

# Dispatch Service Enhancement Project

Response to Code amendment consultation submissions

**Transpower New Zealand Limited**  
July 2018

*Keeping the energy flowing*



TRANSPOWER



Version	Date	Change
V0.1	28/05/2018	First Draft
V1.0	30/05/2018	Final Version
V1.1	03/07/2018	Updated response to question 7
V1.2	19/07/2018	Updated responding to EA Board comments

	Position	Date
Prepared By:	Marije Postma – SO Project Manager Hamish McKinnon – Senior Market Analyst	28/05/2018
Reviewed By:	Daniel Crawshay – Performance and Programme Manager	30/05/2018

---

## IMPORTANT

---

### Disclaimer

The information in this document is provided in good-faith and represents the opinion of Transpower New Zealand Limited, as the System Operator, at the date of publication. Transpower New Zealand Limited does not make any representations, warranties or undertakings either express or implied, about the accuracy or the completeness of the information provided. The act of making the information available does not constitute any representation, warranty or undertaking, either express or implied. This document does not, and is not intended to; create any legal obligation or duty on Transpower New Zealand Limited. To the extent permitted by law, no liability (whether in negligence or other tort, by contract, under statute or in equity) is accepted by Transpower New Zealand Limited by reason of, or in connection with, any statement made in this document or by any actual or purported reliance on it by any party. Transpower New Zealand Limited reserves all rights, in its absolute discretion, to alter any of the information provided in this document.

### Copyright

The concepts and information contained in this document are the property of Transpower New Zealand Limited. Reproduction of this document in whole or in part without the written permission of Transpower New Zealand is prohibited.

---

### Contact Details:

Address: Transpower New Zealand Ltd  
Waikoukou  
22 Boulcott St  
PO Box 1021  
Wellington  
New Zealand

Telephone: +64 4 495 7000

Fax: +64 4 498 2671

Email: [system.operator@transpower.co.nz](mailto:system.operator@transpower.co.nz)

Website: <http://www.transpower.co.nz>

---

## REVIEW SUMMARY

Industry participants have requested Transpower to enhance the dispatch solution to utilise up-to-date electronic communications protocols (Dispatch Service Enhancement Project) to enhance flexibility and lower complexity and cost. Furthermore, a redesigned dispatch solution will enable new functionality which would be required for some proposed elements of the Authority's Dispatch Based Pricing proposal.

Transpower has investigated upgrade options and recommends the implementation of both ICCP and Web Services as alternate communications protocols to manage the acknowledgement of dispatch instructions.

The Authority completed a Code amendment consultation between 10 April 2018 and 22 May 2018.

The Authority provided a total of six submissions to Transpower for review on Wednesday 23 May 2018. The submissions received were from Contact, Mercury, Meridian, MEUG, Norske Skog Tasman, and Nova Energy Limited.

Transpower has undertaken a review of the submissions received and has included a summary of the comments and responses to each in the sections below. The responses to each of the comments represent solely the views of Transpower as system operator.

