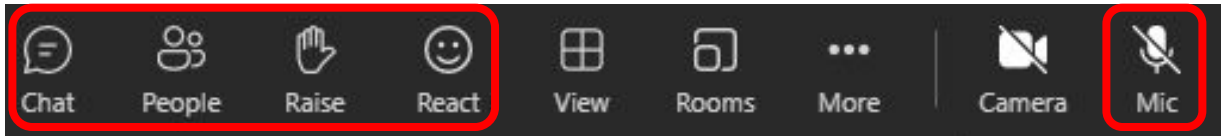
TRANSPOWER

System Operator Controllable Load Forum

Connected Asset Owners

15 September 2026

Welcome and housekeeping





Agenda

- Opening Address
- Code Change Background
- Controllable Load Requirement
- What is needed in the Control Room
- Vector - Controllable Load Experience
- Transition Support – ODI Process
- Key Messages / Next Steps
- Questions







Opening Address

Matt Copland, Head of Grid & Systems Operations | System Operator (Transpower)

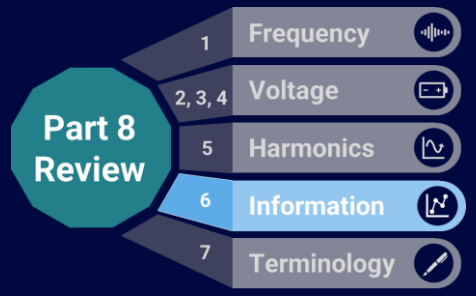


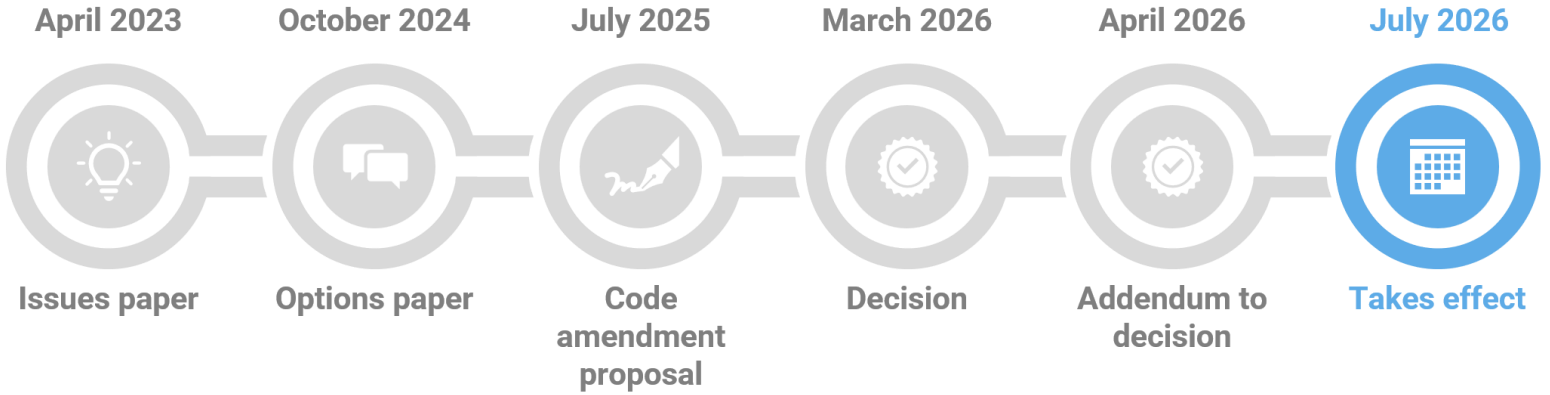
Code Change Background

Code Amendment Consultation and Compliance

Otis Boyle, Principal Analyst Future Security & Resilience (FSR) | (Electricity Authority)

FSR issue 6: Information

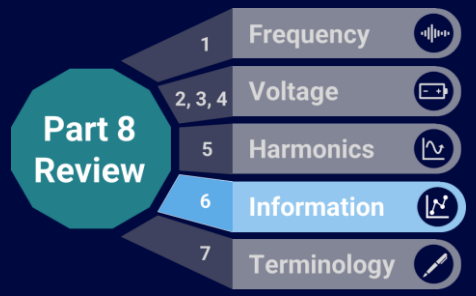


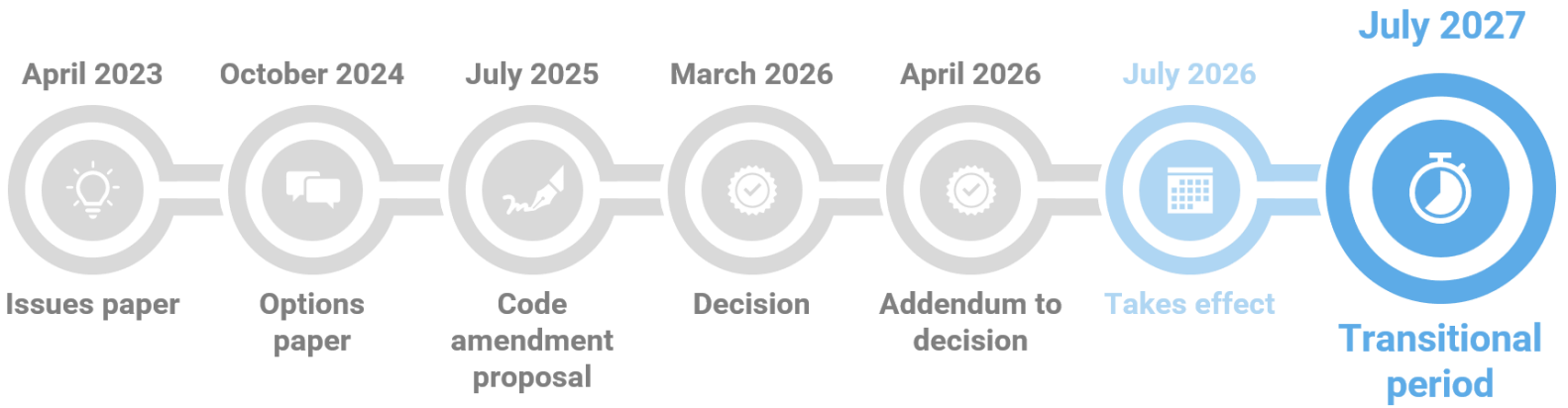


Code amendment

- Update and clarify the common quality-related information requirements in the Code.
- Move the technical details into a new system operation document – the CACTIS.
- CACTIS includes controllable load obligations.

