

**ELECTRICITY INDUSTRY PARTICIPATION CODE
DISTRIBUTOR AUDIT REPORT**



For

TRUSTPOWER LIMITED

Prepared by: Steve Woods

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Date audit report completed: 5 February 2020

Audit report due date: 5 February 2020

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EXECUTIVE SUMMARY

This Distributor audit was performed at the request of **Trustpower Ltd (Trustpower)** to encompass the Electricity Industry Participation Code requirement for an audit, in accordance with clause 11.10 of part 11.

Previous audits have recorded that Trustpower has responsibility for one NSP (DUNW for the Waipori Village). It has been confirmed that Trustpower also has responsibility for two other points of connection as recorded in Section 1.8. WPG0331 is the network that Waipori village is embedded into. TWC2201 is a grid connected network at a windfarm. The audit scope has been expanded to include these additional points of connection. Each of these points of connection has an “SB” ICP.

The audit was conducted in accordance with the Guideline for Distributor Audits version 7.2, which was produced by the Electricity Authority.

Aurora Network Limited (Aurora) performs all of the relevant functions for Trustpower with the exception of network supply point table maintenance, which is carried out by Trustpower. All activity completed by Aurora for Trustpower during the audit period was reviewed during this audit. Aurora uses the same systems and processes for Trustpower and ICPs on their own Aurora network. Aurora’s distributor audit report dated 07/09/18 was reviewed to support my findings on process compliance. I also confirmed that processes had not changed from this date until now.

Trustpower has changed the loss factor for DUNW for the WPVLV loss category code from 1.6835 to 1.2 with an effective date of 01/04/20. Historically the high losses were at least partly caused by an unmetered weir, which is now metered. There are also a large number of transformers on the network and the transformer losses are likely to have an impact on losses. The loss factor of 1.2 is based on research of transformer losses for a quantity of 12 transformers. Trustpower intends to refine the calculation using specific nameplate data from each transformer.

I don’t have sufficient information to determine whether a loss factor of 1.2 is reasonable, so I recommend Trustpower compares consumption in EIEP files (multiplied by 1.2) with the total metered kWh at the gate meter for the period from March 2019 (when the weir metering was installed) until today’s date to determine if the UFE is close to zero.

There has been very little activity on the DUNW network and no activity on the other two networks. The main change with regard to DUNW is that a previously unmetered weir has been metered and the ICP has been changed to Active. Non-compliance is recorded for the late change to “Ready” for this ICP.

The next audit frequency table indicates that the next audit be due in 36 months. I agree with this recommendation.

The matters raised are shown in the tables below:

AUDIT SUMMARY

NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Control s	Audit Risk Rating	Breach Risk Rating	Remedial Action
Changes to registry information	3.4	7(2) of Schedule 11.1	Late change to "Ready" for ICP 0000508580DEC75	Strong	Low	1	Cleared
Future Risk Rating						1	

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	Clause	Description
Changes to registry information	4.1	8 Schedule 11.1	Check why a status event was sent for ICP 0000031712DE94F
Loss factors	8.1	11.2	Compare consumption in EIEP files (multiplied by 1.2) with the total metered kWh at the gate meter for the period from March 2019 (when the weir metering was installed) until today's date to determine if the UFE is close to zero.

