**Submission on the Draft New Zealand Geothermal Strategy – *From the Ground Up***

**To:** Resource Policy Team, Ministry of Business, Innovation and Employment, Resourcesfeedback@mbie.govt.nz
**From:** New Zealand Geothermal Association (NZGA)
**Date:** 12 September 2025

## Introduction

Tēnā koe,

The New Zealand Geothermal Association (NZGA) welcomes the release of the Government's draft *New Zealand Geothermal Strategy – From the Ground Up*. We are grateful for the opportunity to have engaged with officials during its development and to now provide input through this consultation process.

Aotearoa New Zealand is uniquely gifted with geothermal resources, our taonga. These naturally occurring hydrothermal reservoirs are central to our renewable energy future and integral to te Ōhanga Māori (the Māori economy). The draft Strategy is bold and action-oriented, and we particularly welcome its acknowledgement of the deep cultural, economic, and environmental connections to geothermal.

This submission highlights areas where NZGA recommends strengthening the Strategy to ensure it is ambitious, practical, and impactful.

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## PART (1): Our Overall Key Feedback on the draft Strategy:

### 1. Strengthening the Vision – Regional Economies Reindustrialisation

The proposed vision would benefit from a stronger focus on **regional economies**, their local benefit and export earning potential, as renewable energy resources and opportunities are distributed unevenly across the motu. Regional growth, jobs, export earnings and investment are critical to the success of geothermal.

**Recommendation:**

*"New Zealand is a global leader in sustainable geothermal development, delivering innovation, resilience, export earnings, enriched regional economies, and inclusive growth for future generations."*

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### 2. Identifying Next and Future Users

The draft Strategy sets out ambitious goals for Strategic Outcome #2—doubling geothermal energy use by 2040. However, it is unclear who the **next and future users** of this additional geothermal supply will be.

Without clearly identifying and incentivising these users, the Strategy risks being framed around a *"build it and they will come"* model, which weakens the investment case.

Geothermal is "always on" and uniquely positioned to provide:

- **Electricity users:** Doubling geothermal generation would strengthen renewable baseload supply and increase security of supply nationally and reduce the reliance on (coal and gas) in the electricity market.

- **Heat: and steam users** Expanding direct and indirect use would replace coal & natural gas in industrial process heat, supporting decarbonisation in hard-to-abate sectors.
- **Potential next and future users**
    a) Production of Sustainable Aviation Fuels using woody waste residues and low-value wood products in New Zealand. With the recent joint announcement made by Air New Zealand and their partners in Oct 2024, the study found that using domestically grown woody waste for SAF has the potential to contribute hundreds of millions of dollars to New Zealand's economy per year and create hundreds of new regional jobs.[1]
    b) Production of torrefied black wood pellets for electricity generation at Huntly Power Station facility in Kawerau in the Bay of Plenty.[2]

**Recommendation:** *Appropriate policy settings and partnership fundings are required to lower the barriers to transition into geothermal resource applications.*

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**3. Workforce Development: Vocational Training and Career Pathway**

- Delivering multiple geothermal projects requires a strong and capable workforce. To ensure this, the Strategy should go beyond highlighting the need for coordination among institutions and instead outline concrete mechanisms for fostering effective collaboration. For example, Wintec, Toi Ohomai, Civil Contractors New Zealand, and the Infrastructure Commission could form a dedicated geothermal workforce working group tasked with developing shared training frameworks and standards. This group might establish regular knowledge-sharing forums, such as quarterly roundtables or annual conferences, to facilitate best practice exchange and align curriculum development with industry needs.
- By working together, these organisations could co-create a nationally recognised curriculum—combining classroom learning with hands-on experience across geothermal projects, plant operations, tourism, and emerging technologies. Regular feedback loops between industry employers and training providers could ensure that skillsets remain adaptive and responsive to future geothermal growth.
- Evidence from similar workforce development initiatives in New Zealand's construction sector and international renewable energy programmes demonstrates the tangible benefits of coordinated action. For instance, the New Zealand Infrastructure Skills Centre has helped reduce skill gaps by 15% over five years through a unified curriculum and sector-wide training approach.[3]
- Applying a similar model, a coordinated geothermal training pathway could result in the creation of many new jobs and address critical skill shortages, positioning New Zealand's workforce for success as geothermal use doubles by 2040.
- Such outcomes would not only facilitate project delivery but also provide a robust pipeline of skilled talent—strengthening geothermal career pathways and supporting long-term sector growth.