Transitional arrangements





- Stakeholders highlighted practical challenges of implementing some of the new requirements immediately.
- Distributors and direct consumers have until 1 July 2027 to comply with controllable load indications and measurements obligation.

Compliance overview

- Transpower working with asset owners during transition period.
- Authority monitoring and enforcing compliance with the Code.
- Equivalence arrangement or dispensations available if compliance or timelines can not be met.
- Exemption applications also available and are considered on case-by-case basis.



CACTIS - Controllable Load Requirement

Varun Nand, Senior Power Systems Engineer | System Operator (Transpower)

Code Change

- Part 8, Sch. 8.3, Tech Code C moved to CACTIS Chapter 8.
- All requirements of Tech Code C have been moved.
- **Plus** some new measurement and indication requirements.
- Refer CACTIS Section 8.34 for CAO specific requirements.



Code Definitions

connected asset owner means a **direct consumer**, or a **distributor** in its capacity as the owner or operator of a **local network**

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**

Controllable Load Operational Comms Requirements

	Indication or measurement	Values required
Connected Asset Owner - Specific Requirements	Controllable load available MW	Any controllable load that is not currently off or armed for interruptible load Actual or calculated (±5% accuracy)*
	Controllable load currently off MW	Actual or calculated (±5% accuracy)*
	Controllable load armed for interruptible load MW	Actual (±2% accuracy)*

*Per GXP unless agreed otherwise by the Connected Asset Owner and the System Operator



What is needed in the Control Room

Matthew Hansen, Operations Manager, Dispatch | System Operator (Transpower)

Control Room Needs

Available for control

- CL that could be removed if required

Available for IL

- CL that is Armed for IL (not what is offered or dispatched)

Controllable load Off

- Estimated CL or IL that is currently off

Controllable Load NI

Company	Site Detail	GEN SO Instruction to control load	Available for Control	Available for I.L.*	Controlable Load OFF	Current Load
Counties Energy	CNP					86 x
Firstlight Networks	FNL					28
Electra	ELA					56
Horizon Networks	HRZ					51 x
Northpower	NPW					106
Powerco	PCO		66	0	0	297 x
Scanpower	SCP					10
The Lines Company	TLP					32
Top Energy	TOP					20
Unison Networks	UNN					200 x
Centralines (Operated by Unison)	CNL					12
Vector	VLD		0	82	0	804
Waipa Networks (Operated by WEL)	WPM					57
WEL Networks	WEN					194
Wellington Electricity	WGE					298

x Industrial load excluded
* Interruptible Load

DISPATCH O/V PR-DP-257

Control Room Needs

Available for control

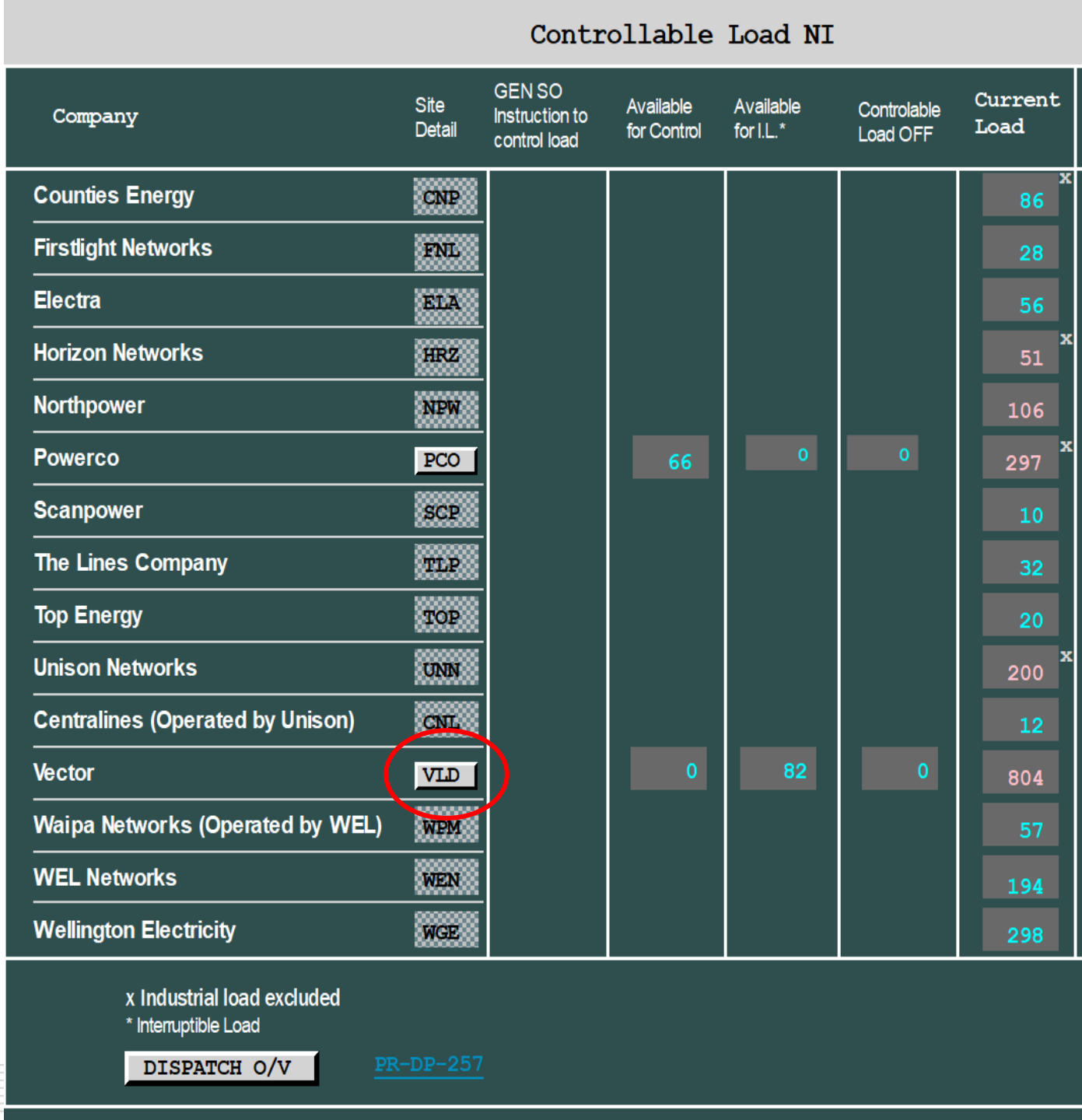
- CL that could be removed if required

Available for IL

- CL that is Armed for IL (not what is offered or dispatched)

