JRG | Energy

Quarterly Newsletter

March 2025

Welcome to our new edition of JRG Energy's Quarterly Newsletter

In this issue, we're excited to share our latest endeavors in advancing geothermal energy around the world.

JRG Energy is dedicated to delivering sustainable solutions tailored to optimise resources utilization and address end-user demand. Our approach integrates international multi-disciplinary expertise with in-country knowledge, aligned with local environmental, social, and regulatory frameworks through a collaborative development process.

Speak to us today about your next project and how a renewable solution could benefit your organization.

JRG Energy Supports New Zealand–OECS Partnership to Advance Geothermal Energy in the Caribbean

In the picture: Signing the agreement are H.E. Linda Charlotte Te Puni, the new Ambassador of New Zealand to the OECS, and Dr. Didacus Jules, Director General of the OECS. (Photo courtesy of OECS Pressroom)

The Organisation of Eastern Caribbean States (OECS) and New Zealand have officially signed a major partnership agreement to drive geothermal energy development across the region—a significant milestone for clean energy progress in the Caribbean.

JRG Energy are proud to be part of this transformative journey!

Through the Caribbean Facility for Renewable Energy and Energy Efficiency (Caribbean FRENZ)—funded by New Zealand's Ministry of Foreign Affairs and Trade (MFAT), and delivered by Cowater International, JRG Energy is bringing Aotearoa New Zealand's deep geothermal expertise to the Caribbean. Our team is working closely with local partners to deliver tailored technical support, capacity building, and project facilitation.

This collaboration supports several island nations, including Dominica, Saint Lucia, Saint Vincent and the Grenadines, and Grenada, in their efforts to reduce dependence on imported fossil fuels and transition to a more sustainable, energy-secure future.

We're excited to contribute to this regional transformation and look forward to continued collaboration with the OECS, Caribbean Development Bank (CDB), CCREEE, and other key stakeholders.

Read more about the partnership: https://pressroom.oecs.int/oecs-new-zealand-sign-partnership-agreement-to-boost-geothermal-energy-development

