

**ELECTRICITY INDUSTRY PARTICIPATION CODE
DISTRIBUTOR AUDIT REPORT**



For

**AUCKLAND INTERNATIONAL AIRPORT
LIMITED (AIAL)**

Prepared by: Rebecca Elliot, Veritek Limited

Date audit commenced: 29 August 2018

Date audit report completed: 11 September 2018

Audit report due date: 19 September 2018

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EXECUTIVE SUMMARY

This Distributor audit was conducted at the request of **Auckland International Airport Ltd (AIAL)** 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.

AIAL's compliance for registry maintenance is largely reliant on the compliance of Vector, as the contractor. Whilst Vector's audit is greater than seven months old I have undertaken an audit of all activity carried out on behalf of AIAL to ensure that compliance can be determined. Their audit report will be submitted with this report.

The audit found eight non-compliances and one recommendation is made. This is a similar level of non-compliance found in the last three audits.

The missing initial electrical connection dates reported in the last few audits have all been populated. Updates to the registry appear to be sporadic and it was evident that a good number of updates were conducted just prior to the information for this audit being provided. As stated in the last audit, the volume of activity for AIAL is very small compared to Vector's overall workload and this appears to be hindering resolving the non-compliances found for AIAL.

The Distributor audit frequency matrix the next recommended audit is due in six months. I have considered this result in conjunction with the response from AIAL's responses and I agree with this recommendation.

AUDIT SUMMARY

NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Requirement to provide complete and accurate information	2.1	Clause 11.2(1) and 10.6(1)	Registry information not complete and accurate in all instances.	Moderate	Low	2	Identified
Requirement to correct errors	2.2	Clause 11.2(2) and 10.6(2)	Corrections not made as soon as practicable.	Moderate	Low	2	Identified
Timeliness of initial electrical connection date	3.5	7(2A) of Schedule 11.1	The event date population of the registry was performed more than 10 business days after the actual date of initial electrical connection for 68 (89%) ICPs.	Weak	Low	3	Identified
Changes to registry information	4.1	8 Schedule 11.1	Registry not updated within three days of the event.	Weak	Low	3	Investigating
ICP Location Address	4.4	2 Schedule 11.1	Three ICPs with duplicate addresses.	Moderate	Low	2	Identified
Distributors to Provide ICP Information to the Registry manager	4.6	7(1) Schedule 11.1	Initial electrical connection date not populated for four ICPs and an incorrect date used for six ICPs.	Moderate	Low	2	Identified
Management of Decommissioned status	4.11	20 Schedule 11.1	Decommissioned status not managed.	Weak	Low	3	Identified
Creation of loss factors	8.1	11.2	Incorrect loss factors recorded since 1/4/18 when Vector changed the parent network loss factors.	None	Low	5	Identified
Future Risk Rating						22	

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	Remedial action
Distributors to Provide ICP Information to the Registry	4.6	Request paperwork to confirm correct electrical connection date before updating the registry.	Identified

ISSUES

Subject	Section	Issue	Remedial action
		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