Controllable load Off

- Estimated CL or IL that is currently off



What we want in the GXP level data

Customer Control System Tag		Sites	Available for Control	Available for I.L. *	Controlable Load OFF	Station Load
GXP1 Shedable Load	Hepburn Rd	HEP	0.0	1.6	0.0	81
GXP North Shedable Load	Vector Northern Region Total		0.0	1.6	0.0	
GXP 2 Shedable Load	Managre	MNG	0.0	7.1	0.0	97
GXP 3 Shedable Load	Otahuhu	OTA	0.0	3.8	0.0	42
GXP 4 Shedable Load	Pakuranga	PAK	0.0	8.1	0.0	81
GXP 5 Shedable Load	Penrose	PEN	0.0	37.3	0.0	297
GXP 6 Shedable Load	Mt Roskil	ROS	0.0	10.5	0.0	95
GXP 7 Shedable Load	Takanini	TAK	0.0	9.0	0.0	72
GXP 8 Shedable Load	Wiri	WIR	0.0	5.1	0.0	66
GXP South Shedable Load	Vector Southern Region Total		0.0	80.8	0.0	
GXP Total Shedable Load	Vector Total		0.0	82.4	0.0	

Upper South Island Load Manager

USI load manager

- Works well
- Don’t break it!

- If you leave USI LM you will have to supply CL indications via alternative means

Company	Sheddable Load Available	Control Limit	Current Load	PDAP % Allocation Note 1	PDAP % Maximum MW Allocation Note 2	Historic					
						12:04:59	11:59:59	11:54:59	11:49:59	11:44:59	11:39:59
Alpine Energy	20.9	115.9	83.7	8.6	106.3	84.5	85.2	84.7	85.3	83.8	82.6
Buller Network	0.6	10.1	7.1	0.9	11.7	7.1	6.7	6.7	6.7	6.7	7.1
Electricity Ashburton	11.5	74.8	53.0	6.0	74.0	52.4	50.6	48.3	46.4	46.4	46.6
WestPower	6.7	26.5	15.2	3.0	37.1	15.6	14.6	15.1	14.8	14.4	14.4
MainPower	7.5	78.9	54.2	6.8	83.2	56.5	56.3	57.9	59.1	58.9	57.6
Network Tasman	7.6	113.4	79.1	10.3	128.8	79.6	78.1	80.8	81.5	85.1	82.6
Orion	37.7	666.1	468.8	62.4	774.8	467.5	466.5	469.7	470.4	467.9	470.4
USI TOTALS	92.5	1085.6	761.1	98.0	1215.9						
USI Load Manager	Held Off	Zone 3 VSAT Limit 1240.3 12:05:54				Load to restore in: 5 min 0.0					
Control Load	Held Off	USI Load Manager Active				1 hr 0.0					
						2 hr 0.0					

Malbrough Lines are no longer part of the USI load manager -but may re-enter in the future.

						12:04:59	11:59:59	11:54:59	11:49:59	11:44:59	11:39:59
Marlborough Lines	6.4	26.1	19.6	1.9	23.5	19.0	19.7	18.2	18.1	15.9	16.6

Direct Consumers - Industrial load

Is it required ?

- Do you have controllable load that could be shed during grid emergency ?
- Do you have IL ?
- If Neither: the obligation does not apply, but let us know so we can record this