Geothermal News

Global Geothermal Power Capacity Surges to 16,873 MW

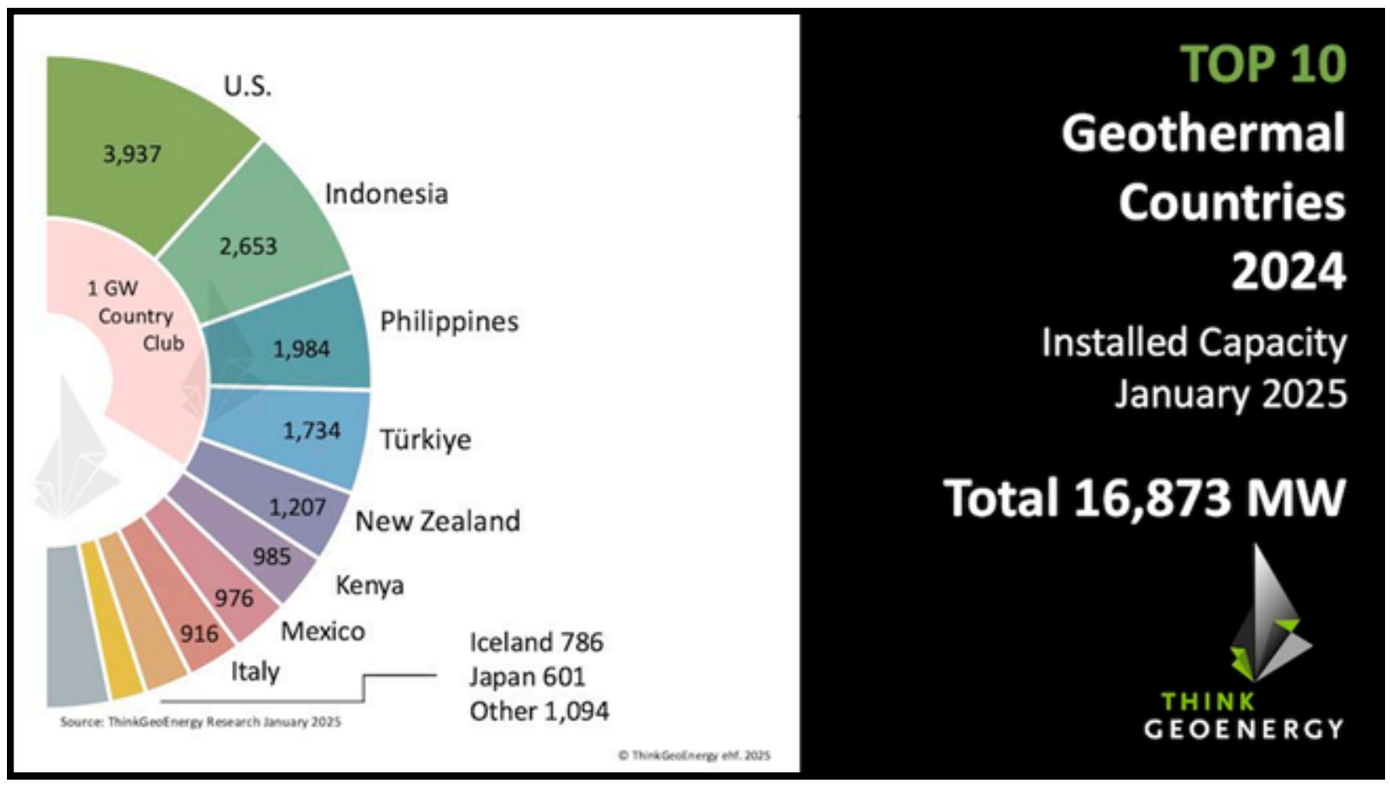


Photo Source: ThinkGeoEnergy

According to ThinkGeoEnergy's latest report, global geothermal power generation capacity reached 16,873 MW by the end of 2024, reflecting steady growth from 16,335 MW in 2023.

Leading the way in geothermal development: United States – 3,900 MW; Indonesia – 2,719 MW and Philippines – 1,928 MW. Collectively, the top 10 geothermal-producing nations account for approximately 93% of the world's installed geothermal capacity.

Key milestones in 2024:

- Kenya surpassed the 1 GW mark with an additional 51 MW from the Menengai geothermal field.
- Indonesia expanded its capacity with 301 MW from the newly commissioned Sorik Marapi and Lumut Balai geothermal plants.

As the world accelerates its shift toward clean, renewable energy, expertise in exploration, drilling, and field development becomes more critical than ever.

At JRG Energy, we are proud to support the global geothermal sector with specialized services in geothermal resource assessment, feasibility studies, engineering and consulting, well testing, reservoir engineering, and project management. Our team's hands-on experience in complex geothermal projects—especially in high-growth regions like Indonesia, Kenya, and the Philippines—makes us a trusted partner in advancing sustainable energy solutions.

Looking ahead to 2025, significant geothermal projects are expected to come online, particularly in East Africa and Southeast Asia. If you're planning or expanding a geothermal initiative, JRG Energy is ready to help you unlock your project's full potential.

🔗 Read more: News Link

Geothermal News

Geothermal Energy: Powering the AI Boom Sustainably

As artificial intelligence (AI) accelerates, so does the demand for massive computing power—and with it, electricity. A new report published by the Rhodium Group (featured on ThinkGeoEnergy, March 11, 2025) highlights how geothermal energy, especially Enhanced Geothermal Systems (EGS), could play a transformative role in sustainably meeting the surging energy needs of AI-driven data centers.