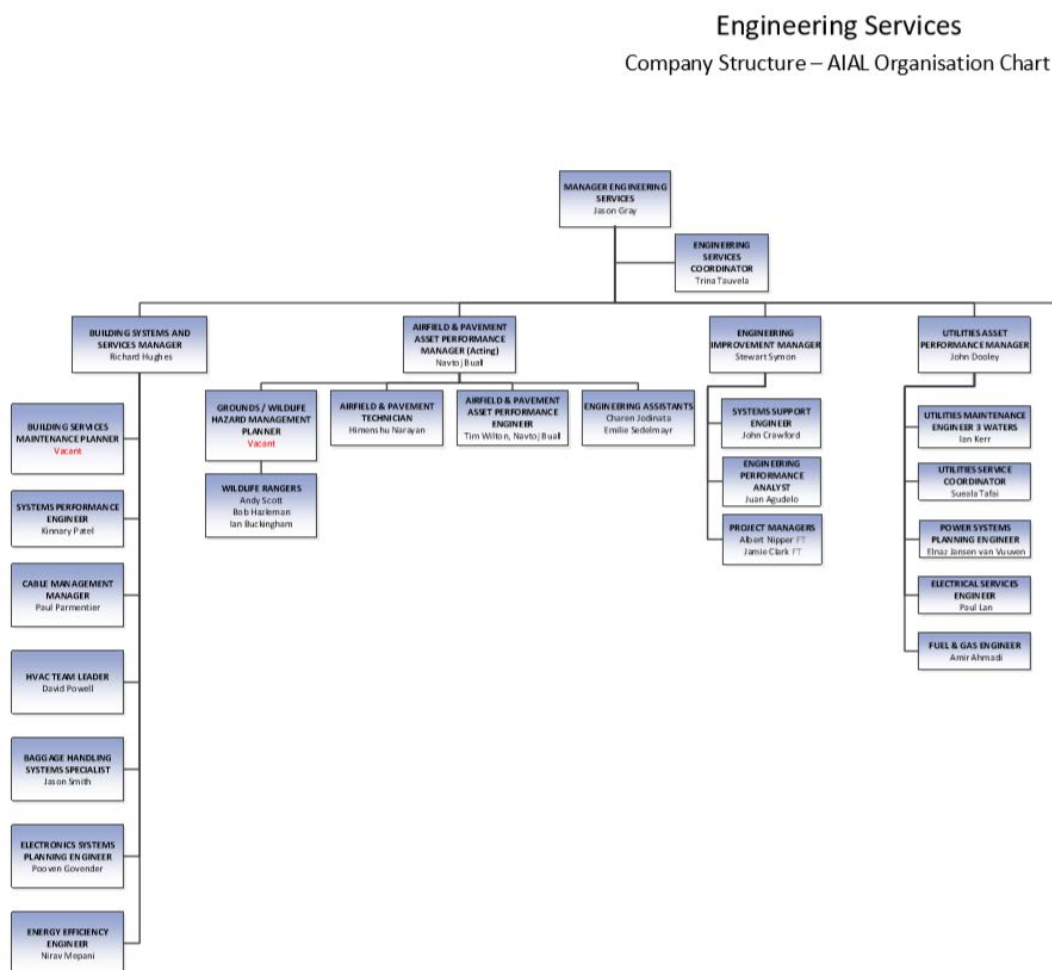
The Electricity Authority website was checked to determine whether AIAL has any Code exemptions in place.

Audit commentary

Review of exemptions on the Electricity Authority website confirmed that there are no exemptions in place for AIAL.

1.2. Structure of Organisation

AIAL provided an organisational structure:



1.3. Persons involved in this audit

Auditor:

Name	Company	Role
Rebecca Elliot	Veritek Limited	Lead Auditor

Personnel assisting in this audit were:

Name	Title	Organisation
Elnaz van Vuuren	Power Systems Engineer	AIAL
Richard Green	Director	Business Engagement Ltd

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

Vector acts as a registry agent for a small number of embedded networks, one of which is Auckland Airport. The service Vector provides is restricted to uploading new ICPs to the registry and its maintenance. ICPs are created by an embedded network owner or its agent and passed to Vector with all the obligatory information needed to load it to the registry. The embedded network owner is fully accountable for the information provided.

1.5. Supplier list

Activities covered by the scope of this audit, are conducted by Vector.

1.6. Hardware and Software

This is covered off in Vector's report.

1.7. Breaches or Breach Allegations

AIAL has not had any breach allegations relevant to this audit recorded by the Electricity Authority.

1.8. ICP and NSP Data

Review of the NSP table showed AIAL had the following NSPs at 15 August 2018:

Distributor	NSP POC	Description	Parent POC	Parent Network	Balancing Area	Network type	Start date	No of ICPs
AIAL	AKL0331	AUCKLAND AIRPORT	MNG0331	VECT	AKL0331AIALEN	EN	1/03/17	547

A list file was provided as at August 2018:

Status	Number of ICPs 2018	Number of ICPs 2017	Number of ICPs 2016	Number of ICPs 2015
Distributor	0	0	0	0
New	0	1	1	0
Ready	10	9	22	16
Active (2,0)	547	585	571	553
Inactive - new connection in progress (1,12)	4	0	0	7
Inactive – vacant (1,4)	10	10	8	7
Inactive - reconciled elsewhere (1,5)	0	0	0	0
Inactive – AMI remote disconnection (1,7)	0	3	1	0
Inactive – de-energised due to meter disconnected (1,9)	5	5	3	0
Inactive – at pole fuse (1,8)	0	0	0	0
Inactive – de-energised at meter box switch (1,10)	0	0	0	0
Inactive - at meter box switch (1,11)	0	0	0	0
Inactive – ready for decommissioning (1,6)	1	8	23	3
Decommissioned (3)	299	213	187	183

1.9. Authorisation Received

AIAL provided a letter of 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 AIAL, 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 scope of the audit is shown in the table below:

Functions Requiring Audit Under Clause 11.10(4) of Part 11	Contractors Involved in Performance of Tasks
The creation of ICP identifiers for ICPs.	Vector
The provision of ICP information to the registry and the maintenance of that information.	
The creation and maintenance of loss factors.	

