

**ELECTRICITY INDUSTRY PARTICIPATION CODE
DISTRIBUTOR AUDIT REPORT**

For

ELECTRA

Prepared by: Ewa Glowacka

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EXECUTIVE SUMMARY

This distributor audit was performed at the request of Electra(ELEC) as required by clause 11.10 of Part 11, to assure compliance with the Electricity Industry Participation Code 2010. The relevant rules audited are as required by the Guidelines for Distributor Audits V7.0 issued by the Electricity Authority

Electra expects a big growth coming their way in their new connections due to a new expressway being built which will make travel to Wellington shorter so more people will be interested in living in the area.

Since the last audit, Electra replaced NIMS with software called WindMil. The new software was implemented at the end of July 2017. This software is a new GIS system which also has billing functionality. At the time of audit, WindMil did not have the functionality to communicate with the registry, receive files or upload files. Electra has started using manually created txt files to communicate with the registry. The change to processes introduced by Electra, which are the subject of this audit, as per clause 16A.23 of Part 16A, are considered to be material changes. According to clause 16A.11(1) the participant must arrange for an additional audit, which must be completed in accordance with Part 16A, no later than 5 business days before the change is implemented. Electra has not undergone such an audit.

The level of non-compliance has decreased since the last audit. Ten non-compliances were found and whilst this is more than last year one reason for this is that a new audit template provided by the Authority was used to create this report. This template has been separating some previous non-compliances out, which resulted in two non-compliances instead one in this report. Additionally, a new audit regime asks for the assessment of controls regarding the monitoring of compliance between audits.

We did not observe many processes in place to monitor the compliance with regards to providing accurate data. There is concern that Electra still does not have an effective process in place to upload the Initial Energisation Date to the registry and embedded generation. A breach was lodged against Electra by the Authority in relation to Initial Electrical Connection date.

At the time of this audit, Electra did not have an interface to the registry which would allow the upload of data effectively and bring back notifications and acknowledgement files from the registry for review. The methods used, very manual and open to mistakes, are not sufficient for a network with nearly 47,000 ICPs.

We thank Electra for its full and complete cooperation in this audit.

AUDIT SUMMARY

NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Audit required if participant makes material changes	1.2	16A.11	NIMS was replaced by Wind Mil, which does not have an interface to the registry. A significant impact on processes covered by this audit	None	Low	5	Identified
Requirement to provide complete and accurate information	2.1	11.2(1)	Some information in registry still must be corrected or populated	Moderate	Low	2	Identified
Requirements to correct errors	0	11.2(2)	Incorrect data is corrected but in some cases, it is identified late, it results in backdating transactions in the registry. There is no structured process yet	Moderate	Low	2	Identified
Timeliness of provision of ICP information to the registry manager	3.4	7(2) of Schedule 11.1	2 ICPs were not uploaded to the registry prior to electricity being traded at the ICP	Strong	Low	1	Identified
Timeliness of provision of Initial Electrical Connection Date	0	7(2A) of Schedule 11.1	The Initial Electrical Connection Date was not recorded in the registry for any new connections before 10 business days as required	Weak	Low	3	Identified
Connection of ICPs which is not an NSP	3.6	11.17	5 ICPs were connected without traders being recorded accepting responsibility in the registry	Strong	Low	1	Identified
Embedded generation loss category	3.15	7(6) of Schedule 11.1	Incorrect Loss Factor Code for Mangahao Power Station recorded in the registry caused King	Medium	Weak	6	Identified

			Country Energy to purchase an additional 7,400 (approx.) units of electricity per year				
Changes to registry information	4.1	8 of Schedule 11.1	Some updates to network, pricing information and the “decommissioning” status in the registry were done later than 3BD.	Weak	Low	3	Identified
ICP location address	4.4	2 of Schedule 11.1	For nearly 400 ICPs the addresses descriptions do not allow ICPs to be readily located	Moderate	Low	2	Identified
Distributor to provide ICP information to the registry manager	4.6	7(1) of schedule 11.1	Incorrect or missing information in the registry for UML, Initial Electrical Connection Date, NSPs	Weak	Low	3	Identified
Future Risk Rating						28	

Based on Table 1 of the Guidelines for Reconciliation Participant audit, below, the next audit should happen within the next 3 months. Our recommendation is to have it within 6 months to give Electra time to resolve issues.

