

AOTEAROA GEOTHERMAL FOR THE WORLD AND TO THE WORLD

Rachael McGuckian, International Market Manager

JULY 2025

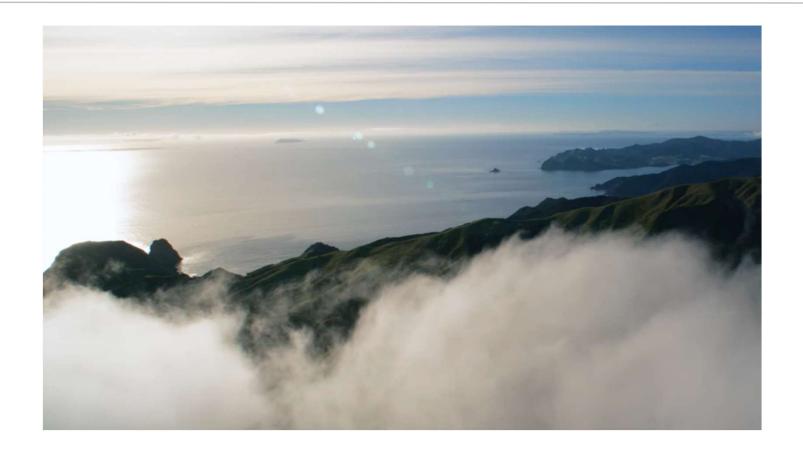
Message from our CEO

Aotearoa New Zealand is good for the world, our Geothermal expertise speaks to that



- NZTE is proud to support the publication of the 2025 Aotearoa New Zealand Geothermal Companies Directory
- This is a testament to the expertise, innovation and collaborative spirit that defines New Zealand's geothermal sector.
- This directory highlights the strength and diversity of the sectors geothermal companies and demonstrates why our country is considered a global leader,
- Deeply rooted in cultural partnership and stewardship.
- Tools like this directory help us all tell the stories of innovative solutions, innovative approaches, showcasing New Zealand's leadership and help us leverage these stories to economic opportunities.

Geothermal video



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Who is NZTE

NZTE has a purpose and direction that is consistent with the Government's objectives.

NZTE PURPOSE:

Growing companies
internationally
bigger, better, faster for the good of
New Zealand

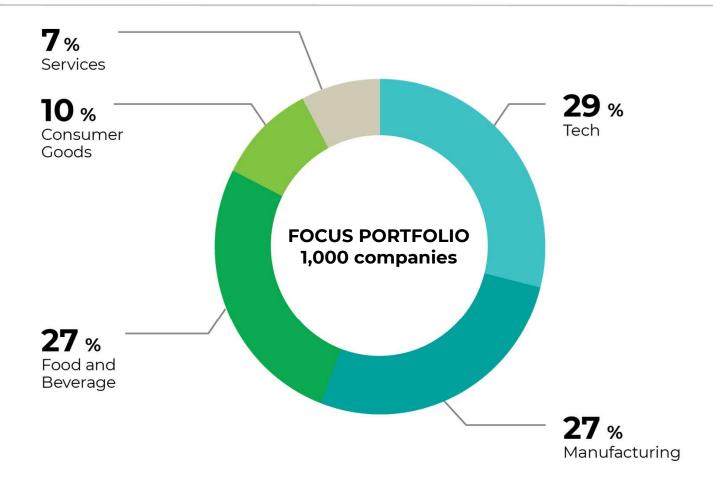


STRATEGY FOR NEW ZEALAND:

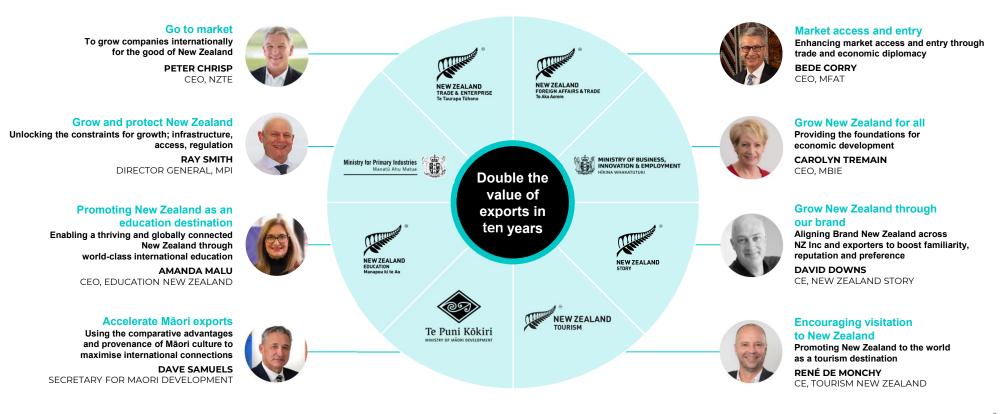
Export and Investment led growth

We see ourselves as part of the fundamental DIVERSIFICATION of our economy from commodities to VALUE ADD, over decades. This means we need internationally competitive, innovative, knowledge intensive companies, differentiating themselves on quality, ingenuity, customer intimacy, authenticity and sustainability.

Our export portfolio by sector

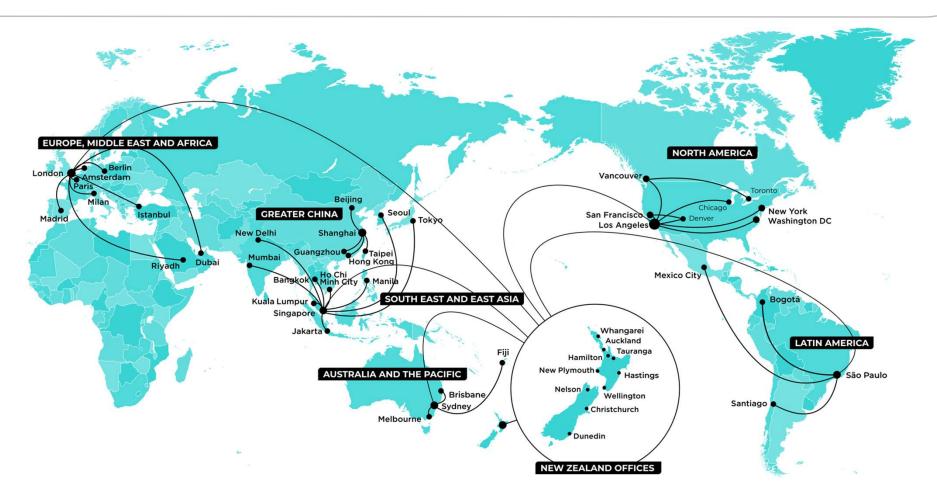


Our key partners - NZ Inc is key to our approach





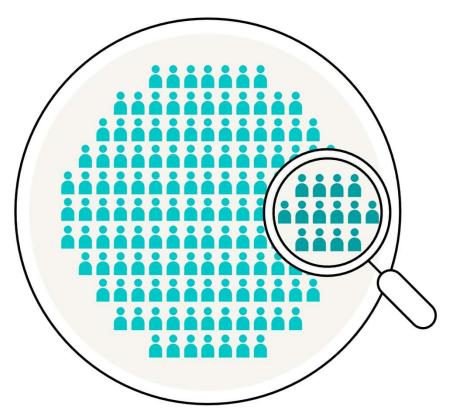
Where we operate



Export businesses: How we support them

ALL NZTE Customers GET:

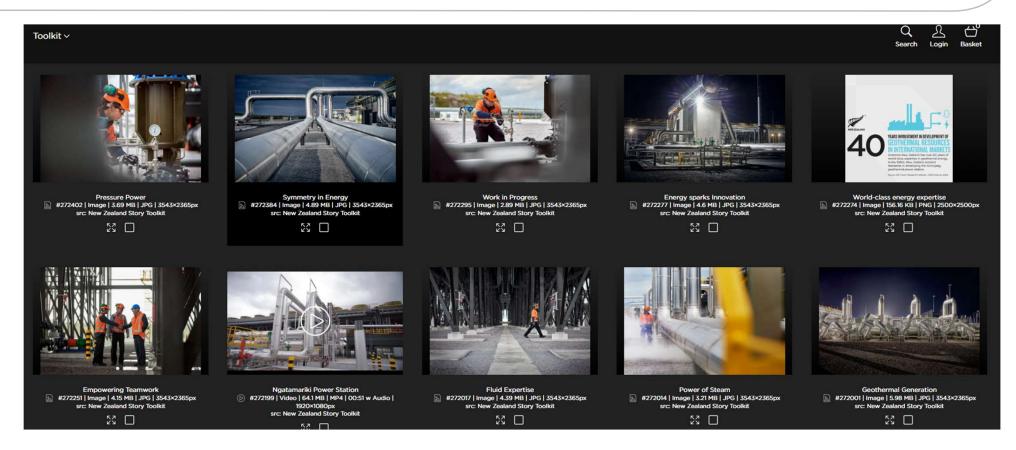
- myNZTE: Events; Learning; Guides and Insights
- Customer Advisors
- Export Essentials
- · Investment Services
- NZ Inc