The audit report for Vector will be submitted with this audit. This audit was carried out more than seven months ago but all events for the audit period were examined to confirm compliance.

1.11. Summary of previous audit

AIAL provided a copy of their previous audit conducted September 2017 by Rebecca Elliot of Veritek Limited. The current status of these has been updated below:

Table of Non-Compliance

Subject	Section	Clause	Non-compliance	Status
Requirement to provide complete and accurate information	2.1	11.2(1)	44 active ICPs with missing initial energisation dates.	Still existing
Requirement to correct errors	2.2	11.2(2)	Corrections not supplied as soon as practicable.	Still existing
Timeliness of Provision of Initial Energisation Date	3.5	7(2A) of Schedule 11.1	The event date populated to the registry for IECD updates is not the IECD date.	Still existing
Monitoring of “new” & “ready” statuses	3.13	15 Schedule 11.1	ICPs at the “New” and “Ready” for greater than 24 months are not managed.	Cleared
Changes to registry information	4.1	8 of Schedule 11.1	Registry not updated within three days of the event.	Still existing
ICP location address	4.4	2 of Schedule 11.1	3 ICPs with duplicate addresses. 1 ICP not readily locatable.	Still existing Cleared
Distributors to Provide ICP Information to the Registry	4.6	7(1) Schedule 11.1	Initial energisation date not populated for 44 ICPs.	Still existing
Responsibility for metering information for NSP	6.8	10.25(3)	Meter not certified until May 2017 and not notified to the RM.	Cleared

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

The requirement to provide complete and accurate information is discussed in the Vector audit report.

The registry LIS report for 1 September 2017 – 24 August 2018 was examined to determine compliance.

Audit commentary

Compliance is recorded for Vector.

All new ICPs set up in the network go through AIAL's New Connections Process, i.e. the tenant (Customer's agent) fills in the New Connections form. The allocation of ICP is performed by AIAL, and the form is sent to Vector to be set up in the Registry.

Examination of the list file for this audit found the initial electrical connection date was missing for four ICPs. See **sections 3.5** and **4.6** for detailed findings.

As detailed in **section 3.5**, analysis of the updating of the registry found the incorrect event date being applied in some instances. The data dictionary in the registry defines the event date as follows:

The Event Date defines the date from which the attribute values of the event should apply.

The event date should always be updated to indicate the effective date the change applies from. This is recorded as non-compliance.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.1 With: 11.2(1) From: 01-Sep-17 To: 24-Aug-18	Registry information not complete and accurate in all instances. Potential impact: None Actual impact: None Audit history: Multiple Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are rated as moderate as the majority of information is complete and accurate, but the population of the initial electrical connection date using the correct effective date is an opportunity for improvement. The audit risk rating is low as the missing information has no direct impact on settlement.		
Actions taken to resolve the issue		Completion date	Remedial action status
Update the Registry with IED dates for the 4 ICPs mentioned above		1/10/18	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
A memo will be sent to all contractors and Electricity Retailers to highlight the importance of correct and accurate information More stringent sanity checks will be taken prior to populating the information in the Registry, this includes requirement for photos of the meter certification, site visits, checks with the nominated Electrical Inspector and or the nominated Registry Agent		1/10/18 On-going	

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

The requirement to correct errors is discussed in the Vector audit report.

The registry LIS report for 1 September 2017 – 24 August 2018 was examined to determine compliance.

Audit commentary

Compliance is recorded for Vector.

The missing initial electrical connection dates found in the last audit have been populated during the audit period. Some of these updates incorrectly updated the ICP to a reconciliation type of “GN” from “EN”. These were all corrected upon discovery.

I note in **section 4.4**, that the duplicated addresses were expected to be updated post the last audit, but this has not occurred. This is recorded as non-compliance below.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.2 With: 11.2(2) From: 01-Sep-17 To: 24-Aug-18	Corrections not made as soon as practicable. Potential impact: None Actual impact: None Audit history: Multiple Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are rated as moderate as corrections were evident, but the duplicated addresses expected to be corrected post the last audit have not been updated. The audit risk rating is low as the missing information has no direct impact on settlement.		
Actions taken to resolve the issue		Completion date	Remedial action status
The address for the 3 ICPs with the same address will be corrected		17/09/18	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
AIAL will have contract in place with a nominated Registry Agent with agreed level of service to minimise errors		1/10/18	

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 is discussed in the Vector contractor report, there have been no changes to the process since February 2016.