Future risk rating	1-2	3-6	7-9	10-19	20-24	25+
Indicative audit frequency	36 months	24 months	18 months	12 months	6 months	3 months

RECOMMENDATIONS

Subject	Section	Recommendation	Description

ISSUES

Subject	Section	Issue	Description

1. ADMINISTRATIVE

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

Code reference

Section 11 of Electricity Industry Act 2010.

Code related audit information

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

Audit observation

It was discussed with Electra and it was confirmed that there are no exemptions in place which are relevant to the scope of this audit.

Audit commentary

We checked the Electricity Authority website and confirm that there are no exemptions in place.

1.2. Audit required if participant makes material changes (clause 16A.11)

Code reference

If there is a material change to any of a participant's systems or processes that are the subject of regular audits under clause 10.17A, 11.8B, 11.10, 15.37A or 15.37B, the participant must arrange for an additional audit, which must be completed in accordance with this Part no later than 5 business days before the change is implemented.

Audit observation

At the end of July this year, Electra implemented new software replacing NIMS. This software is a GIS system called Wind Mil The software has built-in billing functionality, but no interface to the registry. The result of the change is a significant change to Electra's systems and processes, which are covered by the scope of this audit.

Audit commentary

NIMS was replaced by WindMil and no material change audit was conducted We class it as non-compliance. The Code states "*a material change to a system or process is a change that is likely to affect the ability of the participant to comply with any relevant provision of this Code*". At the time of audit some processes covered by this audit such as provision of information for new ICPs or notifications of changes to the registry had to be changed.

It is one of the most recent changes to the Code (1 June 2017) which requires all participants to go through a material change audit. Previously it was applicable to traders only.

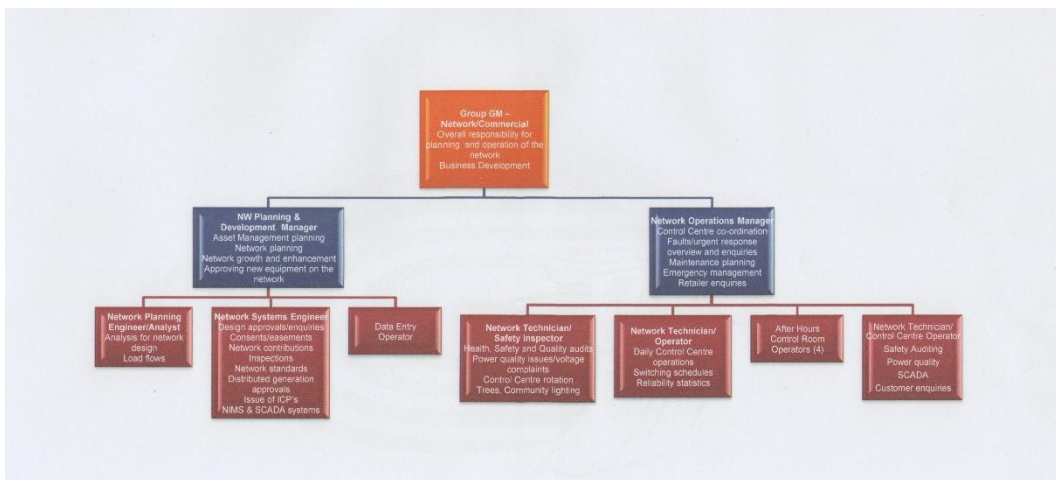
Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 1.2 With: 16A.11 From: 01-Jul-17 To: 31-Aug-17	NIMS was replaced by Wind Mil, which does not have an interface to the registry. This has a significant impact on processes covered by this audit Potential impact: Low Actual impact: Low Audit history: Controls: None Breach risk rating: 5		
Audit risk rating	Rationale for audit risk rating		
Low	We recorded controls as none. No material change audit was conducted. No impact on settlement outcomes therefore audit risk rating recorded as low		
Actions taken to resolve the issue		Completion date	Remedial action status
None, system replacement implemented in July 2017.			Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Unaware of change to code regarding material change audit, now aware of it for future changes.			

1.3. Structure of Organisation

Electra has provided an organisation chart of their structure which is shown below



1.4. Persons involved in this audit

Name	Title	Company
Mark Branagh	Network Engineer	Electra
Ewa Glowacka	Electricity Authority Approved Auditor	TEG & Associates Ltd

1.5. 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

There are no contractors who assist with, or are used in, Electra operations that were audited.