According to the study, EGS could supply up to 64% of projected U.S. data center electricity demand growth by the early 2030s—and under optimal conditions, potentially 100% at lower costs than conventional grid electricity. This comes as data center electricity consumption in the U.S. has jumped from 2% in 2020 to 4.5% in 2024, with projections of reaching 7–12% by 2028, driven by AI models like ChatGPT, Google Gemini, and Meta AI.

What sets geothermal apart? Unlike wind and solar, geothermal delivers 24/7 baseload power with a capacity factor of over 90%, making it ideal for the uninterrupted power demands of high-performance computing. Co-locating data centers near geothermal sources could slash electricity costs by 31–45%, while offering energy at very low levels of carbon expense. —a major incentive for tech giants such as Amazon, Microsoft, and Google, who are racing toward net-zero goals.

However, challenges remain. Regulatory approvals can take 7–10 years, and grid interconnection issues continue to stall progress.

This is where JRG Energy steps in.

With a global track record in regulatory framework studies, resource assessment, and project development, JRG Energy is uniquely positioned to support geothermal initiatives that power critical infrastructure—including AI data centers. Whether your project is for standalone power demand or grid stabilization, our team brings deep expertise to ensure efficient, scalable, and compliant execution from exploration to operation.
As governments and the tech sector push for smarter energy solutions, JRG Energy stands ready to help unlock geothermal's full potential—to sustainably power the future of AI.

To read the report, click this link: https://rhg.com/research/geothermal-data-center-electricity-demand/

Source: ThinkGeo Energy (https://www.thinkgeoenergy.com/could-geothermal-meet-rising-data-center-electricity-demand/)