ISSUES

Subject	Section	Issue	Description
		Nil	

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

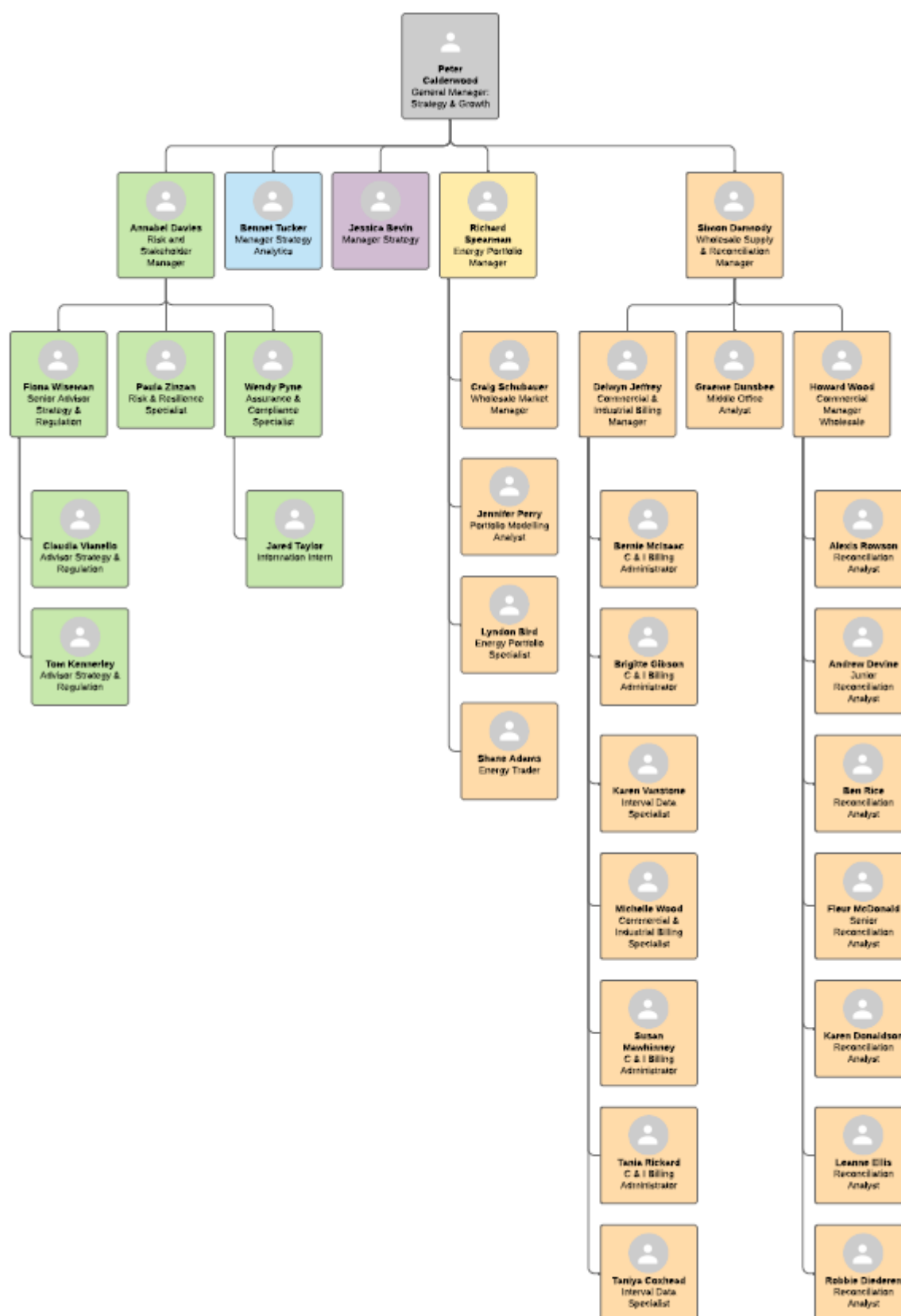
Trustpower has no exemptions in place that are relevant to the scope of this audit.

Audit commentary

Not applicable

1.2. Structure of Organisation

Trustpower provided a copy of their organisational structure as at December 2019:



1.3. Persons involved in this audit

Auditor:

Steve Woods

Veritek Limited

Electricity Authority Approved Auditor

Personnel assisting in this audit were:

Name	Title	Company
Wendy Pyne	Assurance and Compliance Specialist	Trustpower
Ben Rice	Senior Reconciliation Analyst	Trustpower
Howard Wood	Commercial Manager Wholesale	Trustpower
Richard Starkey	Commercial Manager	Aurora
Simeon Dwyer	Network Billing Analyst	Aurora

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 contractors fulfillment 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

Aurora performs all of the relevant functions for Trustpower with the exception of network supply point table maintenance, which is carried out by Trustpower.

1.5. Supplier list

Aurora performs all of the relevant functions for Trustpower with the exception of network supply point table maintenance, which is carried out by Trustpower.

1.6. Hardware and Software

Aurora provided the following information that details hardware and software used in the processes being audited.

- Aurora connection application database for tracking connection applications
- GTV for ICP creation, line charge billing and source for Registry updates.

Aurora's backup arrangement processes are documented under Aurora's Quality Management System – ISO9001:2008. All data is backed-up in accordance with standard industry protocols.