The event detail file and the registry LIS report for 1 September 2017 – 24 August 2018 were examined.

Audit commentary

41 ICPs were created during the audit period. The new ICPs were created in accordance with this clause.

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 is discussed in the Vector contractor report. The event detail file and the registry LIS report for 1 September 2017 – 24 August 2018 were examined. 41 ICPs were created during the audit period.

Audit commentary

This clause requires Distributors to create ICPs within three business days of the request. This clause also assumes that ICP requests will be made by traders, however the process for AIAL is different and ICP requests are made by customers to AIAL therefore this clause does not apply.

Audit outcome

Not applicable

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

The new connection process is discussed in the Vector contractor report.

AIAL's 41 new ICPs were checked to confirm compliance.

Audit commentary

Compliance is recorded for Vector. All information recorded on the registry was correct.

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

The new connection process is discussed in the Vector contractor report.

The event detail file and the registry LIS report for 1 September 2017 – 24 August 2018 were examined to determine the timeliness of the provision of ICP information.

Audit commentary

Compliance is recorded for Vector. A check of the list file confirmed that all ICPs created during this audit period were updated as soon as practicable, and prior to electrical connection in all cases.

Audit outcome

Compliant

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 manager no later than 10 business days after the date on which the ICP is initially electrically connected.

Audit observation

The process to update the registry with the correct electrical connection date was examined.

The event detail file and the registry LIS report for 1 September 2017 – 24 August 2018 were examined to determine the timeliness of the provision of the initial electrical connection date.

Audit commentary

Non-compliance was recorded for Vector in their audit report. Vector only load the event to the registry on behalf of AIAL as AIAL use a different process to gather this information and have changed this process during the audit period. The Inspector (Sel electrical) who carry out this activity on the AIAL network provides notification to AIAL directly of any electrical connections on the same day that the activity has taken place. AIAL then know exactly which day an ICP has been electrically connected, and Vector is informed of the electrical connection date and they update the registry on AIAL's behalf.

There were 31 ICPs made active during the audit period.

Four ICPs have no initial electrical connection date populated on the Registry, this is covered in **sections 2.2.and 4.6**.

Examination of the event detail report for the audit period identified 76 updates to registry to update the initial electrical connection date. This includes ICPs electrically connected outside of the audit period that had the initial electrical connection date details missing hence the number won't match those electrically connected during the audit period).

Of the 76 events, 68 ICPs (89%) were updated more than 10 business days after becoming electrically connected. This is largely due to the population of the missing initial electrical connection dates that were identified in the last audit. The new process put in place by AIAL should see the speed of updating the registry improve going forward.

I also checked the event or effective date used in the updates and found that these did not align with the initial electrical connection event date in 29 (38%) of the updates. The data dictionary in the registry defines the event date as follows:

The Event Date defines the date from which the attribute values of the event should apply.

Therefore, the event or effective date should be the same date as the initial electrical connection date. This is recorded as non-compliance in **section 2.1**.

The accuracy of the initial electrical connection date is discussed in **section 4.6**.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.5 With: 7(2A) of Schedule 11.1 From: 01-Sep-17 To: 24-Aug-18	The event date population of the registry was performed more than 10 business days after the actual date of initial electrical connection for 68 (89%) ICPs. Potential impact: None Actual impact: None Audit history: Multiple Controls: Weak Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are recorded as weak as timeliness of updates to the registry is longer than required (even allowing for the population of the missing initial electrical connection dates for historic ICPs) and this has been evident in the AIAL audit since this requirement came into effect. There is no impact on settlement, therefore the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
The majority of the IED updates longer than 10 working days were due to historical non-compliances and cannot be corrected, however the new process with Sel electrical will see this issue disappear in the next audit			Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Better communication with nominated electrical inspector as well as AIAL internal staff			

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

The new connection process is discussed in the Vector contractor report. The event detail file and the registry LIS report for 1 September 2017 – 24 August 2018 were examined to determine compliance.