2024 Global Renewable Capacity accounted to 90% of Total Power Expansion

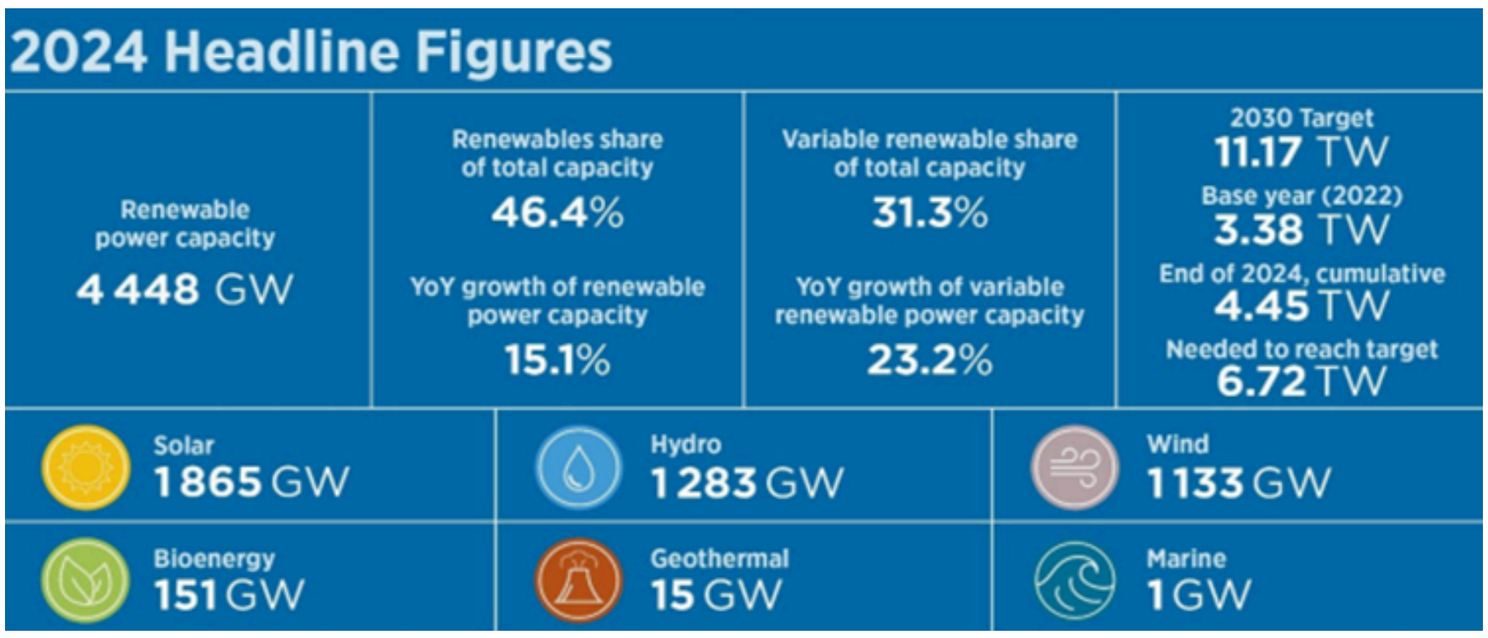


Photo Source: IRENA.org

In the recent press release from the International Renewable Energy Agency (IRENA), the global renewable energy sector in 2024 has achieved unprecedented growth, adding 585 gigawatts (GW) of new capacity—a 15.1% increase from the previous year—bringing the total renewable capacity to 4,448 GW. This expansion accounted for 92.5% of all power capacity additions worldwide, underscoring the accelerating shift towards sustainable energy sources.

In 2024, Asia led the global renewable energy expansion, with China alone contributing nearly 64% of all new capacity. The G7 nations accounted for 14.3%, while the G20 countries were responsible for a combined 90.3% of additions. In contrast, Central America and the Caribbean experienced relatively slow growth, contributing just 3.2% to the global total. On the technology front, solar energy saw a remarkable 32.2% increase, reaching a total installed capacity of 1,865 GW, while wind energy expanded by 11.1%. Combined, solar and wind made up 96.6% of all net renewable additions in 2024.

Challenges Ahead:

Despite this record-breaking progress, the current trajectory falls short of the global goal to triple installed renewable energy capacity by 2030, which requires reaching 11.2 terawatts (TW). Achieving this target necessitates an annual growth rate of 16.6%, highlighting the need for accelerated efforts and strategic planning.

Leadership Insights:

Francesco La Camera, Director-General of the International Renewable Energy Agency (IRENA), emphasized the economic viability and deployability of renewables but also pointed out persistent regional disparities and the urgency imposed by the approaching 2030 deadline.

United Nations Secretary-General António Guterres highlighted that renewable energy is driving the transition away from fossil fuels, creating jobs, reducing energy costs, and improving air quality. He called for a faster and fairer shift to clean energy, ensuring all countries can benefit from affordable, clean power.

Conclusion:

The substantial growth in renewable energy capacity during 2024 marks a pivotal step towards a sustainable energy future. However, to meet the ambitious 2030 targets, a concerted global effort is essential to overcome existing challenges and ensure equitable progress across all regions.

Source Article Link: https://www.irena.org/News/pressreleases/2025/Mar/Record-Breaking-Annual-Growth-in-Renewable-Power-Capacity

Project Highlights

Empowering Geothermal Development in Kenya!