Focus Customers (F1000) get:

- · Customer Manager
- · In-market Support
- · Funding and Providers
- International Growth Fund
- Springboard
- · External Advisory Services
- · Market Research
- myNZTE: Events; Learning; Guides and Insights
- · Customer Advisors
- Export Essentials
- Investment Services
- NZ Inc

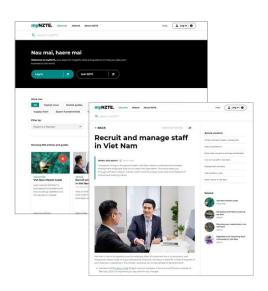
NZ Story Assets – specifically Geothermal (25 to choose from)



myNZTE.

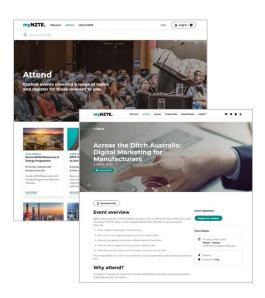
Content

Articles, videos, podcasts and reports; look at general, market specific or sector specific content. 90% of articles are available without logging in to myNZTE.



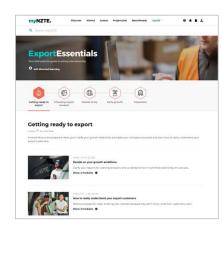
Events

Discover and register for public or customer only events from NZTE and partners.



Facilitated and self-directed learning

Cohort-led export courses for customers, self-directed for all. Self directed course for Raising Capital.

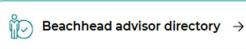














Ngā ratonga o Te Taurapa Tūhono

NZTE solutions

OVERSEAS SERVICES

BESPOKE MARKET RESEARCH

□ 1:1 COACHING AND ADVISORY

GROUPS AND WORKSHOPS

Beachhead advisors

Connect with our network of private sector advisors for market expertise and insights.

Market research services

Get current, in-depth insights and data to help de-risk your market choices.

Māori business support

Meet with an advisor from our dedicated Māori business team for support with your kaupapa Māori entity.

Women in export

Be part of a supportive network and access expert advice.

International service provider directory

Find and connect with service providers in your target markets.

Supply Chain Review

Strengthen your supply chain following expert advice.

Fresh Thinking

Uncover what will drive your business forward.

FINANCE AND FUNDING

Support for your capital raise

View expert advice on securing growth capital.

Digital Coaching

Start your digital transformation.

Position for Growth

Articulate what sets you apart from competitors.

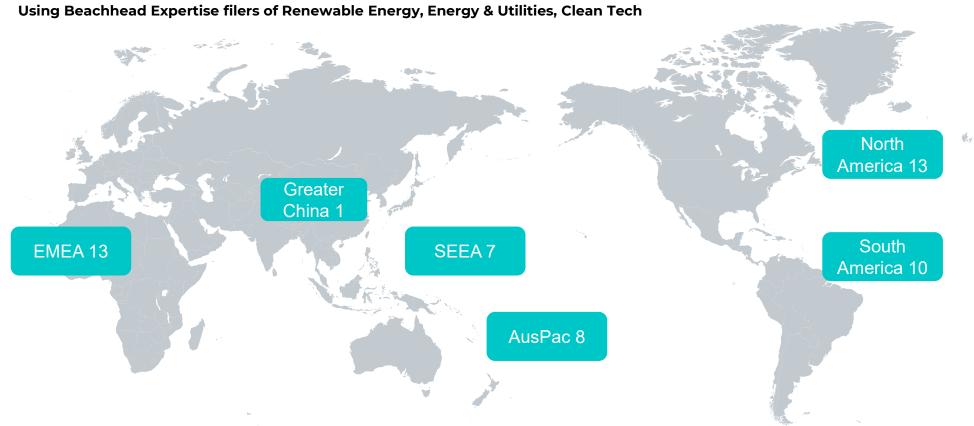
Good Governance

Build the right governance structure for your business.

