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## TRUSTPOWER SUBMISSION: PRICE DISCOVERY UNDER 100% RENEWABLE ELECTRICITY SUPPLY: MDAG ISSUES DISCUSSION PAPER

### 1. Introduction and overview

Trustpower Limited (**Trustpower**) welcomes the opportunity to provide a submission to the Market Development Advisor Group (**MDAG**) on its Price Discovery under 100% Renewable Electricity Supply Issues Discussion Paper (**the Discussion Paper**).

The Discussion Paper provides valuable insight into the potential market dynamics under a 100% renewable generation scenario and the associated challenges to the wholesale market design that will need to be further considered in the next stage of the MDAG's work. Key findings from the paper include:

- a) Hydrogeneration and green peaker's capability of providing the flexibility required to balance the overbuild of intermittent generation under 100% renewables;
- b) Prices becoming more volatile; and
- c) The importance of confidence in market outcomes being maintained to achieve 100% renewables under the existing energy market structures.

Our submission focuses on:

- a) The Government's aspirational 100% renewable electricity target;
- b) The potential need for further investigation into the implications of less permissive resource consenting arrangements and climate changes impact on existing hydrogeneration to understand the potential market dynamics of a more renewable electricity sector; and
- c) The importance of ensuring regulatory certainty during the energy transition.

### 2. The 100% Renewable Electricity Target

While outside the scope of the MDAG's considerations, we consider that the best approach for the Government in setting policy for the energy sector would be to adopt the Climate Change Commission's recommendations to:

- a) establish a renewable energy target, rather than an electricity specific target; and
- b) replace the aspirational 100% renewables target with a goal of 95-98% renewables by 2030.

Regardless of the Government's final policy decisions in this space, MDAG's current work explores the dynamics of a significantly more renewable NZ electricity industry and provides an important basis for further considering how the existing market arrangements might need to adapt. This work is both timely and critical.

The Discussion Paper identifies a number of important issues that will have implications for the wholesale market with more renewable generation, such as: the role of demand side flexibility; the need for the contracts market to do more heavy lifting; and potential changes in competitive forces.

We strongly support MDAG further considering the identified issues and the appropriate range of solutions during the next phase of the review.

### **3. Implications of resource consenting arrangements on modelling**

MDAG's work highlights the important, more flexible role that existing hydrogeneration will need to play as it replaces thermal. Whilst outside the remit of MDAG, it will be critical that hydrogeneration's ability to provide this flexibility continues to be ensured under the new resource management system.

We agree with the Discussion Paper's findings that hydrogeneration will provide much of the needed source of flexibility if managed well. We note that there are no changes to the hydro generation base considered in the modelling (paragraph 5.14 of the Discussion Document) and that the system as it was in 2020 has been used for the simulations (i.e. current resourcing consenting arrangements apply). However, we think there is a risk that resource consents for existing hydrogeneration become less permissive under the new resource management system, consequently modelling based upon behaviours observed under pre-existing consents may not be reflective of the future flexibility of these generators.

To better understand the potential implications if less flexible consenting arrangements eventuate, Trustpower supports the modelling scenarios further exploring hydrogenerations' role as the primary provider of flexible electricity under a less permissive consenting arrangement.

We also suggest it would be useful for the MDAG to remain cognisant of the potential implications of more volatile weather events in the future. For example, higher hydro lake levels may lead to more frequent use of flood management plans and its uncertain what implications this might have to the system overall. This will be exasperated by greater weather volatility.

### **4. The critical importance of regulatory/investor certainty**

As MDAG identifies, an unprecedented level of investment across the electricity supply chain, particularly in renewable generation, will be required to meet New Zealand's decarbonization objectives.

We anticipate that the necessary private sector capital to finance this investment will be made available, however capital is global and will naturally flow to the global markets with:

- a) the best risk adjusted returns; and
- b) policy/regulatory settings that protect investor interests and encourage the greater level of emissions reductions per dollar (all else equal -e.g. certainty of returns, stable political and regulatory settings etc).

As outlined in our previous presentation to MDAG on this topic, we consider that regulators during the transition will need to remain cognizant that investors also require:

- a) Regulatory/policy settings that encourage investment and divestment.
- b) Robust, well understood and stable regulatory/policy objectives.
- c) Transparency, consistency and stability of the regulatory/policy decision-making processes.

- d) Primacy of policy over politics, particularly when making 20 year+ investments.

Certainty around the regulatory/ policy settings is an important prerequisite for investors.

We consider it is vital that changes to the market settings to support the energy transition are well justified, clearly signalled, and well understood in order to enable investors to develop expectations about the market they will operate within and ensure a smooth transition occurs. There is also likely to be an important role for specific transition arrangements in some cases.

Evidence based decision making around regulatory changes continues to be important and we welcome the level of rigour applied by the MDAG in seeking to understand the market dynamics and potential issues associated with 100% renewables that need further consideration.

The Authority has several workstreams underway to support the energy transition, including the Future Security and Reliability and Distribution Reform workstreams, and are seeking to appropriately co-ordinate this work. While its vital that we ensure the machinery of the wholesale market is up for task of achieving a more renewable electricity sector, the extent of regulatory change potentially impacting on the sector needs to be carefully balanced as the uncertainty it creates has implications for investment decisions.

We support the Authority considering how it can seek to provide greater certainty to investors during future stages of work in this area (and for related workstreams) to best enable the marked increase in investment that is required for a more renewable future. Advice from the MDAG around how to seek to achieve would be valuable.

We also strongly support the MDAG and the Authority seeking to ensure that investors can maintain confidence that market outcomes remain reflective of underlying market conditions in a world where there is more price volatility and where the competitive landscape may look quite different to today. To this extent, an analysis of the strength of the competitive trade-off between hydrogeneration spill and renewable spill from other sources may help to instil confidence in the cost-reflectivity of prices under a 100% renewable scenario.<sup>1</sup>

For any questions relating to the material in this submission, please contact Peter Southey Jensen, Regulatory Advisor on 027 205 7347.

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<sup>1</sup>As raised by John Culy in the first MDAG workshop.