

**ELECTRICITY INDUSTRY PARTICIPATION CODE  
DISTRIBUTOR AUDIT REPORT**

For

**Network Waitaki Limited**



Prepared by: Steve Woods

Date audit commenced: 19 February 2019

Date audit report completed: 4 March 2019

Audit report due date: 22-Mar-19

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## EXECUTIVE SUMMARY

This Distributor audit was performed at the request of Network Waitaki to encompass the Electricity Industry Participation Code requirement for an audit, in accordance with clause 11.10 of part 11. The audit was carried out at Network Waitaki's premises in Oamaru on February 19<sup>th</sup>, 2019.

The audit was conducted in accordance with the Guideline for Distributor Audits V7.2, which was produced by the Electricity Authority.

This audit found six non-compliances and makes four recommendations.

The main issues to address are the accuracy of event dates and initial electrical connection dates. These inaccuracies can cause problems for other participants where they use these fields for validation of their own data.

There were a small number of other discrepancies and some late registry updates.

I have recommended Network Waitaki ensures they have trader approval prior to the electrical connection of streetlight circuits, to ensure the load is correctly recorded.

It appears that the balancing areas need to be reviewed because at least one substation can be fed from GXP's in different balancing areas.

The date of the next audit is determined by the Electricity Authority and is dependent on the level of compliance during this audit. The table below provides some guidance on this matter and contains a future risk rating score of 10, which results in an indicative audit frequency of 12 months. Considering this result along with the proposed solutions to the matters raised, I believe 18 months is an appropriate recommendation.

The matters raised are shown in the tables below:

## AUDIT SUMMARY

### NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Complete and accurate information	2.1	11.2(1)	Some event dates and IECs not complete and accurate.	Moderate	Low	2	Identified
Provision of ICP information	3.4	7(2) of Schedule 11.1	Ready status updated after trading for ICP 0000460513WTA82.	Strong	Low	1	Identified
Population of IED	3.5	7(2A) of Schedule 11.1	15 late initial electrical connection date updates.	Moderate	Low	2	Identified
Changes to registry information	4.1	8 Schedule 11.1	Updates to registry backdated greater than 3 business days of the event.	Moderate	Low	2	Identified

NSP accuracy	4.2	7(1),(4) and (5) Schedule 11.1	Two ICPs with incorrect NSPs.	Strong	Low	1	Identified
Registry accuracy	4.6	7(1)(k)&(p) of Schedule 11.1	Incorrect registry information for one DG ICP. 80 missing IECDs. 15 incorrect IECDs.	Moderate	Low	2	Identified
<b>Future Risk Rating</b>						<b>10</b>	
<b>Indicative Audit Frequency</b>						<b>12 months</b>	

Future risk rating	0-1	2-5	6-8	9-20	21-29	30+
Indicative audit frequency	36 months	24 months	18 months	12 months	6 months	3 months

## RECOMMENDATIONS

Subject	Section	Recommendation	Description
Electrical connection of streetlight circuits	3.16	Regarding Clause 10.33A	Review streetlight circuit connection process to ensure that these are associated with an ICP prior to electrical connection.
Registry accuracy	4.6	Regarding clause 7(1)(o) of Schedule 11.1	Create fields for distributed generation in the database.
Registry accuracy	4.6	Regarding clause 7(1)(o) of Schedule 11.1	Check 7 ICPs to confirm DG is definitely installed.
Balancing areas	6.3	Regarding Clause 24(1) and Clause 26(3) Schedule 11.1	Check whether there should be only one balancing area rather than two.

## ISSUES

Subject	Section	Recommendation	Description

## 1. ADMINISTRATIVE

### 1.1. Exemptions from Obligations to Comply with Code (Section 11)

#### Code reference

*Section 11 of Electricity Industry Act 2010.*

#### Code related audit information

*Section 11 of the Electricity Industry Act provides for the Electricity Authority to exempt any participant from compliance with all or any of the clauses.*

#### Audit observation

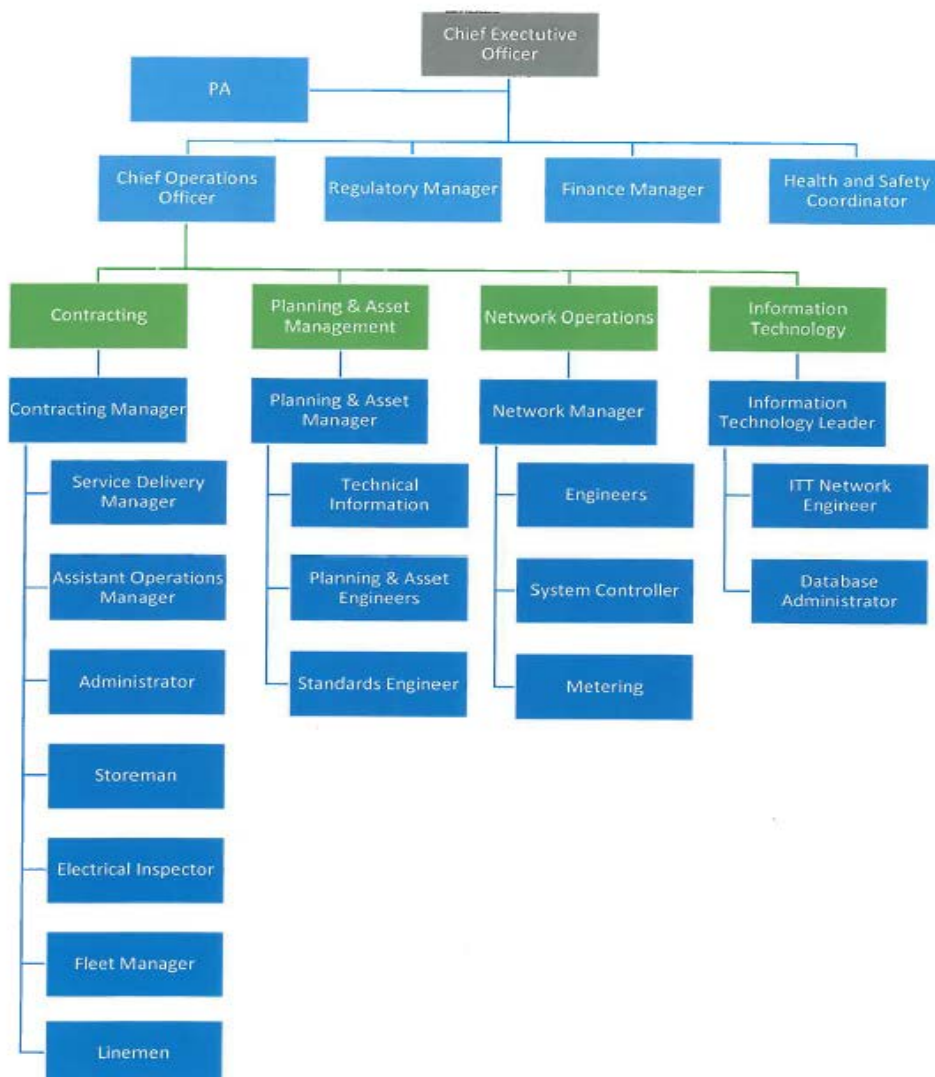
I checked the Authority's website to identify any exemptions in place.

#### Audit commentary

Network Waitaki has no exemptions in place that are relevant to the scope of this audit.

### 1.2. Structure of Organisation

#### Organisation Structure:



### 1.3. Persons involved in this audit

Auditor:

**Steve Woods**

**Veritek Limited**

**Electricity Authority Approved Auditor**

Network Waitaki personnel assisting in this audit were:

Name	Title
Peter Fridd	Metering Manager

### 1.4. Use of contractors (Clause 11.2A)

#### Code reference

*Clause 11.2A*

#### Code related audit information

*A participant who uses a contractor*

- *remains responsible for the contractor's fulfilment of the participants Code obligations*
- *cannot assert that it is not responsible or liable for the obligation due to the action of a contractor*
- *must ensure that the contractor has at least the specified level of skill, expertise, experience, or qualification that the participant would be required to have if it were performing the obligation itself.*

#### Audit observation

Network Waitaki subcontracts contractors to conduct connection and energisation activities on their network. This matter was discussed during the audit to ensure Network Waitaki understands their responsibilities under this clause.

#### Audit commentary

Network Waitaki has maintained responsibility for all of their obligations during the audit period. Compliance is confirmed.

### 1.5. Supplier list

The list of contractors is shown below:

- Collect Electrical - Callum Reid – Kurow
- Altitude Electrical - Kerry Wilson – Twizel
- Plunket Electrical - Oamaru
- Kevin Peterson.

For most new connections there is one visit with the contractor conducting connection, electrical connection and metering functions.

## 1.6. Hardware and Software

Network Waitaki use a SQL database and Content Management Server.

Network Waitaki's backup arrangements are in accordance with normal industry protocols.

## 1.7. Breaches or Breach Allegations

Network Waitaki has no breach allegations recorded by the Electricity Authority, which are relevant to this audit.

## 1.8. ICP and NSP Data

The table below lists the relevant NSPs and their associated balancing areas.

Distributor	NSP POC	Description	Parent POC	Parent Network	Balancing Area	Network type	Start date	No of ICPs
WATA	OAM0331	OAMARU		WATA	OAM0331WATAG	G	01-01-17	11,087
WATA	TWZ0331	TWIZEL		WATA	WTKIVLYWATAG	G	01-05-08	633
WATA	WTK0111	WAITAKI		WATA	WTKIVLYWATAG	G	13-11-15	1,256
WATA	WTK0331	WAITAKI		WATA	WTKIVLYWATAG	G	01-05-08	0

Network Waitaki provided a list of all ICPs as at January 2019 by way of a registry "list file". A summary of this data by "ICP status" is as follows.

