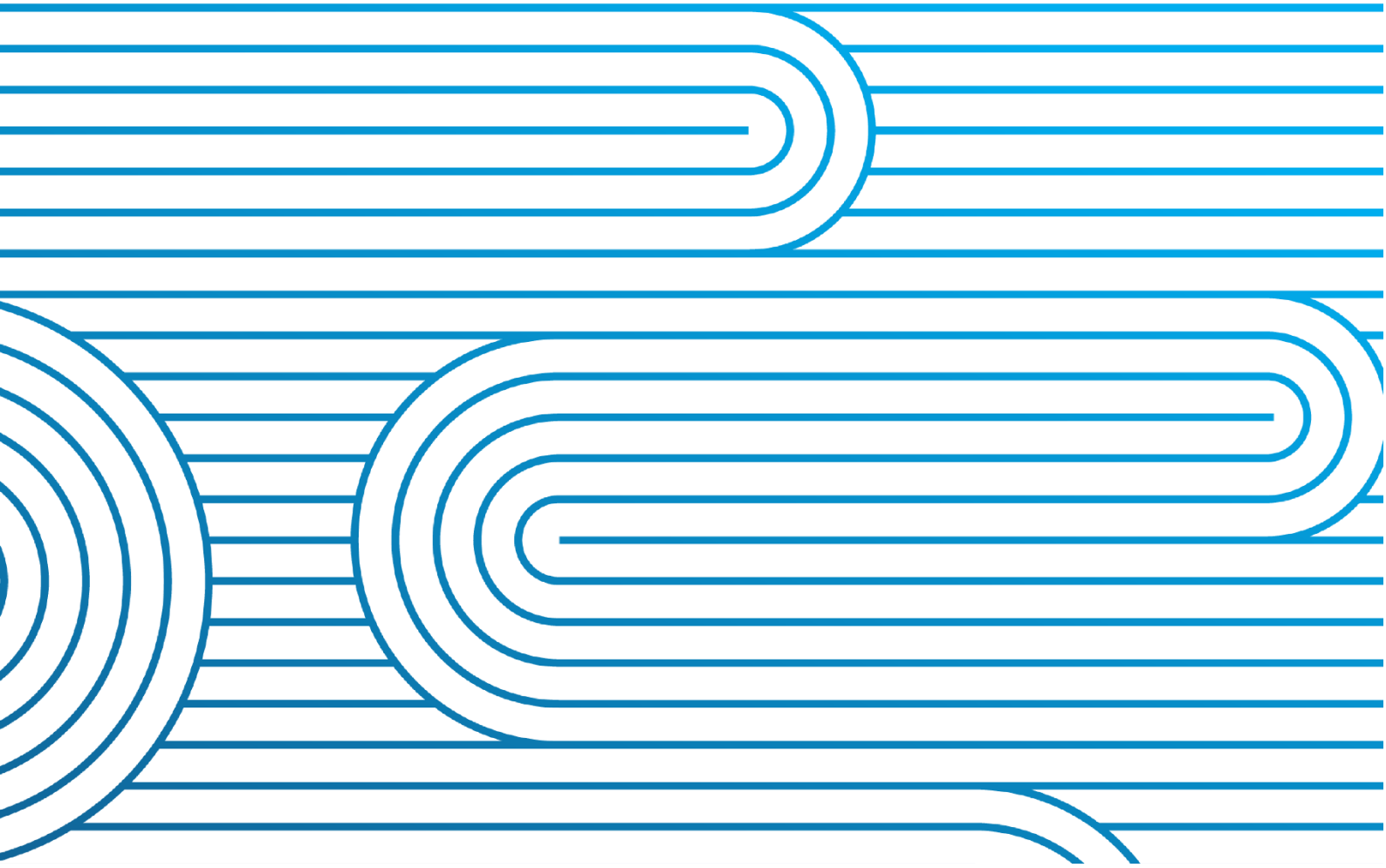
TRANSPOWER

2026 System Operator Controllable Load Forum Questions and Answers

15 September 2026



IMPORTANT

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Contact Details

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

Telephone: +64 4 495 7000

Email: system.operator@transpower.co.nz

Website: www.transpower.co.nz

Introduction

The System Operator Engineering Forum on 15 September 2026 focused on the Controllable Load obligations for Connected Asset Owners, as part of the wider CACTIS implementation Connected Asset Commissioning, Testing, and Information Standard

Participants in attendance asked questions in response to the presentations given by the Electricity Authority and System Operator teams.