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1 https://www.airnewzealandnewsroom.com/press-release-2024-new-study-shows-local-production-of-sustainable-aviation-fuel-could-support-fuel-resilience-and-security-in-aotearoa-new-zealand

2 https://forestagroup.com.au/genesis-and-foresta-in-biomass-supply-negotiation/

3 https://civilcontractors.co.nz/work-experience-for-a-lifetime-infrastructure-skills-centre-launched/10912-fc62c811-d6da-4bd6-adf6-6b68b4c56c0e/

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**4. Pace of Change**

- The draft Action Plan does not appear to align with the bold ambition of the Strategy. While some new projects are likely within the next 15 years, the feasibility of meeting a **doubling target by 2040** is uncertain under current policy and investment settings. We respectfully ask MBIE to consider our specific recommendations in Part (2) of this submission.

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**5. Revise the "Driving science, research and innovation, including supercritical geothermal technology" to "Driving science, research and innovation through vocational training, mātauranga Māori and Research excellence."**

- The draft Action Plan currently emphasises science, research, and innovation—including the advancement of supercritical geothermal technology—reflecting existing government commitments. To truly maximise sector growth, however, the Association advocates for a deliberate integration of vocational training, mātaurang Māori and research excellence.
- This means not only supporting on-the-job training for machine operators, geothermal plant operators, and field workers, but also fostering specialised expertise through university studies and dedicated research. Integration could be achieved by developing joint training modules where vocational training institutes, industry partners and universities collaborate to deliver blended courses, ensuring that practical skills and theoretical knowledge are cultivated side by side. For instance, apprenticeships in geothermal operations might be structured to include classroom-based modules, while university research students may participate in hands-on placements at geothermal sites.
- To further facilitate movement between the vocational and academic pathways, mechanisms such as scholarship programmes for field workers wishing to pursue advanced studies in geothermal technology could be instituted. Certification courses could be co-developed and co-delivered by vocational training institutions and industry leaders, allowing for flexible transitions and upskilling throughout a career. By embedding these concrete initiatives within the Action Plan, the Association intends to create a workforce ecosystem where vocational and academic streams reinforce one another—ensuring a robust pipeline of skilled talent for the future of New Zealand's geothermal sector.
- In line with the revised focus outlined in Paragraph 5, the deliberate inclusion of mātauranga Māori—traditional Māori knowledge and perspectives—within geothermal sector planning is vital for holistic, sustainable progress. By integrating mātauranga Māori alongside vocational training and research excellence, the Action Plan will ensure that indigenous values, environmental stewardship, and community engagement are embedded throughout workforce development and innovation pathways. This approach not only broadens the knowledge base underpinning technical advancement, but also fosters respectful partnerships and shared benefits, positioning geothermal initiatives within a more inclusive and resilient framework that reflects Aotearoa New Zealand's unique cultural landscape.

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**6. A "National System of Innovation" (NSI) framework—drawing on the UNFCCC's (United Nations Framework Convention on Climate Change) Innovation System guidelines—to strengthen coordination, innovation, and impact across the industry.**

The UNFCCC's summary on NSI structures, which emphasises three core functions essential for systemic innovation: *producing* innovations, *diffusing* them across stakeholders, and ensuring their *use* in society and markets.[4]

**Rationale:**

Adopting an NSI model through the Geothermal Centre of Excellence will enable us to:

- Drive cutting-edge research and innovation,
- Rapidly disseminate knowledge and capabilities across sectors and communities, and
- Accelerate adoption of geothermal solutions that deliver on both climate and economic objectives

Applying National System of Innovation Principles to New Zealand's Geothermal Industry