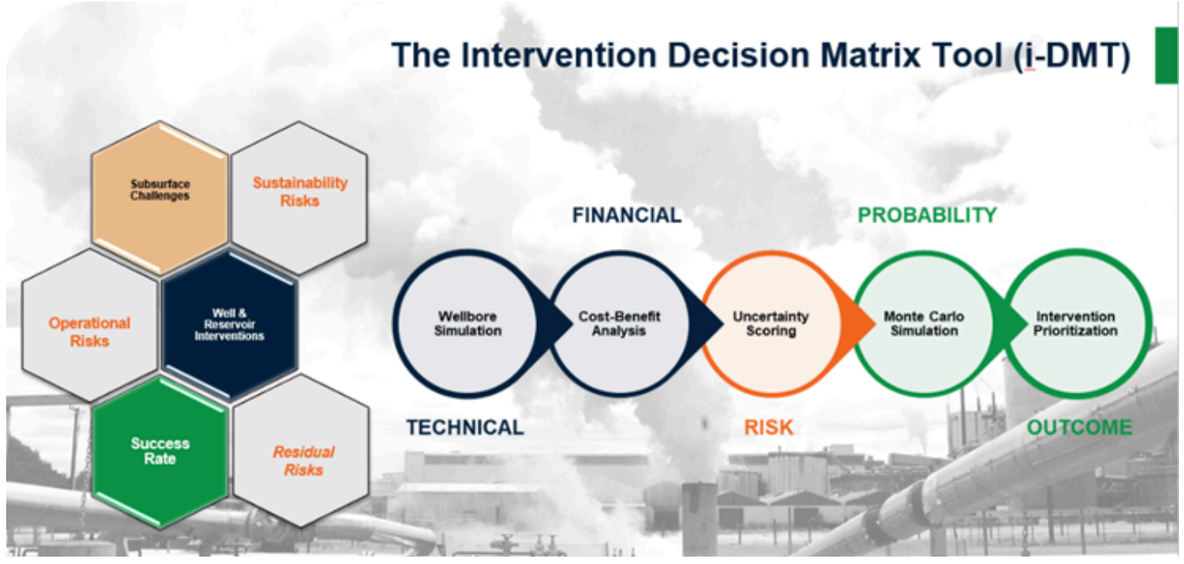
JRG Energy's Reservoir & Direct-Use Lead, Martin Pujol, successfully led a technical workshop for the Geothermal Development Company (GDC) team at the Menengai Steamfield in Kenya.

The workshop was designed to equip GDC's technical staff with essential skills and tools to conduct effective feasibility studies, improve operational maintenance, and bolster internal expertise. In addition, the team explored global best practices from successful spa facilities, gaining valuable insights on how to run a profitable and sustainable hot springs business.

This collaboration underscores our commitment to empowering local teams and enhancing geothermal development capabilities in Kenya, supporting their vision of a sustainable energy future.

At JRG Energy, we believe in knowledge-sharing and capacity building as key drivers for a thriving geothermal industry worldwide.

Well Intervention Planning and Capacity Building in the Philippines



JRG Energy is currently working with a client to plan for a fit for purpose intervention to a legacy geothermal production well using a proprietary intervention decision framework.

Wellbore simulation, cost-benefit analysis and risk assessment are involved in the probabilistic prediction of success and corresponding confidence level for available intervention options.

The client is also being engaged in the process as part of their capacity building for well and reservoir intervention planning.

Project Highlights

Empowering Rural Communities Through Geothermal and Sustainable Agribusiness Training in Colombia!

Since January 2024, JRG Energy has been involved in a project bringing transformative change to communities surrounding the Doña Juana Volcanic Complex in La Cruz, Nariño, Colombia. This initiative focuses on training for rural communities in Agribusiness, Farming, Conservation, and Direct Use of Geothermal Energy.

This initiative delivers hands-on, practical training to 50–60 community members, including women, men, and youth, with a broader impact on over 200 indirect beneficiaries. The program focuses on enhancing skills in sustainable farming, value-added agricultural production, environmental conservation, and geothermal energy use, aiming to strengthen local livelihoods and promote environmental stewardship.

The project features a rich lineup of activities, including:

- Virtual training on sustainable agribusiness and resilient farming practices
- A geothermal energy case study workshop highlighting direct-use applications such as greenhouse heating and agricultural drying
- Conservation sessions on soil, water management, and reforestation
- In-person advisory support on market access and value chains
- A video production to showcase project outcomes and share learnings with Indigenous and regional communities

JRG Energy is proud to support this initiative, with the participation of Pablo Aguilera, contributing technical expertise in direct-use geothermal applications. His involvement has helped bridge renewable energy knowledge with community-based sustainability goals, opening doors to new opportunities for rural development.