This document captures those questions and the answers given. We have organised them based on the themed sessions that they connect to.

If you have any queries about these answers, please contact system.operator@transpower.co.nz.

Questions and Answers

Defining Controllable Load

Question 1:

What is the definition of controllable load?

Answer:

Refer to section 1.1 of the Code- Interpretation: Electricity Industry Participation Code 2010 | Electricity Authority

controllable load*, for the purposes of Part 8, means the quantity of resources (in **MW**) that a **connected asset owner** estimates will be available for use by the **system operator** under a **grid emergency**. The available **controllable load** must exclude—

- (a) resources a **connected asset owner** intends to use for its own network demand management purposes; and
- (b) any resources offered into the **instantaneous reserves** market; and
- (c) any resources bid or offered on behalf of a **dispatch-capable load station** or **dispatch notification purchaser** or **dispatch notification generator**; and
- (d) any contracted **emergency reserve**

*definition current as at 15 September 2026

Question 2:

If I use hot water cylinders to manage my own network demand will this be excluded from my available controllable load?

Answer:

The CACTIS obligation is that connected asset owners must provide controllable load indications where they have controllable load available for use during grid emergencies. The controllable load indication is intended to be a real-time indication of the quantity of controllable load available at a particular point in time. This is reflected in the requirement in the CACTIS that indication be updated at least every 8 seconds (paragraph 8.22).

Paragraph (a) of the controllable load definition (that requires exclusion of resources a connected asset owner intends to use for its own network demand management purposes) must be read in combination with the main part of the definition (which requires identification of the quantity of

resources (in MW) that a connected asset owner estimates will be available for use by the system operator under a grid emergency) as well as the obligation in paragraphs 8.22 and 8.34 of the CACTIS. Together these provisions in our view only enable connected asset owners to exclude the quantity of load that a connected asset owner intends to use for network demand management purposes at the relevant time (i.e., the at least 8 second interval when the indication must be updated).

Accordingly, where a connected asset owner has controllable load available for use during a grid emergency, we would generally expect it to provide controllable load indications under the CACTIS. Where a connected asset owner has previously submitted controllable load difference bids identifying controllable load available to the System Operator, we would generally expect that participant to provide controllable load indications unless something has changed and it no longer has any controllable load available at any time.

Question 3:

For large industrial loads with intermittent processes, for example only running 20% of the time at 10MW – is that considered controllable load?

Answer:

Yes, it is considered controllable load, but we only want this to be indicated as available when it is actually available.

Question 4:

If my industrial process is not safe to be removed quickly or not able to be stopped in a safe manner, then that load would be excluded from the available controllable load?

Answer:

That is correct- we would not consider this controllable load. If you have any doubt, we can work with you to identify whether this is in fact controllable load or not.

Code Obligations and Compliance

Question 5:

We have assets connected to our distribution network that are controlled by a trader and not the Connected Asset Owner. Should available controllable load, that is trader controlled and not EDB controlled, be provided?

Answer:

For now, the obligation sits with the Connected Asset Owner to provide controllable load data. Discussions are underway to evolve the Code in future considering whether the obligation needs to be on the party who has operational control of the load rather than the party that has the ownership of the connection of the load.

Question 6:

How can we find out more about the Code change, and how can we take steps to be compliant?

Answer:

Our website outlines the wider Connected Asset Commissioning, Testing and Information Standard (CACTIS), including this change for Connected Asset Owners in Chapter 8: Connected Asset Commissioning, Testing and Information Standard (CACTIS) | Transpower

The CACTIS is available here: Documents incorporated into the Code | Electricity Authority

Information on the consultation process is available here: Connected Asset Commissioning, Testing and Information Standard Code amendment finalised | Electricity Authority

Information on our Operation Data Integration (ODI) process, which entails ICCP connections and changes in datasets, is available here: Operational Data Integration | Transpower

If in doubt on where to start, talk to your Transpower Relationship Manager or email us-system.operator@transpower.co.nz

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Question 7:

We provide controllable load indications through the Upper South Island Load Manager (USI LM). Does this qualify?

Answer:

We are satisfied with the indications received though the USI LM. While this is not at the GXP level, the CACTIS, 8.34 Table J, allows for agreement between connected asset owners and the system operator. Our position is that no change is required from these providers so long as they continue to participate in the scheme. You do not require an equivalence arrangement for this.

Question 8:

Our interpretation of these obligations is that we do not have controllable load, and therefore this does not apply to us.