Below is an example of application of those NSI principles, mapped onto key components that would support geothermal innovation and deployment in New Zealand:

| NSI Function | Applied to NZ Geothermal | Example Activity |
|---|---|---|
| **Produce (Innovation)** | Generating technological, social, and business model advancements | Regional R&D incubators focused on carbon capture, geoheat fertilisers, mineral recovery |
| **Diffuse (Dissemination)** | Spreading innovations across stakeholders and markets | Public-private forums, conferences, knowledge portals, demonstration projects in different regions |
| **Use (Adoption & Uptake)** | Applying innovations in real-world settings by users | Scaling new geothermal-powered industries—like dairy drying (e.g. Essity) or green hydrogen in Mōkai |

**Example in Context: The Geothermal Centre of Excellence**

1. Produce – Innovation Hub

- Focus areas: For example: Supercritical geothermal technologies, carbon capture & reinjection, geoheat-based fertilisers, mineral extraction from fluids.
- Serve as a national R&D accelerator and collaboration platform for PMOs, universities, iwi-led enterprises, and industry partners.

2. Diffuse – Innovation Network

- Host knowledge sharing events (e.g., workshops, innovation fairs) that bring together academia, Māori enterprises, regional councils, and private sector users.
- Operate an online portal for open-access datasets, case studies, and policy guidance related to geothermal innovation.

3. Use – Adoption & Scaling

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4 https://unfccc.int/ttclear/misc_/StaticFiles/gnwoerk_static/TEC_NSI/63eb6ced5b1e43429a6eccdef95ff61e/85bd141304c5486fb7f2ef71f8d2d45f.pdf

- Pilot programs where geothermal innovations are adopted in real-world settings—e.g., converting industrial users (Essity's drying) to geothermal energy, scaling green hydrogen facilities at Mōkai, or introducing geothermal heating on marae and across regional networks.
- Provide funding and support to fast-track these pilots in ways that deliver economic and environmental outcomes, especially prioritising equitable Māori-led development.

**Benefits:**

- Integrative Approach: It covers the full innovation lifecycle—from R&D to market deployment—mirroring the NSI model's emphasis on producing, diffusing, and using innovation .
- Collaboration and Shared Ownership: Multiple stakeholders (government, Māori, industry, researchers) share responsibility and expertise in the system.
- Regional Impact: Embeds innovation in regional economies and Māori enterprise, supporting inclusive growth and equitable access to benefits.

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**PART (2): Our Specific Key Recommendations: Opportunities for Going for Growth and reindustrialisation of regions economic development**

NZGA recommends targeted initiatives to unlock geothermal's full potential.

**We agree with the Government's proposed actions on the Draft Action Plan (p.20-p.21). We ask the Government to prioritise these key recommendations relating to the draft Action Plan.**

## Horizon 0: Now (New)

**Establish an interim Geothermal Industry Strategy Finalisation Group:**

An Interim Geothermal Industry Strategy Finalisation Group—led by MBIE and NZGA—will support MBIE in conducting in-depth analysis of key themes and proposed actions identified by submitters. The group will serve as a collaborative "think tank," bringing together a diverse range of skills to collectively refine and finalise the Strategy.

