



Monday, July 8, 2024

Madeleine King
Minister for Resources and Northern Australia

RE: Response to Australia's Future Gas Strategy

Minister King,

EnerGeo Alliance is writing following the announcement on May 9 2024 of Australia's Future Gas Strategy.

We are writing in response to direct concerns of our members about the approach taken in the strategy on:

- Exploration
- Geoscience/Seismic surveys

First, let me introduce the EnerGeo Alliance.

Introduction

Founded in 1971, the EnerGeo Alliance is the global trade alliance for the energy geoscience industry, the intersection where earth science and energy meet. Providing solutions to revolutionize the energy evolution, the EnerGeo Alliance and its member companies span more than 50 countries, representing onshore and offshore survey operators and acquisition companies, energy data and processing providers, energy companies, equipment and software manufacturers, industry suppliers, service providers, and consultancies. The surveys acquired by our member companies are a prerequisite for the safe discovery, development, and delivery of mainstay sources of energy (oil and gas), alternative energy and low-carbon energy solutions that meet our growing world's needs.

We work across the Asia-Pacific region with governments, regulators and other trade bodies. In Australia, we have engaged with government on offshore environment regulatory reform, data regulation and marine parks. With a full-time scientific staff we

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provide a scientifically rigorous position on all matters concerning energy geoscience surveys. For example, EnerGeo Alliance worked with the Australian Institute of Marine Science (AIMS) to co-design their Shoal to Shore Research program that determined that the transit of a commercial seismic source over a marine habitat had no impact on the reef fish¹ or pearl oysters² in that habitat.

Australia's Future Gas Strategy

The Future Gas Strategy provides a robust baseline for Australia's exploration, production and development of gas through to 2050. In particular, the strategy points to a need for:

- At least a doubling of electricity generation capacity by 2050, a tripling of Australia's east coast gas generation capacity to 2,281 TJ/day by 2035 and gas-powered generation capacity that can provide large time-limited contributions to Australia's energy supply out to 2050 and beyond.

Consulting external benchmarks such as the IEA's World Energy Outlook 2023³ demonstrates the criticality of gas as an energy source for advanced and developing economies with a greater than 30% increase in the use of gas in Australia's Asian neighbours out to 2050.

The Australian Petroleum Statistics note that 160,900 Mm³ of gas was produced in Australia in 2023⁴. Petroleum engineers tell us that field decline rates of 20% per annum mean that c. 32,000 Mm³ or c. 1 Tcf of gas must be explored for and developed every year to sustain the current rate of production, notwithstanding the increase in gas consumption envisaged by an expanding Asian export market and the need for increased gas-powered electricity generation across Australia itself.

¹ Meekan, M. G., Speed, C. W., McCauley, R. D., Fisher, R., Birt, M. J. Currey-Randall, L. M., et al. (2021). A large-scale experiment finds no evidence that a seismic survey impacts a demersal fish fauna. Proc. Natl. Acad. Sci. U.S.A. 118:e2100869118. doi: 10.1073/pnas.2100869118

² Miles J.G. Parsons, Diego R. Barneche, Conrad W. Speed, Robert D. McCauley, Ryan D. Day, Cecile Dang, Rebecca Fisher, Hosna Gholipour-Kanani, Stephen J. Newman, Jayson M. Semmens, Mark G. Meekan, A large-scale experiment finds no consistent evidence of change in mortality or commercial productivity in silverlip pearl oysters (*Pinctada maxima*) exposed to a seismic source survey, Marine Pollution Bulletin, Volume 199, 2024, 115480, <https://doi.org/10.1016/j.marpolbul.2023.115480>.

³ <https://www.iea.org/reports/world-energy-outlook-2023>

⁴ <https://www.energy.gov.au/energy-data/australian-petroleum-statistics>

The Australian Future Gas Strategy notes that exploration and development should ‘focus on optimising existing discoveries and infrastructure in producing basins...’ (Principle 3, Page 29).

Our members, many of the most active participants in Australia’s upstream gas industry, have not found 1Tcf of new gas in Australia for several years. While our members might have resources and reserves on this scale under or near development, there are not fields ‘hoarded’ with the more than 30 Tcf required to sustain current levels of gas production out to 2050 and beyond.

To deliver the gas needed for Australia’s future, more exploration outside of the existing discoveries and producing basins will be required.

EnerGeo notes that more exploration is part of the strategy of many of Australia’s neighbours and peers. Particularly, Australia’s neighbour Indonesia is promoting increased exploration for energy security and at the same time fast tracking carbon capture and storage projects.

To be investable by our members more exploration in Australia will need to be competitive against opportunities in our part of the globe and have a clear pathway through regulatory approval.

To underpin more exploration, and the characterisation of Australia’s resource endowment, energy geoscience surveys are required to enable accurate targeting of exploration and development wells. The primary imaging technology deployed is seismic surveying. Other electromagnetic techniques such as gravity or magnetic surveys and passive seismic surveys have a role in exploration and development. Only reflection seismic surveys provide a subsurface image sufficient to safely drill a well costing tens of millions or plan a development costing over a billion dollars.