1.7. Breaches or Breach Allegations

Trustpower has not had any breach allegations recorded by the Electricity Authority within the scope of this audit.

1.8. ICP and NSP Data

Previous audits have recorded that Trustpower has responsibility for one NSP, as shown in the top row of the table below. It has been confirmed that Trustpower also has responsibility for two other points of connection. These are also shown in the table below. WPG0331 is the network that Waipori village is embedded into. TWC2201 is a grid connected network at a windfarm.

Distributor	NSP POC	Description	Parent POC	Parent Network	Balancing Area	Network type	Start date	No of ICPs	Responsible Party	Certification expiry
Trustpower	WPV0061	WAIPORI VILLAGE	WPG0331	TRPG	WPV0061DUNWE	E	1/05/08	45	DUNW	15/02/2026
Trustpower	TWC2201	NZ Windfarms			TWC2201TRPGG	G	1/05/08	1	TRPG	18/10/2021
Trustpower	WPG0331	WAIPORI GENERATION	HWB0331	DUNE	WPG0331TRPGE	E	1/05/08	1	TRUS	4/10/2020

The TPRG and TRUS networks each have one “SB” ICP.

Trustpower ICPs for the DUNW network are summarised by status below:

Status	Number of ICPs 2020	Number of ICPs 2019	Number of ICPs 2018	Number of ICPs 2017
New (999,0)	-	1	-	-
Ready (0,0)	-	-	-	-
Active (2,0)	38	38	38	38
Distributor (888,0)	-	-	-	-
Inactive – new connection in progress (1,12)	-	-	-	-
Inactive – electrically disconnected vacant property (1,4)	5	4	4	5
Inactive – electrically disconnected remotely by AMI meter (1,7)	-	-	-	-
Inactive – electrically disconnected at pole fuse (1,8)	-	-	-	-
Inactive – electrically disconnected due to meter disconnected (1,9)	-	-	-	-
Inactive – electrically disconnected at meter box fuse (1,10)	-	-	-	-
Inactive – electrically disconnected at meter box switch (1,11)	-	-	-	-
Inactive – electrically disconnected ready for decommissioning (1,6)	-	-	1	1
Inactive – reconciled elsewhere (1,5)	-	-	-	-
Decommissioned (3)	2	2	1	-

1.9. Authorisation Received

Trustpower provided authorisation to Veritek, permitting the collection of data from other parties for matters directly related to the audit.

1.10. Scope of Audit

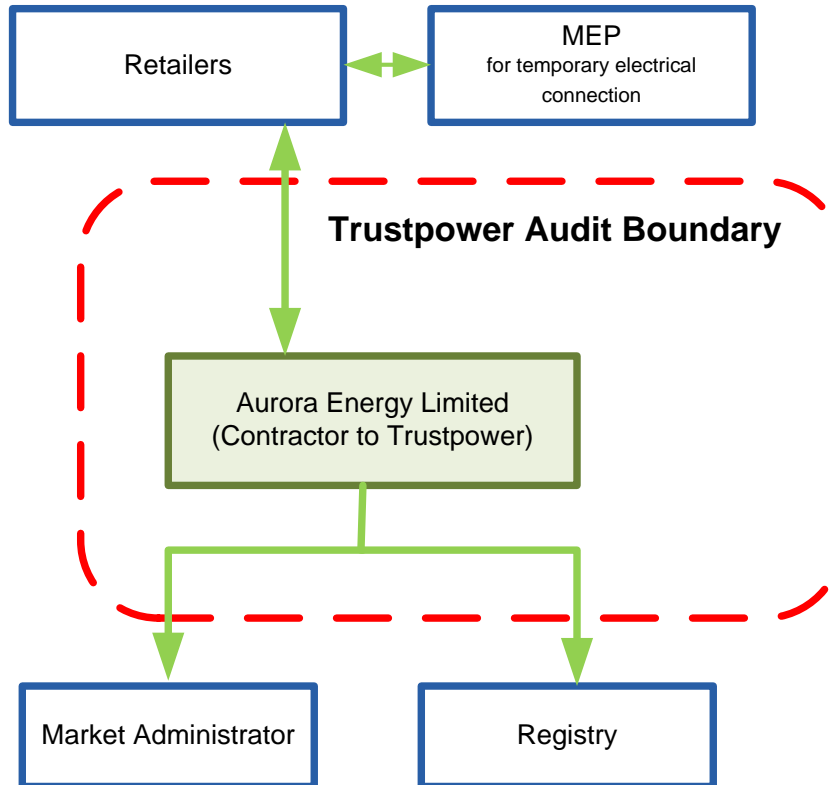
This Distributor audit was performed at the request of Trustpower to encompass the Electricity Industry Participation Code requirement for an audit, in accordance with clause 11.10 of part 11. The audit was conducted in accordance with the Guideline for Distributor Audits V7.2, which was produced by the Electricity Authority.