Audit commentary

During the audit, we did not identify any contractors which assist Electra to meet their obligation relevant to the scope of this audit.

1.6. Supplier list

WindMilMap software is provided by Milsoft Utility Solutions.

1.7. Hardware and Software

NIMS (Network Information System) was the main software application used for network management and storing information about installations. At the end of June this year new software, called WindMilMap was implemented.

1.8. Breaches or Breach Allegations

Electra had an alleged breach. On 10 May 2017, the market administrator reported to the Electricity Authority that Electra Limited had breached clause 7(1)(p) and 7(2A) of Schedule 11.1. File reference 170 ELEC1.

1.9. ICP and NSP Data

Distributor	NSP POC	Description	Parent POC	Parent Network	Balancing Area	Network type	Start date	No of ICPs
ELEC	MHO0331	MANGAHAO			MHO0331ELECGN	GN	1/05/11	
ELEC	PRM0331	PARAPARAUMU			PRM0331ELECGN	GN	1/05/08	

Electra provided the LIS file dated 23 August 2017. Total number of ICPs was 47,713

Status	Number of ICPs (23/08/2017)	Number of ICPs (2016)	Number of ICPs (2015)
Active (2,0)	44,305	43,826	43,537
Inactive- new connection in progress (1,12)	22	17	22
Inactive – vacant (1,4)	776	771	774
Inactive – AMI remote disconnection (1,7)	78	83	1
Inactive – at pole fuse (1,8)	2	2	1
Inactive – de-energised due to meter disconnected (1,9)	5	1	1
Inactive – de-energised at meter box switch (1,10)	0	0	0
Inactive- at meter box switch (1,11)	0	0	0
Inactive – ready for decommissioning (1,6)	332	283	259
Inactive – reconciled elsewhere (1,5)		0	0
Decommissioned (3)	2,120	2,090	1,986
New (999)	12	11	6
Ready (0)	61	49	70

1.10. Authorisation Received

Electra provided a letter of authorisation to the auditors permitting the collection of data from other parties for matters directly related to the audit.

1.11. Scope of Audit

The audit covers the following processes under clause 16A.23 of Part 16A, performed by Electra, as listed below:

- (a) -The creation of ICP identifiers for ICPs
- (b) -The provision of ICP information to the registry and the maintenance of that information
- (c) - The creation and maintenance of loss factors

The audit was carried out on the Electra premises, at cnr Bristol Street & Exeter Street in Levin, on the 31 August/1 September 2017. We have followed the Guidelines for Distributor Audits version 7.0, published by the Authority, as at the report date.

1.12. Summary of previous audit

The previous audit was carried out on 1/2 September 2016, by Ewa Glowacka (TEG & Associates Ltd). The findings of the audit are shown below:

Subject	Clause	Non-compliance	Cleared
Distributor to provide ICP information to registry	7(1)(c)(o)(p) of Schedule 11.1	No Initial Energisation Date (IED) populated for 222 ICPs and lack of generation capacity (solar) for 2 ICPs. There is no consistent process in place to populate IED	Still existing
ICP location address in the registry	2 of Schedule 11.1	396 ICP identifiers have a location address which would not allow an ICP to be readily located	Still existing
Changes to ICP information in the registry	8 (2)(b) of Schedule 11.1	Some updates to ICP information are not performed within the timeframe specified by the Code	Still existing

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

Compliance with these clauses was reviewed to assess if all practicable steps had been taken to provide accurate information.

Audit commentary

The new connection process is sound. The registry is correctly populated. There is still some historic information which needs to be corrected, such as location addresses, ICPs assignment to NSPs, lack of information for embedded generation. We confirm that an effort is made to have information complete and accurate but more tools must be developed. The fact that there is no interface to the registry does not help with the quality of data.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.1 With: 11.2(1) From: 16-Sep-16 To: 15-Aug-17	Some information in the registry still must be corrected or populated Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	We recorded controls as moderate. The new connection process is good. Audit risk rating is assessed as low because Electra pursue data correction. No impact on settlement outcomes.		
Actions taken to resolve the issue		Completion date	Remedial action status
Continue to pursue historic data correction using site visits		ongoing	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Processes in place for new data entry		ongoing	

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

We did not observe a structured approach to maintaining the quality of data in the registry. It is more like a catch-up approach. They accept on-going non-compliance because of the Initial Electrical Connection Date issues.