Answer:

It is your responsibility to ensure that you fully understand and comply with your Code obligations. Where a CAO determines they do not have controllable load (as defined), they should notify the System Operator via system.operator@transpower.co.nz, so we can record this as part of compliance reporting to the Authority.

If a CAO still has doubts, contacting The Electricity Authority is recommended: compliance@ea.govt.nz

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Question 9:

These new obligations apply to us, but the 1 July 2027 timeframe seems difficult to meet. What are our options?

Answer:

We recommend you talk to us about the options we have through our ODI process- Operational Data Integration | Transpower. There are options for new ICCP connections:

- Establish a new ICCP connection
- Engage a 3rd party provider
- Look to collaborate with another ICCP user

In the past, ODI connection processes have taken up to 12 months, depending on individual circumstances, so we recommended engaging as soon as possible with a request form.

We recommend you talk to us in the first instance, to understand your timings and how we can support accelerating this- Operational Data Integration | Transpower.

There are pathways for dispensations and equivalence, if compliance cannot be met by 1 July 2027: Dispensations and equivalence arrangements | Transpower

There is also an Electricity Authority Exemptions process: Exemptions | Electricity Authority

We encourage you to talk to the Electricity Authority if you have any compliance concerns- compliance@ea.govt.nz

Inter Control Centre Protocol (ICCP)

Question 10:

If we have direct 3rd party RTU connection with Transpower, would this legacy connection be considered as an alternative?

Answer:

Transpower's policy is to use ICCP for all new data requirements: Customer ICCP interconnection policy

The following hierarchy shall be applied when establishing or modifying interfaces between Transpower and third-party customer systems. The intent is to align with **TP.GC 29.01 Customer SCADA Interconnection Policy** and **TP.DC 29.07 Design for Substation Management Systems**, and to avoid the creation or expansion of site-based SCADA protocol connections between Transpower and customer assets.

1. ICCP (TASE.2)

Preferred solution.

Where operational or monitoring data must be exchanged between organisations and a communications-based solution is required, the interface shall be implemented using an ICCP (TASE.2) connection between the Transpower ICCP gateway and the customer's ICCP gateway.

This approach aligns with TP.GC 29.01, which requires new SCADA-level customer interconnections to be established using ICCP and provides a standardised, secure, and centrally managed interface independent of substation SMS infrastructure.

2. Hardwired Indications

Preferred alternative where only limited functionality is required.

Where only a small number of indications are required, and no control or high-volume telemetry exchange is necessary, hardwired interfaces should be used. This provides a simple, deterministic connection to the asset without introducing ongoing communications dependencies, protocol translation, or cyber security considerations associated with external communications links.

Hardwired interfaces are the preferred alternative where ICCP is not justified or does not support the required functionality.

3. Legacy Serial or RTU-to-RTU Communications (Including DNP3)

Legacy approach. Not supported for new implementations.

Site-based serial communications arrangements, including RTU-to-RTU links, serial-over-fibre connections, DNP3 connections, or similar protocol-based customer integrations, are considered legacy solutions.

These interfaces shall only be retained where required to support existing operational arrangements that cannot practically be migrated. New installations shall not be commissioned, and existing implementations shall not be extended through the addition of new points, functions, or customer connections.

Any exceptional requirement to retain or modify a legacy serial connection shall require explicit approval through the relevant asset planning and standards governance process. Consistent with TP.GC 29.01 and TP.DC 29.07, the long-term direction is migration to ICCP or hardwired alternatives and the progressive retirement of legacy customer serial communications.

Question 11:

We have existing data on the legacy connection (DNP3) sharing with Transpower, do we need to create an ICCP link for the new data requirement?

Answer:

Yes. Transpower is moving away from legacy connections from a security point of view but also with the intent that will be able to be shared bi-directionally in future which creates a benefit for both organisations.

Question 12:

If we create a new ICCP connection to replace the legacy connection, is there a Transpower programme of work that will drive parties to remove these legacy connections?

Answer:

Currently Transpower does not have a programme under way, but this is where we want to move to. If, and when, this is developed, we will work with Connected Asset Owners for this transition.

Question 13:

We have plans to establish ICCP, and can include controllable load as part of our dataset, but this is not planned prior to 1 July 2027

Answer:

We recommend you talk to us in the first instance, to understand your timings and how we can support accelerating this- Operational Data Integration | Transpower.

There are pathways for dispensations and equivalence, if compliance cannot be met by 1 July 2027: Dispensations and equivalence arrangements | Transpower