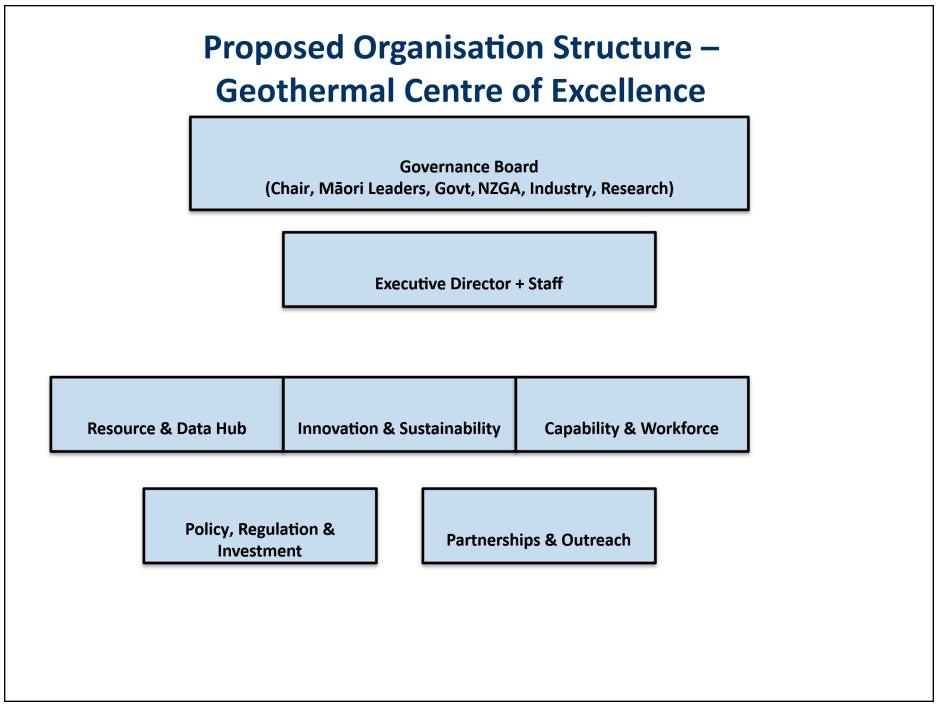
MBIE will facilitate meetings and coordinate stakeholder input, while NZGA will provide technical expertise and industry insights. Other group members will contribute by reviewing submissions and recommending actionable steps.

This approach will ensure strong industry buy-in from the outset and create clear pathways for implementing actions identified in Horizon 1.

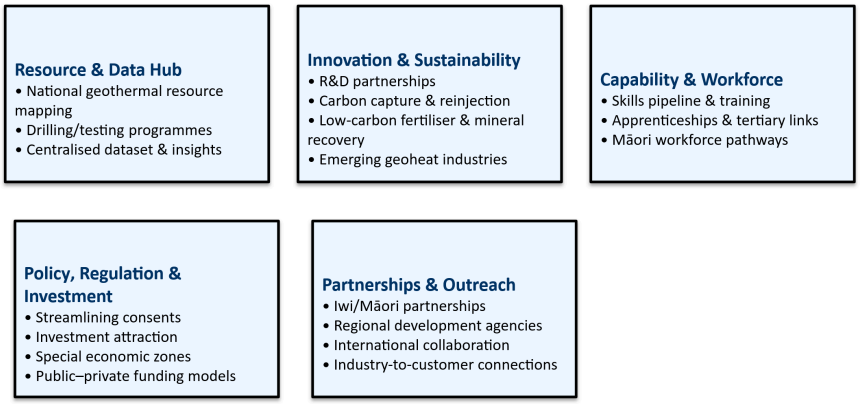
## Horizon 1: 2025-2026

1. **Geothermal Centre of Excellence (Critical)**
   - Establish a national, public–private partnership as a "single door" for geothermal coordination.
   - Focus areas: capability building, resource assessment, policy review, data and insights, international collaboration, and connecting resource holders to users.

- Suggested investment: $10 million over 10 years.
- **Vision:** ***Māori economic transformation at the heart of geothermal innovation and growth.***
- Context: The 2025 *Te Ōhanga Māori* report (BERL/MBIE) highlights extraordinary growth—Māori GDP contribution rising to 9%, assets increasing from $69b to $126b, and over 24,000 Māori businesses operating across the motu. Geothermal can be a central driver of this continued transformation.
- International Collaboration: Ensure that support for New Zealand companies and organisations, to reinforce international activities acknowledges that, while these opportunities provide foreign earnings and build invaluable relationships at market and government levels, they offer critical ongoing offshore engagements that allow retention and strengthening of our industry workforce in a cyclical domestic market. The two figures below are examples only.