The table below shows the tasks under clause 11.10(4) of Part 11, which Trustpower is responsible for. Trustpower subcontracts Aurora to manage all activities covered by the scope of this audit, with the exception of network supply point table maintenance, which is carried out by Trustpower.

Functions Requiring Audit Under Clause 11.10(4) of Part 11	Contractors Involved in Performance of Tasks
The creation of ICP identifiers for ICPs.	Aurora

The provision of ICP information to the registry and the maintenance of that information.	
The creation and maintenance of loss factors.	

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



1.11. Summary of previous audit

Trustpower provided a copy of the previous audit report, conducted in January 2019 by Tara Gannon of Veritek Limited. The audit found one non-compliance. The status of the non-compliance is detailed in the table below.

Subject	Section	Clause	Non-Compliance	Status
Changes to registry information	4.1	8 Schedule 11.1	Three pricing updates were one business day late.	Late pricing update for one ICP

2. OPERATIONAL INFRASTRUCTURE

2.1. Requirement to provide complete and accurate information (Clause 11.2(1) and 10.6(1))

Code reference

Clause 11.2(1) and 10.6(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 Parts 10 or 11 is:

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

Audit observation

Aurora's data management processes were examined. Trustpower's registry list as at 17/12/19 was examined to confirm compliance.

Audit commentary

Aurora has processes in place to ensure that information is complete and accurate and is not misleading or deceptive. No inaccurate registry information was identified.

Audit outcome

Compliant

2.2. Requirement to correct errors (Clause 11.2(2) and 10.6(2))

Code reference

Clause 11.2(2) and 10.6(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

Aurora's data management processes were examined. Trustpower's registry list as at 17/12/19 was examined to confirm compliance.

Audit commentary

Aurora has a comprehensive suite of discrepancy reports in place. These are managed on a daily basis to ensure that information is complete and accurate and is not misleading or deceptive. Any incorrect data is corrected upon discovery.

As discussed in **section 2.1**, all instances of incorrect information found in the 2019 audit were rechecked and found to be corrected.

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

Aurora's new connection process was examined during their distributor audit. Examination of the registry list and event detail reports for 01/01/19 to 17/12/19 found there were no new ICPs created.

Audit commentary

Aurora's ICP creation process was reviewed during their distributor audit and found to be compliant.

The ICP for the Waipori Village NSP was created on the Waipori Generation network (TRPG) in 2008. The details are correct in the registry.

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

Aurora's new connection process was examined during their distributor audit. Examination of the registry list and event detail reports for 01/01/19 to 17/12/19 found there were no new ICPs created.

Audit commentary

ICP requests are received directly from customers or their agents via the submission of an Aurora Connection Application (ACA). ICPs are created at "New" immediately, whether engineering work is required or not.

Aurora's ICP creation process was reviewed during their distributor audit and found to be compliant.

Audit outcome

Compliant

3.3. Provision of ICP Information to the registry manager (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

Aurora's new connection process was examined during their distributor audit. Examination of the registry list and event detail reports for 01/01/19 to 17/12/19 found there were no new ICPs created.

Audit commentary

Aurora has a fully automated registry update process to ensure all information listed in this clause is provided to the registry. Aurora data is contained in GTV, which is validated against the registry on a regular basis, error logs are created if any fields are different, and these are then investigated.

Timeliness of provision of information is discussed in **sections 3.4** and **3.5** below.

Audit outcome

Compliant

3.4. Timeliness of Provision of ICP Information to the registry manager (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

Aurora's new connection process was examined during their distributor audit. An event detail report for 01/01/19 to 17/12/19 was examined to determine the timeliness of the provision of ICP information for new connections.

