

Based on input from our public engagement sessions, we have compiled answers to commonly asked questions about the regulation of brine-hosted mineral resources. Questions are divided into the following topics:

- regulatory oversight
- liability management
- environmental considerations
- public safety and risk
- participant involvement

Regulatory Oversight

Does the AER have the expertise to regulate minerals?

The AER has, in various forms, been regulating energy and resource development in Alberta for more than 80 years. Also, the Alberta Geological Survey (AGS) has researched, mapped, and studied minerals for decades.

Who is funding the regulation of minerals?

The Government of Alberta has provided grants to the AER to support this work. This funding is separate from fees collected from oil and gas operators.

How will the AER manage competing interests from operators?

Alberta Energy and Minerals manages and issues mineral rights, known as tenure. Learn more about mineral ownership [here](#).

Secondly, once the AER receives an application, we post a [public notice of application](#). If you have specific concerns about a company's proposed energy or mineral development, you may submit a [statement of concern](#) (SOC). A hearing may be required to address a competing interest issue.

Did you know?

Sometimes, companies work together to meet their operational needs and lessen their environmental footprint. For example, wells that produce both geothermal energy and oil and gas.

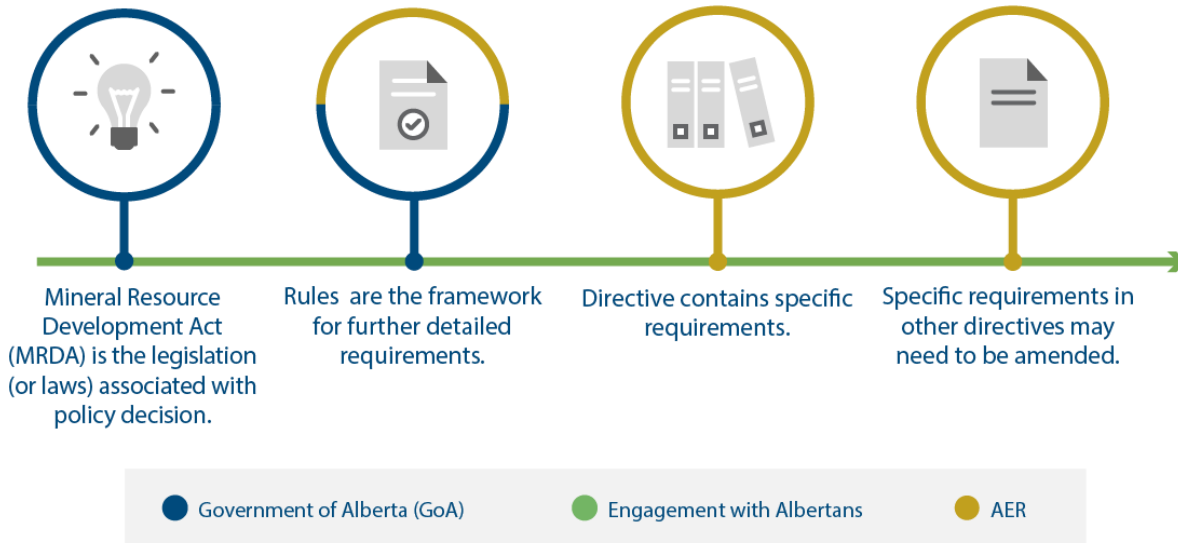
What is the regulatory framework?

The Government of Alberta sets the policy regarding mineral resources. The regulatory framework reflects the policy direction and includes

- legislative instruments (e.g., acts and regulations) and
- rules and directives that specify requirements and expectations that industry must follow.

The following graphic shows the division of responsibilities for the regulatory framework. Similar frameworks exist for geothermal, rock-hosted minerals, helium, coal, oilsands, and oil and gas resource development.

Once the framework is in place, we enforce it through our [Compliance Assurance Program](#).



Who is responsible for brine-hosted mineral regulation?

Historically, mineral development was overseen by several regulators, including

- Alberta Energy and Minerals
- Alberta Environment and Protected Areas
- Forestry and Parks

The AER now regulates the life cycle of mineral resource development through [Directive 090: Brine-Hosted Mineral Resource Development](#) and [Directive 091: Rock-Hosted Mineral Resource Development](#).