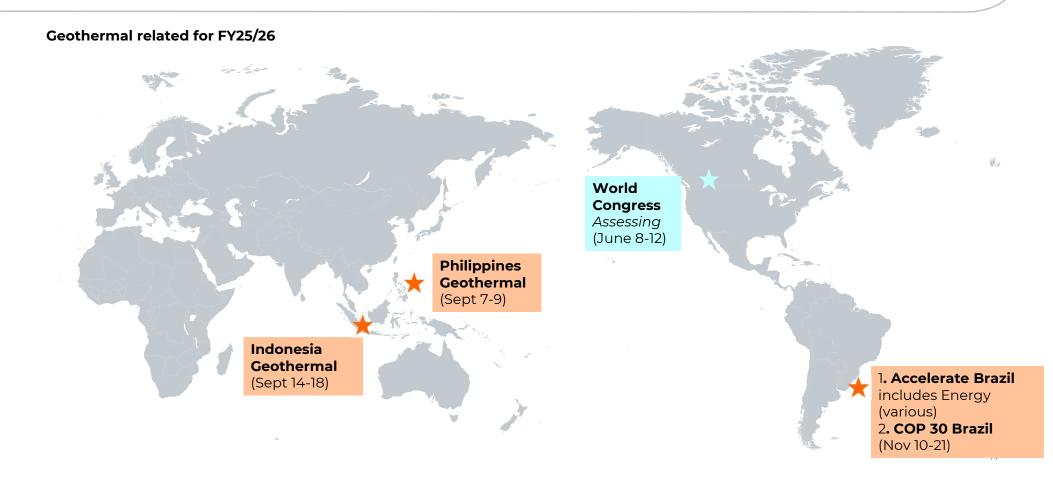
Digital Clinic

Get support with your digital journey.

Beachheads with Energy sector expertism



Working with cohorts around global activations

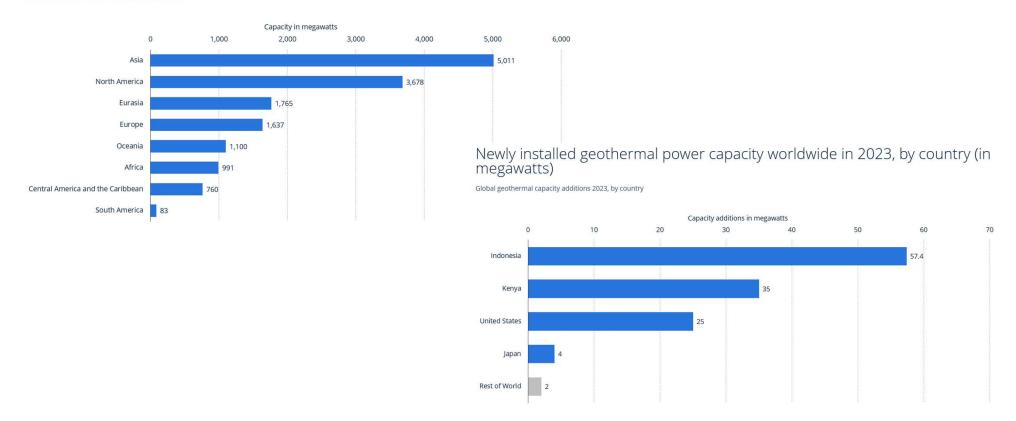




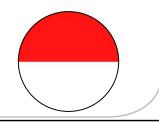
Where are the global 'hot spots'

Geothermal electricity capacity worldwide in 2023, by region (in megawatts)

Global geothermal power capacity 2023, by region







Indonesia's Geothermal Growth Trajectory

- Installed capacity: **2,744 MW** (only 11.2% of potential tapped)
- Targeting 140 MW new capacity in 2025, with major contributions from Pertamina, Star Energy, Medco, and KS Orka
- PLN's RUPTL 2025–2034: Ambitious plan to add 5.1 GW, with 950 MW COD by 2029
- Goal: World's leading geothermal producer by 2030 (4.1 GW capacity)