Status	Number of ICPs (2019)
Distributor	0
New	0
Ready	11
Active	12,976
Inactive - new connection in progress (1,12)	14
Inactive – vacant (1,4)	238
Inactive – AMI remote disconnection (1,7)	19
Inactive – de-energised due to meter disconnected (1,8)	1
Inactive – at pole fuse (1,9)	1
Inactive – de-energised at meter box switch (1,10)	0
Inactive - at meter box switch (1,11)	0



Inactive – ready for decommissioning (1,6)	1
Decommissioned (3)	1,176

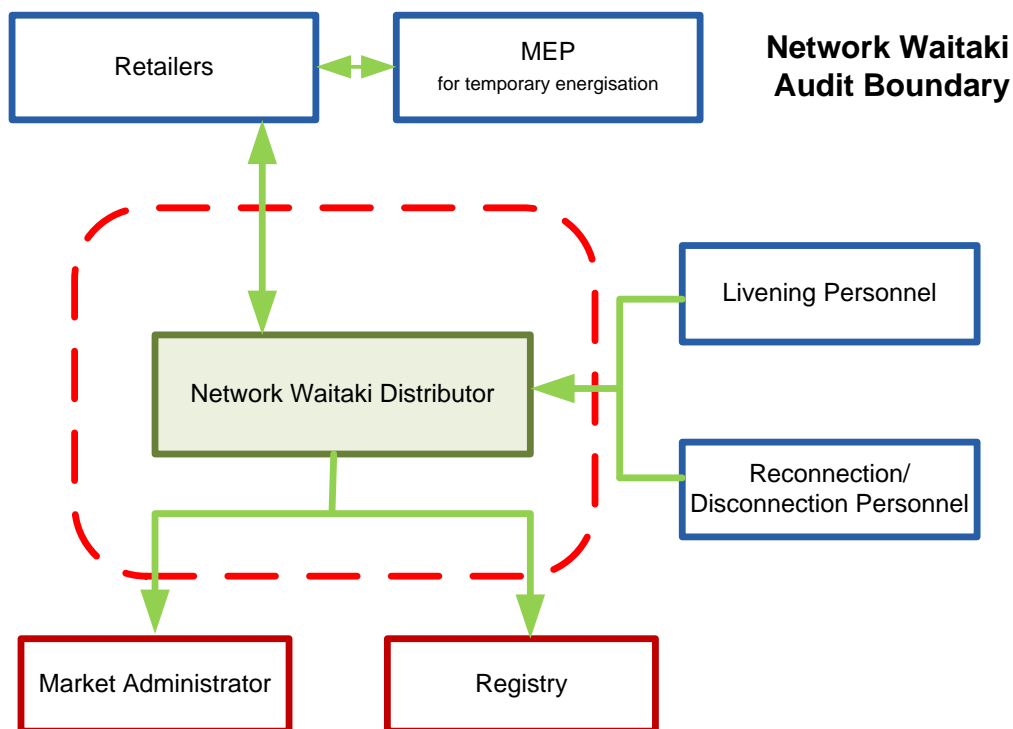
### 1.9. Authorisation Received

A letter of authorisation was not required or sought. Network Waitaki was able to provide all necessary information.

### 1.10. Scope of Audit

This Distributor audit was performed at the request of Network Waitaki to encompass the Electricity Industry Participation Code requirement for an audit, in accordance with clause 11.10 of part 11. The audit was carried out at Network Waitaki's premises in Oamaru on February 19<sup>th</sup>, 2019.

The scope of the audit is shown in the diagram below, with the Network Waitaki audit boundary shown for clarity.



The audit was conducted in accordance with the Guideline for Distributor Audits V7.2, which was produced by the Electricity Authority.

### 1.11. Summary of previous audit

Network Waitaki provided a copy of their previous audit, conducted in September 2017 by Steve Woods of Veritek Ltd.

The findings of the previous audit are shown in the tables below:

#### Table of Non-Compliance

Subject	Section	Clause	Non-compliance	Status
Provision of ICP information	3.3	11.7	One initial energisation date not populated.	Cleared for the ICP identified in the previous audit
Population of IED	3.5	7(2A) of Schedule 11.1	10 late initial energisation date updates.	Still existing
Changes to registry information	4.1	8 Schedule 11.1	Updates to registry backdated greater than 3 business days of the event.	Still existing
Registry accuracy	4.6	7(1)(k)&(p) of Schedule 11.1	Five ICPs with DG fields inadvertently removed.	Still existing

#### Table of Recommendations

Subject	Section	Clause	Recommendation for improvement	Status
Registry accuracy	4.6	Regarding clause 7(1)(o) of Schedule 11.1	Create fields for distributed generation in the database.	Still existing
Registry accuracy	4.6	Regarding: Clause 7(1)(m) of schedule 11.1.	Unmetered load format, as recommended by the EA, be populated where possible.	Cleared

## 2. OPERATIONAL INFRASTRUCTURE

### 2.1. Requirement to provide complete and accurate information (Clause 11.2(1))

#### Code reference

Clause 11.2(1)

#### Code related audit information

*A participant must take all practicable steps to ensure that information that the participant is required to provide to any person under Part 11 is:*

- a) complete and accurate*
- b) not misleading or deceptive*
- c) not likely to mislead or deceive.*

#### Audit observation

Network Waitaki's data management processes were examined. The list file as at January 2019 was examined to confirm compliance.

#### Audit commentary

Network Waitaki has processes in place to ensure that information is complete and accurate and is not misleading or deceptive. Examination of the list file found examples of some information that was not complete and accurate. Specific examples are:

- some incorrect event dates for registry updates;
- some incorrect IECDs; and
- some missing IECDs.

Network Waitaki is examining automation of registry updates, which will assist with compliance.

#### Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.1 With: Clause 11.2(1)  From: 01-Sep-17 To: 31-Dec-18	Some event dates and IECDs not complete and accurate  Potential impact: Low  Actual impact: Low  Audit history: None  Controls: Moderate  Breach risk rating: 2
Audit risk rating	Rationale for audit risk rating
<b>Low</b>	The controls are recorded as moderate because they mitigate risk most of the time but there is room for improvement.  The impact on settlement and participants is minor; therefore, the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
<p>We have Included IED Dates to our Data comparison Report which checks for IEDs after ICPs become Active in Registry. In the event of any differences the report will highlight it as an exception for us to fix.</p> <p>This control will assist in Keeping IEDs to correct dates.</p>	<p>Proposed Finish Date</p> <p>30/3/2019</p>	Identified
Preventative actions taken to ensure no further issues will occur	Completion date	
As Above	Proposed or actual date	

## 2.2. Requirement to correct errors (Clause 11.2(2))

### Code reference

Clause 11.2(2)

### Code related audit information

*If the participant becomes aware that in providing information under this Part, the participant has not complied with that obligation, the participant must, as soon as practicable, provide such further information as is necessary to ensure that the participant does comply.*

### Audit observation

Network Waitaki's data management processes were examined. The list file as at January 2019 was examined to confirm compliance.

### Audit commentary

Network Waitaki has a comprehensive suite of discrepancy reports in place. These are managed on a regular basis to ensure that information is complete and accurate and is not misleading or deceptive. Any incorrect data is corrected upon discovery. I did not identify any examples where errors were not corrected as soon as practicable.

### Audit outcome

Compliant

### 3. CREATION OF ICPS

#### 3.1. Distributors must create ICPs (Clause 11.4)

##### Code reference

*Clause 11.4*

##### Code related audit information

*The distributor must create an ICP identifier in accordance with Clause 1 of Schedule 11.1 for each ICP on the distributor's network. This includes an ICP identifier for the point of connection at which an embedded network connects to the distributor's network.*

##### Audit observation

The new connection process was examined in detail and is described in **section 3.2** below. 20 new connection applications of the 212 created during the audit period were checked from the point of application through to when the ICP was created.

##### Audit commentary

The process in place is robust and has good controls in place. The sample checked in **section 3.2** below confirms this.

##### Audit outcome

Compliant

#### 3.2. Participants may request distributors to create ICPs (Clause 11.5(3))

##### Code reference

*Clause 11.5(3)*

##### Code related audit information

*The distributor, within three business days of receiving a request for the creation of an ICP identifier for an ICP, must either create a new ICP identifier or advise the participant of the reasons it is unable to comply with the request.*

##### Audit observation

The new connection process was examined in detail. 20 new connection applications of the 212 created during the audit period were checked from the point of application through to when the ICP was created. These were selected using the typical characteristic methodology to confirm the process and controls worked in practice.

##### Audit commentary

Network Waitaki's new connection process contains the following steps:

- an application is made directly to Network Waitaki from the customer or their agent (electrician) and this application can be made on-line;
- this application contains the proposed retailer and the contractor;
- the application is allocated to an engineer for approval;
- if payment is required a quotation is sent to the customer;
- once payment is made the approved application is provided to Metering and Connections;
- Metering and Connections creates the ICP at "Ready";
- the New Connections sheet is provided to the retailer or approval; and

- the retailer sends approval back to Metering and Connections.

The records for 20 ICPs were examined. 18 were created within three business days and liaison occurred with the retailer or their agent for the other two.

#### **Audit outcome**

Compliant

### **3.3. Provision of ICP Information to the registry (Clause 11.7)**

#### **Code reference**

*Clause 11.7*

#### **Code related audit information**

*The distributor must provide information about ICPs on its network in accordance with Schedule 11.1.*

#### **Audit observation**

The new connection process for populating all required registry fields was examined. The list file was examined for all ICPs created during the audit period.

In this section I have examined the process for populating the registry, and the controls to ensure information is complete.

The accuracy of information is discussed in **section 4.6**.