Price responsive load

- Please ensure load bids reflect what you intend to do



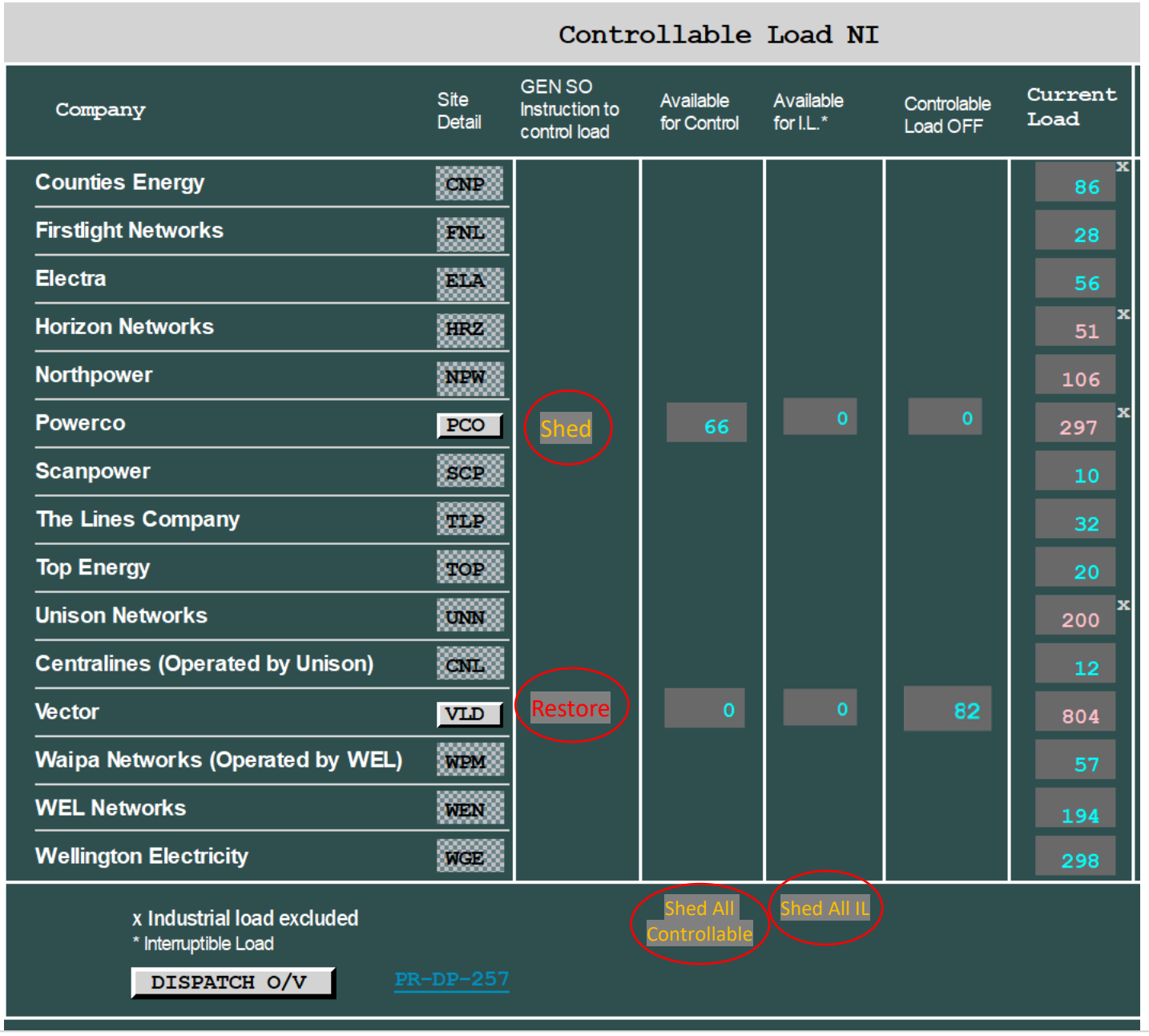
What's next

Electronic Shed/Restore

- Setup buttons to Instruct /Trip Controllable load and IL
- Restore buttons to give Permission to restoration Controllable load and IL (Alarm in EDB SCADA)

Forecasting Controllable load

- Difference bid still required
- Once we have the historical data we may be able to forecast your CL and automate Difference Bids