Audit commentary

Aurora requires contractors to provide prior notification of their intention to connect and energise an ICP. It is intended that ICP statuses be changed from "New" to "Ready" prior to energisation occurring. ICP 0000508580DEC75 was made "Ready" on 26/03/19 but it was electrically connected on 19/03/19, therefore compliance was not achieved with the requirement to populate the registry prior to electricity being traded.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.4 With: Clause 7(2) of Schedule 11.1 From: 19-Mar-19 To: 26-Mar-19	Late change to "Ready" for ICP 0000508580DEC75 Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	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
This was the metering of the weir which was already live and the issuing of the ICP was as a result of the installation of the metering at the ICP. Dates are based on meter installation date.		Completed	Cleared
Preventative actions taken to ensure no further issues will occur		Completion date	
[This was the metering of the weir which was already live and the issuing of the ICP was as a result of the installation of the metering at the ICP. Dates are based on meter installation date.		Completed	

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 subclause (1)(p) to the registry manager no later than 10 business days after the date on which the ICP is initially electrically connected.

Audit observation

Aurora's new connection process was examined during their distributor audit. An event detail report for 01/01/19 to 17/12/19 was examined to determine the timeliness of the provision of initial electrical connection dates for new connections.

Audit commentary

One initial electrical connection date was populated in the registry and it was within the 10 business day timeframe.

Audit outcome

Compliant

3.6. Connection of ICP that is not an NSP (Clause 11.17)

Code reference

Clause 11.17

Code related audit information

A distributor must, when connecting an ICP that is not an NSP, follow the 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

Aurora's new connection process was examined during their distributor audit. An event detail report and registry list for 01/01/19 to 17/12/19 were examined to determine compliance.

Audit commentary

Compliance is recorded in the Aurora audit report.

Review of the registry list confirmed that a trader is currently recorded for all active and inactive ICPs, and no shared unmetered load is recorded. A proposed trader was recorded for ICP 0000508580DEC75 which was connected during the audit period.

Audit outcome

Compliant

3.7. Connection of ICP that is not an NSP (Clause 10.31)

Code reference

Clause 10.31

Code related audit information

A distributor must not connect an ICP that is not an NSP unless requested to do so by the trader trading at the ICP.

Audit observation

Aurora's new connection process was examined during their distributor audit. An event detail report and registry list for 01/01/19 to 17/12/19 were examined to determine compliance.

Audit commentary

Compliance is recorded in the Aurora audit report.

Review of the registry list confirmed that a trader is currently recorded for all active and inactive ICPs, and no shared unmetered load is recorded. A proposed trader was recorded for ICP 0000508580DEC75 which was connected during the audit period.

Audit outcome

Compliant

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

Code reference

Clause 10.31A

Code related audit information

A distributor may only temporarily electrically connect an ICP that is not an NSP if requested by an MEP for a purpose set out in clause 10.31A(2), and the MEP:

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

Audit observation

Aurora's new connection process was examined during their distributor audit. Examination of the registry list and event detail reports for 01/01/19 to 17/12/19 found one new ICP was created during the audit period.

Audit commentary

Compliance is recorded in the Aurora audit report.

ICP 0000508580DEC75 was electrically connected but it was not temporarily electrically connected.

Audit outcome

Compliant

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

Code reference

Clause 10.30

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

The NSP table was reviewed.

Audit commentary

No new NSPs were created by Trustpower during the audit period.

Audit outcome

Compliant

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 were created by Trustpower during the audit period. No temporary electrical connections were identified.

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 Authority.*

Audit observation

Aurora's ICP creation process was examined during their distributor audit. Examination of the registry list and event detail reports for 01/01/19 to 17/12/19 found no new ICPs were created during the audit period.

Audit commentary

Compliance is recorded in the Aurora audit report.

ICP 0000508580DEC75 was created during the previous audit period, and its format is compliant.

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 registry list as at 17/12/19 was examined to confirm all active ICPs have a single loss category code.

Audit commentary

Each active and inactive ICP 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 registry list and event detail report for the period from 01/01/19 to 17/12/19 were examined.

Audit commentary

Compliance is recorded in the Aurora audit report.

There are no ICPs at 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 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 registry list for ICPs at “New” or “Ready” for longer than 24 months to confirm that traders had been notified.

Audit commentary

No ICPs are at the new or ready status.

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

The registry list as at 17/12/19 was examined to confirm compliance.

