24 July 2023

Electricity Authority
By email to fsr@ea.govt.nz

OMV Exploration & Production

Henrik Mosser
General Manager OMV NZ

Tel +64 4 910 2500
Fax +64 4 910 2504

OMV New Zealand Ltd
Level 20, Majestic Centre
100 Willis Street
Wellington,
New Zealand

www.omv.com

Submission on *Ensuring an Orderly Thermal Transition*

Background

1. OMV New Zealand (OMV) is a major energy provider for the country, finding and developing natural gas deposits in Taranaki. Our business helps to meet the energy demands of New Zealanders in economically, environmentally, and socially responsible ways.

2. OMV welcomes the opportunity to provide feedback on the Electricity Authority's (the Authority) consultation document (the paper) titled *Ensuring an Orderly Thermal Transition*.

The global energy sector is undergoing a transition

3. The energy sector is at the heart of the challenge to reduce Greenhouse Gas emission levels. OMV sees that natural gas has an important role in acting as a lower carbon bridge, while the world switches from oil and coal to renewables.

4. In 2022 OMV launched a new global strategy which will see our oil and gas business decline over time to be replaced with low carbon energy sources. By 2050 OMV intends to be a net zero company across all of Scope 1, 2 and 3 emissions. OMV will gradually reduce fossil fuel production by 2030, with a stronger decline in the following decades. By 2050 we will exit fossil production for energy use.

5. While our oil and gas production will decline, we see excellent opportunities to build a successful low carbon business by 2030. Here, we have identified two main areas: geothermal energy, and carbon capture and storage (CCS). OMV defined a target to reach a CCS storage capacity of approximately 5 million tons of CO2 per year by 2030 and to achieve at least 1 TWh from renewable power to support our operations.

6. OMV's strategy and investment priorities have a direct impact on Aotearoa New Zealand's energy transition and the orderly transition from thermal fuels.

The energy transition brings challenges and opportunities

7. OMV welcomes the Authority's examination of the role of thermal generation during the transition. While the energy transition brings many opportunities, the risks are also significant. In the context of the required multi-decade,

economy wide transformation to achieve Net Zero by 2050, our recent submissions have highlighted:

a. the critical importance of regulatory stability in enabling (or at least not hindering) the significant investment needed in New Zealand's energy system;
b. the need to make sure policy interventions are considered only when really needed to deliver emissions reductions that are additive over what would be achieved by the ETS alone, and such policy interventions should be justified by robust cost-benefit analysis;
c. the importance of ensuring that New Zealand's emissions are not simply exported to overseas economies, i.e. the need to avoid decarbonisation through deindustrialisation;
d. the need to ensure that decarbonisation options are not unnecessarily or prematurely closed off, but instead the need to maintain optionality is recognised;
e. that gas is widely seen to play an important role in the energy transition, providing a low emissions alternative to coal and continuing to provide energy to consumers until the transition to lower emissions energy sources can be realised in a reliable and affordable manner; and
f. the important role Methanex plays in underpinning gas demand to ensure continued gas availability to other hard-to-abate consumers through the energy transition.

8. The energy transition is also driving rapid technological innovation. OMV's operations globally are suggesting that CCS may viably reduce the link between thermal generation and emissions. We note that the Climate Change Commission also identified the potential role for CCS to play in addressing hard-to-abate residual emissions in the medium-term and achieving net negative emissions in the long-term. Accordingly, we suggest that your desired outcome "*to avoid …excessive costs and emissions (if there is too much thermal generation)*" may be too limiting. Recent modelling studies such as Boston Consulting Group (BCG) 's "*The Future is Electric*" and the Parliamentary Commissioner for the Environment's report "*The economics of four future electricity system pathways for New Zealand*" have found that excessive costs may also arise during the thermal transition due to the overbuild of renewable generation.

9. You may wish to consider rewording the Desired Outcome to "…*avoid .. excessive costs and emissions (if there is too much unabated thermal generation without CCS, or overbuild of other generation*).

Gas plays a critical role in the NZ energy sector…

10. In New Zealand we are fortunate to enter the energy transition in an enviable position, with renewable energy sources providing most of our electricity (around 82%) and around 40% of our total primary energy. Gas plays an important role in the current energy system. It provides a secure energy supply for electricity generation and for users of industrial heat, as well as a feedstock into chemicals such as methanol. We note the paper shows that thermal generation continues to play a vital role in supporting electricity generation during the energy transition. We concur with studies such the Climate Change Commission's 2021 *Inaia Tonu Nei* that gas lends itself to critical applications that support services needed in the transition, such as security of supply during dry years and for year-round peak demand until other sources of back-up energy become available.

…but requires continued investment to avoid a disorderly exit

11. The paper states that it does not directly consider investment decisions related to the provision of gas supply, as that matter is outside of the Authority's area of responsibility.

12. The provision of gas supply currently remains as OMV's core business in NZ. We consider that the Authority's decision to not directly consider gas supply may be unduly limiting and may restrict your ability to recognise emerging risks to an orderly thermal transition within NZ's

interlinked, integrated energy system. Investment decisions for gas supply are critical to security of supply and an orderly thermal transition. The availability of gas throughout the thermal transition will require continued investment. For example, around 80% of current field production at the Māui Field is delivered by wells that have been drilled since late 2020, highlighting the importance of investing in these existing fields. Investment decisions in gas supply are also "lumpy" in a similar way that you have identified for thermal plant, requiring episodic, very large, up-front expenditure.

13. Gas production is a complex business and exists with intrinsic engineering and economic uncertainty. This uncertainty has been recently shown by MBIE's 2023 gas reserves data, which shows a 17% decrease in Proven plus Probable (2P) reserves. In previous years gas use has been balanced by increases in 2P reserves. However, in 2022 there was an overall net decrease of 332PJ in gas reserves due to revisions of remaining 2P gas reserves. Estimated gas reserves have now dropped below ten years of remaining use for the first time. We note also the unexpected 2022 issues in the gas storage facility at Ahuroa, where reservoir performance and modelling suggest a reduction in available storage. Gas use is declining, but 2022 was the wettest and warmest winter on record and more electricity was supplied from hydro generation. During the transition, we can expect that gas demand will be significantly different in a dry year.

14. While investments are continuing currently, in 2021 the Gas Industry Company (GIC) has highlighted within their Gas Market Settings Investigation that delayed or deferred investments could mean that sufficient reserves are not developed and are unable to support security of supply for electricity generation and major gas users during the transition out to 2030. The GIC, using modelling by Concept Consulting, found that production could come largely from existing reserves until 2027, but beyond 2027 it is likely to require development of contingent resources. This will require additional investment, and the GIC timeline does not yet reflect the 2023 reduction in 2P reserves.

15. We note that the paper considers the supply of some fuels (such as water) as a key element within your models, noting the increase in thermal generation in a dry year when water is more constrained as a fuel. However it appears to consider that some fuels (including gas) will be available in an unconstrained manner when required. This may not be correct.

16. We also wish to return to highlighting the pivotal role Methanex plays in underpinning gas demand to ensure continued gas availability through the energy transition. Although outside the electricity sector, Methanex's activities will influence the attractiveness of ongoing investment to maintain the availability of gas. This is a further factor of thermal transition risk that should be considered by the Authority, and we reiterate the importance of ensuring that New Zealand's decarbonisation is not achieved through deindustrialisation.

17. We recommend that the Authority aligns with GIC and MBIE to ensure that it maintains visibility of these risks in the ongoing supply of gas. A joined-up approach between the regulators of the sector is advantageous in the complex energy transition for Aotearoa New Zealand.

Different views exist on the future state of NZ electricity

18. We consider the modelling associated with the paper, conducted by Concept Consulting, to be a useful addition to the growing library of quantified future electricity scenarios. The direction of travel in these scenarios is clear, with a consensus that thermal generation will materially decline during the transition.

19. However, we note that other recent studies have arrived at different conclusions with respect to the detailed picture of the transition, and in particular the role of new thermal generation. For example, modelling conducted in late 2022 by BCG suggested that fast-start flexible, supply-

side resources will play an important role in ensuring resource adequacy at peak periods in the future. BCG identified that a total of 400 MW of battery storage and 700 MW of gas peaking capacity is needed to meet the highest 2030 demand peak. New thermal peaking capacity is also suggested by the Climate Change Commission's 2021 *Inaia Tonu Nei* Demonstration Pathway, and by two cases within MBIE's 2019 Electricity Demand and Generation Scenarios. And most recently, Transpower (as System operator) has released its Security of Supply Assessment for 2023, suggesting that North Island winter capacity margins and New Zealand winter energy margins cross upper security standards in the mid-late 2020s.

20. Although variation between models is to be expected given the uncertainties of the energy transition, you may wish to consider what weight you wish to give to the Concept Consulting models in your planning. Prudent risk management may suggest alternative models, regular refreshing of the modelling, different methodologies and different providers should be drawn on to give a fuller assessment of risks.

The electricity market does not exist in a vacuum

21. We are pleased that your paper specifically seeks to understand selective support mechanisms paid outside the wholesale market that could pose a challenge to achieving an efficient thermal transition, and also seeks to understand to what extent thermal retirement/investment decisions will be driven by non-financial factors.

22. We consider that government policy may play a significant role here, and note:

    a) The aspirational target by the Government of achieving 100% renewable electricity by 2030. We would welcome an understanding of how the Authority's modelling of an orderly thermal transition recognises this target, and we suggest you may wish to consider scenarios where additional policy interventions to achieve this target are made.

    b) The funding of the NZ Battery Project, a very significant investment outside of the electricity market, which is considering options for long-term energy storage in NZ. While commissioning of the pumped hydro option is not likely before 2037, the portfolio options under consideration by the Project may be more rapidly available and may influence the market during the thermal transition.

23. We also note the global shift towards preferred investment in renewable energy, in which OMV is playing a role. However social licence for continued investment in, or even continued use of, thermal generation may shift. More rapid exit from thermal generation due to social licence or ESG-driven investor concerns may change the incentives on market participants and lead to a disorderly transition.

The Authority plays an important role, but is not alone

24. We congratulate the Authority on developing the paper. However, the Authority is only one participant in a complex and rapidly-changing policy landscape. At time of writing, we await the publication of consultation papers on the Gas Transition Plan, Electricity Market Measures, the NZ Hydrogen Roadmap, and Offshore Renewables. These are significant policy initiatives that may materially change the landscape.

25. In particular, the Government's pending Gas Transition Plan may have influence and overlap with the Authority's work in ensuring an orderly thermal transition. Responding to the Authority's evaluation of thermal transition risks without clarity on Government transition plans for the gas sector is challenging. This runs the risk of the policy landscape appearing disconnected and unduly complex to sector participants. We suggest that the Authority may

wish to await conclusion of the policy development process for the Gas Transition Plan before suggesting that thermal transition risks are likely to be low.

Thank you for the opportunity to provide feedback on the paper.

Yours sincerely

Henrik Mosser
General Manager, OMV New Zealand