To use a medical analogy, drilling without a seismic survey to position a well is like asking a surgeon to undertake surgery without an x-ray. Like a surgeon specifying an x-ray, seismic surveys are targeted only on high-grade areas.

EnerGeo members acquire seismic surveys only over the areas high-graded by our industry partners and other titleholders. The survey areas could be high-graded for offshore oil and

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gas exploration such as the TGS Capreolus 3D⁵ over the Bedout sub-basin, for offshore greenhouse gas storage (CCS⁶) such as the SLB/Viridien Bonaparte MC3D in the Petrel sub-basin, or other resources such as the onshore Ramsay 2D seismic survey⁷ acquired by Terrex Seismic that targets natural hydrogen.

EnerGeo members work with government, regulators, environment specialists and scientific experts to minimise any potential impact associated with these surveys. Our industry will deploy any market-ready technology that produces the intended data/images while also reducing the spatial, environmental and temporal footprint of surveys as this is good for the environment, stakeholders and our members' business.

Ultimately, geoscience surveys not only indicate where exploration, development or storage may be appropriate but also areas that lack prospectivity, benefiting citizens and future governments with knowledge for managing multiple activities.

An assertion that energy geoscience surveys should be minimised is environmentally and commercially appropriate.

Any implication that minimisation of surveys is compatible with an adequate supply of gas through to 2050 and beyond, a thorough characterisation of Australia's resources and meeting Australia's net-zero commitments through the development of a CCS industry is mis-guided.

Exploration

Based on the Future Gas Strategy EnerGeo sees that Australia needs on-going exploration outside of existing discoveries and producing basins and is perplexed the government's strategy spends little time on the importance of exploration. To implement this program of exploration EnerGeo asks that government:

- Awards the 12 exploration permits with the Joint Authority for a decision.
- Re-instates annual exploration licensing rounds with a commitment to holding them over the long term.
- Empowers regulators to re-cycle inactive offshore permits.

⁵ <https://www.tgs.com/seismic/multi-client/asia-pacific/australia>

⁶ CCS – Carbon Capture and Storage

⁷ <https://www.terrexseismic.com/news/terrex-seismic-mobilises-for-gold-hydrogen>

- Updates regulations, legislation and expectations of regulators to provide greater approval certainty and minimize opportunities for vexatious legal challenge.
- Provides fiscal certainty and reasonable incentives to efficiently explore Australia's resource endowment.
- Engages with communities to demonstrate why:
 - Exploration is important to Australia's economic and social wellbeing, as well as underpinning Australia's place in the world.
 - Exploration is compatible with Australia's net-zero commitments.

Seismic surveys

To deliver the exploration required to deliver the Future Gas Strategy, seismic surveys are a critical first step. In recent times, the acquisition of seismic surveys in Australia has received a higher degree of public interest. Our members and EnerGeo have embraced this public interest and sought to inform and educate the public about the proposed activity and the long history of safe and responsible seismic survey acquisition in Australia and around the world. As an example we have engaged with media organisations to correct misinformation (e.g. concerning whale strandings) and misleading terminology (e.g. use of the term 'seismic testing' and 'blasting').

On occasions this consultation has been over-taken by interest groups who seek to stop resource development of any sort. The promulgation of misinformation by interest groups will inhibit offshore wind development, exploration for critical minerals (onshore and offshore) as well as ongoing gas exploration.

To acquire the seismic surveys necessary to the success of the Future Gas Strategy, EnerGeo asks government for:

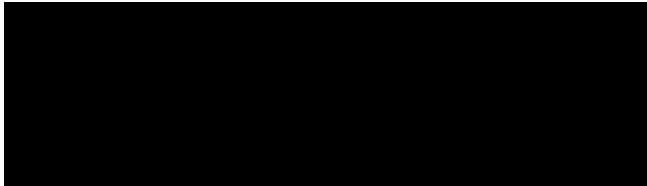
- Updates to regulations to provide greater approval certainty and minimize opportunities for vexatious legal challenge.
- Collaborative engagement with the Australian community to demonstrate why:
 - Seismic surveys and exploration are important to Australia's economic and social wellbeing, as well as underpinning Australia's place in the world.
 - Such surveys are regulated and agreed to only after significant scrutiny by a world-class regulator.



Thank you for taking the time to read this submission. EnerGeo is available to work with your team to implement the Future Gas Strategy and looks forward to a constructive dialogue.

As a next stage, may I propose a meeting between you or your staff with the EnerGeo Alliance. To arrange this please contact Dr Simon Molyneux our Asia-Pacific Representative based in Perth (smolyneux@energeoalliance.org +61 418 349 672) to make arrangements. Thank you again for your time and attention.

Sincerely,



Dustin Van Liew
Vice President, Global Policy & Government Affairs
EnerGeo