## Geothermal Centre of Excellence – Functional Units (Details)




2. A joint Government and Industry partnership fund to co-create a $60 million ($20 million from public, $40 million from private), called **"Geothermal Projects & People Ready" fund via the Regional Economic Fund (New. Move the dial)**

- The objective of this fund is to support projects that are either already at a fundable stage or ready for feasibility study, aiming for implementation within the next three years, starting from Q1 2026. Priority will be given to projects already completed a feasibility study , or with an installed capacity of less than 100 kW, with a goal of supporting at least 50 installations during this period. The fund specifically targets ground source heat pumps and geothermal heat and steam applications and initiatives that enable small and medium-sized businesses to transition away from fossil fuels. A higher number of small-scale projects will maximise the fund's impact across diverse communities.
- Accelerating the transition away from gas use is a key priority for this fund, with the aim of achieving a 20% reduction in gas consumption among participating businesses by 2029.
- The Geothermal Centre of Excellence and EECA will jointly oversee project selection, monitoring, and reporting. Details on application procedures and evaluation criteria will be co-designed and be released in Q4 2026. At present, two to three companies have already expressed interest in participating.
- Example 1: He Ahi Geothermal Park, Taupō

  He Ahi Geothermal Park, Taupō: This initiative exemplifies a project that could progress rapidly with the support of the "Geothermal Projects & People Ready" fund, especially if already at or near a fundable stage. Leveraging ground source heat pumps and direct geothermal heat, the park aims to provide clean, reliable energy for businesses and local communities, directly aligning with the fund's focus on accelerating startups and innovation and maximising impact through multiple small-scale installations.

- Example 2: Expansion of Kawerau geothermal energy precinct

  The Kawerau geothermal field is located in the Bay of Plenty Region and sits in both the Kawerau and Whakatane districts. Drilling for geothermal energy development started in early 1950s.[5] The Kaweau geothermal energy precinct is now home to Ngāti Tūwharetoa (NTGA), Eastland Generation, Oji Fibre, Essity, Carter Holt Harvey, Sequal Timber and Waiū Dairy.[6] This supports the fund's aim to enable swift implementation of ready-to-go projects, drive local job creation, and accelerate the reduction of gas use in industrial settings.

- Example 3: Expansion of ground source heat pumps in both North and South Island, New Zealand

  Expansion of Ground Source Heat Pumps in both North and South Island, New Zealand: By targeting a higher number of small-scale renewable heating systems across diverse communities, this example demonstrates the fund's commitment to broad, equitable benefits. Projects will be prioritised based on readiness and capacity, with the goal of supporting at least 50 installations by 2029 and achieving a 20% reduction in gas consumption among participating businesses, as set out in the fund's objectives.

3. **National Geothermal Resource Assessment (Move up from Horizon 3 to Horizon 1)**

   - Publicly funded programme ($60m over 5 years) through the Centre of Excellence.
   - Shared-liability model involving government, investors, and drilling companies to de-risk exploration and resource confirmation.
   - Supports equitable outcomes for landowners and long-term confidence in the resource base.

4. **Centralised Geothermal Data (Move up from Horizon 2 to Horizon 1)**

   - Crown-owned dataset of drilling results and fluid characteristics.
   - Consistent data collection, regular updates, and cross-fuel comparability.
   - Supports investment decisions and regulatory transparency.

5. **Capital Access and Investment (New)**

   - Enable access to capital through collaboration with NZTE, Invest New Zealand, and capital markets.
   - Crowd-in investment by combining public, private, and industry funding.
   - Retain capability and value within regions.
   - Investigate capital access by enabling Kiwisaver investment in private assets.[7]

[5] https://www.nzgeothermal.org.nz/geothermal-in-nz/nz-geothermal-fields/kawerau/
[6] https://www.tuwharetoageothermal.co.nz/customers
[7] https://www.mbie.govt.nz/dmsdocument/29948-enabling-kiwisaver-investment-in-private-assets-discussion-document

## 6. National Policy Direction for Geothermal (Move up from Horizon 2 to Horizon 1)

The Draft Action Plan suggests that in the Horizon 2 phase (2027-2028), work be undertaken to ensure geothermal regulatory frameworks are fit for purpose and to explore the role of policy direction in managing geothermal resources.

NZGA supports the focus on the adequacy of regulatory frameworks and considers there is merit in development of geothermal resource specific policy direction. NZGA believes that that should be a priority for the reasons set out below. Accordingly, the preferable approach would be to incorporate development of such policy direction in the revision of the National Policy Statement-Renewable Electricity Development currently under action by Central Government. If this is not possible, NZGA would support development of a new National Policy Statement-Geothermal as part of Horizon 1, with gazettal by end 2026.

