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10 SEPTEMBER 2025

First supercritical geothermal site chosen

HON SHANE JONES(/MINISTER/HON-SHANE-JONES)

Regional Development (/portfolio/nationalactnew-zealand-first-coalition-government-2023-2026/regional-development)

Land within Rotokawa Geothermal Reservoir in the Taupō Volcanic Zone has been selected as a preferred site for New Zealand's first supercritical geothermal exploration, with design work already underway to develop the first well, Regional Development Minister Shane Jones says.

"This early-stage exploration could help prove the viability of supercritical geothermal energy, which has the potential to deliver several times the power output of conventional geothermal wells. This groundbreaking work could be a game changer for securing New Zealand's future energy needs," Mr Jones says.

The Rotokawa site was selected following extensive geological and geophysical study by Earth Sciences New Zealand, and risk assessments to confirm its suitability.

"Tauhara North No.2 Trust is guardian of the Rotokawa geothermal resources and have deep cultural and historical connection to the area. Its people have used geothermal energy for cooking, bathing, and healing for generations," Mr Jones says.

A Memorandum of Understanding has been signed between Tauhara North No.2 Trust, the Ministry of Business, Innovation and Employment, and Mercury NZ which operates the Rotokawa geothermal power station, to explore the potential of supercritical geothermal energy at the site. Earth Sciences NZ is contributing technical and scientific expertise.

As part of the work, a multi-disciplinary design team comprising local and international experts, is also being assembled to lead work across regulatory approvals, design, risk assessment, geoscientific modelling, engineering, procurement, drilling and asset management.

The Coalition Government has committed up to $60 million from the Regional Infrastructure Fund to support the development of the first well, with plans for two additional wells as part of a broader programme.

The first phases of the project include pre-feasibility work studies, well design, development of a business case and validation of the preferred site. Drilling is expected to begin in 18-24 months.

“Three exploratory wells are the minimum needed to understand the energy resource. New Zealand has pioneered geothermal development in the past with government-led geothermal exploration during 1950s and 1970s. During this time, more than 40 wells were drilled across the motu to explore geothermal resources,” Mr Jones says.

“Drilling into supercritical zones means going 1km-3km deeper into the Earth and managing higher pressures and temperatures than current conventional generation. This is one of the most technically demanding frontiers in geothermal technologies and science,” Mr Jones says.

“Safely converting and commercialising supercritical geothermal energy is the next step. The Government is backing this groundbreaking project which aims to unlock transformative, clean, renewable energy over the long term to strengthen our energy security and be transformative for the country and internationally,” Mr Jones says.

TOP

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Iwi join discussion on geothermal potential

HON SHANE JONES(/MINISTER/HON-SHANE-JONES)

Regional Development (/portfolio/nationalactnew-zealand-first-coalition-government-2023-2026/regional-development)

Progressing a holistic strategy to unlock the potential of New Zealand's geothermal resources, possibly in applications beyond energy generation, is at the centre of discussions with mana whenua at a hui in Rotorua today, Resources and Regional Development Minister Shane Jones says.

The Coalition Government is in the early stages of considering how the abundant but underutilised natural resource could be used to bolster energy security, as well as in applications such as tourism, mineral resources, science and technology, regional and Māori economic development.

"Today's hui with iwi from around the Taupō Volcanic Zone is an opportunity to discuss the potential of supercritical geothermal technology, which the Government has ring-fenced up to $60 million from the Regional Infrastructure Fund to explore," Mr Jones says.

Supercritical geothermal is sourced from extremely hot rock heated by magma. At present, conventional geothermal wells are drilled to a maximum depth of about 3.5km but scientists believe by drilling beyond this, possibly to 6km deep, the energy output could be up to three times greater than traditional geothermal energy generated from steam.