Audit commentary

The company's policy to hand responsibility over to traders for the connection of ICPs and decommissioning of installations has left Electra very dependent on another participants performance. There is an on-going problem with the Initial Electrical Connection Date being populated. This time all new installations had the date populated but always late. A new process has been implemented to check it weekly, hopefully it will deliver good results.

We did not observe a structured approach to checking and maintaining the quality of data in the registry.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.2 With: 11.2(2) From: 16-Sep-16 To: 15-Aug-17	Incorrect data is corrected but in some cases, it is identified late and results in backdating transactions in the registry. There is no structured process yet. Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	We recorded controls as moderate, Audit risk rating is assessed as low because Electra proactively pursue data correction. It is just a matter of time and resources. No impact on settlement outcomes.		
Actions taken to resolve the issue		Completion date	Remedial action status
As noted in auditor comments Electra pursues data correction. Historical corrections have been completed			Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
New IECD process implemented.		ongoing	

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

There are two types on new connections, simple and complex. A simple connection can be connected without additional work being done by a network, a complex connection requires additional cabling or line work to be done before the connection can occur.

The process is as follows. For a complex connection, a customer first contacts the Electra Contracting Division, a quote is prepared, accepted by a customer, deposit paid. A chosen trader is contacted by a customer, who request Electra to create a new ICP. For a simple connection, a customer contacts a chosen trader straight away, who requests an ICP from Electra.

Traders or their agents request a new ICP via emails; emails are archived. Electra does not have a prescribed format for new network connection applications. The ICP is issued and advice is also sent via email.

Audit commentary

Electra still uses a spreadsheet, in which it records new ICPs. From time to time, a new set of blank ICPs is create by NIMS, which are used as requested. The spreadsheet stores information about a customer, address, what trader requested and when.

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 3 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

An ICP identifier is requested by a trader chosen by a customer or its agent. We randomly chose 17 requests for ICPs from traders to assess compliance.

Audit commentary

We reviewed the new connection process and checked 17 randomly chosen applications. In all cases an ICP identifier was issued within 3 BD and loaded to the registry.

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

The process of providing ICP information has changed since the previous audit. A list of ICP's is generated in NIMS using the Access tool which creates ICPs and outputs into Excel. After the ICP's have been generated, the list is added to a spreadsheet for allocation to new connections. Previously NIMS created a file to upload to the registry. The current process is to create a file manually and upload to the registry using FileZilla.

Audit commentary

ICP information is usually uploaded to the registry the same day are. Electra "re-uses" the previously used UIS file by re-entering details. It is not an easy task to adjust txt files. It would be useful to have a template to create the file. Electra does not check for acknowledgement files from traders so each new ICP is checked manually one by one. From time to time a proposed trader is not included in the original file so it is entered manually via the registry web interface.

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

We walked through 30 new connections to assess if ICPs were created before electricity being traded. Additionally, we checked the EDA file for the period 16/9/16 to 15/8/17 to check backdated "0" status. A summary of information is shown below:

ICP	ICP uploaded to registry	Initial Electrical Connection Date
0110010305EL080	21/03/2017	21/03/2017
0110010340ELF6A	07/04/2017	13/05/2017
0110010522EL619	08/08/2017	10/08/2017
0110010233ELFF3	07/02/2017	24/02/2017
0110010264ELA31	23/02/2017	24/02/2017
0110010443ELCA8	19/06/2017	23/06/2017