Did you know?

Proclamation is just one step in the legislative process. Requirements come into effect once the Government of Alberta publishes the rules on the [Alberta King's Printer](#) in the Alberta Gazette.

What is a life-cycle regulator?

AER regulation begins at the application review stage, continues throughout construction and operations, and ends with site closure and reclamation.

Liability Management

How will liability be managed?

We work to develop and implement liability management programs that help protect Albertans from potential environmental issues and costs associated with the closure of energy and mineral resource projects.

This approach includes a holistic licensee assessment. This assessment allows us to make decisions about a company's ability to manage its regulatory and liability obligations, including cleaning up its sites throughout its life cycle.

When submitting an application for brine-hosted mineral development, applicants must provide a security deposit of at least 50% of the total estimated liability of their development. However, we may collect a security deposit of up to 100% of the total liability estimate if higher risks are identified with the application or as warranted by the holistic licensee assessment. Applicants must provide an estimate of liability for each asset with their application.

Additional information can be found in [Manual 012: Energy Development Applications Procedures and Schedules](#).

Environmental Conditions

What type of water is used in the production of brine-hosted mineral resources?

Brines are highly saline (salty) water found deep below the base of groundwater protection. Therefore, brines are not used for drinking water (i.e., potable) or for agricultural purposes.

Is brine extracted through mining?

No, brines are liquid and are extracted through wells.

Did you know?

Within Alberta, lithium is almost exclusively found in brine water.

How will the environment be protected?

The AER has existing regulatory requirements that apply to brine-hosted mineral resource development (e.g., preventive measures such as conservation and reclamation planning, monitoring programs, and emergency response planning). These existing requirements were combined with specific requirements related to brine spills and cleanup, pipeline corrosion, soil protection, waste management, and storage. As part of our [Compliance Assurance Program](#), every company must follow the rules to make certain that energy development happens safely.

Did you know?

Brine is a by-product of traditional oil and gas operations and is known as produced water.

How big is the environmental footprint of brine-hosted mineral operations?

It varies depending on the operation and the technology.

Did you know?

Operators could use existing infrastructure to extract brine-hosted mineral resources (e.g., wells, pipelines, storage units). This approach minimizes the development footprint.

Public Safety and Risk

Is there an increased safety risk associated with brine-hosted mineral resources?

The safety of the public and the environment is our top priority and safety risks, like all risks, are managed through the regulatory framework. The risks associated with well-based operations are clearly understood and managed using existing regulations.

How can I be assured the AER will require industry to have appropriate risk mitigation measures in place?

We have extensive knowledge from the oil and gas sector that can help inform the safe and responsible development of brine-hosted mineral resources. These include requirements for emergency response planning and for saltwater containment to help mitigate impacts from mineral resource development (e.g., berm heights, liner types, double-wall containment, leak detection, and spill response).

Participant Involvement

What is participant involvement?

Overall, participant involvement is about how operators engage with those affected by their operations as directed by regulatory requirements and the opportunities for participants to provide input about those operations.

How will participant involvement be managed?

Section 31 of the [Responsible Energy Development Act \(REDA\)](#) and *section 5* of the [Alberta Energy Regulator Rules of Practice](#) set out the rules regarding public notice associated with resource development applications. Applications submitted under the *MRDA* will be subject to these participant involvement requirements (i.e., notification and consultation requirements).

If you are concerned about a mineral project in your area and believe you may be directly or adversely affected by it, you can submit a [statement of concern](#) against the company's application. We share applications on our [Public Notice of Application](#) page.

A [preapplication](#) concern can be submitted to adr@aer.ca.

Did you know?

The AER provides opportunities to have your say about proposed developments beyond those outlined in *REDA*, including participation in a public comment period. We also seek feedback in

less formal ways, such as stakeholder workshops. In 2022, we hosted a series of engagement events to support the creation of the regulatory framework for brine-hosted mineral development and provided a 41-day public comment period on the draft directive.

Why does the *Surface Rights Act* apply to brine-hosted mineral development and not geothermal?

The [Surface Rights Act](#) does not apply to renewable energy resources, such as geothermal, solar, and wind. Minerals are included within the *Surface Rights Act*.