Audit commentary

Non-Compliance is recorded for Vector. The review of the registry list report for AIAL confirmed that a trader is recorded for the ten ICPs that are at the “ready” status. The registry list does not record any shared unmetered load, therefore compliance is recorded for AIAL.

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

The new connection process is discussed in the Vector contractor report. The event detail file and the registry LIS report for 1 September 2017 – 24 August 2018 were examined to determine compliance.

Audit commentary

Vector’s processes in relation to this clause are such that an ICP will not be connected without the agreement from the trader, who in turn has agreement with an MEP for the ICP. The list file confirmed that all ten ICPs at the “Ready” status had a trader nominated.

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

The new connection process is discussed in the Vector report. The event detail file and the registry LIS report for 01/09/2017 - 24/08/2018 were examined to determine compliance.

Audit commentary

Vector’s processes are robust in relation to this clause as an ICP will not be connected without the agreement from the trader, who in turn has agreement with an MEP for the ICP. All new connections were authorised by the trader prior to being 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 on the registry was examined.

Audit commentary

No new NSPs have been connected 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 on the registry was examined.

Audit commentary

No new NSPs have been 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 Authority.*

Audit observation

The ICP creation process is discussed in the Vector contractor report.

Audit commentary

Compliance is recorded for Vector.

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 active ICP only has a single loss category, which clearly identifies the relevant loss factor. Loss Codes used were confirmed against the Loss factor table as at August 2018.

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 ICP creation process is discussed in the Vector contractor report. The event detail file, and the registry LIS report for 1 September 2017 – 24 August 2018 were examined to determine compliance.

Audit commentary

Compliance is recorded for Vector.

Vector’s processes result in most ICPs being created at “Ready” as all the necessary information is required prior to the creation of an ICP. Three ICP’s were created at the status of ‘New’ during the audit period. These ICPs were changed to “Ready” once the metering details and retailer had been determined.

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

Monitoring of new and ready status is discussed in the Vector contractor report.

The Registry LIS report for 1 September 2017 – 24 August 2018 were examined to determine compliance.

Audit commentary

Compliance is recorded for Vector.

The previous non-compliance has been cleared as AIAL now monitor and manage ICPs at these statuses. An examination of the LIS file confirmed this as the ten ICPs at the “Ready” status, none have been at that status for more than 24 months.

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 LIS report for 1 September 2017 – 24 August 2018 was examined.

Audit commentary

AIAL does not supply any embedded generators.

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 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 management of this process is discussed in the Vector contractor report.

I also examined the event detail report for 1 September 2017 – 24 August 2018 to identify late changes to registry information during the audit period.

Audit commentary

Non-compliance is recorded in the Vector contractor report in relation to updates on their network. The event detail report found:

Address events

There were 29 address events during the audit period; all were updated within three business days.

Network Events

There were five network events during the audit period (excluding the updating of initial electrical connection dates which are discussed in **section 3.5**) and these were all updated between six to eight days from the event date. These were all checked and found all were updates to the reconciliation type from “GN” (grid connected) to “EN” (embedded network). One was a correction and the remaining four events related to the ICPs that transferred to the AIAL network from the Vector network. This is discussed in **sections 6.12** and **6.13**.

Pricing Events

There were 42 pricing events during the audit period. Five (12%) of these were updated within three business days. The remaining 37 (88%) were updated greater than three business days.

Status Events

There were 82 decommissioned event updates during the audit period. 22 ICPs (27%) were updated within three business days. The remaining 60 ICPs (73%) were updated greater than three days from the event date, 24 of which were updated on the 21st & 22nd August highlighting that these were actioned just prior to information being provided for this audit. These updates appear to be occurring in a sporadic fashion.

A sample of ten decommissioned ICPs using the extreme sample methodology were checked and found that the trader had updated the registry to the “Inactive-ready for decommissioning” status but these were not actioned in six of the ICPs checked. The remaining four instances highlighted that meters being removed were also missed by the traders and they have backdated the ready for decommissioning event, but as with the other events this was not picked up and progressed until just prior to this audit.

The late updating of the registry is recorded as non-compliance below

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.1 With: 8 Schedule 11.1 From: 01-Sep-17 To: 24-Aug-18	Registry not updated within three days of the event. Potential impact: None Actual impact: None Audit history: Multiple Controls: Weak Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are weak as 88% of the pricing updates and 73% of the status updates to the registry were late. The audit risk rating is low as the volume of ICPs affected is relatively small and therefore the impact on settlement will be low.		
Actions taken to resolve the issue		Completion date	Remedial action status
Regulatory rules Refresher course was taken in March 2018 for the staff involved in this process,			Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
AIAL is looking into a new Registry Agent which will be more proactive in ensuring the events are captured within the specified period.			

