



GEOTHERMAL RISING

Candidates for Board of Directors Applicant Form 2027-2029 3 Year Term

Personal Information

Name

Julian McDowell

Phone Number

[REDACTED]

Organization and Title (optional)

Geothermal Team Lead, ResFrac

Please provide a brief candidate biography and statement describing your background and qualifications for serving on the Board (maximum 750 words).

Julian McDowell is a geothermal professional with over 16 years of global experience, including 5 years directly in operational leadership, bridging subsurface strategy, reservoir modeling, commercial due diligence, and drilling operations. He currently serves as the Geothermal Team Lead for ResFrac, a fully integrated fracturing and reservoir simulator for simulating hydraulic fracturing and long-term circulation in multistage EGS designs and hydrothermal resources, supplementing its well-established use in the oil and gas sector.

Prior to this, Julian was the Geothermal Resources Market Lead (North America) at Jacobs, where he co-led the establishment and growth of Jacobs' regional capability serving global clients. Based in Calgary, Alberta, his work provides a natural cross-border perspective between the U.S. and Canadian geothermal sectors.

His career spans major international project developments and technical advisory roles across North America, New Zealand, East Africa, Southeast Asia, and the Caribbean. As Reservoir Lead at Contact Energy in NZ, Julian guided the appraisal and development drilling programs for the 174 MWe Tauhara project. He also served as Modelling Lead for the Te Mihi expansion and managed the reservoir modeling portfolio for over 400 MWe of operating assets. Additionally, Julian stepped into operational execution as Acting Drilling & Interventions Manager, leading a 9-person team to deliver wells safely, under budget, and above production targets.

Julian holds a PGCert in Geothermal Energy Technology and a CoP in Energy and Resource Economics from the University of Auckland, an MSc in Applied Environmental Geology from Cardiff University, and a BA (Mod.) in Environmental Science from Trinity College Dublin, Ireland.

Qualifications for serving on the GR Board

Julian would bring a holistic governance perspective to the Board, and the Consultant Seat in particular, combining practical technical expertise with commercial judgment and strategic oversight. While predominantly power-focused, Julian carries a strong passion to see low-temperature geothermal leveraged more widely for heating, cooling, and district energy solutions to maximize the industry's total decarbonization impact.

- **Lender-Side & Investor Advisory:** Julian has led complex subsurface due diligence for financial institutions and developers, evaluating reservoir sustainability, forecasting workflows, and operational risk. His experience evaluating geothermal resources for flagship Enhanced Geothermal Systems (EGS) developments, hydrothermal greenfield projects, and expansions informs his understanding of bankability and financial risk.

- **Bridge Between Hydrothermal & Emerging Technologies:** Having worked across both high-temperature hydrothermal developments and modern EGS/next-generation technologies, Julian provides

balanced, board-level oversight on how emerging coupled physics modeling, well stimulation, and permeability enhancement techniques can be commercially deployed at scale.

- **Operational & Multi-Stakeholder Integration:** From co-founding consulting practices to operational drilling campaign oversight and authoring peer-reviewed GRC and WGC publications, Julian understands the technical rigor, cross-functional collaboration, and strategic clarity required to de-risk geothermal investments.

Your Personal Geothermal Rising Involvement statement (Maximum 500 words).

My commitment to Geothermal Rising (GR) is rooted in advancing our industry's technical body of knowledge, fostering market growth, and championing the diverse ecosystem of operators, consultants, and technology startups driving our sector forward.

GR serves as the primary platform for technical exchange and market advocacy. Over my career, I have contributed directly to GR's technical literature through published papers in the Transactions on resource assessment, basin energy density, and probabilistic risk frameworks. In addition to presenting at GR conferences, I have represented our community at the World Geothermal Congress (WGC) and international summits.

As a consultant and team leader, I have consistently championed GR membership, encouraged early-career professionals to publish, and leveraged GR benchmark standards within my teams. If elected to the Consultant Seat, I intend to apply this commitment to the board level, ensuring GR actively supports new technology pioneers, cross-border EGS initiatives, low-temperature geothermal (including open and closed loop) integration via Thermal Energy Networks (TENs), and high-impact industry advocacy.

Statement of your personal plan if elected (Maximum 500 words).

If elected to represent the Consultant Seat on the Geothermal Rising Board of Directors, my plan focuses on four strategic governance pillars:

- **Standardizing Subsurface Risk to Lower Capital Costs**

My experience has shown me how consultants play a critical role in bridging technical risk and financial capital. To accelerate geothermal deployment, GR must continue to engage the financial community and take leadership in how resources and reserves are reported. I will work with GR committees to elevate standardized framework guidelines for subsurface due diligence, risk messaging, and resource assessment, drawing from experiences in both hydrothermal and EGS sectors, while adapting proven reporting frameworks from adjacent energy industries where appropriate. Helping lenders and institutional investors clearly quantify subsurface risk will expand project financing options and lower capital costs across the industry.

- **Scaling EGS Innovations Alongside Traditional Hydrothermal Assets**

The geothermal landscape is evolving rapidly. I will advocate for GR programs, committees, and publications that foster cross-pollination between traditional hydrothermal operators and next-generation developers, including early-stage startups and cross-border pioneers. While these are often viewed as distinct pursuits, there are significant opportunities for hydrothermal projects to leverage advances in well stimulation and resource management driven by EGS technology. Furthermore, my current role leading the geothermal team at ResFrac places me directly at the intersection of advanced subsurface physics, hydraulic fracturing, and reservoir simulation across both oil & gas and geothermal. This provides a unique vantage point to bridge technical tools, modeling workflows, and engineering perspectives to help the sector scale faster.

- **Elevating Cross-Sector Knowledge Sharing and Technical Workshops**

GR's most powerful asset is its ability to convene experts. In the Consultant Seat, I will lead and advocate for strategic board initiatives that empower GR committees to curate practical workshop tracks and webinar series. These programs will bring real-world operational insights, technical best practices, and emerging digital tools, including AI applications in subsurface characterization and reservoir management, directly to our membership. By leveraging GR's existing educational platforms, we can support committee-driven technical exchanges where independent advisors, engineering firms, and operators share open-source learnings, elevating technical competency, interdisciplinary collaboration, and practical knowledge across our consulting community.

- **Championing Thermal Energy Networks and Low-Temperature Heat**

Decarbonizing heating and cooling is one of the largest untapped opportunities for the geothermal sector. I will support GR's advocacy for Thermal/Geothermal Energy Networks (GENs/TENs), district energy, and direct-use applications within its programming, policy outreach, and technical committees. While my primary background is in power generation, I am committed to using my board seat to ensure GR actively supports the growth of low-temperature geothermal, helping bridge municipal, utility, and consulting

stakeholders to unlock thermal decarbonization at scale.

Signature

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Date

Tuesday, August 25, 2026

If you have any questions regarding the election process, Board service, or candidate materials, please feel free to reach out directly to Caity Smith, Chair of the Governance & Nominations Committee, at csmith@xgsenergy.com.