#### **Audit commentary**

The registry is populated manually and there is peer review between the two operators to ensure information is accurate. There is also a set of validation reports run monthly to identify errors.

#### **Audit outcome**

Compliant

### **3.4. Timeliness of Provision of ICP Information to the registry (Clause 7(2) of Schedule 11.1)**

#### **Code reference**

*Clause 7(2) of Schedule 11.1*

#### **Code related audit information**

*The distributor must provide information specified in Clauses 7(1)(a) to 7(1)(o) of Schedule 11.1 as soon as practicable and prior to electricity being traded at the ICP.*

#### **Audit observation**

The new connection process was examined. The event detail report for the period from September 2017 through to December 2018 was examined.

#### **Audit commentary**

ICP 0000460513WTA82 was updated to “Ready” on 12/04/18 but it was electrically connected on 10/04/19, therefore the information was not provided to the registry prior to trading. All other updates were prior to trading.

## Audit outcome

Compliant

Non-compliance	Description		
Audit Ref: 3.4 With: Clause 7(2) of Schedule 11.1  From: 10-Apr-18 To: 12-Apr-18	Ready status updated after trading for ICP 0000460513WTA82.  Potential impact: Low  Actual impact: Low  Audit history: None  Controls: Strong  Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	The controls are recorded as strong because the new connections process is well designed and managed. There was only one exception out of all new connections during the audit period.  The impact on settlement and participants is minor; therefore, the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
Not sure how this happened ( I was in Hospital ) but we received a Wells SR No 2224547 on the 28/3/2018 asking us to fit meter and liven. The Wells job came from AMS SR No 2721149, to get this SR they would have had instructions from the Retailer Genesis prior to 28/3/2018. We failed to update the Registry with the retailer and to put the ICP into the Ready Status. The Retailer had agreed to trade on this ICP before livening date as they wouldn't have issued a Metering SR dated 28/3/2018.			Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
We now insist on a Customer nominating a retailer before we will accept a New Connection application and by putting the retailer in the Registry it alters the ICP Status to Ready.		Proposed or actual date 1/3/2019	

### 3.5. Timeliness of Provision of Initial Electrical Connection Date (Clause 7(2A) of Schedule 11.1)

#### Code reference

*Clause 7(2A) of Schedule 11.1*

#### Code related audit information

*The distributor must provide the information specified in sub-clause (1)(p) to the registry no later than 10 business days after the date on which the ICP is initially energised.*

#### Audit observation

The new connection process for populating all required registry fields was examined. The event detail report for the period from September 2017 through to December 2018 was examined.

#### Audit commentary

There is a requirement to populate the initial electrical date within 10 business days of physical electrical connection. There were 212 initial energisation date updates in the event detail report, and 15 of them were updated later than 10 business days.

Most of the late updates occurred in March 2018, during a period where the main operator was away. Network Waitaki is investigating the automation of the registry updates and improvements to reporting to improve timeliness of updates. These were updated in the database but not the registry.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.5 With: Clause 7(2A) of Schedule 11.1 From: 07-Mar-18 To: 12-Sep-18	15 late initial electrical connection date updates. Potential impact: Low Actual impact: Low Audit history: Twice Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Network Waitaki has reporting in place to ensure initial energisation dates are provided by contractors in a timely manner. I consider the controls are moderate because there are improvements that can be made to reporting and the level of automation to improve compliance. There is no impact on settlement. The only potential impact is where a trader may wish to compare their Active date to the IED, so the impact is considered minor, leading to an audit risk rating of low.		
Actions taken to resolve the issue		Completion date	Remedial action status
We are in the process of adding the IEDs to our Data Comparison report and should have it complete before March end this year. This will provide us with a check that we have loaded our database and the registry with the correct IED and on the correct date.		Proposed or actual date 30/3/2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
AS Above			



### 3.6. Connection of ICPs (Clause 11.17)

#### Code reference

Clause 11.17

#### Code related audit information

*A distributor must, when connecting an ICP that is not also an NSP, follow the electrical connection process set out in Clause 10.31.*

*The distributor must not connect an ICP (except for an ICP across which unmetered load is shared) unless a trader is recorded in the registry as accepting responsibility for the ICP.*

*In respect of ICPs across which unmetered load is shared, the distributor must not connect an ICP unless a trader is recorded in the registry as accepting responsibility for the shared unmetered load.*

#### Audit observation

The new connection process was examined. The event detail report for the period from September 2017 through to December 2018 was examined.

#### Audit commentary

The new connections process was examined, and the process includes a “trader responsibility” step.

All ICPs that were electrically connected had a trader recorded in the registry as having accepted responsibility.

#### Audit outcome

Compliant

### 3.7. Electrical connection of ICP that is not an NSP (Clause 10.31)

#### Code reference

Clause 10.31

#### Code related audit information

*(1) Only a distributor may, on its network, connect an ICP that is not an NSP.*

*(2) Despite subclause (1), a distributor must not connect an ICP that is not an NSP unless—*

*(a) the trader trading at the ICP has requested the connection; or*

*(b) in the following circumstances:*

*(i) there is only shared unmetered load at the ICP; and*

*(ii) in accordance with clause 11.14, the distributor has—*

*(A) assigned the shared unmetered load; and*

*(B) advised each trader, that is responsible under clause 11.18(1) for the ICPs across which the unmetered load is shared, of that assignment.*

#### Audit observation

The new connection process was examined. The event detail report for the period from September 2017 through to December 2018 was examined.

#### Audit commentary

ICPs will not be electrically connected without the agreement from the trader, who in turn has agreement with an MEP for the ICP. Trader acceptance is confirmed during the application process.

As discussed in **section 3.4**, the new connections reviewed all had proposed trader recorded on the registry prior to initial electrical connection.

#### **Audit outcome**

Compliant

### **3.8. Temporary electrical connection of ICP that is not an NSP (Clause 10.31A and 10.31B)**

#### **Code reference**

*Clause 10.31A & 10.31B*

#### **Code related audit information**

*Clause 10.31A*

- (1) Subject to clause 10.33, only a distributor may, on its network, temporarily electrically connect an ICP that is not an NSP.*
- (2) A distributor may only temporarily electrically connect an ICP that is not an NSP—*
  - (a) if a metering equipment provider requests that the distributor temporarily electrically connect the ICP for the purposes of—*
    - (i) certifying a metering installation at the ICP; or*
    - (ii) maintaining, repairing, testing, or commissioning a metering installation at the ICP; or*
  - (b) in the following circumstances:*
    - (i) there is only shared unmetered load at the ICP; and*
    - (ii) in accordance with clause 11.14, the distributor has—*
      - (A) assigned the shared unmetered load; and*
      - (B) advised each trader, that is responsible under clause 11.18(1) for the ICPs across which the unmetered load is shared, of that assignment; and*
  - (iii) the distributor has advised those traders of the distributor's intention to temporarily electrically connect the ICP.*
- (3) Despite subclause (2)(a), a metering equipment provider must not request that a distributor temporarily electrically connect an ICP that is not an NSP unless—*
  - (a) the trader responsible for the ICP has authorised the metering equipment provider to do so; and*
  - (b) the metering equipment provider has an arrangement with that trader to provide metering services.*
- (4) Despite subclause (2)(b), the distributor need not advise the traders of the distributor's intention to temporarily electrically connect the ICP if—*
  - (a) advising all traders would impose a material cost on the distributor; and*
  - (b) in the distributor's reasonable opinion, advising the traders would not result in any material benefit to any of the traders.*

*Clause 10.31B*

- (1) A distributor may electrically connect an ICP that is not an NSP only if—*
  - (a) there is only shared unmetered load at the ICP; and*
  - (b) in accordance with clause 11.14, the distributor has—*
    - (i) assigned the shared unmetered load; and*
    - (ii) advised each trader, that is responsible under clause 11.18(1) for the ICPs across which the unmetered load is shared, of that assignment; and*
  - (c) the distributor has advised those traders of the distributor's intention to electrically connect the ICP.*
- (2) Despite subclause (1)(b), the distributor need not advise the traders of the distributor's intention to electrically connect the ICP if—*
  - (a) the distributor is doing so following a maintenance outage; and*
  - (b) advising all traders would impose a material cost on the distributor; and*

*(c) in the distributor's reasonable opinion, advising the traders would not result in any material benefit to any of the traders.*

#### **Audit observation**

The new connection process was examined in **sections 3.1** and **3.2**.

The event detail file and registry list were examined to determine compliance.

#### **Audit commentary**

Any ICPs that are temporarily electrically connected follow the same process as those for all other new connections. No temporarily electrically connected ICPs were identified.

#### **Audit outcome**

Compliant

### **3.9. Connection of NSP that is not a point of connection to the grid (Clause 10.30)**

#### **Code reference**

*Clause 10.30(2)*

#### **Code related audit information**

*A distributor must not connect an NSP on its network that is not a point of connection to the grid unless requested to do so by the reconciliation participant responsible for ensuring there is a metering installation for the point of connection.*

*The distributor must, within five business days of connecting the NSP that is not a point of connection to the grid, advise the reconciliation manager of the following in the prescribed form:*

- *the NSP that has been connected*
- *the date of the connection*
- *the participant identifier of the MEP for each metering installation for the NSP*
- *the certification expiry date of each metering installation for the NSP.*

#### **Audit observation**

Network Waitaki has not created any new NSPs during the audit period.

#### **Audit commentary**

Network Waitaki has not created any new NSPs during the audit period.

#### **Audit outcome**

Not applicable

### **3.10. Temporary electrical connection of NSP that is not point of connection to grid (Clause 10.30(A))**

#### **Code reference**

*Clause 10.30(A)*

#### **Code related audit information**

*A distributor may only temporarily electrically connect an NSP that is not a point of connection to the grid if requested by an MEP for a purpose set out in clause 10.30A(3), and the MEP:*

- *has been authorised to make the request by the reconciliation participant responsible for the NSP; and*
- *the MEP has an arrangement with that reconciliation participant to provide metering services.*

#### **Audit observation**

The NSP table was reviewed.