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

This is an unlikely event given that AIAL has only one NSP. I examined the event detail report for the audit period of 1 September 2017 – 24 August 2018 to confirm that no ICPs had had a change of NSP during the audit period.

Audit commentary

Review of the event detail report confirmed that there was no change of NSP during the audit period to any ICPs on the AIAL network.

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 three business days after receiving a request for that information.

Audit observation

The management of customer queries was examined.

Audit commentary

AIAL does not receive direct requests for ICP identifiers, but if they were received these would be 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 list file was analysed, and the Vector contractor report was reviewed.

Audit commentary

Non-compliance is recorded in Vector's report.

A check of AIAL's list file found that all but three ICPs were readily locatable. The three ICPs have duplicate addresses, none of which were created during the audit period. It was noted in the last audit that a unit number would be added to these ICPs to differentiate them but to date this has not happened.

ICP	Add Unit	Add No.	Add Street	Add Suburb	Add Town	Add Region
0003133398AAC4E		1	RAY EMERY DRIVE	AUCKLAND AIRPORT	AUCKLAND	Auckland
0003133792AA2DE		1	RAY EMERY DRIVE	AUCKLAND AIRPORT	AUCKLAND	Auckland
0003133797AAF91		1	RAY EMERY DRIVE	AUCKLAND AIRPORT	AUCKLAND	Auckland

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.4 With: 2 Schedule 11.1 From: 01-Sep-17 To: 24-Aug-18	Three ICPs with duplicate addresses. Potential impact: None Actual impact: None Audit history: Once Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are rated moderate as Gentrack now has a built-in business rule to check for non-unique addresses. The audit risk rating is low as this affects three of the 547 ICPs that AIAL are responsible for.		
Actions taken to resolve the issue		Completion date	Remedial action status
Unit numbers will be updated for the 3 ICPs above		17/09/18	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
No future ICPs will be issued without unit numbers. This is evident in addition of ICPs in the audit period		On-going	

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

This was reviewed in the Vector contractor report.

Audit commentary

Compliance is recorded in the Vector contractor report.

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 management of this process is discussed in the Vector contractor report.

The list file 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

Non-compliance is recorded in Vector's report.

All ICP information was checked and confirmed compliant unless discussed below:

The ICPs recorded in the last audit with missing initial electrical connection dates have been populated during the audit period. All registry information was correct with the exception of:

- four ICPs created and energised during the audit period with no initial electrical connection date recorded; non-compliance is recorded in the Vector contractor report in relation to the population of the initial electrical connection date
- there has been no unmetered load added during the audit period
- ICP 0000021334AA349 was noted in the last audit with metering with an injection channel present but AIAL has no distributed generation recorded, AIAL have confirmed that whilst this site has generation present the generation won't be injected to the grid, therefore the generation details are not required to be recorded on the registry
- of the 30 ICPs electrically connected six ICPs (20%) had an initial electrical connection date that did not match the first active date recorded by the trader; the six ICPs with a different date are detailed in the table below:

ICP	Distributor Initial Electrical Connection Date	Earliest retailer active date	Meter Certification Date	Comments
0003133794AA351	19-Sep-17	20/09/2017	22-Sep-17	Incorrect date advised to AIAL by phone
0003133795AAF14	19-Sep-17	20/09/2017	22-Sep-17	Incorrect date advised to AIAL by phone
0003133798AA04F	22-Sep-17	21/09/2017	21-Sep-17	Incorrect date advised to AIAL by phone
0003133800AA2B3	07-Dec-17	6/12/2017	06-Dec-17	Incorrect date advised to AIAL by phone
0003133832AA5CE	20-Jul-18	26/06/2018	20-Jul-18	Site crew error, Cert date advised, not IECD of 26/06/18

ICP	Distributor Initial Electrical Connection Date	Earliest retailer active date	Meter Certification Date	Comments
0003133833AA98B	20-Jul-18	26/06/2018	26-Jun-18	Site crew error, Cert date advised, not IECD of 26/06/18

These dates are generally advised via phone. I recommend that paperwork is sighted to ensure that the correct electrical connection date is recorded. A Distributor has ten business days to update the registry, so this should provide enough time to receive the paperwork with the correct date.

