

FEB 12, 2025

# Innovation & the Alberta Energy Regulator

## Navigating the Regulatory Landscape

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Presented to:

Clean Resource Innovation Network



# Agenda

**1**

**Introduction of the AER and the External Innovation Team**

**2**

**The Support We Offer**

**3**

**Intake and Assessment Process**

**4**

**Examples of Innovation File**

**Our Mandate**

“ To provide for the efficient, safe, orderly, and environmentally responsible development of energy and mineral resources in Alberta through our regulatory activities. This includes allocating and conserving water resources, managing public lands, and protecting the environment while providing economic benefits for all Albertans. ”

## **Innovation**

**New ideas, methods, techniques or processes**

**Support the improvement of current products, technologies and environmental outcomes**

**Meet market needs and create value for the industry and Albertans**

## Innovators and other Stakeholders

- Industry operators and groups
- Vendors, manufacturers and consultants
- Government agencies and ministries
- Non-profit organizations
- Universities and research centers
- Individual innovators



## Innovation Team

## What the team can do

**To guide innovators through the regulatory system by providing 3 key types of services:**

- Clarifying relevant rules and regulations.
- Facilitating information exchange and knowledge sharing.
- Providing regulatory support for field trials or pilots.



## Innovation Team

## What the team does not do



### It is important to note the innovation team does not:

- Replace the regulatory application process
- Issue any endorsements, testimonials, or certifications
- Help innovators find customers

Innovation Team

# Confidentiality Consideration

Freedom of Information and Protection of Privacy Act (FOIP) applies to all information and records which are in the custody or control of the AER, including any records provided to the innovation team.

If an innovator considers portions of any records provided to the AER outside of an application to be confidential, it should identify those parts of its records considered to be confidential and what harm could reasonably be expected from disclosure.



## Process

# Innovation Intake and Assessment



## Innovation Intake

A webpage is available on the AER website.

Innovation requests can be submitted online.



## Initial Assessment

Sufficient information provided?

Does it fall under the AER's jurisdiction?

Is there an existing AER regulatory pathway?



## Continued Assessment

Which type of service is requested?

Determine the Technology Readiness Level (TRL).

Does the innovator have a partnership with a licensee?



## Outcomes

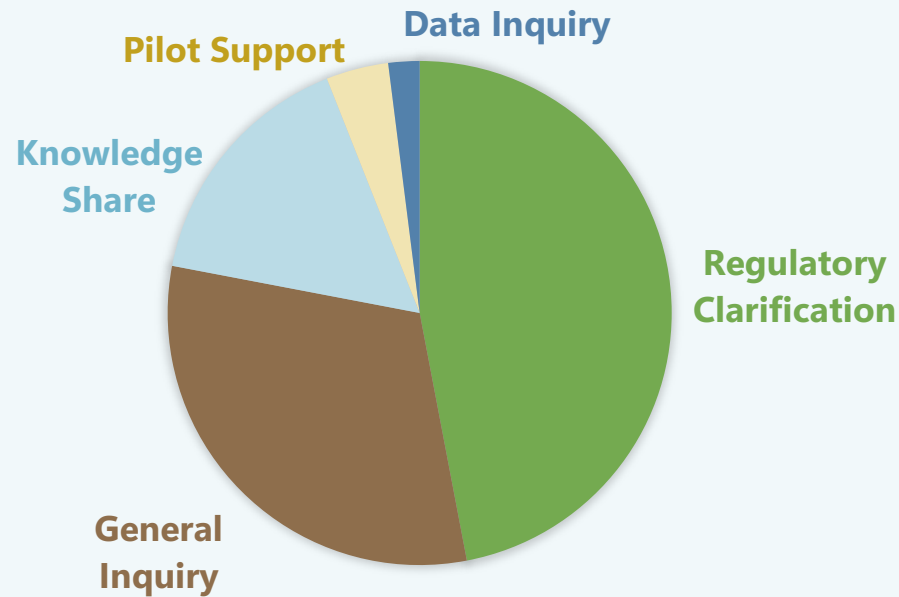
Innovator moving forward and advancing technology.

Update regulatory instrument (e.g., directives).

Initiate discussion with other regulatory bodies (e.g., change of policy, mandate expansion).

2024

# Purpose of Request



47%

## Regulatory Clarification

Clarify regulations, rules and directives applicable to the innovation.

16%

## Knowledge Share

Connect the innovator with the appropriate and relevant SME to stay informed of latest technologies.