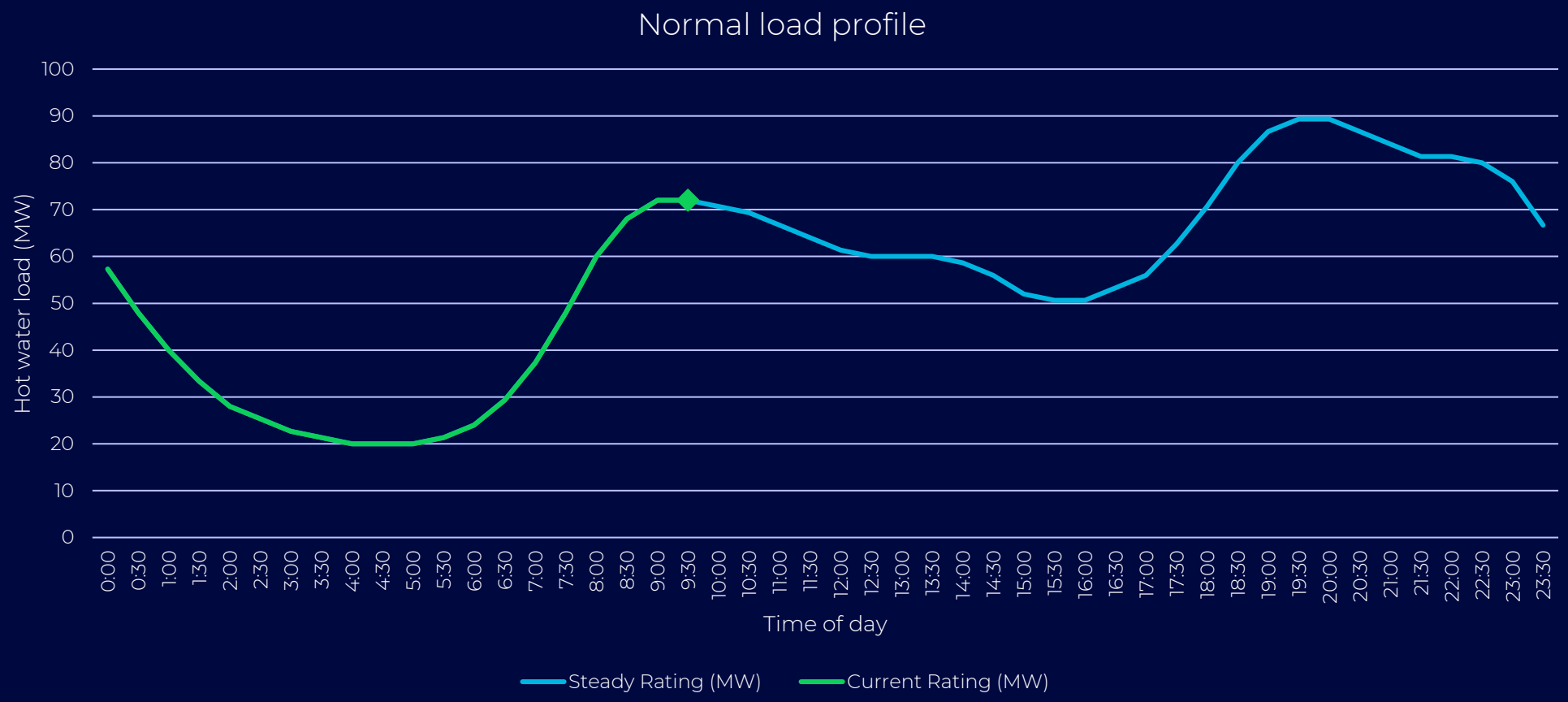




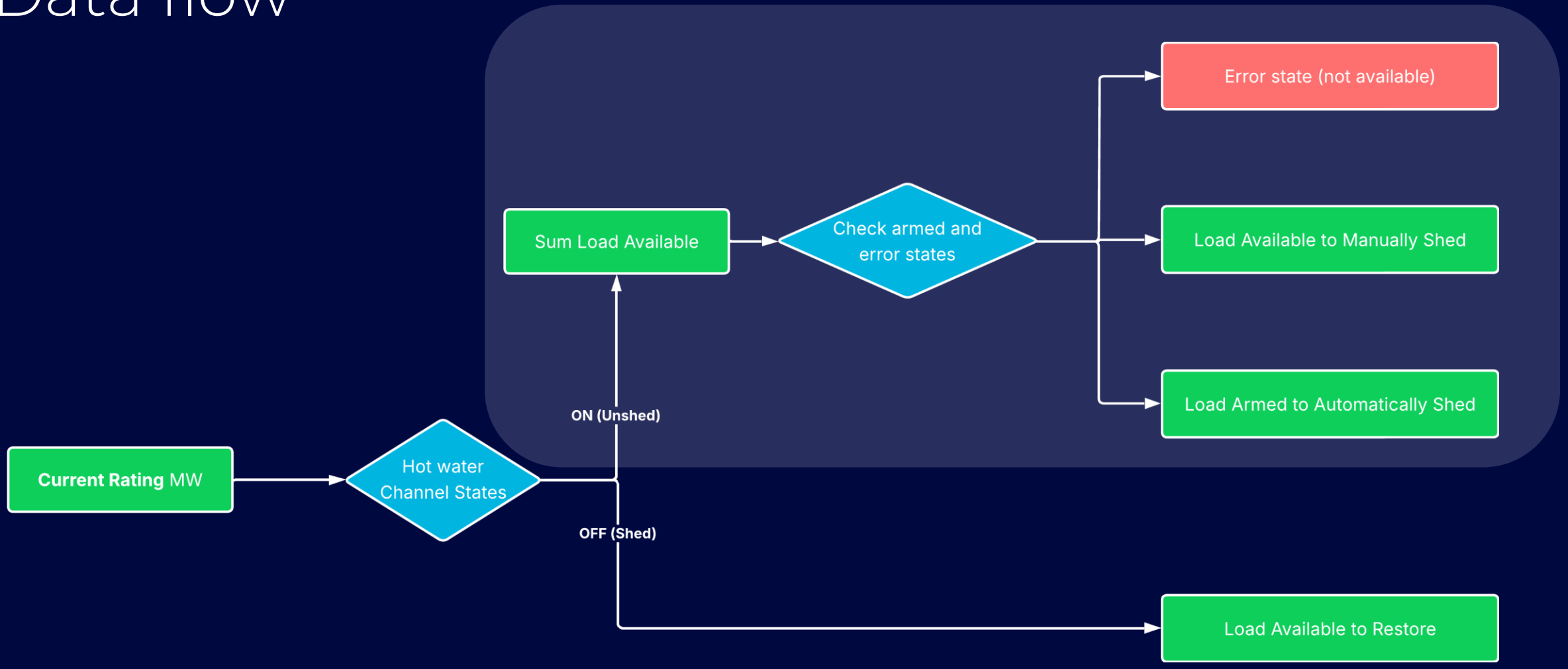
Vector – Controllable Load Experience

Heath Grant, Control Systems Engineer | (Vector)