This project not only improves food security and economic resilience but also fosters long-term environmental sustainability by promoting renewable energy in agricultural settings. Stay tuned for the final project video, which will highlight success stories and impact from the field.

Project Highlights

De-risking geothermal development through the GRMF – the 10th round of application launched!

The New Zealand Ministry of Foreign Affairs and Trade (MFAT) and the African Union Commission (AUC) have been actively supporting geothermal development in Eastern Africa through the African Geothermal Facility (AGF). As part of these efforts, MFAT and the New Zealand-African Geothermal Facility (NZ-AGF) contracted JRG Energy in 2020 to provide technical assistance to East African geothermal developers under the Geothermal Risk Mitigation Facility (GRMF) Application Technical Assistance Programme.

The GRMF, established to fund, facilitate, and accelerate geothermal energy development in the region, has played a crucial role in advancing geothermal projects by mitigating financial risks associated with early-stage exploration. To date, the GRMF has successfully completed nine Application Rounds (AR), seven dedicated to electricity generation (POWER) and two focusing on direct-use geothermal applications (HEAT).

Since 2020, JRG Energy, through the AGF programme, has supported 11 geothermal projects by providing capacity building, technical reviews of drilling programs, and surface studies. Eight projects have successfully secured GRMF funding, marking a significant milestone in the region's geothermal expansion.

The GRMF launched its tenth round of application in January 2025: the GRMF-POWER Application Round 8. JRG Energy is excited to remain involved in the AGF programme and to guide East-African developers through the rigorous application and project development process, ensuring alignment with international best practices.

Additional information on the GRMF, including eligibility criteria and ongoing funding opportunities, can be found on the GRMF website: https://grmf-eastafrica.org/

Events & Webinars

JRG Energy at GeoTHERM 2025: Advancing Geothermal Innovation

On February 20-21, 2025, the JRG Energy team proudly participated in GeoTHERM 2025 in Offenburg, Germany. Representing our team were Emmanuel Dimakis (Business Development Manager) and Charlene Joubert (Hydrogeologist & Geothermal Scientist).

Now in its 18th edition, #GeoTHERM2025 provided a dynamic platform to explore the latest advancements in shallow and deep geothermal energy. The event featured a high-impact trade fair showcasing cutting-edge technologies and a congress offering key insights from global research and practical applications.

The JRG team always enjoys coming together at conferences around the world to reflect on regional project experiences shared during presentations, explore new opportunities, tools, and approaches, and connect with key players in the energy sector. These gatherings also offer a chance to experience local culture—whether it's sharing a slice of flammkuchen or taking part in the traditions of the Fastnacht carnival!

As the geothermal sector continues to evolve, JRG Energy remains committed to innovation, collaboration, and driving meaningful progress.

See you in 2026 GeoTHERM !!

JRG Energy at SPE Aberdeen Geothermal 2025: Driving Geothermal Innovation

On February 26-27, 2025, SPE Aberdeen hosted the Geothermal 2025: Gaining Momentum conference at the Net Zero Technology Centre in Aberdeen, Scotland. This annual event, now in its fourth year, continues to solidify the role of geothermal energy in the UK's clean energy transition.

The conference featured highly engaging discussions on the latest innovations and advancements in geothermal power generation, machine learning applications in geothermal exploration, and the integration of geothermal energy with carbon capture and storage (CCUS). A keynote presentation by Ryan Law (Geothermal Engineering Ltd.) provided insights into the United Downs Geothermal Project, the UK's first geothermal power plant.

JRG Energy was well represented by Nadia Domanski (Well Services Engineer) who is based in the UK and participated in key discussions to explored opportunities to further support geothermal technology development and awareness in the UK and around the globe.

As the geothermal sector gains momentum, JRG Energy remains committed to supporting the geothermal energy sector with global expertise to help drive sustainable energy solutions for its global client base.