# COMMENTS ON THE PROPOSED CODE AMENDMENTS FOR TO ENABLE THE IMPLEMENTATION OF THE DISPATCH SERVICE ENHANCEMENT PROJECT

## 1.1 GENERAL COMMENTS FROM THE SUBMISSIONS RECEIVED

4

Comment	Transpower response
<p><b>Contact:</b> Preamble</p>	<p><b>Transpower:</b> Contact has responded comprehensively to the Authority's proposed amendments. Several observations that Contact identified will be considered "for the detailed design". Transpower appreciates Contact's continued engagement in the DSE project.</p>
<p><b>Contact:</b> Supporting enabling dispatch over internet, identifying that if some dispatch products were not able to be dispatched over the internet the cost of increased demand side participation would be prohibitive.</p> <p>Uncertainty over the use of a threshold for requiring dispatch participants or plant to receive dispatch instructions using a dedicated private network.</p>	<p><b>Transpower:</b> In moving to ICCP and Web Services Transpower needs to carefully consider how the internet may be used to deliver dispatch instructions while ensuring a secure and reliable connection is maintained with each dispatch participant to maintain system security. We have already begun this process and will continue this process into the detailed design phase of the project. At this stage, we anticipate that any restriction on the use of internet for dispatch via Web Services will be in the form of the plant capacity.</p> <p>By end November 2018 we will endeavour to share our thoughts on any limitations to using internet based dispatch. Ultimately, the results of our consideration will be published as part of an amendment to the system operator's policy statement, on which participants are consulted. We encourage all industry participants to engage in this process to determine what is the most appropriate balance of enablement and risk management in dispatch.</p>
<p><b>Contact:</b> Notes "Transpower could additionally impose mandated requirements on communications between a market participants control system and its connected customer distributed energy resources (DER)."</p>	<p><b>Transpower:</b> The DSE project is making a functional replacement to the GENCO communications protocol within the current dispatch architecture. This architecture sends dispatch instructions from Transpower's market system to nominated participant sites, usually asset control sites. There is typically a secondary interface (either manual or automatic) between the GENCO client receiving the dispatch instruction and the market participants control system. The secondary interface is entirely maintained and controlled by the participant.</p> <p>Transpower cannot, and would not, seek to impose conditions on participant's secondary control interfaces. Participants are wholly responsible for ensuring that having received an instruction from the system operator, that is then implemented in their assets.</p> <p>We recognise there could be a miss-match of specification and standards between Transpower requiring a fixed private connection and the participant implementing an internet-based secondary interface. As part of an assessment of a possible threshold for internet dispatch as described in the previous response, we welcome participants' views on how this threshold could impact their intentions for building DER capability.</p>
<p><b>Contact:</b> Observations on security and encryption used with new communications protocols.</p>	<p><b>Transpower:</b> We recognise the need for high levels of security and encryption and this has been considered in the high-level design. The participant noted "HTTPS is the only common encryption method that is currently supported across many devices" and this protocol has been specified in the design. Security and encryption requirements will be further developed in the detailed design phase of the project.</p>

<b>Norske Skog Tasman:</b> Notes that the project has not demonstrated a user interface.	<b>Transpower:</b> The DSE project is not developing a client user interface for the new dispatch protocols. Transpower will provide a specification and sample code covering the attributes of the interface that will need to be implemented by a participant. We have assumed that participants will develop their own bespoke user interfaces that suit individual needs.
<b>Norske Skog Tasman:</b> Suggests a Web Services platform may also be used for communication of SCADA indications information as required under the Technical Codes of Part 8 of the Code.	<b>Transpower:</b> The DSE project is making a functional replacement to the GENCO communications protocol within the current dispatch architecture in the market system.  The communication of asset indication information, which is currently achieved using ICCP and other systems, is out of scope for this project.  The development work we have completed on this project is not applicable to the communication of asset indications as they affect different elements of Transpower's control and market operations systems. Specifically, the project is focussing on the dispatch communication capability (market system) and not on the power system control software (SCADA).
<b>Nova Energy Limited:</b> Notes that the cost/benefit analysis is marginal therefore project costs must be tightly controlled to deliver the estimated net benefit.	<b>Transpower:</b> Noted

## 1.2 SPECIFIC COMMENTS TO THE CONSULTATION QUESTIONS

Q1. Do you agree the issues identified by the Authority warrant amending the Code provisions for dispatch instructions and the Approved Systems Document?	
Comment	Transpower response
<b>Contact:</b> Yes <b>Mercury:</b> Yes <b>Meridian:</b> Yes <b>Norske Skog Tasman:</b> Yes <b>Nova Energy Limited:</b> Yes. Subject to the replacement systems addressing the identified issues at a reasonable cost.	<b>Transpower:</b> Noted.

Q2. Do you agree with the proposed sunset clause ending GENCO's status as an approved system on 31 December? If not, why not?	
Comment	Transpower response
<b>Contact:</b> Yes <b>Mercury:</b> Yes, in principle. We would like more technical information to be made available as soon as possible to help us with our planning and budgeting to transition to the new protocols. <b>Meridian:</b> Yes <b>Norske Skog Tasman:</b> Yes, provided that an alternative Dispatch system has been deployed. <b>Nova Energy Limited:</b> Agree in principle of including a sunset clause.  We note that the GENCO sunset date, the end of 2020, seems tight given the replacement systems are estimated only to be available by mid-2019 (given how long it took for Transpower to establish ICCP).	<b>Transpower:</b> We note the urgency with this transition timeframe and will work with participants to provide information as soon as practical.