#### **Audit commentary**

No new NSPs that are not points of connection to the grid were connected during the audit period.

#### **Audit outcome**

Compliant

### **3.11. Definition of ICP identifier (Clause 1(1) Schedule 11.1)**

#### **Code reference**

*Clause 1(1) Schedule 11.1*

#### **Code related audit information**

*Each ICP created by the distributor in accordance with Clause 11.4 must have a unique identifier, called the “ICP identifier”, determined in accordance with the following format:*

*xxxxxxxxxxccc where:*

- *xxxxxxxxxx is a numerical sequence provided by the distributor*
- *xx is a code that ensures the ICP is unique (assigned by the Authority to the issuing distributor)*
- *ccc is a checksum generated according to the algorithm provided by the market administrator.*

#### **Audit observation**

The new connection process was examined and a sample of 20 new connections were checked.

#### **Audit commentary**

All ICPs are created in the appropriate format. The sample checked confirmed compliance.

#### **Audit outcome**

Compliant

### **3.12. Loss category (Clause 6 Schedule 11.1)**

#### **Code reference**

*Clause 6 Schedule 11.1*

#### **Code related audit information**

*Each ICP must have a single loss category that is referenced to identify the associated loss factors.*

#### **Audit observation**

The list file was examined to confirm all active ICPs have a single loss category code.

#### **Audit commentary**

Each ICP only has a single loss category, which clearly identifies the relevant loss factor.

#### **Audit outcome**

Compliant

### 3.13. Management of “new” status (Clause 13 Schedule 11.1)

#### Code reference

*Clause 13 Schedule 11.1*

#### Code related audit information

*The ICP status of “New” must be managed by the distributor to indicate:*

- *the associated electrical installations are in the construction phase (Clause 13(a) of Schedule 11.1)*
- *the ICP is not ready for activation (Clause 13(b) of Schedule 11.1).*

#### Audit observation

The management of ICPs in relation to the use of the “New” status was examined. The list file and event detail report for the period September 2017 to December 2018 were examined in relation to the use of the “New” status. I also checked for ICPs at the “New” status with an initial electrical connection date populated.

#### Audit commentary

The “New” status is not normally used. Seven ICPs were created at “New” during the audit period, but only because a retailer had not been nominated.

Network Waitaki correctly uses the “New” status.

#### Audit outcome

Compliant

### 3.14. Monitoring of “new” & “ready” statuses (Clause 15 Schedule 11.1)

#### Code reference

*Clause 15 Schedule 11.1*

#### Code related audit information

*If an ICP has had the status of “New” or has had the status of “Ready” for 24 calendar months or more:*

- *the distributor must ask the trader who intends to trade at the ICP whether the ICP should continue to have that status (Clause 15(2)(a) of Schedule 11.1)*
- *the distributor must decommission the ICP if the trader advises that the ICP should not continue to have that status (Clause 15(2)(b) of Schedule 11.1).*

#### Audit observation

I checked the list file for ICPs at “New” or “Ready” for longer than 24 months to confirm that traders had been notified.

#### Audit commentary

There are no ICPs at “New” or “Ready” for longer than 24 months. Network Waitaki routinely check any ICPs at these statuses every two weeks and communicates with the relevant parties to confirm if the connection is still required or not.

#### Audit outcome

Compliant

### 3.15. Embedded generation loss category (Clause 7(6) Schedule 11.1)

#### Code reference

*Clause 7(6) Schedule 11.1*

#### Code related audit information

*If the ICP connects the distributor's network to an embedded generating station that has a capacity of 10 MW or more (clause 7(1)(f) of Schedule 11.1):*

- *The loss category code must be unique; and*
- *The distributor must provide the following to the reconciliation manager:*
  - o *the unique loss category code assigned to the ICP*
  - o *the ICP identifier of the ICP*
  - o *the NSP identifier of the NSP to which the ICP is connected*
  - o *the plant name of the embedded generating station.*

#### Audit observation

This requirement was discussed, and the list file was examined.

#### Audit commentary

There are no embedded generators with a capacity greater than 10MW that require specific loss category codes. There has been no new embedded generation greater than 10MW created during the audit period.

#### Audit outcome

Not applicable

### 3.16. Electrical connection of a point of connection (Clause 10.33A)

#### Code reference

*Clause 10.33A*

#### Code related audit information

- (1) A reconciliation participant may electrically connect a point of connection, or authorise the electrical connection of a point of connection, only if—*
- (a) the reconciliation participant is recorded in the registry as being responsible for the ICP; and*
  - (b) one or more certified metering installations are in place at the ICP in accordance with this Part; and*
  - (c) in the case of an ICP that has not previously been electrically connected, the owner of the network to which the point of connection is connected has given written approval of the electrical connection.*
- (2) A reconciliation participant described in subclause (1)(a)—*
- (a) may authorise the electrical connection of an ICP if—*
    - (i) a metering installation is in place at the ICP; and*
    - (ii) the metering installation is operational but not certified; and*
    - (iii) the reconciliation participant arranges for the certification of the metering installation to be completed within five business days of the ICP being electrically connected;*
  - (b) may electrically connect an ICP if the point of connection is solely for unmetered load.*
- (3) A reconciliation participant must not authorise the electrical connection of a point of connection in either of the following circumstances:*

- (a) a distributor has electrically disconnected the point of connection for safety reasons, and has not subsequently approved the electrical connection of the point of connection:
- (b) electrically connecting the point of connection would breach the Electricity (Safety) Regulations 2010.
- (4) No participant may electrically connect a point of connection or authorise the electrical connection of a point of connection, other than a reconciliation participant in the circumstances described in sub-clause (1), (2), or (3).

#### Audit observation

Sub-clause (4) states that no participant may electrically connect a point of connection without the permission of the Reconciliation Participant. The electrical connection of street light circuits which are a point of connection was examined.

#### Audit commentary

The connection of street light circuits was examined. This is not a frequent occurrence, but I note that streetlight circuits can be electrically connected prior to the Council having the data in the database and without the trader knowing. I recommend the new connections process for streetlighting circuits be reviewed to ensure Network Waitaki is not electrically connecting them without approval from the trader. No examples were identified so this is a recommendation rather than non-compliance.

Recommendation	Description	Audited party comment	Remedial action
Regarding Clause 10.33A	Review streetlight circuit connection process to ensure that these are associated with an ICP prior to electrical connection.	I have arranged a meeting with Roger McCaw from the WDC and their Contractor John Clements as soon as the Council receive their current Audit report. We will implement a new connection process that will keep The WDC , NWL and Retailer Contact informed of any additions to the Streetlighting Circuits.	Identified

#### Audit outcome

Compliant

## 4. MAINTENANCE OF REGISTRY INFORMATION

### 4.1. Changes to registry information (Clause 8 Schedule 11.1)

#### Code reference

*Clause 8 Schedule 11.1*

#### Code related audit information

*If information held by the registry that relates to an ICP for which the distributor is responsible changes, the distributor must provide notice to the registry of that change.*

*Notification must be given by the distributor within three business days after the change takes effect, unless the change is to the NSP identifier of the NSP to which the ICP is usually connected (other than a change that is the result of the commissioning or decommissioning of an NSP).*

*In those cases, notification must be given no later than eight business days after the change takes effect.*

*If the change to the NSP identifier is for more than 14 days, the time within which notification must be effected in accordance with Clause 8(3) of Schedule 11.1 begins on the 15th day after the change.*

#### Audit observation

The process to manage ICP changes were examined, with the event detail report for the period from September 2017 through to December 2018. I used the typical case methodology examining a sample of ten late updates for any change where the initial analysis could not determine the cause.

#### Audit commentary

Network Waitaki updates the registry directly. Their IT platform does not populate the registry. The table below details the quantity and compliance of registry updates. Analysis of the 15 late price code updates showed that 13 of the 15 were not late; they only appeared to be late because the event date was incorrect due to it not being updated and therefore the date of the previous event was effectively “re-used”.

The same issue was found for network event updates. seven of the late updates were due to the addition of solar details for ICPs where the trader’s profile was PV1. The event date used was the event date of the last network update. It was not confirmed if solar was definitely installed, therefore I recommend a check is made with the trader and of the EIEP1 file for “I” flow kWh and if there is not generation connected, these events should be reversed. At least two other updates had the incorrect event date. The other reason for late updates was late field notification of DG details.

Update	Year	Total	Compliant	Late	% Compliant	Average days
Price codes	2017	16,095	16,068	27	99.8%	1.3
	2019	1115	1100	15	99%	104
Status (decom)	2017	42	10	32	24%	13
	2019	51	14	37	27%	11
Network events	2019	282	269	13	95%	15



GXP change over 14 days	2019	646	635	11	98%	11
GXP change within 14 days	2019	2,379	1,410	969	59%	6

I checked 12 status updates greater than 10 business days and in ten cases, late registry population by the trader was the cause. Most of the remaining late updates are because the process to monitor retailers' status updates to "ready for decommissioning" only occurs weekly.

### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.1 With: Clause 8 Schedule 11.1  From: 01-Sep-17 To: 31-Dec-18	Updates to registry backdated greater than 3 business days of the event. Some incorrect event dates. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	I have recorded the controls as moderate because there is room to improve the accuracy of event dates and additional reporting can improve the identification of events where updates are required.  There is a minor impact on participants with late updates. The Audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
Pricing changes have been a cause of our non-compliance forgetting to put in the odd Event date, we are now peer reviewing all changes to help improve our percentage of mistakes.		Proposed or actual date 28/2/2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
As above this will be in place until we update Our Database in a couple of years where we will look at automated the upload.			