Keep an eye out for chances to connect with our experts at some of the upcoming geothermal industry events.

🔗 Learn more about the event: Geothermal 2025 Gaining Momentum

Events & Webinars

Webinar Recap: Exploring Geothermal Heating Opportunities in Victoria's Latrobe Valley

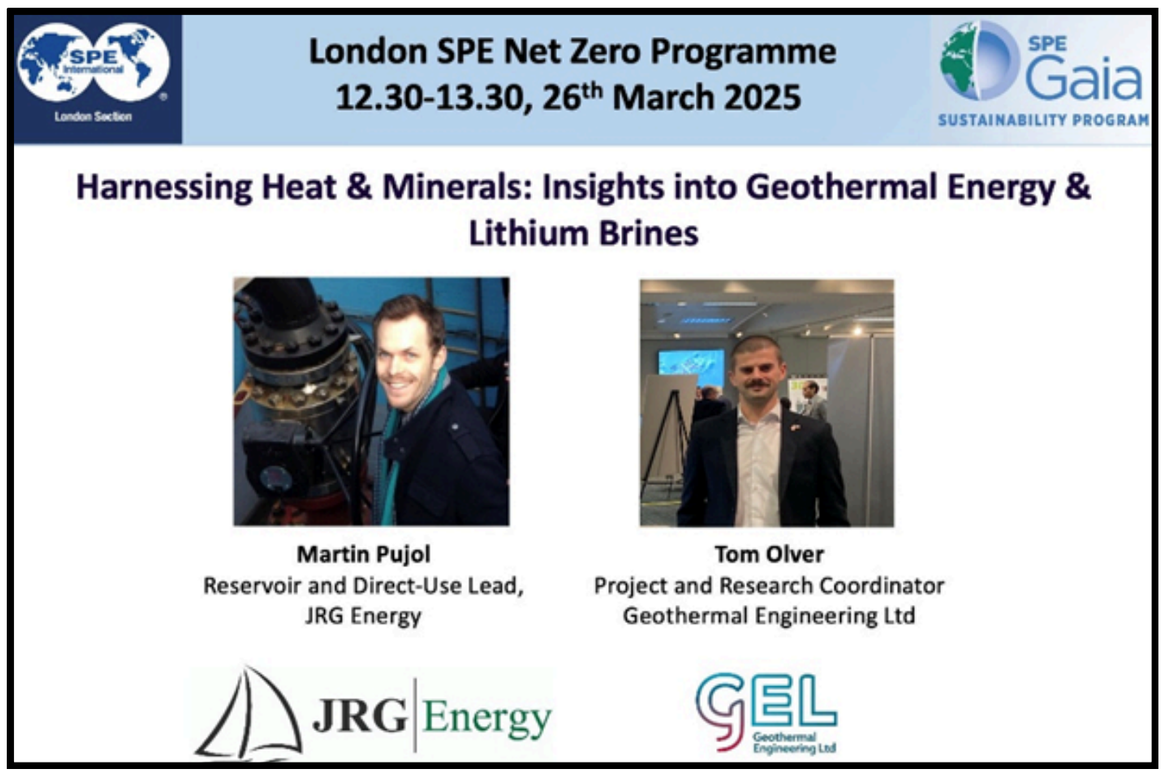
The Australian Geothermal Association (AGA) kicked off its 2025 webinar series with an insightful session on geothermal heating for industrial developments, held on Thursday, 6th February.

The webinar featured expert presentations Martin Pujol, Reservoir & Direct-use Lead at JRG Energy. Alongside Jorik Poessé from RockWater. They shared key findings from a recent geothermal feasibility study conducted in the Latrobe Valley, Victoria, highlighting the area's geothermal potential with an active groundwater aquifer. Based on the presentations, the area has a notably high geothermal gradient, making it a prime location for geothermal development. A geothermal doublet is already operational at the local aquatic centre, delivering temperatures of up to 68°C.