Audit commentary

There are no embedded generators connected to the Trustpower networks.

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 give written notice to the registry manager of that change.

Notification must be given by the distributor within 3 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 8 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 management of registry updates was reviewed.

The event detail report for 01/01/19 to 17/12/19 was reviewed to determine compliance. All late updates were reviewed to confirm the reason for the late update.

Audit commentary

When information recorded in the registry changes, the distributor should ensure that the registry is updated within three business days.

Update type	Updates	Late updates	Comment
Address	3	-	Compliant
Network	2	-	Compliant
Pricing	3	-	Compliant
Status	1	1	Requires investigation

ICP Will was decommissioned in 2018 but on 09/07/19 another status event was sent to the registry for the same status and reason and with the same event date. So, this was not actually a status change, but I recommend it is investigated to see why it was sent.

Recommendation	Description	Audited party comment	Remedial action
Regarding Clause 8 Schedule 11.1	Check why a status event was sent for ICP 0000031712DE94F	Will follow up with our Agent Aurora	Identified

Audit outcome

Compliant

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

Code reference

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

Code related audit information

Under Clause 7(1)(b) of Schedule 11.1, the distributor must provide to the registry manager the NSP identifier of the NSP to which the ICP is usually connected.

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 process to determine the correct NSP was examined. The registry list and event detail report for 01/01/19 to 17/12/19 were reviewed to determine compliance.

Audit commentary

The NSP for each ICP is notified to the registry as part of the new connections process. NSP identification occurs in the GIS. All DUNW ICPs have the correct NSP of WPV0061 recorded in the registry. Both “SB” ICPs at the other networks have the correct NSPs recorded.

Audit outcome

Compliant

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 3 business days after receiving a request for that information.

Audit observation

The management of customer queries was examined.

Audit commentary

As recorded in Aurora’s audit, Aurora does receive direct requests for ICP identifiers and these are provided immediately.

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 registry list as at 17/12/19 was reviewed to determine compliance.

Audit commentary

A check of Trustpower's registry list found that all ICPs have unique addresses with sufficient information to allow the ICPs to be readily located.

Audit outcome

Compliant

4.5. Electrically disconnecting an ICP (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 electrically disconnected without electrically disconnecting 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 the difference between the total consumption for the embedded network and all other ICPs on the embedded network.

Audit observation

The management of this process was examined.

Audit commentary

Compliance is recorded in the Aurora audit report. For new connections, this clause is well understood, and the policy is to allow shared service mains but individual fusing is required. A section in the "network connection inspection form" requires that fusing information be notified. No new ICPs were created during the audit period.

Audit outcome

Compliant

4.6. Distributors to Provide ICP Information to the Registry manager (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 manager:

- *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*
- *the initial electrical connection date of the ICP (Clause 7(1)(p) of Schedule 11.1)*

Audit observation

The registry list as at 17/12/19 was examined to check for the population of all required information and its alignment with the trader where appropriate e.g. distributed generation, unmetered load if known and shared unmetered load.

Audit commentary

Examination of the registry list confirmed that ICP information had been populated correctly.

There is no distributed generation present, and no issues were identified with address, NSP, pricing or reconciliation type information. One ICP has the initial electrical connection date correctly populated.

Audit outcome

Compliant

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 manager 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

Aurora's new connection process was examined during their distributor audit. Examination of the registry list and event detail reports for 01/01/19 to 17/12/19 found one ICP was electrically connected during the audit period.

Audit commentary

Aurora's processes to provide information to the registry were reviewed during their distributor audit. The relevant information was provided to the registry within the allowable timeframes for ICP 0000508580DEC75.

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

The registry list as at 17/12/19 was reviewed to identify all ICPs with GPS coordinates.

Audit commentary

No ICPs have GPS coordinates populated.

Audit outcome

Compliant

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

The management of ICPs in relation to the use of the “ready” status was examined. The registry list and event detail report for 01/01/19 to 17/12/19 were examined.

Audit commentary

Compliance is recorded in the Aurora audit report.

There were no ICPs at “ready” status during the audit period.

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

The registry list and event detail report for 01/01/19 to 17/12/19 were examined.

Audit commentary

Compliance is recorded in the Aurora audit report.