"In the longer term this could be a game-changer for New Zealand's energy sector and potentially internationally, as other countries chase solutions to their energy challenges. Our geothermal resources aren't at the mercy of the weather gods in the same way renewable energy sources such as hydro, solar and wind are. This is particularly important in the context of energy security," Mr Jones says.

A total of $5m of the $60m government funding will be drawn down for work on the detailed design and costs of drilling the first of three deep exploratory wells in the Taupō Volcanic Zone.

GNS Science, which is leading the initiative with the Ministry of Business, Innovation and Employment (MBIE), will present to today's hui on the research done to date to identify possible sites for the three wells.

"Māori have a long history of utilising geothermal resources for heating, cooking, and therapeutic purposes, and are now actively involved commercially in developing and operating geothermal energy generation, glasshouse food production using geothermal heat, and tourism ventures," Mr Jones says.

"I am excited to start a conversation about where we go next. New Zealand has a proud history of innovation. Harnessing geothermal energy for electricity generation is an area in which we have achieved success and international recognition. Having a geothermal strategy we can all get behind will be invaluable and I want to do that with the experience and expertise Māori will bring."

Mr Jones is expecting to launch a geothermal strategy later this year.

TOP

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Home (/)

Releases (/releases)

Speeches (/speeches)

Features (/features)

Archive (/advanced_search)

News Feeds (/feeds)

About this site

About (/about-this-site)

Contact us (/feedback)

Site Map (/sitemap)

30 JULY 2025

Ambitious course set for NZ's geothermal potential

HON SHANE JONES(/MINISTER/HON-SHANE-JONES)

Resources (/portfolio/nationalactnew-zealand-first-coalition-government-2023-2026/resources)

Doubling the production of geothermal energy by 2040 for electricity generation and direct heat applications is part of an ambitious plan to harness the vast potential of New Zealand's geothermal resources, Resources Minister Shane Jones says.

From the Ground Up – a draft strategy to unlock New Zealand's geothermal potential, launched for consultation by Mr Jones in Taupō today, seeks to position the country as a global leader in sustainable geothermal development while delivering innovation, resilience and growth.

"Our history of utilising geothermal resources is extensive. Our tīpuna in the central North Island used geothermal waters for heating, cooking and therapeutic purposes, and later settlers enjoyed the healing benefits of our thermal springs," Mr Jones says.

"New Zealand was at the forefront of global utilisation of geothermal energy for electricity generation, and today the sector is a vital contributor to our economy as part of our energy sector, tourism and beyond.

"Our unique geographic position on the boundary of both the Australian and Pacific tectonic plates, coupled with the Earth's thin crust along that rift, gives us a significant geological advantage in expanding the use of this abundant natural resource.

"This strategy aims to build on the great work already under way and provide a clear direction for future endeavours."

In addition to energy outcomes, the draft strategy aims to extend New Zealand's position as a world leader in geothermal innovation and strengthen regional economies and the Māori economy. It will advance geothermal development and will help unlock industrial growth, tourism and trade to support the country's goal of doubling exports.

"The Coalition Government is not prepared to leave potential on the table as we strengthen our economy, and as we grapple with energy security and affordability challenges," Mr Jones says.

"I see potential for our geothermal sector to expand and diversify into areas such as the extraction of minerals from geothermal fluid, the development of globally sought-after innovation and science, and more use of direct geothermal energy to power industrial, commercial and agricultural applications.

"We are proposing some key actions that address the challenges the sector faces when it comes to growth such as improving access to geothermal data and insights, ensuring our regulatory settings are fit for purpose, advancing knowledge and uptake of geothermal technologies, and driving science, research and innovation, including our investment to unlock supercritical geothermal technology.

"Consultation closes on 12 September 2025, and I encourage anyone with an interest to have their say. I am excited to start this conversation about how we work together to remove barriers and support innovation to ensure we remain global leaders in this field."