0110010544EL866	21/08/2017	27/09/2017
0110010293EL7EC	14/03/2017	14/03/2017
0110010161EL47D	06/12/2016	21/12/2016
0110010272EL113	27/02/2017	09/03/2017
0110010388ELA91	18/05/2017	21/06/2017
0110010468ELF29	04/07/2017	18/07/2017
0110010203EL80B	17/01/2017	03/02/2017
0110010546EL8E3	23/08/2017	01/09/2017
0110010397ELFE2	18/05/2017	22/05/2017
0110010174EL39F	14/12/2016	22/12/2016
0110010512EL1E1	02/08/2017	18/08/2017
0110010529EL8CD	14/08/2017	28/08/2017
0110010237ELEF9	27/02/2017	17/02/2017
0110010239ELD62	27/02/2017	23/02/2017
0110010405ELF82	25/05/2017	18/07/2017
0110010414EL96A	30/05/2017	21/06/2017
0110010376EL91D	11/05/2017	25/05/2017
0110010344ELE60	12/04/2017	22/05/2017
0110010320EL09A	30/03/2017	13/04/2017
0110010309EL39E	21/03/2017	17/05/2017
0110010277ELC5C	28/02/2017	14/03/2017
0110010242EL6EB	13/02/2017	15/05/2017
0110010232EL3B6	14/02/2017	10/03/2017
0110010195EL560	11/01/2017	20/01/2017

Audit commentary

The new connection process adopted by Electra is well structured. A request is received, an ICP issued, the same day, or following day, it is uploaded to the registry. All requests are recoded in the specially designed spreadsheet, in which it is marked when the ICP was issued. Once an ICP is issued full control of it is taken by the requested trader. Upon analysing the EDA file, we came across two ICPs, marked in red, which were electrically connected before the information was uploaded to the registry. It is non-compliance with the above clause.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.4 With: 7(2) of Schedule 11.1 From: 16-Sep-16 To: 15-Aug-17	2 ICPs were not uploaded to the registry prior to electricity being traded at the ICP Potential impact: Low Actual impact: Low Audit history: Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	We recorded the controls as strong. We identified two ICPs which did not meet compliance obligations but overall the process is good. No impact on settlement outcomes therefore audit risk rating is recorded as low		
Actions taken to resolve the issue		Completion date	Remedial action status
Action complete.		17/2 & 23/2 2017	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Adhere to current ICP process controls.		ongoing	

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

We examined the LIS file dated 23 August 2017 to assess compliance. We checked timeliness of IECD for all new connections. There were 470 new connections. For all ICPs the Initial Electrical Connection Dates were populated later than 10 BD. The range of business days is between 12 to 180. There was not a single update earlier than 10 BD.

Audit commentary

According to the process, Electra checks to see if traders change the status of any new connections to “active”, once per week. If such an ICP is identified, the date of “active” is copied manually across to the “Initial Energisation Date” field. We checked updates in August this year and all of them were later than 10 BD. There is a simple explanation for it. Electra is fully dependent on the timeliness and accuracy of data provided by the trader. If a trader is late and non-compliant so is Electra.

The process adopted by Electra is in accordance with their policy. Once an ICP identifier is created and passed to a requesting trader, a trader takes full control of the ICP. Electra does not expect to be notified when the ICP is electrically connected.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.5 With: 7(2A) of Schedule 11.1 From: 16-Sep-16 To: 15-Aug-17	The Initial Electrical Connection Date was not recorded in the registry for any new connections before 10 business days as required Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Weak Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
Low	We recorded controls as weak. Electra fully relies on traders' updates. There is no validation of the accuracy of data. No impact on settlement outcomes therefore audit risk rating recorded as low		
Actions taken to resolve the issue		Completion date	Remedial action status
No action - Electra has no other source of information other than updates provided by the respective trader.			Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Process in place to check weekly for updates to active status		ongoing	

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

During analysis of the EDA file, we identified five ICPs (0110010441ELC2D, 0110010465EL072, 0110010474EL69A, 0110009888ELDDE, and 0110010313ELBA2) which were connected and electrically connected without a trader recorded in the registry.

Audit commentary

Electra's policy is to issue an ICP and pass full control of its life cycle to a trader. Unfortunately, this is not how the Code has set-up a distributor's obligation. Even if Electra passes the ICP controls to a trader they are still responsible for the connection of the ICP, even if the company doesn't do itself.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.6 With: 11.17 From: 16-Sep-16 To: 15-Aug-17	5 ICPs were connected without traders being recorded accepting responsibility in the registry Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	We recoded controls as strong. The process for new connections is managed well but as always there is room for improvement. No impact on settlement outcome. Audit risk rating is recorded as low		
Actions taken to resolve the issue		Completion date	Remedial action status
Traders added to ICPs.		August and July 2017	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Process improved to insist on trader being populated before file uploaded to registry		ongoing	

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

According to the new connection process, Electra issues an ICP on a trader's request. Once the ICP is issued a trader takes on the responsibility of connecting the ICP.