Government Support & Market Reform

- Streamlined licensing via Regulation No. 5/2021
- Guaranteed PPAs from PLN to attract private investment
- Launch of GENESIS platform for transparent access to geothermal data

New Zealand's Role Through PINZ (2024-2029)

- Technical assistance for policy, planning, and exploration
- Capacity building and workforce training (e.g., Pertamina engineers at University of Auckland)
- Delivery partners include Jacobs, Geothermal Institute, GNS Science, Beca, Seequent

Commercial Opportunities for NZ Businesses

- Across the sectors including Geothermal, NZ companies are expanding their presence
- Strong demand for exploration services, silica extraction, digital modelling, and engineering expertise
- Local entity establishment and partnerships accelerating market access

Shared Sustainability Goals

- Indonesia's Net Zero by 2060 and ENDC targets align with NZ's clean energy leadership
- Geothermal's baseload reliability supports broader renewable integration

Indonesia Geothermal Development in the Past 10 Years

1927 2087 2305 2372 2470 2539 2598

1377 1442 1477 1579





What's Next- NZ- Philippines Geothermal Partnership

Strengthening Bilateral Cooperation

- •Preparing to sign 3rd Amendment to the PH–NZ Geothermal Energy Arrangement, expiring October 2025.
- •Ongoing commitment to technical assistance, capacity building, and commercial facilitation since 2012.

PH-NZ Geothermal Week (Sept 2025)

- •Week-long programme leading into the 6th Philippine International Geothermal Conference (PIGC).
- •Activities include NZ-led technical workshop & plant site visit, networking events, NZ exhibition booth showcasing geothermal capabilities & Individual customer meetings.
- •Reinforces NZ's brand as the "World's Geothermal Centre of Excellence."

Capacity Building & Training

- •Annual geothermal training for 4–5 Filipino professionals at the University of Auckland via the Manaaki NZ Scholarships Programme.
- •First batch of Pertamina engineers to begin training in July 2025.

Technical Leadership in Risk Mitigation

- •NZ selected as Peer Reviewer for the ADB Philippine Geothermal De-Risking Facility (PGRD).
- •Supports early-stage project development by improving feasibility and reducing financial risk.







Reflections from the Japan Geothermal landscape

Current Geothermal Capacity (as of 2024)

- Installed capacity: ~610 MW
- Japan ranks 3rd in the world in terms of geothermal power (potential) capacity (after the U.S. and Indonesia).
- Number of plants: ~20 major geothermal power plants, with dozens of smaller binary-cycle facilities.
- Contribution to national electricity: Less than 1% of Japan's total electricity generation.

Geothermal Potential in Japan

- Estimated Potential: Confirmed: ~23 GW (23,000 MW)
- Resource location: Japan sits on the ring of fire, giving it access to abundant geothermal resources, particularly in Tohoku, Kyushu, and Hokkaido.

Challenges:

- Many resources are located in or near national parks or onsen (hot spring) areas, leading to environmental and cultural opposition.
- Long development timelines: Exploration, permitting, and construction can take 7–10 years.

National Energy Strategy

- Japan's 6th Strategic Energy Plan (2021) aims to:
 - Increase renewables to 36–38% of electricity mix by 2030
 - Double geothermal capacity by 2030 to ~1 GW



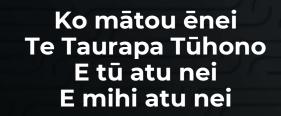
Reflections from Tiawan Geothermal landscape

National Energy Strategy

- Taiwan aims to reach 46 GW of renewable energy capacity by 2030 (currently ~21 GW).
- Geothermal targets are 1.6 GW by 2028 and 3.4 GW by 2030 under its national decarbonization plan.

Taiwan-New Zealand Geothermal Collaboration

- NZTE and Taiwan's Bureau of Energy have co-hosted the TIGC (Taiwan International Geothermal Conference.) along with workshops themed around New Zealand's geothermal expertise.
- In the past, multiple MOUs on geothermal development were signed between Taiwanese counterparts and New Zealand institutions such as the University of Auckland and GNS Science.





We are New Zealand Trade and Enterprise Standing here We acknowledge you all