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## TRUSTPOWER SUBMISSION: LIST OF APPROVED DG IN LOWER SOUTH ISLAND

### 1 Introduction

- 1.1.1 Trustpower Limited (**Trustpower**) welcomes the opportunity to provide a submission to the Electricity Authority (**the Authority**) on its consultation paper on the *List of distributed generation eligible to qualify to receive ACOT: Lower South Island* (the **Consultation Paper**<sup>1</sup>).
- 1.1.2 We have written extensively on this topic over the past several years, and do not wish to repeat those comments here.
- 1.1.3 In this submission, we focus our comments instead on three areas:
  - a) Regulatory change process;
  - b) Eligibility assessment methodology; and
  - c) The list of approved generators.
- 1.1.4 Each of these areas is covered in turn in the following three sections.

### 2 Comments on regulatory change process

#### 2.1 Background

- 2.1.1 In December 2016 the Authority announced it was implementing an alternative proposal to that put forward in its May 2016 proposal – without further consultation.
- 2.1.2 Its revised Code amendment (**DG Amendment**) requires the Authority to determine, based on advice from Transpower, which DG (**eligible DG**) in each of four transmission pricing regions is

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<sup>1</sup> Available online at <https://www.ea.govt.nz/dmsdocument/22903>

expected to contribute to reducing the cost of Transpower providing an interconnection service in the relevant regions in the three-year period from 1 April 2017 to 31 March 2020.

- 2.1.3 Transpower subsequently provided the Authority with its first report, covering DG in the lower South Island, and accompanied by a report from experts Mitton Electronet, in April 2017.
- 2.1.4 The Authority did not publish this report until 5 December 2017, some eight months later, at which time it also published the Consultation paper.
- 2.1.5 We understand this delay arose because of the time it took for the Authority to accept the methodology Transpower adopted to assess eligible DG<sup>2</sup>.

## **2.2 Lack of consultation is problematic**

- 2.2.1 We were extremely disappointed the Authority did not consult on its DG Amendment. This troubles us as a precedent and also because we think an additional round of consultation would have highlighted errors in the Authority's core assumptions, including:
  - a) The risk it has overestimated and overstated the benefit of reform by not adopting in its own cost-benefit analysis (CBA) the methodology subsequently used by Transpower in its eligibility assessment – instead basing its CBA on broad-brush, oversimplified assumptions;
  - b) The very real prospect that the assumed benefits would not arise because of the nature of the contracts price-regulated and other distributors have signed in respect of DG connected on their networks; and
  - c) The extent of the additional (unfunded) costs Transpower would incur in delivering the GRS analysis.

Consultation feedback on any of these could have caused the EA to reconsider its proposal.

- 2.2.2 Consultation would also have enhanced the overall tractability of the proposal for DG investors and reduced what Professor Robert Baldwin calls secondary regulatory risk<sup>3</sup>.
- 2.2.3 In addition, a further round of consultation would have highlighted the improbability of Transpower meeting the legislated timeframes. It is now known that Transpower:
  - a) required an extension for the delivery of the first report;
  - b) breached the Code timeframes for the second report; and
  - c) has advised the Minister<sup>4</sup> that it will also miss the Code deadlines for the third and fourth reports.
- 2.2.4 This regulatory process does not engender either market confidence or investor certainty.

## **3 Comments on eligibility assessment methodology**

- 3.1.1 As discussed above, we would have appreciated the opportunity to comment on Transpower's assessment methodology prior to it being finalised and implemented.
- 3.1.2 Despite this, in general we think that, the methodology employed by Transpower's consultant, Mitton Electronet, is appropriate and fit for purpose.

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<sup>2</sup> See Transpower's Briefing to the Incoming Minister, October 2017, at page 6. Available online at <https://www.beehive.govt.nz/sites/default/files/2017-12/Transpower.pdf>

<sup>3</sup> See his report at <https://www.ea.govt.nz/development/work-programme/pricing-cost-allocation/review-part-6-dg-pricing-principles/consultations/#c15998>

<sup>4</sup> See Transpower's Briefing to the Incoming Minister, October 2017, at page 6.