Audit commentary

The process adopted by Electra assures compliance with this clause.

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

Electra has not been asked to temporarily electrically connect any installation since the last audit.

Audit commentary

Electra does not electrically connect ICPs. It is done by contractors nominated by traders.

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 5 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

Electra does not have any NSP on its network that is not a point of connection to the grid.

Audit commentary

Compliance was not assessed because Electra does not have such NSPs.

Audit outcome

Not applicable

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

Code reference

Clause 10.30(A)

Code related audit information

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

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

Audit observation

Electra does not have any NSP on its network that is not a point of connection to the grid.

Audit commentary

Compliance was not assessed because Electra does not have such NSPs.

Audit outcome

Not applicable

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

We examined the LIS files. There is a unique distributor code "EL" as part of each ICP Identifier on the Electra network.

A list of ICP's is generated in NIMS using the Access tool which creates ICPs and outputs into Excel. After the ICP's have been generated, the list is added to a spreadsheet for allocation to new connections. NIMS is setup so that it only generates a number with the "EL" network code.

Audit commentary

We reviewed the LIS file and the new connections spreadsheet and confirm compliance.

Audit outcome

Compliant

3.12. Loss category (Clause 6 Schedule 11.1)

Code reference

Clause 6 Schedule 11.1

Code related audit information

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

Audit observation

The LIS registry file date 23 August 2017 was examined and we confirm compliance. We would like to note that the registry design prohibits the assigning of more than a single loss category code to an ICP.

Audit commentary

All ICPs recorded in the registry have a single loss category code except ICPs with the status "Decommissioned".

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

Electra uploads to registry all ICP information therefore the registry assigns the status of "Ready".

Audit commentary

We identified two ICPs with the status "new". One of them was request for incorrect address. The second one was ICP 0110009888ELDDE, which was already described in the section 3.6. Due to difficulties to create manually files to upload ICPs information to the registry, Electra uses two-step process. The UIS file does not contain a proposed trader. The same day or following day, a proposed trader is entered using the registry web interface and the registry assigns the status "ready". Such process is open to human error.

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

The LIS file was examined and we confirm that, at the time of audit, 3 ICPs held the status “new”, which were also created more than 24 months ago. The number of ICPs with the status of “Ready” is 10. The “oldest” ICP was created in 2014.

Audit commentary

ICPs with the status “New” were created in 2003 and 2004. Two of them were requested by CTCT and one by TRUS. Electra is in contact the traders before they are decommissioned. Electra regularly contacts traders to keep ICPs with the status “new” or “ready” created more than 24 months ago to a minimum.

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

We examined the LIS file dated 23 August 2017. Electra has an embedded generation station that has a capacity of 37 MW on its network. It is Mangahao Power Station, its ICP is 0110007806EL3CF. At the time of audit this ICP did not have the unique loss category code assigned in the registry.

Audit commentary

When it was identified during the audit that Mangahao did not have the unique loss category code assigned, it was promptly corrected. On 23/4/11 Electra uploaded the registry loss factor code MHO1 specifically for Mangahao Power Station and it was assigned to the ICP on 28/4/11. On 22/8/12 it was replaced by the loss factor code “1”, for which the value for consumption is 1.0710 and for generation is 1.000. We talked to King Country Energy who is the trader for Mangahao Power Station to evaluate how much inaccuracy was caused by applying 1.071 factor instead of 1.000 to consumption volumes, which were submitted to the reconciliation manager.

King country Energy comment was:

“While we were submitting on “1” and not “MHO1” then KCE was over-submitting for any demand so we bought more electricity than needed. As the loss factor for generation was the same then there is no impact on generation volumes. To quantify this impact, using the last 14 months of data (as that is a volume in

the single data set), the Mangahao generation station consumed 122,145 units (kWh) which works out to be on average 287 units per day. This is what was submitted. As the loss factor was “1” then the RM would have allocated an additional 20 units per day to Mangahao for KCE to purchase off the market. This equates to 7,400 units per year, more than we should have bought. As Mangahao generates 131 GWh per year on average this is relatively insignificant. The correction means that KCE will on average be buying approximately 7,400 units less electricity per year.”