The background to this issue stems from the unique characteristics of geothermal resources and the innovative way that those resources have been managed to date in the Taupō Volcanic Zone, where most of the high temperature near surface geothermal resources are located. Up to now, the latter has occurred without the benefit of national direction.

The existing and potential future value of geothermal resources has been well canvassed in the draft strategy document. Likewise, the cultural and tourism values of geothermal resources are well covered.

While possibly a level of detail not intended to be captured in the draft strategy, the tension between those different values needs to be appreciated. More specifically, some cultural and tourism values are incompatible with large scale geothermal development. Thus, flowing (particularly geysering) hot water features, which have the greatest cultural and tourism value, are likely to be detrimentally affected by large scale developments on the same field. As an example, while the pioneering development of the Wairākei Power Station is rightly noted in the draft strategy document, it might also be acknowledged that it resulted in the loss of many high value hot water features, including geysers. While downstream (cascade) uses of the geothermal resource accessed by the development including by Māori and development-induced steam-features have provided measurable benefits to tourism, these are of a different character to the natural resources predating development. Most would also classify them as being of lesser value.

Similar issues were identified in Rotorua, with the proliferation of bores tapping into the geothermal resource for domestic and commercial use threatening the geysers and other hot water features of Whakarewarewa, leading to controls being imposed to safeguard the latter.

Another feature of many geothermal fields is the presence of plant species uniquely adapted to the hot ground found on geothermal fields. Because geothermal fields with heat flowing to the ground surface are rare (on a national basis), such vegetation is similarly ‘rare’ from a national perspective. It is therefore classified as a Significant Natural Area, even though it is comparatively common within geothermal fields. Large scale geothermal development can alter the location and extent of heat flowing through the ground, sometimes in ways that are not expected, adversely affecting the suitability of areas for thermotolerant vegetation as a result.

This is quite different to the adverse effects wind power developments, for instance, can have on Significant Natural Areas. In that situation, the juxtaposition of Significant Natural Areas and the wind resource is largely coincidental. Unlike the indirect effects geothermal development may have, wind farm developments affect Significant Natural Areas directly, though the clearing of vegetation to make room for wind turbine foundations and access roads and potential bird and bat strike impacting the fauna of areas that remain.

Another feature of geothermal development is the need to manage uncertainty. Particularly in the early stages of development, the characteristics of the geothermal resource and its connections to the surface need to be ascertained and managed in parallel with development. This will be a particular issue for development of supercritical geothermal resources.

Regional policy has been developed in the Waikato Region, and largely adopted by Bay of Plenty Regional Council to address these unique features of geothermal development that has as key features:

- Classification of geothermal systems on a spectrum, with those earmarked for large-scale development on one end, and Protected Systems at the other, within which only minimal effects on the resource are permitted.
- Provision for off-field offsetting of adverse development effects to ensure that Development Systems are genuinely available for development, but the community benefits from enhancement of other systems.
- Cascade uses of the geothermal resource are encouraged on Development Systems;
- Mandated use of independent expert peer review panels to monitor development and assist the relevant regional council with its management.

A standalone NPS-Geothermal could provide national direction that would support the existing regional policy regimes of Waikato and Bay of Planty Regional Councils, including greater alignment of terminology and approach where they currently differ. Such a standalone NPS-Geothermal would also provide guidance and direction to Northland Regional Council, within which the Ngāwhā Power Station is located, as well as the Regional Councils administering smaller scale shallow and surface geothermal feature such as those noted on pages 8 and 9 of the draft strategy.

An NPS-Geothermal would provide important national direction, but without a supporting National Environmental Standard (NES), there is no mechanism to ensure consistent rules across regions. This gap risks ongoing variation in consent processes and monitoring, creating uncertainty for developers and inconsistency in the protection of geothermal features, including those valued for cultural, ecological and economic/tourism reasons.

A geothermal focussed NES could apply where it is needed i.e. on a pan-regional basis and could span the range of management needs for geothermal resources. This would include rules that provide for:

- resource protection alongside restoration and enhancement of degraded geothermal surface features,
- energy generation activities, and
- the direct use of heat and fluid.