### 3.2 Benefits of DG that have not been considered

3.2.1 However, we note that there are three benefits of DG that have not been assessed by Mitton Electronet:

- a) Firstly, the analysis does not consider the benefits of electrical loss reduction. This has not been quantified.
- b) Secondly, the analysis does not consider the benefits of other network support, such as voltage support and reactive power. Many DG around New Zealand, including most of our power stations, provide such benefits.
- c) Thirdly, the analysis ignores the fact that from time to time DG can be constrained on, or run, to provide energy while maintenance is undertaken. Further, as is currently the case in the upper North Island region, network companies often ask DG either to run or be available to provide a security product while Transpower carries out work at a GXP.

3.2.2 This suggests the Authority may have further overstated the consumer detriment arising from existing DG.

## 4 Comments on the list of approved generators

### 4.1 Summary

4.1.1 We have restricted our analysis of the list of eligible generators to the locations of generation plant in the Lower South Island owned by Trustpower and Tilt Renewables.

4.1.2 We have identified one key issue, which is presented in this section, namely that where generation is part distribution network connected (i.e. physically embedded) and part grid-connected (but notionally embedded), only the physically embedded plant is included on the list of approved generators. This issue arises largely from the Authority's decision to compile its list on an ICP basis.

4.1.3 Relatedly, where there is more than one ICP in use on the registry for a generation scheme (which is the case for the Waipori scheme) this creates further confusion.

4.1.4 In summary, on the basis of Transpower's analysis and conclusions, the table below sets out the information that is required to be included in the Authority's list of approved generators at Halfway Bush and Naseby.

GXP	Scheme(s)	Basis of connection	ICP number(s) in use	Nameplate capacity (MW)
HWB0331	Waipori Hydro Scheme, Deep Stream Hydro Scheme, Mahinerangi Wind Farm	Partially physically embedded, partially notionally embedded	0000207212DE07E and 0000201299DEE20 for the physically embedded generation, but N/A for the notionally embedded generation.	128.02
NSY0331	Paerau-Patearoa Hydro Scheme	Physically embedded	0002751984TGB5D	12.45

## 4.2 Further information

- 4.2.1 The Mitton ElectroNet report clearly identifies that all the generation at the two qualifying GXPs listed in the table above is required to maintain grid reliability.
- 4.2.2 Our connection agreement with Aurora covers both Trustpower-owned generation (stations 1A and 2A of the Waipori hydro scheme and the Deep Stream hydro scheme), and Tilt-owned generation (the Mahinerangi Wind Farm). This plant is all connected at the same point, although there is more than one ICP number in use covering the schemes.
- 4.2.3 The Waipori scheme consists of a series of power stations which were built and connected to the power system at different times. Some parts of the scheme are physically embedded, and the rest are notionally embedded<sup>5</sup>. Indeed, one unit of Waipori 2A station is typically physically embedded and the other two units are typically physically grid-connected (noting though that the configuration is flexible and is re-configurable at short notice).
- 4.2.4 This is noted in Transpower's report (at page 10) as an issue to be resolved. We understand the Authority received this report in April 2017.
- 4.2.5 The grid-connected portions of the scheme obviously do not have ICP numbers. We note that the recent amendment to the DGPPs does not require that the list of DG is compiled on an ICP basis, as opposed to listing the names of the relevant generation stations or schemes. This would have been appropriate for the larger power schemes such as Waipori.
- 4.2.6 The Waipori scheme is subject to a recently negotiated Prudent Discount Agreement which meets the requirements of Part 12 of the Code.
- 4.2.7 Exclusion of notionally embedded generation from the list of approved generators creates a risk that Prudent Discount Agreements enabled under Part 12 are undermined by and/or in conflict with the DG Amendment under Part 6.
- 4.2.8 This highlights further implementation issues that have arisen by the Authority not consulting on the DG Amendment.
- 4.2.9 We request that the Authority resolves these issue and includes all of the generation in the table above on the list of eligible generators, to ensure consistency with the Mitton ElectroNet and Transpower reports.
- 4.2.10 We are very happy to engage further with the Authority in this process.

Regards,



**PETER CALDERWOOD**  
**GENERAL MANAGER STRATEGY AND GROWTH**

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<sup>5</sup> The notional embedding is enabled under a Prudent Discount Agreement, which is enabled under Part 12 of the Code.