Description	Recommendation	Audited party comment	Remedial action
Distributors to Provide ICP Information to the Registry	Request paperwork to confirm correct electrical connection date before updating the registry.	We will change our process and request photos of the certificate for every IED date from now on	Identified

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.6 With: 7(1) Schedule 11.1 From: 01-Sep-17 To: 24-Aug-18	Initial electrical connection date not populated for four ICPs and an incorrect date used for six ICPs. Potential impact: None Actual impact: None Audit history: Multiple Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are rated as moderate as all information is provided to the registry as required with the exception of the initial electrical connection date, where there is room for errors to occur with the current process. The audit risk rating is low as this has no direct impact on settlement.		
Actions taken to resolve the issue		Completion date	Remedial action status
The IED dates for the ICPs above will be corrected		1/10/18	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Photo evidence will be sought prior to update of IEDs in the Registry			

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

The management of this process is discussed in the Vector contractor report.

The event detail report for the period 1 September 2017 – 24 August 2018 was examined to determine compliance with this clause.

Audit commentary

Compliance is recorded in the Vector contractor report.

Pricing information was updated on the registry before trading of electricity commenced for all ICPs created and energised during the audit period.

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 24/08/2018 was examined.

Audit commentary

AIAL do not populate GPS co-ordinates on the registry.

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 this process is discussed in the Vector contractor report.

The Registry LIS file and event detail report for 1 September 2017 – 24 August 2018 were examined in relation to the use of the ready status.

Audit commentary

Compliance is recorded in the Vector contractor report. The list file contained ten ICPs at “ready”. All had a nominated trader and price category recorded.

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

It is unlikely that AIAL will deal with any ICPs with a “Distributor” status because they do not deal with shared unmetered load, and there are no embedded networks connected to existing embedded networks.

Audit commentary

The Registry LIS file and event detail report for 1 September 2017 – 24 August 2018 were examined in relation to the use of the distributor status. There are no ICPs with that status.

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 management of this process is discussed in the Vector contractor report and was examined in relation to AIAL.

The list file and event detail report for 1 September 2017 – 24 August 2018 were examined in relation to the use of the decommissioned status.

Audit commentary

Compliance is recorded in the Vector contractor report. Vector have changed this process for their customers during the audit period but there has been no change to the process for AIAL.

There have been an increased number of decommissioned ICPs in this audit period due to the demolition of the Cargo central building. As detailed in **section 4.1**, ICPs that have been updated to the “Inactive - ready for decommissioning” status in the registry are not being identified and actioned with the majority of the updates to these ICPs occurring just prior to the information being provided for this audit. AIAL expect the trader to notify them of an ICP to be decommissioned, but this process hasn’t been followed as is evident in the examples checked in **section 4.1**. The lack of management of decommissioned ICPs is recorded as non-compliance below.

The list file recorded one ICP (0344843025LC814) that is at the “Inactive - ready for decommissioning” status. This is awaiting confirmation of being decommissioned. The timeliness of such events is discussed in **Section 4.1**.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.11 With: 20 Schedule 11.1 From: 01-Sep-17 To: 24-Aug-18	Decommissioned status not managed. Potential impact: None Actual impact: Low Audit history: None Controls: Weak Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are rated as weak as the registry updates to “inactive - ready for decommissioning” were not managed. The audit risk rating is low as this has no direct impact on settlement.		
Actions taken to resolve the issue		Completion date	Remedial action status
A memo will be sent to all contractors and Electricity Retailers to highlight the importance of correct and accurate information		1/10/18	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
AIAL will have contract in place with a nominated Registry Agent with agreed level of service to minimise errors		1/10/18	

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

The price category code table on the registry was examined.

Audit commentary

AIAL 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

AIAL 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 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 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

AIAL has not updated or replaced any loss factor codes during the audit period. There was only one loss factor per category code per month.

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 were created or decommissioned during the audit period, therefore compliance was not assessed.

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 two local networks. In all other cases, the request must be made at least one 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 were created, decommissioned or changed 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 balancing areas were changed 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 one 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 on the registry was examined.

Audit commentary

No NSPs were created 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 three business days after the change takes effect.

Audit observation

The NSP table on the registry was examined.

Audit commentary

No balancing areas were changed 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 one 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 outcome

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 three business days before the transfer takes effect.

Audit observation

The NSP table on the registry was examined.

Audit commentary

AIAL has not acquired any new networks

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 NSP supply point table was examined.