An NES would be especially useful in regions where geothermal resources are not suitable for, or are not currently used in, large-scale energy generation. In these areas, lower temperature resources are increasingly being used for direct applications such as space heating and ground-sourced heat pumps (as identified in the NZGA/EECA Geoheat Business Guide). This is likely to result in a progressive increase in consent applications across the country. Beyond the Taupō Volcanic Zone (Waikato and Bay of Plenty) and Northland, regional planning documents currently provide little direction on geothermal resource management.

NZGA considers that an NPS and NES specific to geothermal might also acknowledge the technological advances and emerging technologies in the science and engineering fields. Advances have already delivered benefits, such as reinjection technologies that return greenhouses gases underground. Future innovations, including through the use of supercritical geothermal resources, have the potential to significantly contribute to the Strategic Outcome of the Strategy to double geothermal energy use by 2040.

Precedent for national direction mandating a responsive approach is provided by Policy 8 of the National Policy Statement on Urban Development (NPS-UD) which seeks to ensure that decisions from local authorities in relation to urban environments are responsive to plan changes where such changes would "…add significantly to development capacity and contribute to well-functioning urban environments…" even where the development capacity was not anticipated in RMA documents.

NZGA acknowledges that national direction must also provide flexibility to recognise and protect local and regional values of geothermal resources, which can be diminished when planning at a national scale.

NZGA would welcome the opportunity to assist in development of a new NPS and/or NES along with other stakeholders.

Administrative reforms might form part of or accompany development of national direction. The regional boundary between Waikato and Bay of Plenty Regions bisects the Taupō Volcanic Zone and one system sits under and astride the regional boundary. There may be merit exploring joint management of the geothermal resources of the Taupō Volcanic Zone, both at the policy and consenting level, to ensure a uniformity of approach.

7. **Ensure Geothermal regulatory Framework are fit for purpose (including the Geothermal Energy Regulations 1961) (Move up from Horizon 2 to Horizon 1)**

**Recommendation (Move from Horizon 2 to Horizon 1)**

That MBIE will initiate a comprehensive review of the grossly outdated *Geothermal Energy Regulations 1961* to ensure the regulatory framework is modern, robust, and fit for purpose. The review should:

- Provide clear and consistent guidance for both regulators and industry participants;
- Address gaps that may limit the adoption of emerging and advanced geothermal technologies, such as supercritical systems, or integrated heat and power applications;
- Ensure the framework is enduring, flexible, and aligned with New Zealand Health and Safety requirements

This recommendation directly supports the Draft Geothermal Strategy's call for **Ensuring regulatory and system settings are fit for purpose** and would ensure that the Strategy's vision of doubling geothermal use is underpinned by a fit-for-purpose regulatory environment.

NZGA recommends that this review work commence immediately, with the objective of having an **updated regulatory framework in place by 2026**, so that New Zealand is ready to fully leverage next-generation geothermal opportunities.

## Horizon 2: 2027-2028

8. **Reindustrialisation - Enabling place-based geothermal clusters - Special Economic Zones (Speed up)**
    - Designate geothermal-focused development zones.
    - Use mechanisms such as tax incentives, contracts for difference, or guaranteed offtakes.
    - Promote smaller projects with shorter delivery timelines, equitable benefits, and distributed impacts.
    - Support tourism development, infrastructure and collaborative destination experience or promotion.
9. **Single Point of Contact (New)**
    - Create a clear, accessible contact point for consent applicants.
    - Simplify engagement with government processes.