Q3. Do you agree with the objectives of the proposed amendment? If not, why not?	
Comment	Transpower response
<p><b>Contact:</b> Yes</p> <p><b>Mercury:</b> Yes</p> <p><b>Meridian:</b> Yes</p> <p><b>Norske Skog Tasman:</b> Yes</p> <p><b>Nova Energy Limited:</b> In principle, though there is no mention of any objective of reducing overall industry costs, which should be a consideration of any solution.</p>	<p><b>Transpower:</b> The cost/benefit analysis considered costs to dispatch participants for implementation of and transition to a new communications protocol to receive and acknowledge dispatch instructions, on a per-participant basis.</p>

Q4. Do you agree the benefits of the proposed amendment outweigh the costs?	
Comment	Transpower response
<p><b>Contact:</b> Yes</p> <p><b>Mercury:</b> Yes, in principle but we think it is highly likely that the costs to participants of transitioning to the new communication protocols have been underestimated.</p> <p>We would need more information on the technical specifications of the proposed options in order to estimate the total cost to us.</p> <p>At the Industry presentation in March, Transpower presented protocol information but it appeared that a GENCO equivalent client was not part of the proposal.</p> <p>Mercury tabled at the time the suggestion that Transpower and participants should develop such a client which could then be used by all participants. We see this as an opportunity to reduce total costs as then there is only one development cost not multiple if developed individually. Mercury would be happy to work with other participants and Transpower on this.</p> <p><b>Meridian:</b> Yes</p> <p><b>Norske Skog Tasman:</b> Yes</p> <p><b>Nova Energy Limited:</b> Nova has not reviewed the CBA in detail, though it notes that the stated cost-benefits are marginal in the context of the overall investment required.</p> <p>It is clear that the costs of this project must be closely managed to ensure the net expected benefits are in fact realised.</p>	<p><b>Transpower:</b> We appreciate more information is required to determine what their transition costs will be. We will provide detailed design information and interface specification information as it becomes available.</p>

**Q5. Do you agree the proposed amendment is preferable to the other option? If you disagree, please explain your preferred option in terms consistent with the Authority's statutory objective in section 15 of the Electricity Industry Act 2010.**

Comment	Transpower response
<b>Contact:</b> Yes <b>Mercury:</b> Yes <b>Meridian:</b> Yes <b>Norske Skog Tasman:</b> Yes	<b>Transpower:</b> Noted

**Q6. Do you agree the Authority's proposed amendment complies with section 32(1) of the Act?**

Comment	Transpower response
<b>Contact:</b> Yes <b>Meridian:</b> Yes <b>Norske Skog Tasman:</b> Yes	<b>Transpower:</b> Noted

**Q7. Do you have any comments on the drafting of the proposed amendment to the Code?**

Comment	Transpower response
<p><b>Contact:</b> Yes. Remove the ambiguity in 13.79 (a) where two different acknowledgement times are given:</p> <p>(a) within 4 minutes of receiving that <b>dispatch instruction</b>, and must use its reasonable endeavours to acknowledge to the <b>system operator</b> receipt of the <b>dispatch instruction</b> within 3 minutes of receiving the <b>dispatch instruction</b>; or</p> <p><b>Mercury:</b> No</p> <p><b>Meridian:</b> No</p> <p><b>Norske Skog Tasman:</b> Yes (no further comment supplied)</p>	<p><b>Transpower:</b> We support Contact's proposal to remove the ambiguity around acknowledgement times in 13.79(a). We recognise that among industry participants generally there is confusion around interpretation of this clause. We agree with Contact that removing the requirement to use best endeavours to acknowledge within 3 minutes would reduce this confusion.</p> <p>We expect no operational impact would result from this change. While generally speaking it is better for system operations to receive prompt acknowledgement to dispatch instructions, in practice most participants act promptly. Where participants are not acknowledging promptly it is unlikely they are motivated to act differently as a result of the 'reasonable endeavours' part of this clause.</p> <p>This amendment was not originally proposed by Transpower as part of the project as there is no system functionality that is affected by the presence of a "reasonable endeavours" obligation. Ultimately we expect the project to provide a means for participants to improve their acknowledgement response.</p>

**Q8. Do you have any comments on the drafting of the proposed amendment to the Approved Systems Document?**

Comment	Transpower response
<b>Contact:</b> No <b>Mercury:</b> No <b>Meridian:</b> No <b>Norske Skog Tasman:</b> Yes (no further comment supplied)	<b>Transpower:</b> Noted