Audit commentary

Distributor	NSP POC	Description	MEP	Certification Expiry
AIAL	AKL0331	AUCKLAND AIRPORT	AMCI	09/02/19

The NSP supply point table has been updated during the audit period. The NSP has been recertified during the audit period. A request was made for proof of this update being provided to the Reconciliation Manager to AIAL but I now understand such requests are no longer provided by the participant but must be requested from the Reconciliation Manager. This request has been made but was not able to be provided before this audit due date therefore I have recorded an “unable to determine” audit outcome. I expect to have a response from the Reconciliation Manager by the time of this audit review.

Audit outcome

Unable to determine

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 table on the registry was examined.

Audit commentary

No NSPs were created 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 month's 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 table on the registry was examined.

Audit commentary

AIAL has not acquired any networks.

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

The management of this process is discussed in the Vector report. The Network Supply Points table was examined to determine whether there have been any MEP changes during the audit period.

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 table on the registry and the event detail report for the audit period were examined.

Audit commentary

AIAL has not acquired any networks but as detailed in **section 4.1**, four ICPs (0324964277LCC65, 0308760417LCB2E, 0344843025LC814 & 0344849023LC7DB) were transferred from the Vector network to the AIAL network on 15/9/17. This was due to the Nixon Road Widening project where the network was reconfigured and these ICPs were more logically supplied from the AIAL network. The necessary permissions were obtained and provided to the Electricity Authority.

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 table on the registry was examined.

Audit commentary

AIAL has not acquired any networks. As detailed in **section 6.12**, four ICPs were transferred from the Vector network to the AIAL network on 15/9/17. These were being transferred from a parent network to an embedded network therefore this clause does not apply.

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

The registry list with history for 1 September 2017 – 24 August 2018 was examined to determine compliance.

Audit commentary

There is no shared unmetered load on the AIAL network and none is expected. Examination of the registry list confirmed this.

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

The registry list with history for 1 September 2017 – 24 August 2018 was examined to determine compliance.

Audit commentary

Examination of the registry list confirmed there is no shared unmetered load.

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. The calculation of loss factors was reviewed.

Audit commentary

AIAL derives loss factors for loss category codes from the published parent network loss factors for similar installations. It is expected that ICPs on embedded networks will have the same loss factor as a similar type of connection on the parent network. Vector has made a change to their loss factor with an effective start date of 1/4/18 but this change has not been reflected in the AIAL loss factors and therefore the loss factors affected have a variance of:

LF1 0.0070

LF2 0.0008

This is recorded as non-compliance.

Audit commentary

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 8.1 With: 11.2</p> <p>From: 01-Apr-18 To: 24-Aug-18</p>	<p>Incorrect loss factors recorded since 1/4/18 when Vector changed the parent network loss factors.</p> <p>Potential impact: Medium</p> <p>Actual impact: Medium</p> <p>Audit history: None</p> <p>Controls: None</p> <p>Breach risk rating: 5</p>		
Audit risk rating	Rationale for audit risk rating		
Low	<p>The controls are none as Vector's loss factor changes were not picked up and AIAL's loss factors adjusted.</p> <p>The audit risk rating is low as UFE is allocated to participants; therefore there is no adverse impact on settlement but traders may use published losses in pricing decisions. The variance found was minor.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
A review of AIAL loss factors has been undertaken with new levels (H.V. - 1.0152, & L.V. - 1.0265).		17/9/18	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
AIAL will monitor Vector's published loss factors for variance.		Ongoing	

CONCLUSION

AIAL's compliance for registry maintenance is largely reliant on the compliance of Vector, as the contractor. Whilst Vector's audit is greater than seven months old I have undertaken an audit of all activity carried out on behalf of AIAL to ensure that compliance can be determined. Their audit report will be submitted with this report.

The audit found eight non-compliances and one recommendation is made. This is a similar level of non-compliance found in the last three audits.

The missing initial electrical connection dates reported in the last few audits have all been populated. Updates to the registry appear to be sporadic and it was evident that a good number of updates were conducted just prior to the information for this audit being provided. As stated in the last audit, the volume of activity for AIAL is very small compared to Vector's overall workload and this appears to be hindering resolving the non-compliances found for AIAL.

The Distributor audit frequency matrix the next recommended audit is due in six months. I have considered this result in conjunction with the response from AIAL's responses and I agree with this recommendation.

PARTICIPANT RESPONSE

AIAL have reviewed this report and their comments are recorded in the report. No further comments were provided.