Load Control Model – Normal

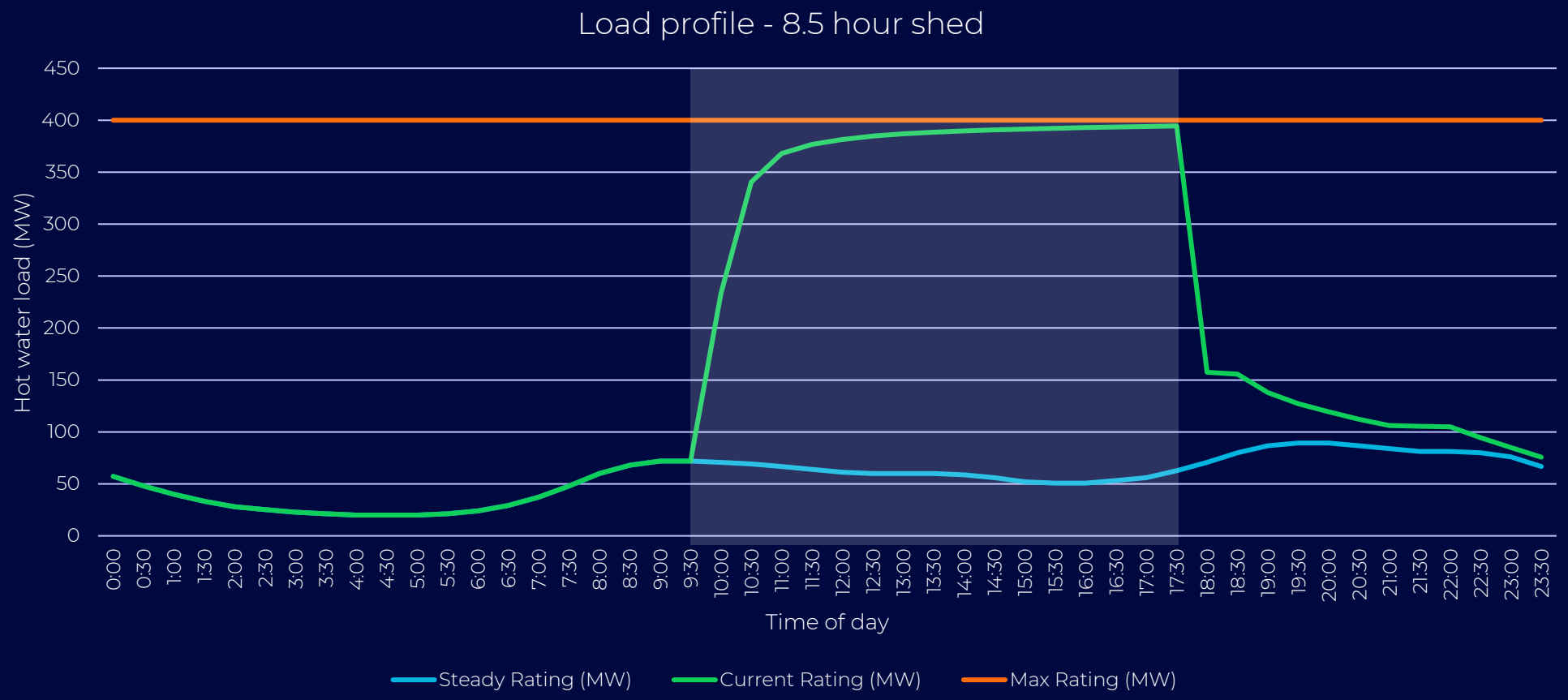


Data flow

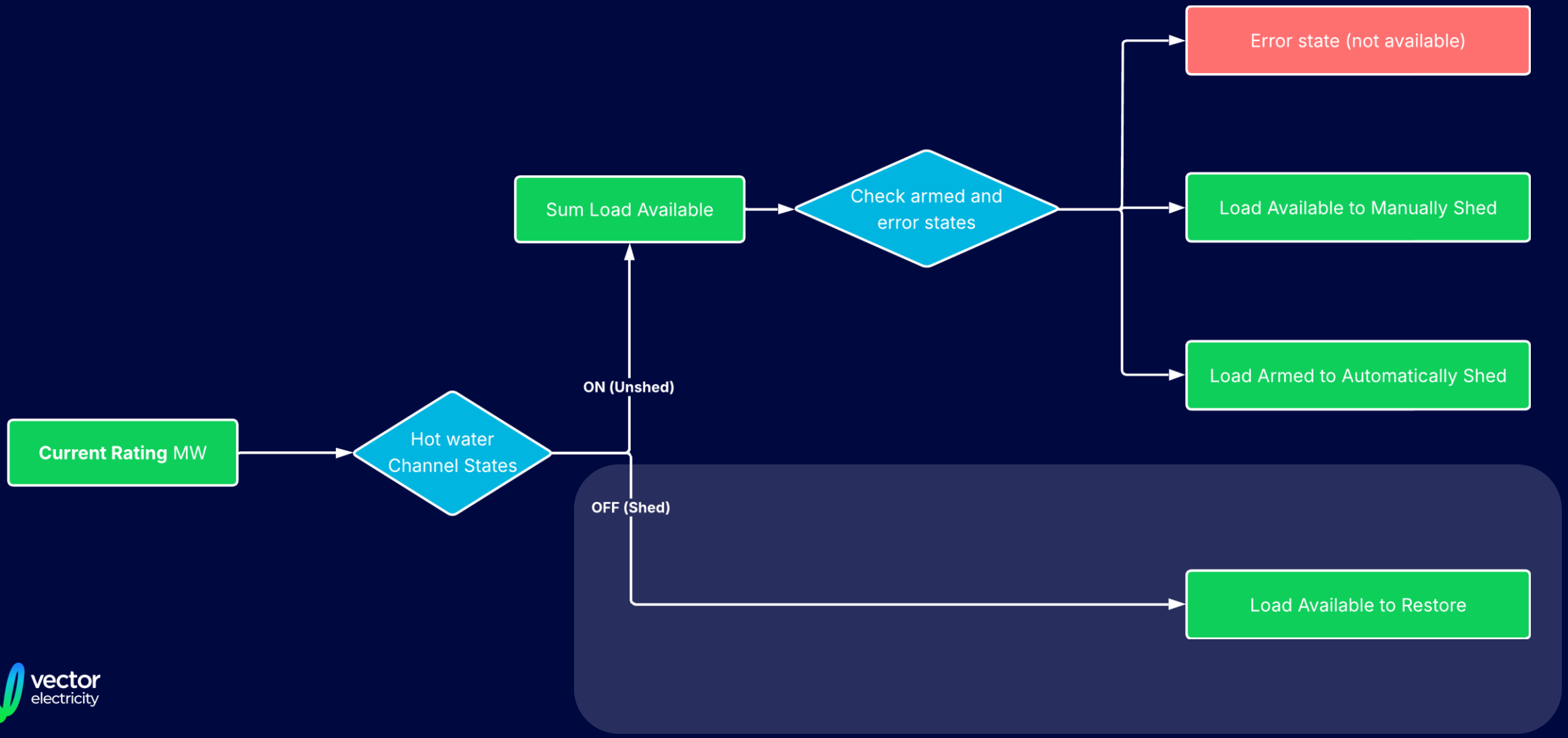


vector electricity

Load Control Model - Shedding



Data flow



vector electricity

ADMS Diagram – ICCP Points

TARGETS & LOADS										
	Vector	Hepburn (Northern)	Auckland	Roskill	Penrose	Otahuhu	Mangere	Pakuranga	TP Wiri / Manukau	Takanini
Load Available to Manually Shed(MW)	0 MW	0 MW	0 MW	0 MW	0 MW	0 MW	0 MW	0 MW	0 MW	0 MW
IL - Load Armed to Automatically Shed(MW)	70.91 MW	1.97 MW	68.95 MW	12.58 MW	16.57 MW	4.53 MW	8.56 MW	9.73 MW	6.14 MW	10.83 MW
Load Available to Restore (MW)	0 MW	0 MW	0 MW	0 MW	0 MW	0 MW	0 MW	0 MW	0 MW	0 MW