#### 4.2. Notice of NSP for each ICP (Clauses 7(1),(4) and (5) Schedule 11.1)

##### Code reference

*Clauses 7(1),(4) and (5) Schedule 11.1*

##### Code related audit information

*The distributor must notify the registry of the NSP identifier of the NSP to which the ICP is usually connected under Clause 7(1)(b) of Schedule 11.1.*

*If the distributor cannot identify the NSP that an ICP is connected to, the distributor must nominate the NSP that the distributor thinks is most likely to be connected to the ICP, taking into account the flow of electricity within its network, and the ICP is deemed to be connected to the nominated NSP.*

##### Audit observation

The accuracy of NSP information was checked by identifying ICPs with a particular NSP where all other ICPs on the same road had a different NSP.

##### Audit commentary

Network Waitaki records the transformer number on the application form. This maps back to the NSP for each ICP in the Network Waitaki database.

I analysed the list file to identify examples where one ICP on a street had a different NSP to all other ICPs on the same street. There were two examples and it was confirmed that they both had incorrect NSPs recorded in the registry. Both had WTK0111 and should have had OAM0331.

Network Waitaki has reporting in place to identify incorrect NSPs, but these two are both next to open points and the reporting did not identify them as problems.

##### Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.2 With: Clauses 7(1),(4) and (5) Schedule 11.1  From: 01-Sep-17 To: 22-Feb-19	Two ICPs with incorrect NSPs.  Potential impact: Low  Actual impact: Low  Audit history: None  Controls: Strong  Breach risk rating: 1
Audit risk rating	Rationale for audit risk rating
<b>Low</b>	The controls are recorded as strong because they mitigate risk to an acceptable level.  The impact on settlement and participants is minor; therefore, the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
Ran Report to check for discrepancies.	30/3/2019	Identified
Preventative actions taken to ensure no further issues will occur	Completion date	
Make it Part of our Data Comparison Report		

#### 4.3. Customer queries about ICP (Clause 11.31)

##### Code reference

Clause 11.31

##### Code related audit information

*The distributor must advise a customer (or any person authorised by the customer) or embedded generator of the customer or embedded generator's ICP identifier within three business days after receiving a request for that information.*

##### Audit observation

The management of customer queries was discussed to confirm policy.

##### Audit commentary

Requests for ICP identifiers are not a common occurrence, however Network Waitaki provides this information if the requesting party has authorisation.

##### Audit outcome

Compliant

#### 4.4. ICP location address (Clause 2 Schedule 11.1)

##### Code reference

Clause 2 Schedule 11.1

##### Code related audit information

*Each ICP identifier must have a location address that allows the ICP to be readily located.*

##### Audit observation

The process to manage address accuracy was examined and the list file was analysed.

##### Audit commentary

Network Waitaki checks the address for each new ICP created to ensure these are not duplicates. A check for this is also included in the monthly validation process. The list file was checked, and no duplicate addresses were identified. All addresses have sufficient information to allow the ICPs to be located.

##### Audit outcome

Compliant

#### 4.5. ICP de-energisation (Clause 3 Schedule 11.1)

##### Code reference

Clause 3 Schedule 11.1

##### Code related audit information

*Each ICP created after 7 October 2002 must be able to be de-energised without de-energisation of another ICP, except for ICPs that are the point of connection between a network and an embedded network, or ICPs that represent the consumption calculated by difference between the total consumption for the embedded network and all other ICPs on the embedded network.*

##### Audit observation

I checked Network Waitaki's policy and documentation in relation to this clause.

##### Audit commentary

Network Waitaki has some historic shared service mains. If any of these are found separate fusing is installed to address this.

Network Waitaki's new connections process contains a step that ensures there any ICP can be de-energised without de-energising any other ICP.

##### Audit outcome

Compliant

#### 4.6. Distributors to Provide ICP Information to the Registry (Clause 7(1) Schedule 11.1)

##### Code reference

Clause 7(1) Schedule 11.1

##### Code related audit information

*For each ICP on the distributor's network, the distributor must provide the following information to the registry:*

- *the location address of the ICP identifier (Clause 7(1)(a) of Schedule 11.1)*
- *the NSP identifier of the NSP to which the ICP is usually connected (Clause 7(1)(b) of Schedule 11.1)*
- *the installation type code assigned to the ICP (Clause 7(1)(c) of Schedule 11.1)*
- *the reconciliation type code assigned to the ICP (Clause 7(1)(d) of Schedule 11.1)*
- *the loss category code and loss factors for each loss category code assigned to the ICP (Clause 7(1)(e) of Schedule 11.1)*
- *if the ICP connects the distributor's network to an embedded generating station that has a capacity of 10MW or more (Clause 7(1)(f) of Schedule 11.1):*
  - a) *the unique loss category code assigned to the ICP*
  - b) *the ICP identifier of the ICP*
  - c) *the NSP identifier of the NSP to which the ICP is connected*
  - d) *the plant name of the embedded generating station*
- *the price category code assigned to the ICP, which may be a placeholder price category code only if the distributor is unable to assign the actual price category code because the capacity or volume information required to assign the actual price category code cannot be determined before electricity is traded at the ICP (Clause 7(1)(g) of Schedule 11.1)*

- *if the price category code requires a value for the capacity of the ICP, the chargeable capacity of the ICP as follows (Clause 7(1)(h) of Schedule 11.1):*
  - a) *a placeholder chargeable capacity if the distributor is unable to determine the actual chargeable capacity*
  - b) *a blank chargeable capacity if the capacity value can be determined from metering information*
  - c) *the actual chargeable capacity of the ICP in any other case*
- *the distributor installation details for the ICP determined by the price category code assigned to the ICP (if any), which may be placeholder distributor installation details only if the distributor is unable to assign the actual distributor installation details because the capacity or volume information required to assign the actual distributor installation details cannot be determined before electricity is traded at the ICP (Clause 7(1)(i) of Schedule 11.1)*
- *the participant identifier of the first trader who has entered into an arrangement to sell or purchase electricity at the ICP (only if the information is provided by the first trader) (Clause 7(1)(j) of Schedule 11.1)*
- *the status of the ICP (Clause 7(1)(k) of Schedule 11.1)*
- *designation of the ICP as "Dedicated" if the ICP is located in a balancing area that has more than 1 NSP located within it, and the ICP will be supplied only from the NSP advised under Clause 7(1)(b) of Schedule 11.1, or the ICP is a point of connection between a network and an embedded network (Clause 7(1)(l) of Schedule 11.1)*
- *if unmetered load, other than distributed unmetered load, is associated with the ICP, the type and capacity in kW of unmetered load (Clause 7(1)(m) of Schedule 11.1)*
- *if shared unmetered load is associated with the ICP, a list of the ICP identifiers of the ICPs that are associated with the unmetered load (Clause 7(1)(n) of Schedule 11.1)*
- *if the ICP is capable of generating into the distributors network (Clause 7(1)(o) of Schedule 11.1):*
  - a) *the nameplate capacity of the generator; and*
  - b) *the fuel type*
  - c) *the initial energisation date of the ICP (Clause 7(1)(p) of Schedule 11.1).*

#### **Audit observation**

Network Waitaki updates the registry manually and the registry then populates Network Waitaki's database. Registry validation in place and is run each month for most registry fields. I checked all registry fields for obvious discrepancies using a set of standard queries.

#### **Audit commentary**

##### Distributed generation

ICP 0000568586WT146 was recorded as "B" but the field was changed back to "L" during another update. The generation type and capacity were still populated.

Distributed generation is recorded in Network Waitaki's database as a "note" and is not a separate field, so the validation process does not include this information. I recommend fields are established for distributed generation.

Recommendation	Description	Audited party comment	Remedial action
Regarding clause 7(1)(o) of Schedule 11.1	Create fields for distributed generation in the database.	We are working with Our Software Developer at present to put some rules in place for DG	Identified

There are 11 ICPs where distributed generation is installed but the trader has not updated the profile from RPS to PV1.

There are seven ICPs where the DG fields were populated based on the trader's profile and the presence of an import/export meter. These may not be correct; therefore, I recommend a check is made with the trader and of the EIEP1 file for "I" flow kWh and if there is not generation connected, these events should be reversed.

Recommendation	Description	Audited party comment	Remedial action
Regarding clause 7(1)(o) of Schedule 11.1	Check 7 ICPs to confirm DG is definitely installed.	Will check them out with retailer and reverse them if not connected yet. We will not populate registry with DG information until we get a commissioning sheet from our Inspector.	Identified

#### Initial electrical connection date

The list file contained 80 ICPs where the initial electrical connection date had been removed when GXP changes were populated in the registry. This was the only example of missing information and all fields have now been re-populated. This was identified by Network Waitaki prior to the on-site audit.

There were 22 ICPs where the initial electrical connection date was different to the active date or the certification date. In 15 cases, Network Waitaki's date was incorrect. This was confirmed by checking the relevant new connection sheets.

#### **Audit outcome**

Non-compliant

Non-compliance	Description
Audit Ref: 4.6 With: Clause 7(1)(o) of Schedule 11.1 From: 02-Oct-17 To: 15-Feb-19	Incorrect registry information for one DG ICP. 80 missing IECDs. 15 incorrect IECDs. Potential impact: Low Actual impact: Low Audit history: Once Controls: Moderate Breach risk rating: 2
Audit risk rating	Rationale for audit risk rating

<b>Low</b>	<p>The controls are moderate and have room for improvement</p> <p>There is an impact on other participants because they may rely on these fields as part of their validation. The impact is minor; therefore, the audit risk rating is low.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
Found that one of our bulk Registry updates removed some IEDs. These have been checked and put back in the registry.			Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Our IT Dept commits to check any Bulk uploads before finalising them.			

