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POWERING A BETTER NEW ZEALAND TOGETHER

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Productivity Commission
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Submission on *Improving Economic Resilience* issues paper

Introduction

1. Energy Resources Aotearoa is New Zealand's peak energy advocacy organisation. We enable constructive collaboration across the energy sector through and beyond New Zealand's transition to net zero carbon emissions in 2050.

2. This document constitutes our submission on the Productivity Commission (the Commission)'s *Improving Economic Resilience* issues paper. We are happy to speak in further detail if this would be of assistance to the Commission.

High level comment

3. The energy supply chain underpins and enables all economic activity. A resilient supply chain that delivers affordable and sustainable energy in a reliable and timely manner is critical to serve our ongoing economic and community wellbeing.

4. We note the Commission has not identified the energy sector (nor any fuel-specific subsectors) in its proposed focus industries and communities. We surmise this is because:

    - the energy sector is already subject to a significant amount of policy and operational work – such as the Gas Transition Plan and New Zealand Energy Strategy – that will consider resilience against supply chain shocks and disruptions among other things; and

    - the energy sector supplies all the focus industries, and so will be captured in the Commission's work by virtue of its critical support for each of them.

5. On this basis, we are generally comfortable with the omission of energy from the Commission's focus industries. Our comments are offered to inform how the Commission thinks about the interdependencies between its focus industries and the energy sector, and how it might augment or influence ongoing government work in this space.

6. We note that while it is easy to focus on energy and fuel resilience, arguably the first-order question is economic strategy. Once we have identified those goods and services our economy produces and sells to the rest of the world, we can then turn to the necessary question of how to fuel those activities. This points to the criticality of a clear economic strategy that signals direction across all sectors, including energy.

7. We are happy to discuss these issues further, and/or to coordinate engagement with our members, who represent the energy resources value chain across all fuels.

Responses to questions

Question 1: What supply chain disruptions and trends are you worried about?

Global supply chain risks

8. New Zealand remains reliant on hydrocarbon (petrol/diesel) imports to meet its total energy demand. In 2021, New Zealand imported 332 PJ of energy (primarily liquid fuels and coal), making up a significant share of its 872 PJ total primary energy supply.[1]

9. This global reliance on supply chains runs beyond liquid fuels. The New Zealand energy sector is reliant on access to imported skilled labour and materials to support ongoing investment in maintenance and growth of domestic energy production. Our dependence on these supply chains is likely to be heightened through the 2020s and beyond, as we embark on a historically significant investment in new electricity generation, transmission, and distribution infrastructure – at the same time most other countries in the world will be doing the same and competing for these inputs.[2]

10. New Zealand is deeply connected to the global energy market, and this will remain the case for the foreseeable future. We agree with the overarching recognition in the Commission's issues paper that while exposure to global supply chains can be managed and mitigated, it cannot be eliminated.

Domestic supply chain risks

11. We also face domestic supply chain risks. New Zealand's energy networks are exposed to weather and other natural hazards (such as earthquakes and volcanic activity). Recent experience through Cyclone Gabrielle showed the significant

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1 https://www.mbie.govt.nz/dmsdocument/23550-energy-in-new-zealand-2022-pdf

2 BCG's *The Future is Electric* report found that $42 billion in new investment needs to be made in the 2020s to deliver the rapid growth in renewable electricity generation required. See: https://web-assets.bcg.com/b8/ba/ce97b6334f019c20269a398800c2/summary-brochure-the-future-is-electric.pdf

impact that severe weather events can have on our networks – though we note utility providers were quick to re-establish services.

12. In the case of electricity, we are increasingly weather dependent, with our growing share of renewable electricity relying on wind and solar generation with seasonal and intra-day intermittency that needs to be managed in real time. Our dependence on electricity, too, is set to increase dramatically as we progressively electrify more segments of our transport and industrial sectors.

13. Domestically produced natural gas fuels critical industries and many commercial/residential customers (via a pipeline network in the North Island, and largely bottled/networked LPG in the South Island). Over time, the relative economics of renewable gas (i.e., biomethane) may see gas blending occur in the network, introducing another dimension to the supply chain resilience picture.

14. Upstream natural gas supply is heavily dependent on ongoing investment in development of existing production fields, and that investment in turn is dependent on long-term confidence about gas demand and policy settings.

Question 2: What is your industry/community currently doing or planning to do to address supply chain concerns?

15. New Zealand is lucky to have a diverse mix of abundant energy resources – including wind, hydro, oil, natural gas, and geothermal, among others – that complement each other (thus mitigating domestic supply risks). Maintaining parallel delivery vectors for energy ensures we have redundancies in the event of disruption.

16. Taken together, this menu of domestic energy sources also functions as a hedge against global supply chain disruptions by reducing our reliance on offshore markets to some extent.

Liquid fuels

17. Imported fuel suppliers are well practised at managing supply chain risks on behalf of their consumers. It is notable that despite significant global disruptions in recent years, and elevated prices as a result, New Zealand did not encounter significant supply shortages (e.g., queues at petrol stations). This reflects ongoing collaboration between the fuel sector and government to ensure fuel supply resilience is adaptive and effective.

18. Here we reiterate our view (expressed elsewhere) that New Zealand's fuel supply resilience has not declined since the closure of Marsden Point Refinery, on the basis that we now see more, and more frequent, shipments of liquid fuels from multiple sources to multiple New Zealand ports.

Gas and electricity

19. Notwithstanding a challenging policy environment (detailed in question 3) the upstream oil and gas sector continues to invest in development of existing fields and, in the case of OMV's Toutouwai prospect, new exploration.

