Consultation submission form

From the Ground Up – A draft strategy to unlock New Zealand's geothermal potential

How to submit using this form

This form is used to provide feedback on the document *From the Ground Up – A draft strategy to unlock New Zealand's geothermal potential*.

When completing this submission form, please provide reasons explaining your answers. Your feedback provides valuable information and will inform decisions about the final geothermal strategy.

You can submit this form by 5pm, 12 September 2025 by:

- Emailing to resourcesfeedback@mbie.govt.nz with the subject line **'Submission on a draft geothermal strategy'** or
- Posting to:
  Submission on a draft geothermal strategy
  Resource Policy
  Ministry of Business, Innovation and Employment
  PO Box 1473
  Wellington 6140

Your feedback will contribute to further development of a geothermal strategy for New Zealand. It will also become official information, which means it may be requested under the Official Information Act 1982 (OIA).

The OIA specifies that information is to be made available upon request unless there are sufficient grounds for withholding it. If we receive a request, we cannot guarantee that feedback you provide us will not be made public. Any decision to withhold information requested under the OIA is reviewable by the Ombudsman.

Submitter information

The Ministry of Business, Innovation and Employment (MBIE) would appreciate if you would provide some information about yourself. If you choose to provide information in the section below, it will be used to help MBIE understand how different groups view the draft geothermal strategy. Any information you provide will be stored securely.

A. About you

Name: Privacy of natural persons

Email address: Privacy of natural persons

B. Are you happy for MBIE to contact you if we have questions about your submission?

☒ Yes ☐ No

C. Are you making this submission on behalf of a business or organisation?

☐ Yes ☐ No

If yes, please tell us the title of your company/organisation:

Zelandez Limited

D. Privacy information

☒ The Privacy Act 2020 applies to submissions. Please check the box if you do not wish your name or other personal information to be included in any information about submissions that MBIE may publish.

☐ MBIE may upload submissions, or a summary of submissions, received to MBIE's website at www.mbie.govt.nz. If you do not want your submission or a summary of your submission to be placed on our website, please check the box and type an explanation below:

E. Confidential information

☒ I would like my submission (or identifiable parts of my submission) to be kept confidential and have stated my reasons and ground under section 9 of the Official Information Act that I believe apply, for consideration by MBIE.

If you have checked this box, please tell us what parts of your submission are to be kept confidential.

Name of entity

From the Ground Up – A draft strategy to unlock New Zealand's geothermal potential

The Government is developing a geothermal strategy for New Zealand to provide a focused pathway to geothermal leadership and growth and unlock the potential of our geothermal resources across a broad range of applications.

New Zealand's geographical location has given us a unique geothermal advantage, and New Zealand has been a global leader in geothermal development since the late 1950s. Geothermal contributes nearly one-fifth of our annual electricity generation, is a strong tourism attraction, and geothermal heat and steam are utilised both directly and indirectly in industrial, commercial and residential applications.

However, despite our world-class resource, geothermal development faces some barriers, including high upfront drilling costs, fragmented access to data, complex and dated regulatory settings and the scale of the sector. New technologies, such as supercritical geothermal, are also on the horizon. In order to drive the energy resilience, regional development, economic growth and climate leadership, deliberate and coordinated action is required.

The draft strategy sets out a vision for New Zealand to be a global leader in sustainable geothermal development. Three interconnected strategic outcomes, centred around being a world-leader in geothermal innovation, accelerating energy resilience, and strengthening regional economies and te Ōhanga Māori, have been identified to guide action and focus. Five action plan goals have been identified to guide the Government's approach, underpinned by a draft action plan. The draft strategy also includes an energy-focused goal to double the use of geothermal energy by 2040.

We are seeking feedback on the draft strategy, particularly whether the proposed direction, ambition and outcomes, and accompanying action plan, capture the necessary government intervention and priorities. We are also interested in views about how the wider geothermal sector can contribute to unlocking our geothermal potential.

Please see the draft geothermal strategy for more information, available on our website:

https://www.mbie.govt.nz/have-your-say/consultation-on-a-draft-geothermal-strategy-for-new-zealand

Questions for the consultation

1. Are the three strategic outcomes of the strategy, centred around **world-leading geothermal innovation**, **accelerating energy resilience** and **strengthening regional economies and te Ōhanga Māori**, suitable, or is there more we need to consider?

The three strategic outcomes are absolutely suitable and form a robust framework for the future of New Zealand's geothermal sector. We believe the opportunity presented by mineral extraction from geothermal brine, particularly lithium, directly supports and enhances all three outcomes.

- **World-leading geothermal innovation: The draft strategy mentions "extracting valuable minerals dissolved in geothermal fluids". This is a critical area for innovation. Developing a domestic capability in post-flash water treatment technologies to directly remove valuable minerals such as lithium and subsequent processing/refining technologies would place New Zealand at the forefront of a major global trend in the energy and critical minerals sectors.**

- **Accelerating energy resilience: Creating additional high-value revenue streams from mineral extraction improves the overall economic viability and resilience of geothermal projects. This can help de-risk the high upfront capital costs of well drilling and new power station development, thereby accelerating the primary goal of energy generation.**
- **Strengthening regional economies and te Ōhanga Māori: This provides a new, substantive opportunity for industrial growth and export diversification, directly supporting the goal of doubling exports. For tangata whenua, who are significant partners in geothermal developments, this represents an additional pathway for economic development and leadership, creating highly skilled local jobs and new business opportunities.**

2. Do the five overarching **action plan goals capture the areas that are most important for achieving** the vision, strategic outcomes and energy goal?

The five action plan goals provide a strong foundation. However, the opportunity of mineral recovery could be more explicitly integrated within them to ensure it is prioritised.