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.15 With: 7(6) of Schedule 11.1 From: 16-Sep-16 To: 01-Sep-17	Incorrect Loss Factor Code for Mangahao Power Station recorded in the registry caused King Country Energy to purchase an additional 7,400 (approx.) units of electricity per year Potential impact: Low Actual impact: Low Audit history: None Controls: Weak Breach risk rating: 6		
Audit risk rating	Rationale for audit risk rating		
Medium	We recorded controls as weak because there is not much of a process to check if correct loss factor code was assigned to ICPs. It is easily understood because all ICPs except Mangahao have the same loss factor applied; settlement outcome was effected; volume will be corrected through wash-up process; This error directly impacted levy calculation therefore some traders were charged more than they should have been. Audit risk rating recorded as medium.		
Actions taken to resolve the issue		Completion date	Remedial action status
Loss factor corrected immediately on identification.		1/9/2017	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Check for correct value when changes made to this ICP.		ongoing	

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

We examined the EDA file for the period of 16/09/16 to 15/08/17 to assess compliance. The results are shown below:

Activity	No of updates	No of updates later than 3BD	Date range of updates [BD]	Comment
Address	821	120 (14.6%)	4 to 4790	Last year 5.35% of updates were backdated. The most backdated, two address updates, were requested by traders. ICP 0015705018EL2FD and 0015843356EL0EF
Network	1,985	1,176 (59.2%)		Last year 67.6% of updates were backdated. Check notes below
Pricing	191	11 (5.75%)	8 to 46	Last year 9.3% of updates were backdated. Check notes below
Status (0)	417			Check notes below
Status (999)	2			ICP 0110009869ELB21 was requested for incorrect address but it is still in registry with the status "new" 0110009888ELDDE - electrically connected before a trader was recorded in the registry.
Status (3)	23		4 to 1653	One ICP back to 2011, the rest within a few days

Audit commentary

Addresses – A significant part of late updates are the result of Electra embarking on a project to correct addresses in the registry, making them compliant with clause 2 of Schedule 11.1 (to be readily located). 20.1% of updates were done via the registry interface. The correction of addresses done manually goes back to the date of ICP creation. It was discussed with Electra and the comment was that, in some cases, the operator forgot to change the date and the registry used the date of last recorded Event Date.

The rest of the updates were uploaded by NIMS. With the exception of 11, these updates were within 3 business days.

Status “0” - we identified 10 ICPs which were “backdated” between 7 and 30 BD. We investigated to assess if the registry was notified about the new ICPs before traders electrically connected the installations. We found two installations which were electrically connected before ICPs were recorded in the registry (0110010237ELEF9 and 0110010239ELD62). It will be recorded as non-compliance in the relevant part of the report. We also identified four ICPs (0110010441ELC2D, 0110010465EL072, 0110010474EL69A, and 0110009888ELDDE), which were electrically connected before a trader was recorded in the registry. It will be recorded as non-compliance in the relevant part of the report.

Pricing – A small number of updates as requested by traders

Network - 954 updates of Initial Energisation Date; the range of dates from 12BD to 1135BD. It was part of the data population in relation to the breach as per section 1.7. It was done in May 2017. 13 late updates, going back to 2008, to remove lights attached to properties.

There were no changes to allocation of ICPs to NPSs for longer than 14 days.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.1 With: 8 Schedule 11.1 From: 16-Sep-16 To: 15-Aug-17	Some updates to network, pricing information and the “decommissioning” status in the registry for were done later than 3BD. Potential impact: Low Actual impact: Low Audit history: Twice or more Controls: Weak Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
Low	We recorded controls as weak/moderate. It appears to be an ongoing catch-up job to clean data. We did not observe a structured approach to maintain the quality of data in the registry; no impact on settlement outcome therefore audit risk rating recorded as low.		
Actions taken to resolve the issue		Completion date	Remedial action status
Cannot resolve as actions complete			Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Data updating will continue as requested by retailers. Address updates will continue as part of compliance requirements.		ongoing	

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

Electra has two NSPs on its network, PRM0331 and MHO0331. At the time of ICP creation an NSP identifier is assigned.

Audit commentary

There is not much choice of which NSP identifier should be assigned to a new ICP. In section 4.6 we explain that for a number of ICPs the incorrect NSP identifier was assigned. It is a concern because PRM0331 and MHO0331 are in different balancing areas therefore reconciliation volumes are effected by inaccuracy.