20. There is general consensus throughout the electricity sector that additional flexible generation capacity will be required through the coming decades to support our increasingly intermittent renewable generation portfolio, and to keep the lights on during periods of peak demand. In the absence of any currently viable alternatives, gas-fired peaking is the clear solution. At least one new gas-fired peaker plant is consented, yet to be built. We discuss policy-related barriers that may explain this in our response to Question 3.

Access to skilled labour

21. Energy Resources Aotearoa – in cooperation with Te Pūkenga, the Taranaki Regional Skills Leadership Group, and industry stakeholders – has developed an Industry Skills Action Plan for the energy resources sector. This recognises the significant and growing need for skilled labour through and beyond the energy transition.[3] The labour market for the energy resources sectors is global in magnitude, and New Zealand must work hard to remain competitive in this environment. To the extent this labour requirement can be met domestically, we are working hard to enable this, but recognise that we will ultimately need access to global talent too.

Question 3: How can the government help to enhance the resilience of your industry/community to supply chain disruptions?

22. As we see it, the core role of government is to provide a stable, predictable policy environment that supports broad investment confidence across the energy and industrial sectors. Such a policy environment allows the market to maximise and optimise our access to energy, achieving an efficient mix of different energy sources and an efficient balance between domestic and imported energy. We believe commercial players are best placed to identify, shoulder, and manage supply risks as they are incentivised to do so through competitive markets.

23. This point extends to emissions and climate policy, where we have consistently advocated for stable settings that, while aligned with a trajectory to net zero emissions by 2050, enable an orderly transition and sustain incentives to invest in core infrastructure.

24. We recognise that government continues to play a fundamental role by setting the rules of the game and coordinating operational responses in response to disruption events.

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[3] https://www.energyresources.org.nz/assets/Uploads/Building-Energys-Talent-Pipeline-Skills-Plan-5-October-22.pdf

Liquid fuels

25. The Government has announced its intent to introduce a minimum onshore fuel stockholding obligation for fuel suppliers that covers petrol, diesel, and jet fuel, as well as procuring its own stocks of diesel.

26. We appreciate the policy intent (increasing fuel supply resilience against global disruptions/shocks) but suggest this needs to be balanced against the likely cost impost on fuel suppliers of additional infrastructure (ultimately passed to consumers). Given the sustained role of fossil fuels through the coming decades as we transition toward a net zero economy, it is important that fuel suppliers are well placed and incentivised to make the significant investment required to maintain their infrastructure and networks.

Gas and electricity

27. Significant new investment in renewable electricity generation capacity is required. A recent Sapere report found that from 2028, a 50% reduction in consent processing times will be required to achieve New Zealand's net zero targets (a challenge compounded by an expected 40% growth in total demand on the consenting system from all sectors).[4] Significantly reducing consenting barriers to new electricity generation should be a priority, because it will support the capacity needed to continue meeting growing demand.

28. The investment climate for natural gas has been significantly challenging in recent years, due to a cacophony of negative policy signals.[5]

29. As our electricity system becomes increasingly renewable – and thus exposed to weather-related intermittency – gas-fired generation capacity will play a critical peaking role to keep the lights on. In the near term this will require natural gas as a fuel. Over time, this can be paired with carbon capture and storage; or progressively blended with renewable gas as it becomes economic.

30. There is broad consensus that new fast-start electricity peaking capacity is required through the coming decades, and that in the absence of a credible alternative, gas-fired peaking will meet this need. But as detailed above, the current policy environment makes such an investment a challenging prospect. This ultimately undermines the resilience of the domestic electricity supply chain.

31. We are hopeful the forthcoming Gas Transition Plan and New Zealand Energy Strategy will be taken as opportunities to reaffirm the ongoing role of gas, and to revisit policy settings with a view to enabling the investments required.

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4 https://www.tewaihanga.govt.nz/assets/Uploads/INFRA_Final-Report-Jan-2023.pdf

5 Examples include the 2018 decision not to allocate any new oil and gas exploration permits; onerous decommissioning requirements for oil and gas facilities; the NZ Battery Project, which is exploring the $16 billion Lake Onslow pumped hydro storage project among other options; and the now-aspirational target of 100% renewable electricity by 2030.

Access to skilled labour

32. The government should ensure that immigration settings enable the relatively free flow of skilled international labour into the energy sector. This includes ensuring the needs of the sector are reflected in any policy statements; that vocational training and education policy is effectively linked with immigration policy; and that highly skilled migrants relevant to the sector face as few barriers to entry as practicable.

33. By the same token, we welcome the cooperation of Te Pūkenga, Hanga Ara Rau, Workforce Development Council and the Taranaki Regional Skills Leadership Group in developing and now implementing our Industry Skills Action Plan. Ensuring vocational educational settings reflect the needs to current and emerging energy sector employers is a critical focus and should remain so.

Question 4: What should the Commission study to learn more about the economic resilience of industries and communities?

34. The Commission's issues paper lists (among other options) liquid CO_2 as a potential issue of interest, given the shortage experienced over the 2021/22 summer due to disrupted output at the Kapuni plant (now New Zealand's only domestic source of liquid CO_2). We suggest this would be worthwhile. It would surface questions as to whether New Zealand could unlock additional sources of CO_2 via carbon capture, utilisation, and storage from geothermal or natural gas activities.

Conclusion

35. Notwithstanding there is already a suite of policy work underway in the energy sector, we strongly suggest the Commission considers the energy system's critical role in underpinning all the identified focus industries. It is worth revisiting our earlier point that a clear economic strategy is rightly the priority, which will then inform sector-specific questions such as how we fuel the associated economic activity.

36. We appreciate the opportunity to provide some input to the Commission's inquiry. We are happy to speak further to the content of this submission.