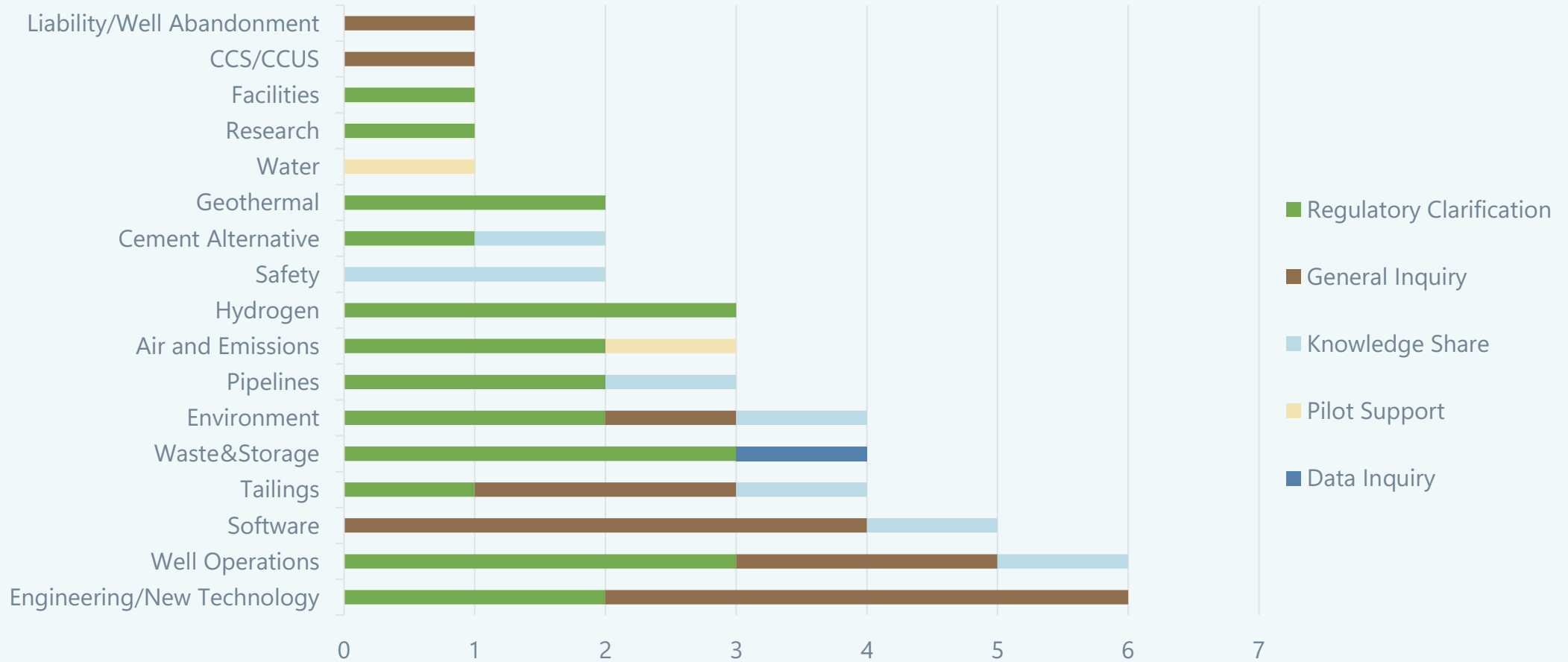
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## Pilot Support

Identify regulatory pathway and provide guidance to submit application for pilot approval.

2024

# Innovation Request by Types and Topics



**Example**

## Cavern Storage - Confidentiality

Innovator requests to extend confidential status to well data.

We worked internally to provide a regulatory pathway that aligned with the licensee's desired outcome.



Fig. 1: Charlie Currie, "Vortex estimates Newfoundland salt caverns could store 800,000 tonnes of hydrogen," H2 View, 24 July, 2023, <https://www.h2-view.com/story/vortex-estimates-newfoundland-salt-caverns-could-store-800000-tonnes-of-hydrogen/2096200.article/>. Accessed 03 Feb. 2025.



**Example**

## Lithium - New Mandate

Initially no existing regulatory pathway for lithium extraction.

Proposed pilot to grow into a standalone facility.

Discussed internally and with ministries regarding regulatory responsibilities.

GoA proclaimed MRDA and set policy direction.



Photo: Business Wire, "E3 Lithium Announces Direct Lithium Extraction Skid Arrival and Field Pilot Plant Construction Complete," Business Wire, 03 August 2023, <https://www.businesswire.com/news/home/20230803111183/en/E3-Lithium-Announces-Direct-Lithium-Extraction-Skid-Arrival-and-Field-Pilot-Plant-Construction-Complete>, Accessed 03 Feb. 2025.

**Example**

## Nuclear - Small Modular Reactors

Uncertain if the AER would have regulatory responsibilities on SMR development for resource operations.

Identified the potential overlaps and gaps in the regulation of a potential SMR project in Alberta.

Reported findings to the Ministry of Energy.



Fig. 3: Adrian Cho, "Deal to build pint-size nuclear reactors canceled," Science, 10 November 2023. <https://www.science.org/content/article/deal-build-pint-size-nuclear-reactors-canceled>. Accessed 03 Feb. 2025.



