

18 March 2021

Alison Andrew
Chief Executive
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By email: Alison.Andrew@transpower.co.nz

Dear Alison

Proposed TPM residual charges and the treatment of batteries

I am writing to you regarding the application of the proposed TPM's provisions relating to the residual charge to grid-connected batteries and similar storage.¹ Our respective teams have been discussing this issue since mid-November 2020, when Contact Energy wrote to the Authority outlining its concerns, and particularly following the Authority's response to Transpower's Checkpoint 2A submission on 7 December 2020. We appreciate your team's constructive approach to this matter.

During discussions between Transpower and Authority staff on 12 March 2021, your team asked the Authority to provide

- a statement explaining the Authority's view that the batteries issue can be accommodated within the 2020 TPM guidelines and that the guidelines do not need to be amended
- clarification of the Authority's intent on the application of the residual charge to batteries, in the context of the options paper Transpower will shortly be publishing. That clarification will help Transpower in its consideration of whether it is able to apply greater flexibility in the TPM it proposes by relying on clause 2 of the 2020 TPM guidelines²

This letter responds to those requests.

Context

By way of background, the proposed residual charge allows Transpower to recover its revenue (that is not recovered through other charges) in a way that does not distort its customers' decision-making. As a starting point, this charge reflects the principle of spreading these costs widely.

However, in the 2020 TPM guidelines the Authority decided to carve generation out from this principle because we recognised residual charges on generation would largely be passed on to

¹ The issues under consideration are relevant to grid-connected solid-state batteries and also any grid-connected device that stores energy (in any form) for later use, eg, a pumped hydro scheme or any other energy storage installation. The issues are also relevant to embedded utility-scale storage devices. For simplicity, this letter uses the generic term 'grid-connected battery' to refer to any type of grid-connected storage device or embedded utility-scale storage device.

² Clause 2 provides that "The TPM may differ in its details from the particular requirements in these Guidelines (but not their intent, including as set out in the Authority's intent section of these Guidelines), if Transpower considers, in its reasonable opinion, that doing so would better meet the Authority's statutory objective than complying with these Guidelines in their entirety."

load in the form of higher energy prices (by delaying generators' entry). Based on this reasoning, under the guidelines generation does not pay the residual charge except to the extent it has load.³

During the TPM review process the Authority previously recognised that batteries operate as both load and generation, but the specific role (now contemplated by Contact) that could be played by grid-connected batteries was not subject to significant discussion or debate during the Authority's consultation process in respect of the TPM guidelines.

In our view Contact's letter, received after the 2020 TPM guidelines were published, raises a potential problem of competitive neutrality between generation exempted from the residual charge and batteries (which are not currently exempted).

The Authority noted this competitive neutrality problem in its 9 December 2020 response to Contact's 16 November 2020 letter, as follows:

The Authority considers that battery owners, like all other transmission customers, should in principle contribute to the cost of transmission investments from which they benefit. Battery owners gain substantial benefit from connection to the grid and should pay for that.

A grid-connected battery owner meets the definition of a load customer under the TPM guidelines, and on that basis would contribute to the residual charge. However, we note that there may be reasonable further discussion to be had – between Contact and Transpower, as part of its development of the proposed TPM, in the first instance – about whether, in allocating the residual charge, there is justification for treating batteries differently to other load for the purpose of preserving competitive neutrality between batteries and generation in the wholesale market.

This was the basis upon which we referred this issue to Transpower as part of Checkpoint 2A.

The 2020 guidelines provide sufficient flexibility

I can confirm it is the Authority's view that this issue is capable of being satisfactorily addressed within the 2020 guidelines. The guidelines cannot, and do not, provide for all matters which might need to be considered to ensure the proposed TPM is consistent with the Authority's statutory objective. Instead, they provide Transpower with some flexibility including through the operation of clause 2, which provides for the proposed TPM to differ in matters of detail from particular requirements in the Guidelines (but not to depart from the Authority's intent).

The Authority's view is that it is appropriate for Transpower to consider issues relating to batteries as part of its development of the proposed TPM (which will subsequently be reviewed and consulted on by the Authority), including through the use of clause 2 if Transpower considers the criteria for its use are met. So, as matters stand, the Authority does not intend to re-open the guidelines in respect of this issue.

Intent

As the Decision Paper makes clear, the Authority intends for any final TPM to be consistent with its statutory objective, ie, it should promote competition, reliability and efficient operation of the industry.⁴ In line with its statutory objective the Authority intends that any new TPM would not compromise competitive neutrality in the wholesale market,⁵ and that batteries/storage should

³ See paragraphs 10.4 and 10.15 - 10.20 in the Authority's 2020 TPM guidelines decision paper.

⁴ Section 15 of the Electricity Industry Act 2010: *The objective of the Authority is to promote competition in, reliable supply by, and the efficient operation of, the electricity industry for the long-term benefit of consumers.*

⁵ This intent is demonstrated in, for example, the 2019 Issues paper, para 2.15: *An efficient price signal avoids inadvertently promoting or discouraging any particular technology, and instead promotes competition by providing electricity services on an even footing. That is, efficient network prices would level the playing field for new solutions,*

be able to operate efficiently and contribute to the reliability of the grid.⁶ The Authority considers that it would most likely be inconsistent with its statutory objective (and it would certainly not be the Authority's intent) for the new TPM to discourage efficient investment in grid-connected batteries.

Transpower staff have noted that we stated in a footnote to the 2019 Issues paper that batteries would be a load customer while charging.⁷ This statement, however:

- was made in the context of discussion around the benefit-based charge and particularly the idea that parties might be both importers and exporters of electricity (and may therefore benefit from investments in different ways)
- is consistent with the principles behind the benefit-based charge, ie, that parties should be charged in proportion to the benefits they receive, since battery owners/operators will benefit from investments as other load customers do
- does not indicate that batteries and similar storage must be allocated a portion of the *residual* charge on the same basis as other load,⁸ irrespective of competition concerns (or other matters relevant to the Authority's statutory objective)
- does not prevent Transpower from utilising clause 2 in this regard.

In addition, the competitive neutrality issue for grid-connected batteries had not been raised by Contact or others, and was not in contemplation, when this statement was made.

It would therefore be reading too much into that footnote to construe it as a broader indication of the Authority's intent with respect to the residual charge's application to batteries.

Noting that the proposed closure of the Tiwai Point aluminium smelter in 2021 (now delayed to 2024) has brought this issue of the residual charge's application to batteries into sharp focus, we agree that Transpower should now explore this issue with stakeholders, to better form its own view of whether clause 2 of the 2020 guidelines should be applied.

Next steps

I look forward to Transpower publishing its options paper on this topic. If your team wishes to discuss the Authority's intent further, please contact Rob Bernau, Director TPM, in the first instance.

Yours faithfully



James Stevenson-Wallace
Chief Executive

for the benefit of consumers. See also 2020 decision paper on the TPM guidelines, para 2.14: The HVDC charge [...] inefficiently discourages investment in South Island generation relative to North Island generation....

⁶ Note also that the Authority is currently considering wider matters relating to batteries, to enable new generation technologies to participate in the wholesale electricity market. We are currently considering updates to the Code provisions to provide a means for offering energy and reserve from batteries as instantaneous reserve into the ancillary services market.

⁷ See footnote 180 of the 2019 Issues paper.

⁸ Note that the residual charge is founded on different principles to the benefit-based charge.