For more information on the draft strategy and making a submission, visit https://www.mbie.govt.nz/have-your-say/consultation-on-a-draft-geothermal-strategy-for-new-zealand (https://www.mbie.govt.nz/have-your-say/consultation-on-a-draft-geothermal-strategy-for-new-zealand)

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26 OCTOBER 2025

The importance of geothermal energy in New Zealand

HON SHANE JONES(/MINISTER/HON-SHANE-JONES)

Regional Development (/portfolio/nationalactnew-zealand-first-coalition-government-2023-2026/regional-development)

Kia ora koutou, and warm greetings from New Zealand.

It's an honour to be here in Reno, Nevada, speaking as New Zealand's Minister for Resources and Minister for Regional Development – two closely intersecting portfolios in New Zealand.

I want to thank the organisers of the 2025 Indigenous Geothermal Symposium for the invitation to deliver this keynote address. I would also like to acknowledge the people of Reno-Sparks Indian Colony for undertaking the opening ceremony.

This is a special gathering. Unlike many audiences where geothermal energy must be explained from first principles, here I'm speaking to experts – engineers, researchers, technology providers, and advocates. That allows me to take a broader view: to reflect on geothermal's past, its cultural significance, and its future potential.

New Zealand is proud to be the world's fifth-largest producer of geothermal electricity. Our location on the boundary of the Indo-Australian and Pacific tectonic plates gives us access to a world-class geothermal resource.

But our connection to geothermal energy goes far deeper than geology. For Māori, the indigenous people of New Zealand, waiwhatu – geothermal water—is a taonga, a treasure. It is a place where the physical and spiritual worlds meet. Our tīpuna, or ancestors, used geothermal waters for cooking, healing, and warmth. These practices were not just practical – they were deeply spiritual, rooted in a worldview that sees the land, water, and energy as living entities.

The Pink and White Terraces, once a major attraction in the central North Island before the 1886 volcanic eruption of Mount Tarawera destroyed them, drew visitors from around the world to bathe in their restorative waters. These terraces were more than a tourist destination – they were a symbol of the natural harmony between geothermal energy and human wellbeing.

Rotorua's spa culture, established in the 1870s, played a vital role in healing injured soldiers returning from war. The geothermal waters were seen as therapeutic, and the region became a centre for rehabilitation and recovery.

This legacy of geothermal use is woven into our national identity. It's a story of innovation, resilience, and respect for the land.

Globally, geothermal electricity generation began over a century ago in Larderello, Italy. New Zealand engineers visited the site in 1944 and again in 1948, witnessing its rebirth after wartime destruction. Inspired, we began exploratory drilling at Wairākei in 1949, leading to the world's second geothermal power station – and the first to harness wet steam.

That pioneering spirit continues today. We are a small country but in geothermal science, we have consistently led the way.

Today, geothermal energy is a cornerstone of the Māori economy, and Māori have a long-term vision to enhance their role in New Zealand's energy sector. Māori have a rich cultural heritage and a deep connection to their land and natural resources. Their identity is rooted in a unique worldview that emphasises the importance of kaitiakitanga, guardianship, over the environment, demonstrated in their commitment to sustainability and community wellbeing.

Many Māori iwi (tribes) own land with significant geothermal potential, particularly in regions like the central North Island. As a result, they've become key players in geothermal energy projects, both as resource owners and partners in large-scale ventures.

Investment in geothermal energy supports iwi, hapū, and ahu whenua (land management) trusts, enabling innovation and investment in areas like geothermal aquaculture, horticulture, and tourism.

These ventures are not just economically significant – they are culturally affirming. They allow Māori communities to exercise rangatiratanga, or self-determination, over their resources. They create opportunities for intergenerational wealth, education, and environmental stewardship.

In this way, geothermal energy is helping to shape a future that is both prosperous and culturally grounded**.**

I've been following the statements of US Energy Secretary Chris Wright with great interest. His emphasis on 'affordable, reliable, and secure energy' as the foundation of national prosperity resonates deeply.