**Example**

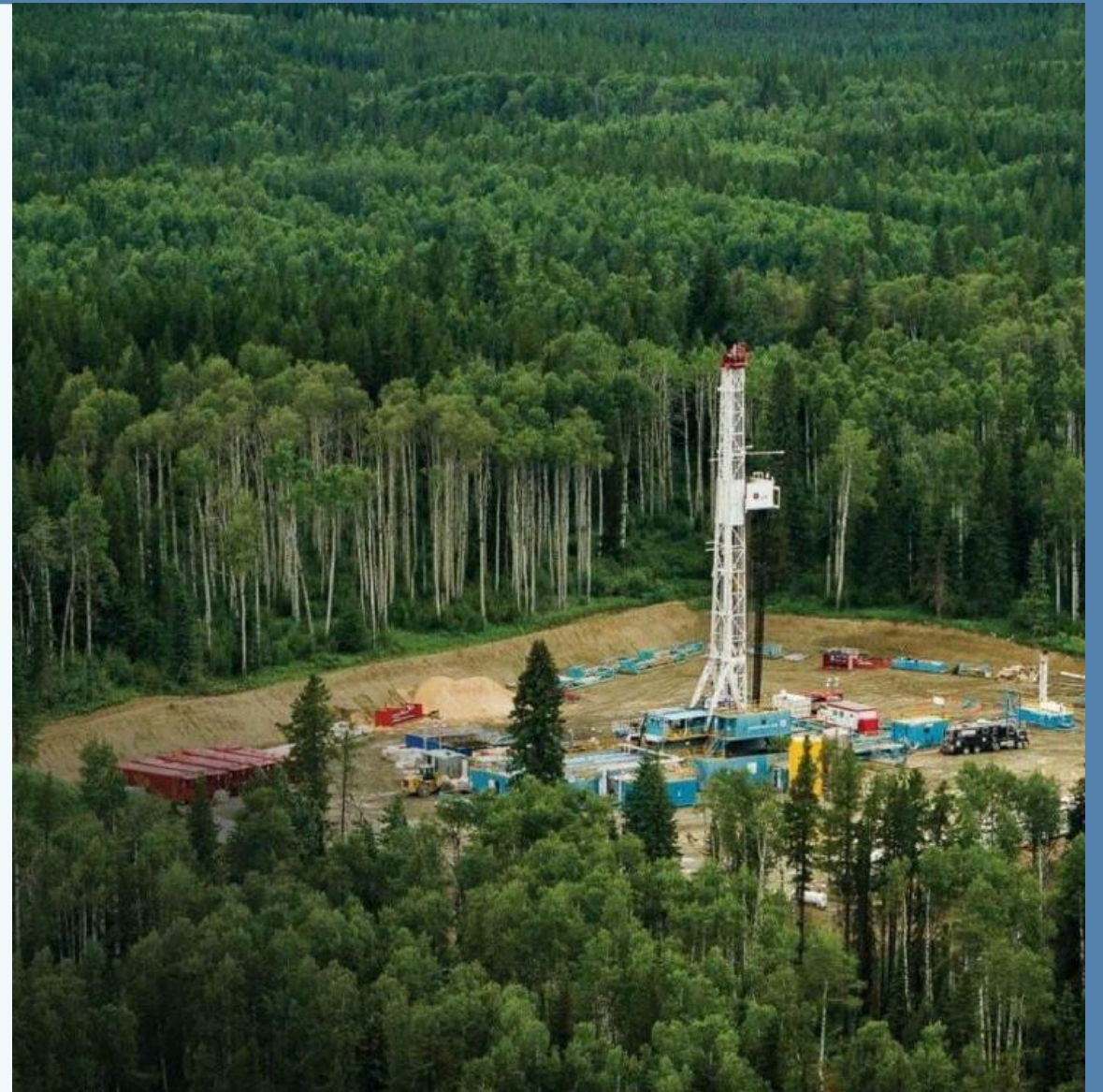
## Drilling Technology Hub

Identified regulatory pathway as part of a feasibility study.

Determined proper well type and classification for the unique purpose.

Discussed eligibility and liability management with proponent.

Ready to advise licensing process to proponent.



*Fig. 4. Tourmaline. "LNG is in greater demand than ever before and continues to drive economic growth and enhance energy security across the world." Energy Now, 17 November, 2023. <https://energynow.com/2023/11/massive-montney-play-ramping-up-with-canadian-lng-exports-on-the-horizon/>. Accessed 03 Feb. 2025.*

**Example**

## Well Abandonment – Alternatives to Cement

Required non-routine approval process.

Considered outcome-based, less prescriptive requirements.

Provide transparency of the assessment criteria.

React and adapt to industry needs to reduce red tape and streamline review.



Fig. 3: Subodh Gupta, Byron Hurlbut, "Ending Methane Leaks in Retired Oil and Gas Wells for Good" Valo Ventures, 22 May, 2023. <https://valoventures.org/viewpoints/ending-methane-leaks-in-retired-oil-and-gas-wells-for-good/>. Accessed 03 Feb, 2025.



## Question Period



# Connect with us

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