10. **Ensuring regulatory and system settings are fit for purpose (Move up from Horizon 3 to Horizon 2)**
    - Horizon 2 refers to actions planned for implementation between 2027 and 2028, while Horizon 3 covers initiatives targeting 2029 onwards. This clarification helps position the proposed actions within a clear timeframe.
    - This Action Plan goal is critical to achieving "Double geothermal energy use by 2040." A key aspect is unlocking existing field classifications—particularly our "research" systems and, to a lesser extent, our "conditional/limited development" systems. For clarity, a "research" geothermal system is an area where exploration is possible but development is not permitted until more is understood, while a "conditional/limited development" system allows strictly regulated development under certain conditions.
    - Examples of research systems in New Zealand include Reporoa and Okataina / Makatiti Dome, while conditional or limited development systems include Tokaanu-Waihi-Hipaua, Atiamuri, Taheke, Tikitere-Ruahine, and Rotoma-Tikorangi.
    - The draft action plan does not address this potential until Horizon 3 (2029 onwards); however, elevating these actions to Horizon 2 could accelerate progress. Financial and risk barriers to transitioning research systems (and, in some cases, conditional/limited development systems) to a "development" classification are significant—a considerable amount of scientific investigation and exploration is required to prove or disprove whether protection or development is justified. Central Government support could be instrumental in overcoming these barriers.

- For instance, the government could establish a technology or development research fund, matching private investments dollar for dollar. Similar research funds have successfully accelerated renewable energy projects in countries such as Iceland and the United States, demonstrating the effectiveness of public-private partnerships in geothermal development. Additionally, offering targeted tax breaks on research and development in geothermal could further incentivize progress.
- A Geothermal Development National Policy Statement led by Central Government would also assist in shifting existing system classifications more toward development. The two major regional councils responsible for regulating geothermal resources in New Zealand (the Bay of Plenty Regional Council and Waikato Regional Council) may not wish to lead such a process or may have differing views on how it should be undertaken, making central leadership crucial. (see Section 6 above)
- At all stages, land access for geothermal development must continue to follow the established process, which requires landowner permission prior to exploration or development. Notwithstanding these recommendations, it remains essential to safeguard systems with significant cultural value—especially those with strong connections to local iwi (tribes). For example, geothermal systems that are culturally significant should involve early and ongoing consultation with iwi to ensure that cultural values are identified, respected, and protected throughout any development process.
- By integrating international best practices and reaffirming our commitment to partnership with local communities, we can balance responsible development with cultural respect and environmental stewardship—ensuring that Aotearoa New Zealand remains a global leader in geothermal energy.

## Horizon 3: 2029 Onwards

### 11. Field Classification: (Deep Dive)

- Build on United Nations Framework for Resources Classification (UNFC) inventory undertaken for Waikato to establish national classification of resources on an internationally recognised basis. This would help provide early visibility and potential on geothermal prospects as a precursor to additional data collection / targeted drilling campaigns.
- Such a classification would establish realistic projections of geothermal development opportunities within our long-term energy strategy and transmission planning, while offering reassurance for domestic and international investors.
- Utilise the systems and learnings from our international work on Probability of Success evaluations of geothermal field development strategies to ensure the best possible results from future exploration drilling programmes.

### 12. Innovation: Drilling capability: (New)

- While longer term supercritical investigation may yield valuable extensions to geothermal resources, there are immediate opportunities to explore potential to enhance the use of operational and more orthodox reservoirs drawing on growing experience with Enhanced Geothermal System (EGS) developments internationally. Science and Research expertise, rig and ancillary equipment for such initiatives are currently available in New Zealand. Building

experience through domestic EGS efforts is a key to strengthening our national drilling capability near term to ensure we retain our workforce and global leadership in geothermal development.

## Conclusion

Geothermal energy is Aotearoa New Zealand's *always-on* renewable advantage. Accelerating its deployment will:

- Drive regional economic growth, jobs, and skills.
- Support Māori economic transformation.
- Strengthen energy resilience and baseload supply.
- Enable a faster and more equitable transition to a low-emissions economy.

We urge the Government to incorporate these recommendations into the final Strategy and to provide the enabling policy, regulatory, and investment support required. Doing so will position New Zealand as a **global leader in sustainable geothermal innovation**.

NZGA looks forward to continuing to partner with Government and stakeholders to ensure this Strategy delivers its full potential.

He waka eke noa – We are all in this together.

Ngā mihi nui,

Kennie Tsui

Chief Executive

New Zealand Geothermal Association

***Acknowledgements***

The New Zealand Geothermal Association wish to express our gratitude to all those who guided us in preparing for this submission. We would like to thank those who provided information, data, knowledge during meetings, discussions, and reviews. The insight and expertise have been invaluable to us.