#### 4.7. Provision of information to registry after the trading of electricity at the ICP commences (Clause 7(3) Schedule 11.1)

##### Code reference

*Clause 7(3) Schedule 11.1*

##### Code related audit information

*The distributor must provide the following information to the registry no later than 10 business days after the trading of electricity at the ICP commences:*

- *the actual price category code assigned to the ICP (Clause 7(3)(a) of Schedule 11.1)*
- *the actual chargeable capacity of the ICP determined by the price category code assigned to the ICP (if any) (Clause 7(3)(b) of Schedule 11.1)*
- *the actual distributor installation details of the ICP determined by the price category code assigned to the ICP (if any) (Clause 7(3)(c) of Schedule 11.1).*

##### Audit observation

The new connection process was examined in detail. The pricing changes were checked against the newly connected ICPs identified through the list file.

##### Audit commentary

There were no ICPs with changes backdated more than 10 business days.

##### Audit outcome

Compliant

#### 4.8. GPS coordinates (Clause 7(8) and (9) Schedule 11.1)

##### Code reference

*Clause 7(8) and (9) Schedule 11.1*

##### Code related audit information

*If a distributor populates the GPS coordinates (optional), it must meet the NZTM2000 standard in a format specified by the Authority.*

#### **Audit observation**

I checked the list file for ICPs with GPS coordinates recorded.

#### **Audit commentary**

GPS coordinates are not recorded.

#### **Audit outcome**

Not applicable

### **4.9. Management of “ready” status (Clause 14 Schedule 11.1)**

#### **Code reference**

*Clause 14 Schedule 11.1*

#### **Code related audit information**

*The ICP status of “Ready” must be managed by the distributor and indicates that:*

- *the associated electrical installations are ready for connecting to the electricity supply (Clause 14(1)(a) of Schedule 11.1); or*
- *the ICP is ready for activation by a trader (Clause 14(1)(b) of Schedule 11.1)*

*Before an ICP is given the “Ready” status in accordance with Clause 14(1) of Schedule 11.1, the distributor must:*

- *identify the trader that has taken responsibility for the ICP (Clause 14(2)(a) of Schedule 11.1)*
- *ensure the ICP has a single price category (Clause 14(2)(b) of Schedule 11.1).*

#### **Audit observation**

I examined the new connections process and the list file to determine compliance.

#### **Audit commentary**

The status of “Ready” is used once the ICP is ready for connection. The new connection process has a step to confirm the trader has taken responsibility. All ICPs only have one price category code.

#### **Audit outcome**

Compliant

### **4.10. Management of “distributor” status (Clause 16 Schedule 11.1)**

#### **Code reference**

*Clause 16 Schedule 11.1*

#### **Code related audit information**

*The ICP status of “distributor” must be managed by the distributor and indicates that the ICP record represents a shared unmetered load installation or the point of connection between an embedded network and its parent network.*

#### **Audit observation**

I checked the list file to confirm compliance.

#### **Audit commentary**

There are no ICPs with the distributor only status.



#### Audit outcome

Not applicable

### 4.11. Management of “decommissioned” status (Clause 20 Schedule 11.1)

#### Code reference

Clause 20 Schedule 11.1

#### Code related audit information

*The ICP status of “decommissioned” must be managed by the distributor and indicates that the ICP is permanently removed from future switching and reconciliation processes (Clause 20(1) of Schedule 11.1).*

*Decommissioning only occurs when:*

- *electrical installations associated with the ICP are physically removed (Clause 20(2)(a) of Schedule 11.1); or*
- *there is a change in the allocation of electrical loads between ICPs with the effect of making the ICP obsolete (Clause 20(2)(b) of Schedule 11.1); or*
- *in the case of a distributor-only ICP for an embedded network, the embedded network no longer exists (Clause 20(2)(c) of Schedule 11.1).*

#### Audit observation

I examined the physical process for decommissioning ICPs along with the timeliness and accuracy of registry updates.

#### Audit commentary

Network Waitaki’s ICP decommissioning requests mostly come directly from the property owner. The property owner’s permission is gained in all instances. Once this has been gained Network Waitaki’s contractors will carry out the decommissioning. The trader is advised to change the ICP to “inactive-ready for decommissioning” once Network Waitaki has received confirmation from the contractor that the decommissioning has taken place. This includes confirmation that metering has been removed.

The process is compliant, and the only issue present is that there is often a delay by retailers in updating their status to “ready for decommissioning” before Network Waitaki can update their status to decommissioned.

#### Audit outcome

Compliant

### 4.12. Maintenance of price category codes (Clause 23 Schedule 11.1)

#### Code reference

Clause 23 Schedule 11.1

#### Code related audit information

*The distributor must keep up to date the table in the registry of the price category codes that may be assigned to ICPs on each distributor’s network by entering in the table any new price category codes.*

*Each entry must specify the date on which each price category code takes effect, which must not be earlier than two months after the date the code is entered in the table.*

*A price category code takes effect on the specified date.*

#### Audit observation

I checked the price category code table for any new or changed codes during the audit period.

**Audit commentary**

There were no new codes created during the audit period.

**Audit outcome**

Compliant

## 5. CREATION AND MAINTENANCE OF LOSS FACTORS

### 5.1. Updating table of loss category codes (Clause 21 Schedule 11.1)

#### Code reference

*Clause 21 Schedule 11.1*

#### Code related audit information

*The distributor must keep the registry up to date with the loss category codes that may be assigned to ICPs on the distributor's network.*

*The distributor must specify the date on which each loss category code takes effect.*

*A loss category code takes effect on the specified date.*

#### Audit observation

I checked the loss category code table for any new codes during the audit period.

#### Audit commentary

There were no additional codes created during the audit period.

#### Audit outcome

Not applicable

### 5.2. Updating loss factors (Clause 22 Schedule 11.1)

#### Code reference

*Clause 22 Schedule 11.1*

#### Code related audit information

*Each loss category code must have a maximum of two loss factors per calendar month. Each loss factor must cover a range of trading periods within that month so that all trading periods have a single applicable loss factor.*

*If the distributor wishes to replace an existing loss factor on the table on the registry, the distributor must enter the replaced loss factor on the table in the registry.*

#### Audit observation

I checked the loss category code table for any changed factors during the audit period.

#### Audit commentary

Each ICP only has a single loss category, which clearly identifies the relevant loss factor.

There were no new codes or changes to loss factors during the audit period.

#### Audit outcome

Compliant

## 6. CREATION AND MAINTENANCE OF NSPS (INCLUDING DECOMMISSIONING OF NSPS AND TRANSFER OF ICPS)

### 6.1. Creation and decommissioning of NSPs (Clause 11.8 and Clause 25 Schedule 11.1)

#### Code reference

*Clause 11.8 and Clause 25 Schedule 11.1*

#### Code related audit information

*If the distributor is creating or decommissioning an NSP that is an interconnection point between two local networks, the distributor must notify the reconciliation manager of the creation or decommissioning.*

*If the embedded network owner is creating or decommissioning an NSP that is an interconnection point between two embedded networks, the embedded network owner must notify the reconciliation manager of the creation or decommissioning.*

*If the distributor is creating or decommissioning an NSP that is a point of connection between an embedded network and another network, the distributor must notify the reconciliation manager of the creation or decommissioning.*

*If the distributor wishes to change the record in the registry of an ICP that is not recorded as being usually connected to an NSP in the distributor's network, so that the ICP is recorded as being usually connected to an NSP in the distributor's network (a "transfer"), the distributor must:*

- notify the reconciliation manager*
- notify the market administrator*
- notify each affected reconciliation participant*
- comply with Schedule 11.2.*

#### Audit observation

The NSP table on the registry was examined. No NSPs were created or decommissioned during the audit period; therefore, this was not assessed as part of this audit.

#### Audit commentary

The NSP table on the registry was examined. No NSPs were created or decommissioned during the audit period; therefore, this was not assessed as part of this audit.

#### Audit outcome

Not applicable

### 6.2. Provision of NSP information (Clause 26(1) and (2) Schedule 11.1)

#### Code reference

*Clause 26(1) and (2) Schedule 11.1*

#### Code related audit information

*If the distributor wishes to create an NSP or transfer an ICP as described above, the distributor must request that the reconciliation manager create a unique NSP identifier for the relevant NSP.*

*The request must be made at least 10 business days before the NSP is electrically connected, in respect of an NSP that is an interconnection point between two local networks. In all other cases, the request must be made at least one calendar month before the NSP is electrically connected or the ICP is transferred.*

### Audit observation

The NSP table on the registry was examined. No NSPs were created or decommissioned during the audit period; therefore, this was not assessed as part of this audit.

### Audit commentary

The NSP table on the registry was examined. No NSPs were created or decommissioned during the audit period; therefore, this was not assessed as part of this audit.

### Audit outcome

Not applicable

## 6.3. Notice of balancing areas (Clause 24(1) and Clause 26(3) Schedule 11.1)

### Code reference

*Clause 24(1) and Clause 26(3) Schedule 11.1*

### Code related audit information

*If a participant has notified the creation of an NSP on the distributor's network, the distributor must notify the reconciliation manager of the following:*

- *if the NSP is to be located in a new balancing area, all relevant details necessary for the new balancing area to be created and notification that the NSP to be created is to be assigned to the new balancing area*
- *in all other cases, notification of the balancing area in which the NSP is located.*

### Audit observation

The NSP table on the registry was examined, and I examined situations where changes had occurred between GXPs in different balancing areas

### Audit commentary

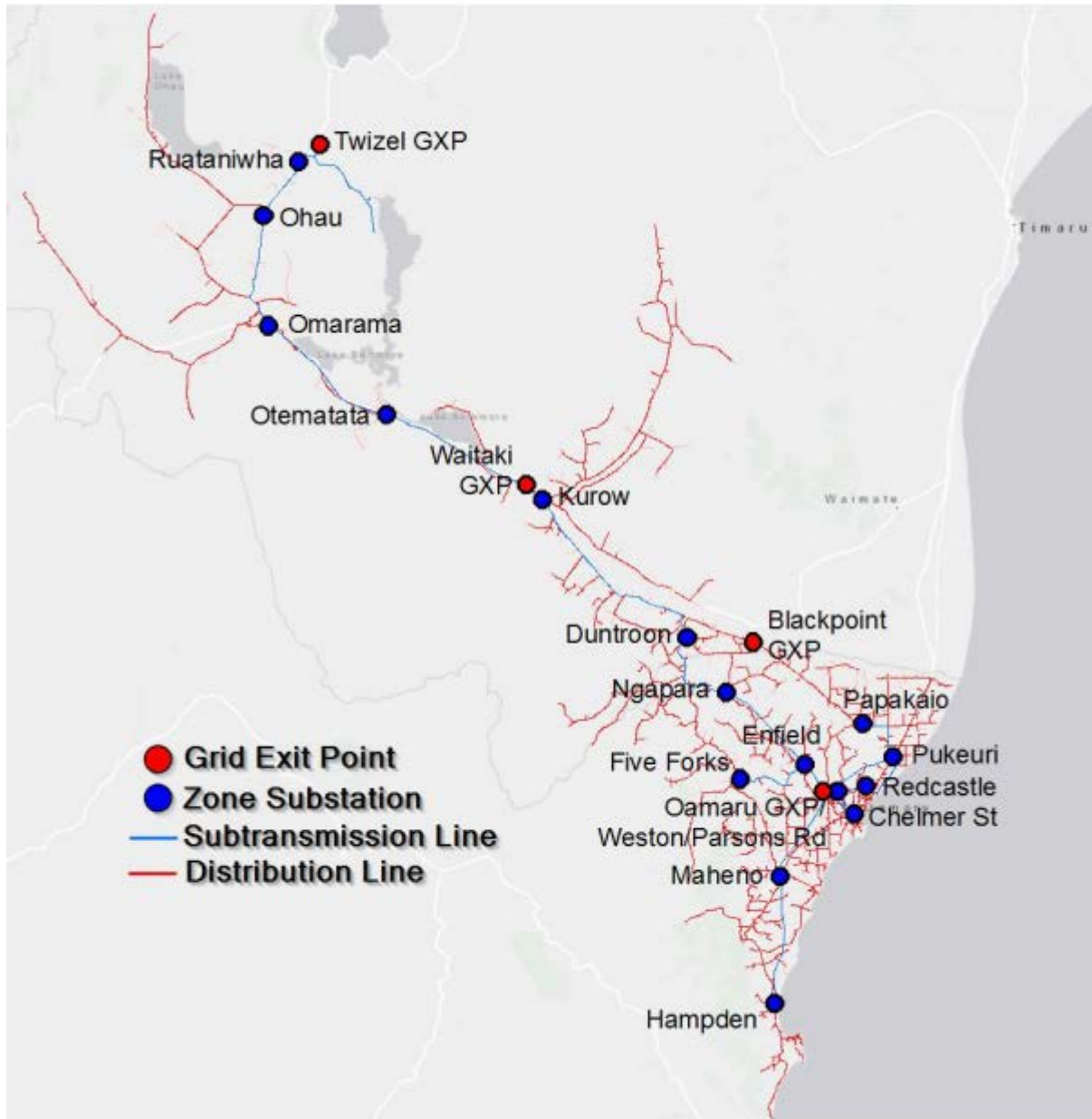
The NSP table on the registry was examined. No new balancing areas were created during the audit period.

Duntroon substation (approx. 350 ICPs) is fed from OAM0330 or WTK0111 depending on the time of year. It is fed from WTK0111 for summer. These GXPs are in different balancing areas and it appears there should only be one balancing area.

The diagram below shows that the Duntroon substation is physically located between Waitaki and Oamaru GXPs. Substations fed from Twizel and Oamaru cannot be fed from each other but switching can occur between Twizel and Waitaki and Oamaru and Waitaki.

There is a possibility that all GXPs should be in the one balancing area. I recommend Network Waitaki investigates this matter. At the same time, the dedicated/non-dedicated fields should be reviewed because they are all currently "N", which may be correct and would further support that there should be only one balancing area.

Recommendation	Description	Audited party comment	Remedial action
Regarding Clause 24(1) and Clause 26(3) Schedule 11.1	Check whether there should be only one balancing area rather than two.	<p>We have looked into our Balancing area and agree that there should be only one balancing area with some of the ICPs made dedicated in Both Oamaru and Twizel GXPs.</p> <p>We are looking to have this completed by end of April 2019.</p>	Identified



#### Audit outcome

Compliant

#### 6.4. Notice of supporting embedded network NSP information (Clause 26(4) Schedule 11.1)

##### Code reference

*Clause 26(4) Schedule 11.1*

##### Code related audit information

*If a participant notifies the creation of an NSP, or the transfer of an ICP to an NSP that is a point of connection between a network and an embedded network owned by the distributor, the distributor must notify the reconciliation manager at least one calendar month before the creation or transfer of:*

- *the network on which the NSP will be located after the creation or transfer (Clause 26(4)(a))*
- *the ICP identifier for the ICP that connects the network and the embedded network (Clause 26(4)(b))*
- *the date on which the creation or transfer will take effect (Clause 26(4)(c)).*

##### Audit observation

Network Waitaki has not created any embedded networks; therefore, this was not assessed as part of this audit.

##### Audit commentary

Network Waitaki has not created any embedded networks; therefore, this was not assessed as part of this audit.

##### Audit outcome

Not applicable

#### 6.5. Maintenance of balancing area information (Clause 24(2) and (3) Schedule 11.1)

##### Code reference

*Clause 24(2) and (3) Schedule 11.1*

##### Code related audit information

*The distributor must notify the reconciliation manager of any change to balancing areas associated with an NSP supplying the distributor's network. The notification must specify the date and trading period from which the change takes effect and be given no later than three business days after the change takes effect.*

##### Audit observation

The NSP table on the registry was examined. No balancing areas were changed during the audit period; therefore, this was not assessed as part of this audit.

##### Audit commentary

The NSP table on the registry was examined. No balancing areas were changed during the audit period; therefore, this was not assessed as part of this audit.

##### Audit outcome

Not applicable

#### 6.6. Notice when an ICP becomes an NSP (Clause 27 Schedule 11.1)

##### Code reference

Clause 27 Schedule 11.1

##### Code related audit information

*If a transfer of an ICP results in an ICP becoming an NSP at which an embedded network connects to a network, or in an ICP becoming an NSP that is an interconnection point, in respect of the distributor's network, the distributor must notify any trader trading at the ICP of the transfer at least one calendar month before the transfer.*

##### Audit observation

There are no embedded networks connected to Network Waitaki.

##### Audit commentary

There are no embedded networks connected to Network Waitaki.

##### Audit outcome

Not applicable

#### 6.7. Notification of transfer of ICPs (Clause 1 to 4 Schedule 11.2)

##### Code reference

Clause 1 to 4 Schedule 11.2

##### Code related audit information

*If the distributor wishes to transfer an ICP, the distributor must notify the market administrator in the prescribed form, no later than three business days before the transfer takes effect.*

##### Audit observation

Network Waitaki has not acquired any networks; therefore, this was not assessed as part of this audit.

##### Audit commentary

Network Waitaki has not acquired any networks; therefore, this was not assessed as part of this audit.

##### Audit outcome

Not applicable

#### 6.8. Responsibility for metering information for NSP that is not a POC to the grid (Clause 10.25(1)&(3))

##### Code reference

Clause 10.25(1)&(3)

##### Code related audit information

*A network owner must, for each NSP that is not a point of connection to the grid for which it is responsible, ensure that:*

- *there is one or more metering installations (Clause 10.25(1)(a)); and*
- *the electricity is conveyed and quantified in accordance with the Code (Clause 10.25(1)(b)).*

##### Audit observation



Network Waitaki is not responsible for any points of connection not connected to the grid.

**Audit commentary**

Network Waitaki is not responsible for any points of connection not connected to the grid.

**Audit outcome**

Not applicable

**6.9. Responsibility for metering information when creating an NSP that is not a POC to the grid (Clause 10.25(2))**

**Code reference**

*Clause 10.25(2)*

**Code related audit information**

*If the network owner proposes the creation of a new NSP which is not a point of connection to the grid it must:*

- *assume responsibility for being the metering equipment provider (Clause 10.25(2)(a)(i)); or*
- *contract with a metering equipment provider to be the MEP (Clause 10.25(2)(a)(ii)); and*
- *no later than 20 business days after identifying the MEP advise the reconciliation manager in the prescribed form of:*
  - a) the reconciliation participant for the NSP (Clause 10.25(2)(b)(i)); and*
  - b) the MEP for the NSP (Clause 10.25(2)(b)(ii)); and*
  - c) no later than 20 business days after the date of certification of each metering installation, advise the reconciliation participant for the NSP of the certification expiry date (Clause 10.25(2)(c)).*

**Audit observation**

The NSP table on the registry was examined. No NSPs were created during the audit period; therefore, this was not assessed as part of this audit.

**Audit commentary**

The NSP table on the registry was examined. No NSPs were created during the audit period; therefore, this was not assessed as part of this audit.