There were no ICPs at “distributor” status on the DUNW network during the audit period. It is unlikely that Trustpower will deal with any ICPs with a “Distributor” status because there is no shared unmetered load on this network, and there are no embedded networks connected to DUNW.

The Waipori Village network is embedded into Waipori Generation and there is a Distributor only ICP (0000207213DEC3B) for the point of connection.

Audit outcome

Compliant

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

The registry list and event detail report for 01/01/19 to 17/12/19 were examined.

Audit commentary

Aurora’s decommissioning process is compliant. No ICPs were decommissioned during the audit period, but one status event was made unnecessarily as recorded in Section 4.1.

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 2 months after the date the code is entered in the table.

A price category code takes effect on the specified date.

Audit observation

The price category code table on the registry was examined.

Audit commentary

Trustpower has not created any new price category codes 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

The loss category code table on the registry was examined.

Audit commentary

Trustpower has not created any new loss category codes during the audit period.

Audit outcome

Compliant

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 2 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 in the registry, the distributor must enter the replaced loss factor on the table in the registry.

Audit observation

The loss category code table on the registry was examined.

Audit commentary

Trustpower updated the WPVLV loss category code from 1.6835 to 1.2 effective from 01/04/20. The change was notified within the required timeframe.

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 give written notice to 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 give written notice to 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 give written notice to 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:

- give written notice to the reconciliation manager*
- give written notice to the Authority*
- give written notice to each affected reconciliation participant*
- comply with Schedule 11.2.*

Audit observation

The NSP table on the registry was examined.

Audit commentary

No NSPs have been created or decommissioned during the audit period.

Audit outcome

Compliant

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 2 local networks. In all other cases, the request must be made at least 1 month before the NSP is electrically connected or the ICP is transferred.

Audit observation

The NSP table on the registry was examined.

Audit commentary

No NSPs have been created or decommissioned during the audit period.

Audit outcome

Compliant

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 give written notice to 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.

Audit commentary

No new balancing areas have been created, and no balancing area changes occurred during the audit period.

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 give notice to the reconciliation manager at least 1 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

The NSP table was examined.

Audit commentary

Trustpower has not created any new embedded networks during the audit period.

Audit outcome

Compliant

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 give written notice to 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 3 business days after the change takes effect.

Audit observation

The NSP table on the registry was examined.

Audit commentary

No balancing area changes occurred during the audit period.

Audit outcome

Compliant

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 give written notice to any trader trading at the ICP of the transfer at least 1 month before the transfer.

Audit observation

The NSP table on the registry was examined.

Audit commentary

No ICPs became NSPs during the audit period.

Audit commentary

Compliant

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 give written notice to the Authority in the prescribed form, no later than 3 business days before the transfer takes effect.

Audit observation

The NSP table was reviewed.

Audit commentary

Trustpower has not initiated the transfer of any ICPs during the audit period.

Audit outcome

Compliant

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

Code reference

Clause 10.25(1) and 10.25(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))*

For each NSP covered in 10.25(1) the network owner must, no later than 20 business days after a metering installation at the NSP is recertified advise the reconciliation manager of:

- *the reconciliation participant for the NSP*
- *the participant identifier of the metering equipment provider for the metering installation*
- *the certification expiry date of the metering installation*

Audit observation

The network supply point table was examined.

Audit commentary

As recorded in Section 1.8, all points of connection have metering installations with current certification.

Audit outcome

Compliant

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 data 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 supply point table was reviewed.

Audit commentary

Trustpower did not create any new NSPs during the audit period.

Audit outcome

Compliant

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 give written notice to:

- *the previous network owner (Clause 29(1)(a) of Schedule 11.1)*
- *the reconciliation manager (Clause 29(1)(b) of Schedule 11.1)*
- *the Authority (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 one months 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

The NSP supply point table was reviewed.

Audit commentary

Trustpower have not initiated any changes of network owner.

Audit outcome

Compliant

6.11. 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 advise the reconciliation manager and the gaining MEP.

Audit observation

Audit observation

The NSP supply point table was examined.

Audit commentary

There have been no MEP changes during the audit period.

Audit outcome

Compliant

6.12. 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 Authority 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

The NSP supply point table was reviewed.

Audit commentary

Trustpower has not initiated the transfer of any ICPs during the audit period.

Audit outcome

Compliant

6.13. 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

The NSP supply point table was reviewed.