vector electricity



Transition Support - ODI Process

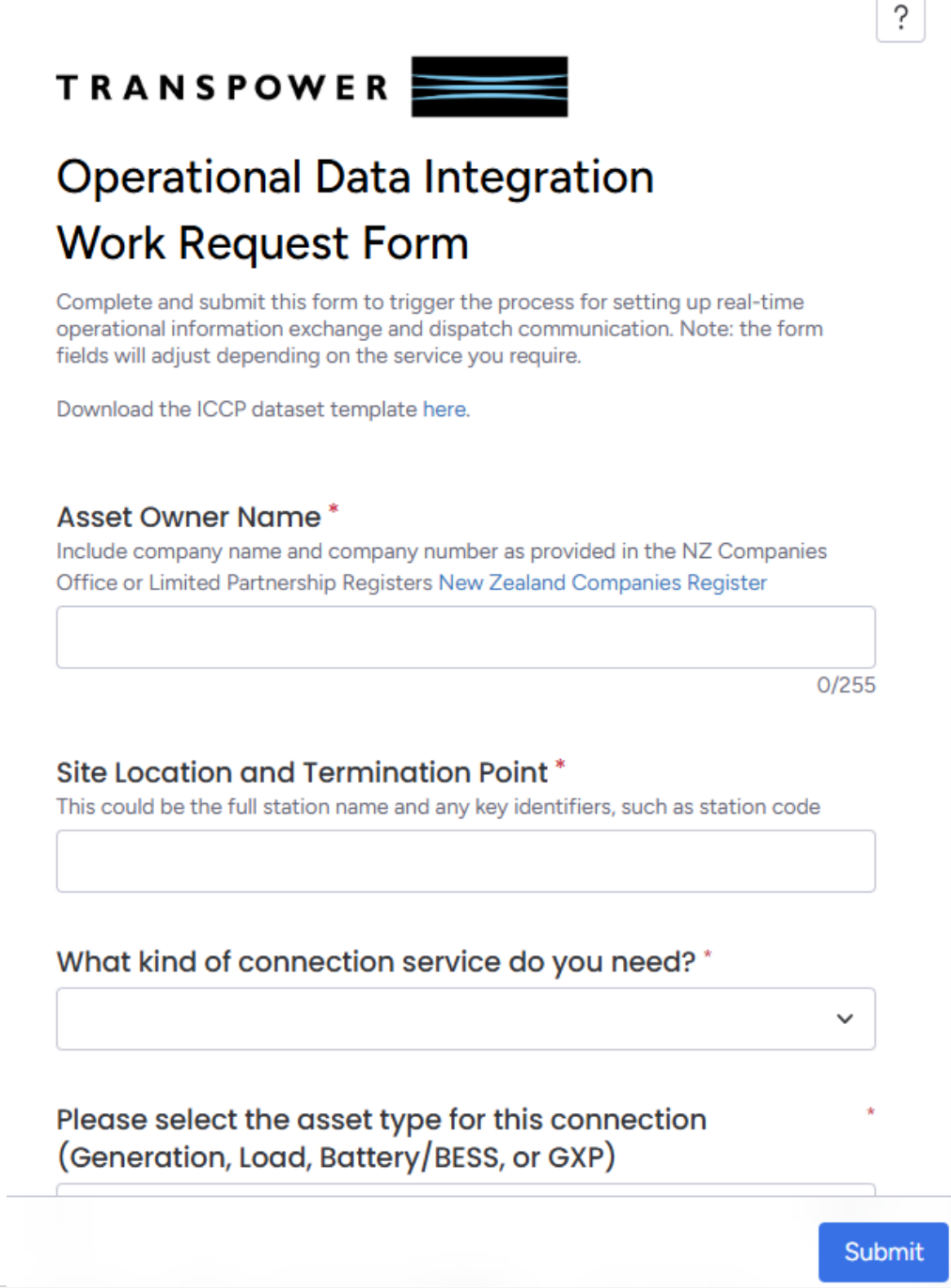
How to engage with Transpower

Andrew Beddard, Relationship Manager | Customer & Commercial Team (Transpower)

How to connect – ODI process

1. Initiate the ODI process using the request form- new ICCP connection or dataset change
2. Partner with other CAOs
    - E.g. USI LM (Orion)
3. Data Communication Provider (ICCP as a Service), i.e.
    - PSC Consulting (Dylan Jenkins)
    - NewPower (Darren O'Neill)
4. Request dispensation, equivalence, exemption

Timeframe: it can take up to 12 months, so initiate the process now



TRANSPOWER

Operational Data Integration Work Request Form

Complete and submit this form to trigger the process for setting up real-time operational information exchange and dispatch communication. Note: the form fields will adjust depending on the service you require.

Download the ICCP dataset template here.

Asset Owner Name *

Include company name and company number as provided in the NZ Companies Office or Limited Partnership Registers New Zealand Companies Register

0/255

Site Location and Termination Point *

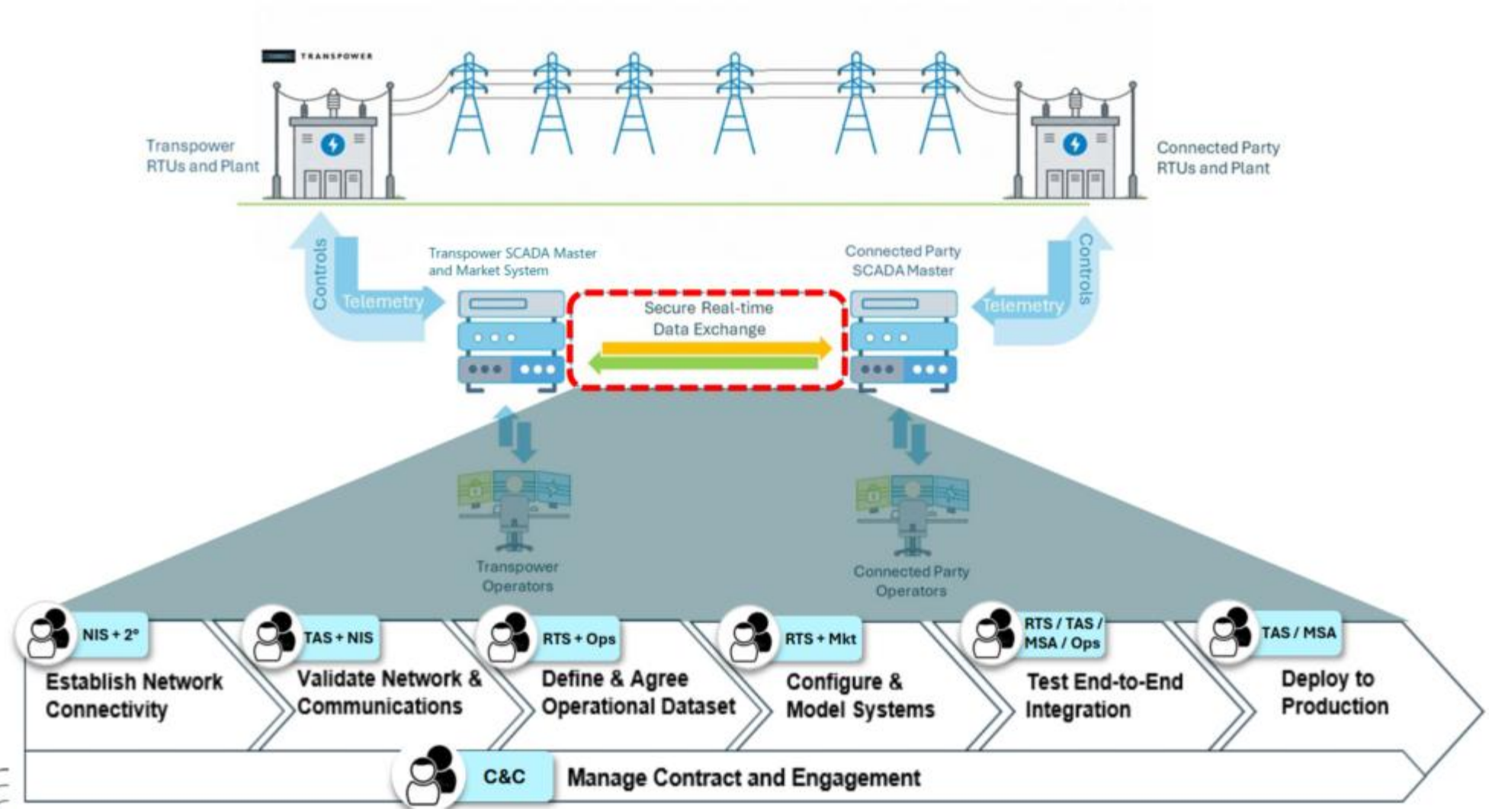
This could be the full station name and any key identifiers, such as station code