**Audit outcome**

Not applicable

**6.10. Obligations concerning change in network owner (Clause 29 Schedule 11.1)**

**Code reference**

*Clause 29 Schedule 11.1*

**Code related audit information**

*If a network owner acquires all or part of a network, the network owner must notify:*

- *the previous network owner (Clause 29(1)(a) of Schedule 11.1)*
- *the reconciliation manager (Clause 29(1)(b) of Schedule 11.1)*
- *the market administrator (Clause 29(1)(c) of Schedule 11.1)*

- every reconciliation participant who trades at an ICP connected to the acquired network or part of the network acquired (Clause 29(1)(d) of Schedule 11.1).

*At least 1 calendar month notification is required before the acquisition (Clause 29(2) of Schedule 11.1).*

*The notification must specify the ICPs to be amended to reflect the acquisition and the effective date of the acquisition (Clause 29(3) of Schedule 11.1).*

#### **Audit observation**

Network Waitaki has not acquired any networks; therefore, this was not assessed as part of this audit.

#### **Audit commentary**

Network Waitaki has not acquired any networks; therefore, this was not assessed as part of this audit.

#### **Audit outcome**

Not applicable

### **6.11. Electrically connecting NSP that is not point of connection to grid (Clause 10.30(1))**

#### **Code reference**

*Clause 10.30(1)*

#### **Code related audit information**

*A distributor must not electrically connect an NSP that is not a point of connection to the grid unless:*

- *a reconciliation participation has requested the electrical connection (Clause 10.30(1)(a)); or*
- *a metering equipment provider (authorised by the trader) has requested the electrical connection for a temporary energisation of the ICP (Clause 10.30(1)(b)).*

#### **Audit observation**

Network Waitaki has not requested the connection of any NSPs.

#### **Audit commentary**

Network Waitaki has not requested the connection of any NSPs.

#### **Audit outcome**

Not applicable

### **6.12. Change of MEP for embedded network gate meter (Clause 10.22(1)(b))**

#### **Code reference**

*Clause 10.22(1)(b)*

#### **Code related audit information**

*If the MEP for an ICP which is also an NSP changes the participant responsible for the provision of the metering installation under Clause 10.25, the participant must notify the reconciliation manager and the gaining MEP.*

#### **Audit observation**

Network Waitaki is not responsible for any ICPs which are also NSPs.

#### **Audit commentary**

Network Waitaki is not responsible for any ICPs which are also NSPs.

**Audit outcome**

Not applicable

**6.13. Confirmation of consent for transfer of ICPs (Clauses 5 and 8 Schedule 11.2)**

**Code reference**

*Clauses 5 and 8 Schedule 11.2*

**Code related audit information**

*The distributor must give the market administrator confirmation that it has received written consent to the proposed transfer from:*

- *the distributor whose network is associated with the NSP to which the ICP is recorded as being connected immediately before the notification (unless the notification relates to the creation of an embedded network) (Clause 5(a) of Schedule 11.2)*
- *every trader trading at an ICP being supplied from the NSP to which the notification relates (Clause 5(b) of Schedule 11.2).*

*The notification must include any information requested by the Authority (Clause 8 of Schedule 11.2).*

**Audit observation**

Network Waitaki has not acquired any networks; therefore, this was not assessed as part of this audit.

**Audit commentary**

Network Waitaki has not acquired any networks; therefore, this was not assessed as part of this audit.

**Audit outcome**

Not applicable

**6.14. Transfer of ICPs for embedded network (Clause 6 Schedule 11.2)**

**Code reference**

*Clause 6 Schedule 11.2*

**Code related audit information**

*If the notification relates to an embedded network, it must relate to every ICP on the embedded network.*

**Audit observation**

Network Waitaki has not acquired any networks; therefore, this was not assessed as part of this audit.

**Audit commentary**

Network Waitaki has not acquired any networks; therefore, this was not assessed as part of this audit.

**Audit outcome**

Not applicable

## 7. MAINTENANCE OF SHARED UNMETERED LOAD

### 7.1. Notification of shared unmetered load ICP list (Clause 11.14(2) and (4))

#### Code reference

*Clause 11.14(2) and (4)*

#### Code related audit information

*The distributor must notify the registry and each trader responsible for the ICPs across which the unmetered load is shared of the ICP identifiers of those ICPs.*

*A distributor who receives notification from a trader relating to a change under Clause 11.14(3) must notify the registry and each trader responsible for any of the ICPs across which the unmetered load is shared of the addition or omission of the ICP.*

#### Audit observation

Network Waitaki does not have any shared unmetered load.

#### Audit commentary

Network Waitaki does not have any shared unmetered load.

#### Audit outcome

Not applicable

### 7.2. Changes to shared unmetered load (Clause 11.14(5))

#### Code reference

*Clause 11.14(5)*

#### Code related audit information

*If the distributor becomes aware of a change to the capacity of a shared unmetered load ICP or if a shared unmetered load ICP is decommissioned, it must notify all traders affected by that change or decommissioning as soon as practicable after the change or decommissioning.*

#### Audit observation

Network Waitaki does not have any shared unmetered load.

#### Audit commentary

Network Waitaki does not have any shared unmetered load.

#### Audit outcome

Not applicable

## 8. CALCULATION OF LOSS FACTORS

### 8.1. Creation of loss factors (Clause 11.2)

#### Code reference

Clause 11.2

#### Code related audit information

A participant must take all practicable steps to ensure that information that the participant is required to provide to any person under Part 11 is:

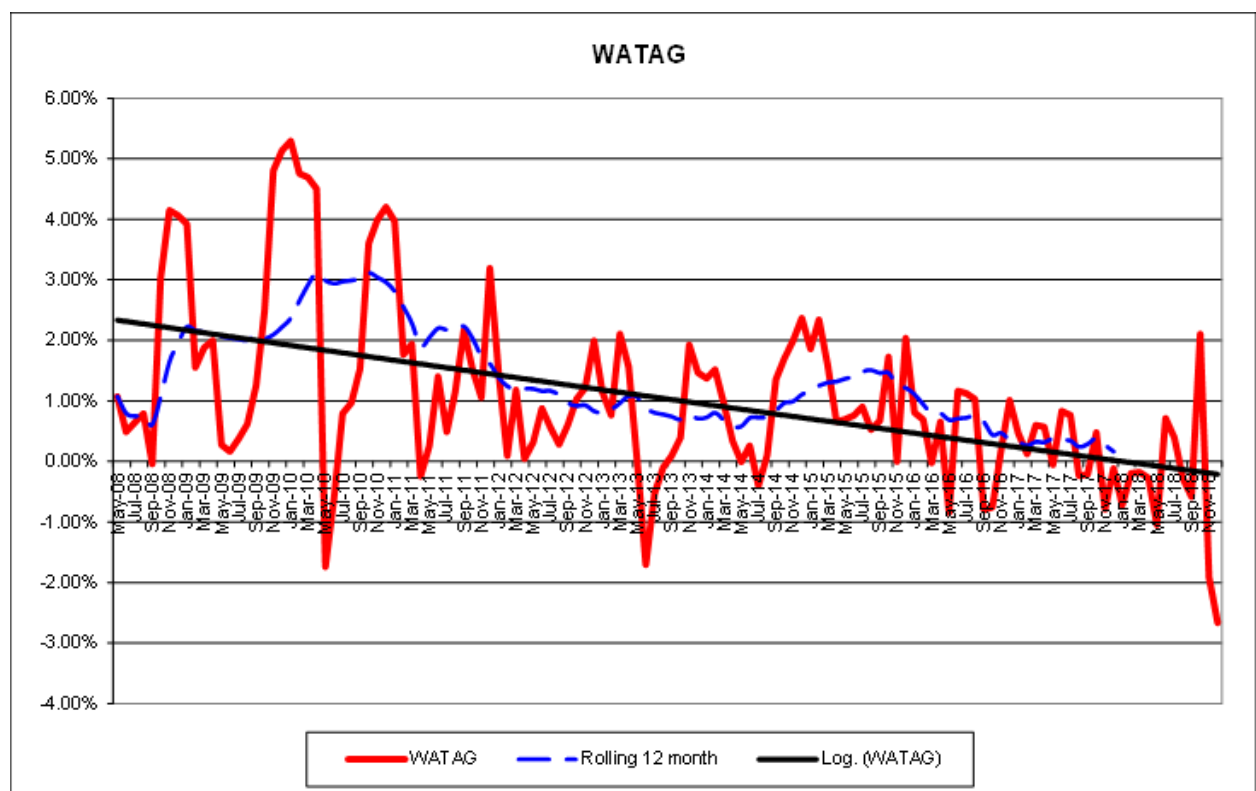
- a) complete and accurate
- b) not misleading or deceptive
- c) not likely to mislead or deceive.

#### Audit observation

Network Waitaki publishes reconciliation losses, which include technical losses and non-technical losses. I reviewed the process and supporting documentation in relation to the calculation of loss factors.

#### Audit commentary

There are three different factors; LV, HV (11kV) and HV (110 kV). Analysis of the supporting information did not identify any non-compliance. The graph below shows that UFE is close to zero. The trend will be monitored during future audits to ensure it does not drop further, indicating loss factors are too high.



#### Audit outcome

Compliant

## CONCLUSION

This audit found six non-compliances and makes four recommendations.

The main issues to address are the accuracy of event dates and initial electrical connection dates. These inaccuracies can cause problems for other participants where they use these fields for validation of their own data.

There were a small number of other discrepancies and some late registry updates.

I have recommended Network Waitaki ensures they have trader approval prior to the electrical connection of streetlight circuits, to ensure the load is correctly recorded.

It appears that the balancing areas need to be reviewed because at least one substation can be fed from GXPs in different balancing areas.

The date of the next audit is determined by the Electricity Authority and is dependent on the level of compliance during this audit. The Future Risk Rating table provides some guidance on this matter and contains a future risk rating score of 10, which results in an indicative audit frequency of 12 months. Considering this result along with the proposed solutions to the matters raised, I believe 18 months is an appropriate recommendation.

## PARTICIPANT RESPONSE