Specifically:

- **Under "Advancing knowledge and uptake of geothermal technologies", the focus appears to be primarily on heat applications. We recommend explicitly including 'mineral extraction and processing technologies' as a key area. The international landscape for lithium removal technology and downstream refining into high value battery grade chemicals is accelerating rapidly, with solutions that have lower environmental footprints (power and water usage) and improved economics. Fostering expertise in this area is crucial.**
- **Under "Driving science, research and innovation", alongside supercritical geothermal, there should be a distinct focus on the science of resource characterisation for minerals within geothermal systems and the research and development of tailored extraction and refining technologies for New Zealand's specific brine chemistries.**

3. Does the proposed action plan correctly capture the necessary **government interventions and priorities**?

The draft action plan captures several essential interventions. We strongly endorse the proposed Horizon 1 action to "Clarify the application of the Crown Minerals Act 1991 to minerals in geothermal fluid". This is the single most important step the government can take. Investment in this area will remain stalled until there is regulatory certainty regarding the ownership of the mineral resource and the framework (e.g., royalties) for its extraction. This action should be considered the highest priority.

Furthermore, we suggest the following additions to the action plan:

- **Under "Improving access to geothermal data and insights," the proposed "Commission data insights report for the geothermal sector" in Horizon 1 should have a specific requirement to collate and assess existing data on brine chemistry from all major geothermal fields to create a national mineral prospectus.**
- **An action should be added under "Advancing knowledge and uptake of geothermal technologies" to "Fund feasibility studies and pilot projects for lithium removal and refining into high value battery grade chemcials on existing geothermal operations" to de-risk investment and build local operational expertise.**

4. Is the **role for the sector** clear? How can the wider geothermal sector play a role (e.g. are there specific actions that the sector could own)?

The strategy provides a good overview, but the role for the specialised technology and services sector could be clearer. The sector can:

- **Provide Expertise: Companies like Zelandez can offer specialised international expertise in subsurface resource definition, brine management, and the identification and validation of extraction/refining technologies to support geothermal operators.**
- **Lead Feasibility and Pilot Projects: The private sector is well-positioned to lead the technical and commercial validation of mineral extraction, in partnership with geothermal asset owners and the Crown.**
- **Develop Human Capability: The sector can work with tertiary institutions and research institutes to build a skilled workforce with expertise in hydrometallurgy, process engineering, and geoscience as it applies to mineral recovery from brines. The sector could own an action to "Establish a Centre of Excellence for Geothermal Resource Recovery," as hinted at in the draft plan, focusing on both energy and minerals.**

5. Does the strategy and proposed action plan create the right settings to **enable tāngata whenua to realise their aspirations** for geothermal resources in their rohe?

Yes, the strategy's emphasis on partnership with tangata whenua is commendable. Adding a tangible, new commercial opportunity like mineral extraction strengthens this significantly. It creates another layer of potential value that can be unlocked from their ancestral lands. To further enable aspirations, the government should:

- **Ensure that as mineral rights are clarified, iwi and hapū are empowered to be central participants and beneficiaries in any new regulatory regime.**
- **Provide targeted support and resources to enable Māori landowners to commission their own independent feasibility studies into the mineral potential of their resources.**

6. Are there **opportunities** for our geothermal sector that we haven't considered?

The strategy touches on mineral extraction, but it understates the scale and timeliness of the opportunity. The key missed opportunity is the synergy between geothermal development and the circular economy.

We propose a significant opportunity in creating "Geothermal Circular Economy Hubs." These hubs would not only generate renewable electricity and process heat but also:

1. **Extract Critical Minerals: Produce battery-grade lithium and recover other valuable minerals like silica and manganese from geothermal brine.**
2. **Co-locate Battery Recycling: Utilise the low-cost, renewable heat and power at geothermal sites to establish end-of-life battery recycling facilities. This would allow New Zealand to create a closed-loop system for batteries from electric vehicles and energy storage, recovering critical minerals domestically rather than shipping waste**

offshore. This creates a powerful synergy, turning a waste stream into a value stream using sustainable energy.

Developing this integrated model would make New Zealand a true global leader, combining renewable energy, sustainable resource extraction, and a circular economy solution. This creates a new, high-value export industry for both primary lithium products and recycled battery materials.

7. Are there **challenges** for our geothermal sector that we haven't considered?

The primary challenge related to the mineral extraction opportunity, which the strategy alludes to but could state more forcefully, is:

- **Regulatory Uncertainty: As mentioned, the lack of clarity on mineral ownership is the single largest barrier to investment and innovation in this space. It is a fundamental challenge that precedes all others.**
- **Lack of Focused Expertise: While New Zealand has world-class geothermal expertise, it currently lacks a critical mass of experience in the specific technologies and processes for lithium removal, concentration into lithium chloride and subsequent conversion to high value battery-grade products. This is a capability gap that needs to be addressed through targeted investment in R&D, international partnerships, and training.**

8. Are there **any other things** that the strategy should include or exclude?

The strategy should include a more explicit and ambitious vision for resource recovery and the circular economy as a core component of geothermal development. The document correctly identifies "unleashing subsurface value", but this should be elevated from a secondary benefit to a core strategic pillar.

We recommend adding a section titled "Geothermal as a Platform for a Circular Economy" to articulate the vision for integrating mineral extraction and battery recycling. This would transform the perception of geothermal from solely an energy source to a holistic, sustainable industrial ecosystem, which we believe is the true "next frontier" alongside supercritical development.

Thank you

Thanks for your feedback, we really appreciate your insight. It helps us establish a long-term strategic approach to unlock the potential of our geothermal resources in a sustainable manner.

To help us continue to develop a geothermal strategy for New Zealand, we would appreciate any additional suggestions or comments you may have.

Please leave your feedback here: