SUBMISSION

Submission from Straterra to MBIE on Strengthening national direction on renewable electricity generation and electricity transmission

May 2023

Introduction

1. Straterra is the industry association representing the New Zealand minerals and mining sector. Our membership is comprised of mining companies (including coal), explorers, researchers, service providers, and support companies.
2. We welcome the opportunity to make this brief submission on the Consultation Document Strengthening national direction on renewable electricity generation and electricity transmission, (the document). Our submission comments on the proposed national direction at a high level and focuses on the need to not exclude non-renewable sources of generation as back up.

Submission

3. We are supportive of the need to streamline resource consenting processes in New Zealand including for new infrastructure.
4. We agree with the premise in the consultation document that electricity consumption will increase as the economy decarbonises and that increased generation will be needed to meet this demand.
5. We support increased use of renewable electricity generation, and we recognise the role of National Direction Instruments to achieve this.
6. Where we strongly disagree with the document is the assumption that increased renewable electricity generation means there is no role for coal (or gas) in the electricity generation mix.
7. In this submission we outline why coal will continue to play an important role in backing up electricity generation and in achieving New Zealand's emission reductions overall.
8. We recommend that the national direction instruments recognise this and do not prevent the use of coal in electricity generation.

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Renewable electricity vs renewable energy targets

9. The document refers to "government targets for increasing renewable electricity generation" that the national direction tools are needed to help achieve, but the document does not state what these targets are.

10. As noted on the MBIE website, the Government has set a target that 50% of total energy consumption will come from renewable sources by 2035. This was the advice of the Climate Change Commission. The Government had a target of 100% renewable electricity generation by 2030 but following the advice of the commission it downgraded this to an aspirational target.

11. The rationale for discarding the firm 100% renewable electricity target was that decarbonising the last few per cent of the electricity mix comes at a very high marginal cost of abatement, meaning electrification becomes increasingly expensive, thereby disincentivising the electrification of transport and industrial heat. In other words, too much renewable electricity will hamper the achievement of increasing New Zealand's overall renewable energy and jeopardise the achievement of net zero carbon emissions by 2050.

12. Notwithstanding our support for increased renewable electricity generation, the "energy-wide" goal of 50% of all energy consumed coming from renewable sources by 2035 makes more sense than a renewable electricity target. There are multiple routes to achieving 50% renewable energy, and we suggest coal has an ongoing role in many of those.

Coal as a back-up for electricity generation

13. Phasing out coal for electricity generation is short sighted given the important role limited volumes of coal play, and will continue to play, as a backup to renewable sources and thus in providing energy security.

14. That backup occurs in dry years when hydropower is limited; at times when the wind isn't blowing and the sun not shining; and also, in times of gas outages. If coal were removed from the electricity system, New Zealand would face electricity shortages and disruptions / blackouts.

15. We recognise that coal's role in electricity generation is limited but it makes a crucial contribution in this backup role, and this should continue, even, as we argue below, as part of a strategy to lower energy emissions.

Future demand for electricity to assist in decarbonisation

16. This role of non-renewable sources in electricity generation is likely to continue into the future, and in fact as electrification continues it may increase in volume terms, if not as a percentage of the total mix.

17. As stated, electricity demand is likely to increase significantly in the future as increased electrification of transport and industry occurs. The Climate Change Commission's 2021 path has electricity generation increasing at 20% above 2018 levels by 2035 to meet industry and electric vehicles' needs. The bulk of the new generation capacity is likely to be renewable which, of course is very positive for New Zealand emissions path. However, the case for a small amount of gas and coal as a backup to this new renewable electricity is as strong as it is for the current generation. In fact, in volume terms – if not as a proportion – there is even a case for it to increase over that time to meet increased demand.

18. In spite of an increase in gas and coal use in electricity generation, lower emissions for New Zealand would still result through greater electrification, i.e. as transport and industry switches to electricity. In other words, perhaps paradoxically, continuing with coal (and gas) can make the increased electrification goal easier to achieve and reduce emissions / increase decarbonisation in the process.

19. Ironically, climate change is likely to intensify seasonal and intraday weather conditions, further testing the resilience of the national grid as the country becomes more reliant on renewable generation. This issue strengthens the case to continue using coal (and gas, if still available) to provide backup into the future.

20. The Interim Climate Change Committee in 2021 estimated that achieving 100% renewables, without any dry-year reserve thermal generation, could add more than $800 million to the cost of electricity each year. It quantified the emissions abatement cost at more than $1200 per tonne of CO2e, as the percentage of renewable generation nears 100%. That is more than 20 times the current price of CO2 on the secondary market.

Coal vs gas

21. While some commentators, including the Climate Change Commission, accept a role for fossil fuels as a backup in electricity generation for security of supply, they see gas playing this role. We believe gas and coal should be used together as a backup to renewable energy.

22. As matters stand, there is uncertainty in future gas supply in New Zealand, partly because of Government policy to greatly constrain new oil and gas exploration, and more importantly in the short term from outages at existing producing assets. Coal is a reliable and flexible energy input and should continue to play its current role to safeguard New Zealand's energy security.

Conclusion

23. In conclusion, the proposed National Direction Instruments, along with Government policy generally, should not exclude the continued use of coal and other non-renewable sources to back up the expansion of renewable electricity that will occur in coming years.