted to address security management?
- How can management systems be used to allow permit holders flexibility in designing programs to address identified risk according to the scope and scale of their operations?

Summary of Responses

Regulatory Framework

Some respondents expressed caution about integrating new energy resource activities within the BCER's existing regulatory framework. These respondents highlighted the type of equipment, operational considerations and risk profile of these new energy resources differ not only from traditional energy projects but also between the new energy resource activities. For example, the risks and considerations associated with a small-scale electrolyzer differ from hydrogen manufactured through other methods. These respondents also highlighted the need for a distinct regulatory framework to address the scale, risks and potential impacts of hydrogen manufacturing on safety and the environment. Such a framework would consider relevant requirements under existing municipal and safety codes (such as electrical, building, fire protection and pressure vessels) to minimize duplication and enable streamlining. Responses described an ideal regulatory framework for an emerging industry in the following terms: clear; simple; easy, predictable; familiar; consistent; transparent; reasonable; defined time limits; streamlined; efficient; flexible; adaptive; not cost prohibitive; avoids duplication; data/evidence-based; supports and accommodates innovation.

Public safety risks

Respondents offered several specific public safety risks, including safe storage/handling for hydrogen; pipeline integrity; leaks and flammability of hydrogen; venting and fugitive emissions; toxicity of ammonia and methanol; safety procedures; risk assessment; setbacks and siting and emergency responder training.

Environmental impacts

Many respondents identified environmental concerns, including impacts to water usage/availability; ground water and riparian areas; wildlife; greenhouse gas impacts; air contaminants; waste discharges; protection of agricultural land; spills; ecosystem protection; restoration and monitoring and mitigation processes.

Cumulative effects

Some respondents identified a framework for analysis of cumulative effects approaches must be considered for these new energy resource activities.

Traditional Knowledge

Some respondents suggested the BCER incorporate traditional knowledge or science into processes for assessing and managing safety risks and environmental impacts.

Emergency management and response

Many respondents wanted clarity on the role of First Nations in emergency management plans. They also stressed the importance of ensuring municipalities support capacity development for first responders as part of emergency response planning.

Technical standards

Many respondents suggested support for the role technical standards can play in the regulatory framework where appropriate. Considerations in the adoption of technical standards include: determination of the adequacy of existing pressure vessel; electrical and building codes used by municipalities; application of appropriate standards relevant for different activities (i.e., manufacturing, transportation, and storage); collaboration with standards development organizations to advance engineering and design standards for hydrogen; identification of specific standards and codes currently employed in hydrogen-related projects, such as design, process safety, integrity management and emergency and security management; consideration of performance-based approaches where an approved standard does not exist and harmonization of standards used for hydrogen in regulatory frameworks between jurisdictions.

Management systems

Some respondents identified the important role of management systems in a regulatory framework in allowing flexibility for a system and accompanying program to be scaled based on the complexity of an activity. Considerations include harmonization across multiple codes and standards as well as requirements across jurisdictions; and the role of established and recognized programs associated with chemical production, storage and transportation such as Responsible Care.

Issues for Engagement

5. Implementation

Guiding Questions

- What can be done to promote compliance and support enforcement?
- What are your recommendations for a cost recovery mechanism?

Summary of Responses

Compliance and enforcement

Many respondents highlighted the need for compliance requirements and the use of enforcement tools to be fully transparent, clear and consistently applied. Respondents suggested considering compliance and enforcement requirements, processes, and tools that include: utilization of fines; promotion of compliance through education and outreach programs; harmonization of audit approaches across jurisdictions; and development of incentives to promote transparency, accountability and reporting among permit holders.

Cost recovery

Some respondents suggested models for cost recovery be simple, predictable and flexible. For example, fees could be based on production capacity instead of flat fees and differentiated by energy activity. In addition, some respondents suggested no fees for advice and consultation on hydrogen, ammonia and methanol projects until the regulation of these projects is well established.

Cross-Cutting Themes

A common theme received from responses is the need for cross-government collaboration and coordination of regulatory frameworks across Canada. Respondents thought this would bring clarity in expectations and expedite investment in new energy resource opportunities and the execution of decarbonization projects. Specifically, the critical role of provincial, municipal and federal agencies/departments to collaborate and coordinate regulatory frameworks to drive outcomes such as:

- Increasing education and awareness of the impacts and opportunities associated with the new energy activities.
- Increasing efficiency, reducing complexity, minimizing overlap or potential duplication for activities subject to review by multiple regulators.
- Enabling maximum predictability and transparency for proponents.
- Ensuring the full value chain of new energy activities are considered to ensure projects and their component pieces are all reviewed and permitted concurrently vs piece-mealed across many regulators.

Additional Topics

Some respondents wanted further engagement by the BCER on the following additional topics: hydrogen measurement, verification, and quality; jurisdictional boundaries for rail and pipeline systems; use of PETRINEX (an existing portal for collecting and reporting oil and gas data); blending standards and guidelines for hydrogen into natural gas pipeline infrastructure and establishing setbacks based on modelling.

Information Sharing

Some issues identified by respondents extended beyond the scope of the BCER's regulatory purview. This information will be shared with the relevant government partners. Issues cited requiring further engagement with our partners include:

- Providing further information on the Province's plans to support the development of these new industries and identify ways for First Nations to benefit economically as owners of hydrogen, ammonia and methanol developments through profit sharing or as equity partners.
- Considering economic opportunities related to de-risking hydrogen and communicating the importance of end uses could provide economic benefits within First Nations territories and support UNDRIP issues, specifically related to Indigenous Peoples' right to benefit from their lands and resources.
- Considering alternative approaches for permitting of clean energy projects or projects supporting government climate goals that reflects differences in risks and impacts, prioritization, processing timelines, etc., compared to traditional energy projects.
- Considering provincial interventions to reduce financial risk for these emerging industries, including pricing guarantees to offset market risks.
- Supporting first responders municipalities need to prepare and train on new energy resource activities.
- Supporting cost recovery for activities that align with government climate goals.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