Attendees gained valuable insights into both existing geothermal applications in the region and the potential for large-scale heating developments, particularly for industrial use. The presentation sparked engaging discussions on direct-use geothermal energy, system design considerations, and the role of sustainable heating solutions in Australia's energy transition.

JRG Energy representative Martin Pujol is a hydrogeologist engineer who specialised in reservoir engineering / modelling for geothermal projects and one of the Board of Directors of AGA. He has been actively involved in the geothermal webinars of the organization.

Webinar Recap: Geothermal Insights from the London SPE Net Zero Programme



On March 26, 2025, industry professionals from around the world tuned in to the London SPE Net Zero Programme Webinar for an in-depth look at the latest developments in geothermal energy and lithium brine extraction in the UK.

The session featured Martin Pujol, Reservoir & Direct-use Lead at JRG Energy, alongside Tom Olver, Geologist and Project & Research Coordinator at Geothermal Engineering Limited. They delivered an engaging and informative discussion on geothermal project advancements in the UK, highlighting the opportunities and challenges in the sector.

One of the webinar's key highlights was a comparative overview of the two leading Lithium Brine projects, where the speakers explored the geological and operational differences, as well as the potential impact of these projects on the UK's transition to net zero.

Attendees left with valuable insights into the role of geothermal in clean energy strategies and a clearer understanding of how lithium extraction from geothermal brine fits into the broader energy landscape.

Martin has been instrumental for JRG Energy with his more than 15 years of experience in providing geoscience expertise and project management on geothermal and deep water well projects.

The JRG Energy Team continues to grow!

Introducing

Callum Streeter

General Manager

JRG Energy is excited to welcome Callum, a highly experienced energy professional with 20 years of global experience spanning the upstream oil and gas sector, industrial decarbonisation, and energy efficiency initiatives across Australia, New Zealand, and the United States.

Beginning his career as a drilling engineer, Callum advanced into executive roles in the U.S. upstream energy sector, where he oversaw critical operations in drilling, completions, reservoir engineering, and geology. His leadership and technical insight have consistently delivered results across complex energy environments.

In recent years, Callum has played a key role in advancing industrial decarbonisation and energy efficiency projects, bringing a future-focused perspective to the challenges and opportunities of the evolving energy landscape. Beyond his technical expertise, Callum also brings deep experience in distressed debt, capital raising, commercial negotiations, and M&A activities—making him a strategic asset in both project development and business growth.

A passionate advocate for the global energy transition, Callum sees geothermal energy as a pivotal player in delivering sustainable, reliable, and scalable solutions. His diverse background and forward-thinking approach will be instrumental in driving JRG Energy's continued impact in the geothermal sector.

Susanne Diaz-Stawiszynski

Geothermal Reservoir and Geoscience Specialist

JRG Energy is proud to welcome Susanne, a seasoned geothermal geoscientist with over 10 years of experience leading and supporting geothermal projects across Germany, Europe, and Latin America. Her extensive background in both open and closed loop geothermal systems adds significant value to JRG's growing portfolio of global projects.

Susanne brings advanced expertise in the design, implementation, and evaluation of numerical simulation models for geothermal reservoirs, including geothermal doublets (Open Loop Systems) and Deep Borehole Heat Exchangers (Closed Loop Systems). Her skillset extends to the development and performance monitoring of Aquifer Thermal Energy Storage (ATES) systems, making her a key contributor to projects focused on sustainable heating and cooling solutions.

In addition to her technical capabilities, Susanne has supported licensing and regulatory procedures in Germany, integrating GIS tools to map geothermal resources and streamline permission workflows—experience that aligns seamlessly with JRG Energy's commitment to delivering regulatory-compliant, data-driven geothermal solutions.

With her international perspective and deep technical know-how, Susanne is well-positioned to strengthen JRG Energy's mission of advancing geothermal innovation and supporting clean energy transitions worldwide.

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For more information,
contact us at

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