What kind of connection service do you need? *

Please select the asset type for this connection (Generation, Load, Battery/BESS, or GXP) *

Submit

Operational Data Integration





Key Messages & Wrap Up



Key Messages

- New controllable load obligations took effect in July 2026.
- Transitional period granted; CAOs have until July 2027 to comply.
- National control room requires visibility of available CL
- Compliance through existing (dataset change) or new ICCP configuration. Alternatively, a third party provider may be considered.
- Engage with Transpower via the ODI process as early as possible as the process can take up to 12 months.
- Dispensation and equivalence, and exemption pathways are available and can be requested.
- Where a CAO deems they do not have CL, notification to Transpower is required.

Wrap Up / Key References

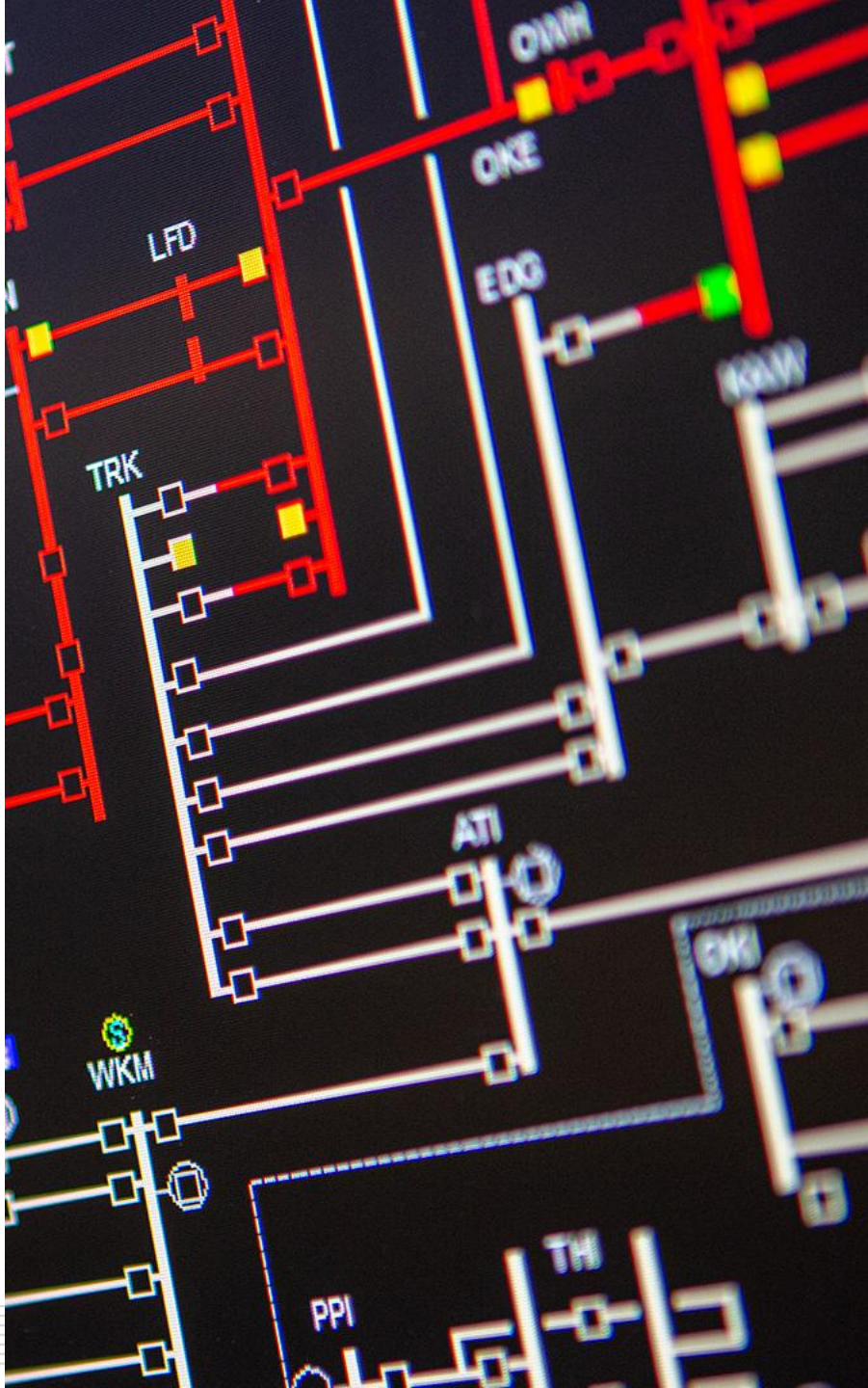
A recording of this Forum and the Q&A will be available on our website this week.

Refer the following links for more information:

- Authority Code and CACTIS decision
  Code Decision Paper | Electricity Authority
- More information on the CACTIS
  Connected Asset Commissioning, Testing and Information Standard (CACTIS) | Transpower
- Transpower ODI process and ODI request form
  Operational Data Integration | Transpower
- Transpower dispensations and equivalence process
  Dispensations and equivalence arrangements | Transpower
- Electricity Authority Exemptions process
  Exemptions | Electricity Authority

For any compliance concerns, contact the Authority at compliance@ea.govt.nz

For any other queries, please reach out to your Transpower Relationship Manager or the System Operator via the System Operator mailbox at system.operator@transpower.co.nz



Questions / Pātai

Please raise your hand or use the chat