Globally, energy demand is projected to rise faster than we experienced during the Industrial Revolution in the 1800s. According to the International Energy Agency, electricity use has grown at twice the pace of overall energy demand over the last decade and is projected to rise even faster.

As AI and other technologies drive unprecedented electricity demand, the link between energy and economic strength becomes even more critical.

Secretary Wright's concept of 'energy dominance' highlights the strategic importance of energy policy. I believe we are witnessing a global reset in how geothermal is positioned – especially in countries like the United States, Japan, and New Zealand.

While geothermal accounts for around 20 per cent of New Zealand's electricity, it contributes less than 1 per cent in the US, despite the US being the largest producer by volume.

Just as the US is advancing its energy transition, New Zealand is developing a national geothermal strategy that aims to unlock the full potential of our geothermal resources to drive energy resilience and support regional and Māori economic development.

The draft strategy, released for public consultation in July, sets the goal of doubling geothermal energy use by 2040, positioning New Zealand as a global leader in sustainable geothermal innovation and supporting our transition to a low-emissions economy.

Let me now turn to supercritical geothermal – sometimes referred to as superdeep or superhot geothermal. In New Zealand, we are investing in proving its viability.

Our Central North Island, home to the Taupō Volcanic Zone, offers extraordinary advantages. Scientific research confirms that supercritical fluids lie just 5–6km, or around three miles, beneath the surface—shallower than in most other regions globally.

Supercritical geothermal has the potential to revolutionise energy generation. These fluids carry vastly more energy than conventional geothermal sources. If harnessed effectively, they could provide baseload renewable energy at a scale comparable to fossil fuels.

We know the risks. We expect challenges. But just as our engineers pioneered wet steam technology in the 1950s, we are backing ourselves to innovate again.

We've established a robust governance structure for this programme. Our Kiwi-based team includes top engineers, scientists, and strategic advisors.

Representatives from these groups are here in Reno and eager to connect with you.

We've also convened an International Review Panel.

Today I am delighted to announce that Professor Roland Horne of Stanford University has agreed to chair the panel.

As you will know, Professor Horne is one of the world's foremost geothermal experts and is attending the Geothermal Rising Conference here in Reno. We are delighted he has agreed to lend his expertise and leadership to our project.

I'd also like to welcome the three other highly regarded members of the International Review Panel – Dr Omar Friðleifsson and Mr Kristinn Ingason both from the Iceland Deep Drilling Project. We also warmly welcome to the panel United States geochemist Dr Darrell Gallup of Thermochem Inc.

We are very pleased to have such outstanding engineering and scientific experts join us.

On that note, I would like to say we are inviting other international collaboration – particularly from US companies and researchers. We believe the Taupō Volcanic Zone can serve as a global laboratory for supercritical geothermal.

But this is not just about New Zealand. The information we gather will have global implications. They will inform policy, guide investment, and shape the future of clean energy. Globally, we're in an energy crisis. We need more clean, renewable energy to support the electrification of transport, industry, and data infrastructure.

Supercritical geothermal offers untapped potential that would be a great step forward for clean, green, sustainable energy. New Zealand is ready to lead – offering decades of geothermal expertise, political stability, a robust regulatory framework, and strong partnerships which our indigenous Māori landowners and communities, for whom geothermal resources are deeply embedded in whakapapa (histories), wairuatanga (identity and spirituality), and tikanga (customs).

We are already seeing interest from Japan, Iceland, and other geothermal-rich nations. The opportunity to share technology, capital, and expertise is immense.

Let me be clear, we are not just drilling wells. We are building a global partnership for energy transformation.

The future of geothermal is bright. With advancing science and deeper collaboration, the opportunities before us are limitless.

We stand at a crossroads. One path leads to incremental change. The other leads to bold innovation, cultural empowerment, and global leadership.

New Zealand has chosen the latter. We invite you to walk it with us.

Ngā mihi nui. Thank you.

TOP