Audit commentary

Trustpower has not initiated the transfer of any ICPs during the audit period.

Audit outcome

Compliant

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 give written notice to the registry manager 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 give written notice to the registry manager 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

Trustpower's registry list as at 17/12/19 was examined to confirm compliance.

Audit commentary

There are no ICPs with shared unmetered load connected.

Audit outcome

Compliant

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 give written notice to all traders affected by that change or decommissioning as soon as practicable after the change or decommissioning.

Audit observation

Trustpower's registry list as at 17/12/19 was examined to confirm compliance.

Audit commentary

There have been no changes to shared unmetered load details.

Audit outcome

Compliant

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

The “Guidelines on the calculation and the use of loss factors for reconciliation purposes” was published on 26 June 2018. I have assessed Trustpower’s process and compliance against the guideline’s recommended thresholds.

Audit commentary

Trustpower has changed the loss factor for DUNW for the WPVLV loss category code from 1.6835 to 1.2 with an effective date of 01/04/20. Historically the high losses were at least partly caused by an unmetered weir, which is now metered. There are also a large number of transformers on the network and the transformer losses are likely to have an impact on losses. The loss factor of 1.2 is based on research of transformer losses for a quantity of 12 transformers. Trustpower intends to refine the calculation using specific nameplate data from each transformer.

I don’t have sufficient information to determine whether a loss factor of 1.2 is reasonable, so I recommend Trustpower compares consumption in EIEP files (multiplied by 1.2) with the total metered kWh at the gate meter for the period from March 2019 (when the weir metering was installed) until today’s date to determine if the UFE is close to zero.

Recommendation	Description	Audited party comment	Remedial action
Regarding Clause 11.2	Compare consumption in EIEP files (multiplied by 1.2) with the total metered kWh at the gate meter for the period from March 2019 (when the weir metering was installed) until today’s date to determine if the UFE is close to zero.	We are continuing to monitor the loss factor and the impact of the standing Iron losses from the high number of 6600/400 volt transformers. We are confident that the 1.2 is an accurate reflection of the true physical losses of this small network	Identified

Audit outcome

Compliant

CONCLUSION

Previous audits have recorded that Trustpower has responsibility for one NSP (DUNW for the Waipori Village). It has been confirmed that Trustpower also has responsibility for two other points of connection as recorded in Section 1.8. WPG0331 is the network that Waipori village is embedded into. TWC2201 is a grid connected network at a windfarm. The audit scope has been expanded to include these additional points of connection. Each of these points of connection has an “SB” ICP.

The audit was conducted in accordance with the Guideline for Distributor Audits version 7.2, which was produced by the Electricity Authority.

Aurora Network Limited (Aurora) performs all of the relevant functions for Trustpower with the exception of network supply point table maintenance, which is carried out by Trustpower. All activity completed by Aurora for Trustpower during the audit period was reviewed during this audit. Aurora uses the same systems and processes for Trustpower and ICPs on their own Aurora network. Aurora’s distributor audit report dated 07/09/18 was reviewed to support my findings on process compliance. I also confirmed that processes had not changed from this date until now.

Trustpower has changed the loss factor for DUNW for the WPVLV loss category code from 1.6835 to 1.2 with an effective date of 01/04/20. Historically the high losses were at least partly caused by an unmetered weir, which is now metered. There are also a large number of transformers on the network and the transformer losses are likely to have an impact on losses. The loss factor of 1.2 is based on research of transformer losses for a quantity of 12 transformers. Trustpower intends to refine the calculation using specific nameplate data from each transformer.

I don’t have sufficient information to determine whether a loss factor of 1.2 is reasonable, so I recommend Trustpower compares consumption in EIEP files (multiplied by 1.2) with the total metered kWh at the gate meter for the period from March 2019 (when the weir metering was installed) until today’s date to determine if the UFE is close to zero.

There has been very little activity on the DUNW network and no activity on the other two networks. The main change with regard to DUNW is that a previously unmetered weir has been metered and the ICP has been changed to Active. Non-compliance is recorded for the late change to “Ready” for this ICP.

The next audit frequency table indicates that the next audit be due in 36 months. I agree with this recommendation.

PARTICIPANT RESPONSE

We are supportive of the Auditors recommendations of a 36 month re audit period. The issue of losses has been addressed and will continue to be a focus for Trustpower.