

Investigation of alleged breaches of the Electricity Industry Participation Code 2010 by Transpower New Zealand Limited as the system operator

On 12 April 2019, Transpower New Zealand Limited as the system operator self-reported to the Electricity Authority (Authority) that it believed on reasonable grounds that it had breached clause 13.58A(1)(e)(i) of the Electricity Industry Participation Code 2010 (Code). The Authority alleged the system operator also breached clauses 13.58A(2)(d)(i) and clause 13.69A of the Code in relation to the same incident.

On 27 June 2019, the Authority appointed Peter Wakefield under regulation 12 of the Electricity Industry (Enforcement) Regulations 2010 (Regulations), as investigator to investigate the alleged breaches.

Under regulation 16 of the Regulations, the investigator must promptly notify the industry participant alleged to have breached the Code of the allegations that are being investigated.

On 28 June 2019, the investigator notified the system operator of the investigation.

Under regulation 17 of the Regulations, at the same time as the investigator sends a notice under regulation 16, the investigator must publicise the information about the matter under investigation, including the content of the notice given under that regulation. This notice publicises the information about the matter under investigation, and a copy of the notice given under regulation 16 is attached.

Any participant who considers that it is affected by the matter being investigated, and who wishes to become a party to this investigation, should notify the investigator within 10 working days after the date on which this notice is published.

The investigator's contact details are:

Peter Wakefield
Senior Investigator
Electricity Authority
Phone: 04 460 8864
Mobile: 021 392 715

peter.wakefield@ea.govt.nz

Level 7
Harbour Tower
2 Hunter Street
PO Box 10041
Wellington

NOTICE UNDER REGULATION 16 OF THE ELECTRICITY INDUSTRY (ENFORCEMENT) REGULATIONS 2010

Date:	28 June 2019
Addressee:	Transpower New Zealand Limited as the system operator
Subject:	The system operator implemented a Special Protection Scheme (SPS) automation project in the market system. The information used to update the SPS models status was incorrect, causing constraints to be automatically modelled when they should not have been, and constraints not generated when they should have been.
Investigator:	Peter Wakefield , Senior Investigator, peter.wakefield@ea.govt.nz (appointed investigator under regulation 12 of the Electricity Industry (Enforcement) Regulations 2010 (Regulations)).
Notifying industry participant:	<p>Transpower New Zealand Limited as the system operator alleged the breach of clause 13.58A(1)(e)(i)</p> <p>The Electricity Authority alleged the breaches of clauses 13.58(2)(d)(i) and 13.69A</p>
Clauses allegedly breached:	<p>Clause 13.58A(1)(e)(i) requires the system operator to use the grid owner's information about the AC transmission system configuration, capacity, and losses as inputs when preparing a price-responsive schedule (PRS).</p> <p>Clause 13.58A(2)(d)(i) requires the system operator to use the grid owner's information about the AC transmission system configuration, capacity, and losses as inputs when preparing a non-response schedule (NRS).</p> <p>Clause 13.69A requires the system operator to prepare a dispatch schedule in accordance with the methodology set out in Schedule 13.3. Clause 7(g)(i) of Schedule 13.3 requires the system operator to use the AC transmission system configuration, capacity and losses as inputs when preparing a dispatch schedule.</p>
Circumstances of alleged breaches:	<p>Transpower implemented a system to automate the SCADA, energy management system, and the system operator's market system modelling around changes in SPS status. The status of an SPS can be either enabled or disabled.</p> <p>When implementing the change, Transpower populated a field in the market system with incorrect default SPS information. At 12:14 pm on 28 March 2019, the system operator put this incorrect modelling into the production market system.</p> <p>At some stage the system operator identified the forward-looking schedules were producing constraints caused by modelling SPSs that should not have been operational. A participant also saw the constraints in the schedules and queried the reason for the</p>

constraints with the system operator.

The system operator investigated and found the SPSs were modelled incorrectly and that:

- the Edgumbe_Owhata (EDG_OWH) and the Maraetai_Whakamaru (MTI_WKM) SPSs were the only schemes where constraints were unnecessarily generated in the production schedules
- the EDG_OWH SPS constraints appeared in the long and short NRSs and /PRSs from 28 March 2019 until 12:00 am on 31 March 2019. Some of these constraints were binding at 100%. The EDG_OWH SPS constraint appeared in 89 real-time dispatch (RTD) schedules between 2:00 pm on 28 March and 9:55 am on 29 March with a maximum binding percentage of 98.6%
- the MTI_WKM SPS constraints did not appear in any RTD schedules although constraints did appear in forward-looking schedules
- the Arapuni (ARI)_Hangatiki (HTI) circuit overload protection SPS was active in the market system when it should have been inactive. The system operator corrected the issue before this reached the NRSL timeframes
- there were no 100% binding constraints in the RTD and final price cases. As a result, dispatch was unaffected and there was no market impact to wholesale prices or constrained costs. However, binding constraints appeared in the forward-looking schedules and traders may have attempted to trade around these constraints
- the modelling of these SPSs did not create a security impact as it was the market model that was not updated correctly. The actual SPSs and their performance would not have changed due to this modelling error.

Date and time of alleged breaches:

- From 12:14 pm on 28 March 2019 to 2:00 am on 31 March 2019

Please note, under regulation 16 of the Regulations, you are obliged to respond to this allegation, in writing, to the investigator within 10 working days of receipt of this notice (unless the investigator allows, in writing, a longer period).

Please provide your response by return email to the investigator.

Include the following in your response:

Whether you believe you have breached the Code

Whether there is another provision you consider more accurately describes the nature of the event

A full explanation of the circumstances surrounding the alleged breaches

Identification of any information provided in your response that you consider confidential and that should not be included in the investigator's report under regulation 19 of the Regulations (regulation 15(2) of the Regulations).