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

Any request from a customer for advice on an ICP for an existing connection is answered immediately, while the customer is on the phone.

Audit commentary

Calls from customers do not happen often but Electra receives many phone calls from traders or electricians asking them to confirm an ICP or asking for additional information or clarification.

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 LIS file, dated 23 August 2017, was examined. We identified 163 ICPs with identical addresses and 320 ICPs for which the address description does not allow them to be readily located.

Audit commentary

It has been recorded as a non-compliance for a number of years. No GPS coordinates are recorded in the registry, which in this case would be of assistance. Electra changes addresses to be more meaningful when it comes across such an ICP but it is not a structured project.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.4 With: 2 of Schedule 11.1 From: 16-Sep-16 To: 15-Aug-17	For nearly 400 ICPs the address descriptions do not allow ICPs to be readily located Potential impact: Low Actual impact: Low Audit history: Three times previously Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are recorded as moderate, the addresses are corrected as an operator comes across them but it is not a structured project. No impact on settlement outcomes. Audit risk rating recorded as low.		
Actions taken to resolve the issue		Completion date	Remedial action status
Manually try and resolve addresses of ICPs		Ongoing	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Manually try and resolve addresses of ICPs. This is a time-consuming job that can require site visits for verification.		ongoing	

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

There are no known situations where an ICP could not be de-energised without the de-energisation of another ICP. The company policy precludes such a situation.

Audit commentary

This clause has been in place for a number of years and Electra was always found compliant. Before a new ICP is created, a connection is validated (visually) in WindMilMap to make sure that such a situation does not occur.

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

Audit observation

The LIS and Metering Information files (PR-255) dated 23 August 2017 were examined to assess compliance.

We identified the following areas where information was incomplete or missing:

1. No UML details in the “Unmetered Load Details – distributor” field in the registry for 27 ICPs but traders recorded daily units. Electra went through the list and the conclusion was that about 50% of the information recorded in the registry by traders in relation to UML is incorrect. UML was never loaded or Electra updated the registry in the past. Traders are probably still submitting volumes for loads which are not connected.
2. 137 ICPs have Import/Export meters installed and programmed as EG. No information recorded by Electra
3. ICP 0014693024EL6CA has the Dedicated flag “Y”. There is only one ICP assigned as the dedicated supply. For the rest of the ICPs the dedicated flag is “N”. It does not matter because Electra has only one NSP per balancing area
4. Initial Electrical Connection Date – not recorded for 33 ICPs. Incorrect for 17 ICPs. These ICPs were created in 1999 so it is rather unlikely that some of them were first electrically connected, for example, in 2013. Our assumption is that it is the date that solar panels were installed.
5. 79 ICPs assigned to an incorrect NSP like PRM0331 instead MHO0331 and vice versa. Both NSPs form separate balancing areas therefore reconciliation volumes are effected by inaccuracy. NSPs were correctly allocated before this report was finalised
6. 5 ICPs had incorrect flag in the installation type field. It was “L” instead of “B” where solar was installed

Audit commentary

Overall the compliance with this clause has not improved since the last audit. There is an on-going problem with Initial Electrical Connection Date; some ICPs identified in the last audit still lack this information. Electra, recently introduced a process to populate the Initial Electrical Connection date for new connections every week. Electra does not know if an installation is electrically connected, they don’t expect a notification from a trader. What Electra does is simply copies a trader’s entry from the status “Active” to the field “initial Energisation Date”. It is a basic mechanical “copy-paste” activity.

There is a concern that the incorrect allocation of ICPs to NSPs is affecting reconciliation. The problem is fixed for now but there is nothing in place to validate future entries. As a part of analysis, we checked the highest metering category for each effected ICP. 77 ICPs are metering category 1 and 1 ICP (0110009112EL9A1) category 2 and ICP 0110009614EL72C category 3.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.6 With: 7 (1) of Schedule 11.1 From: 16-Sep-16 To: 15-Aug-17	Incorrect or missing information in the registry for UML, Initial Electrical Connection Date, NSPs Potential impact: Low Actual impact: Low Audit history: Twice before Controls: Weak Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
Low	We recorded controls as weak because there is no process in place. Audit risk rating is recorded as low because only two ICPs of metering category 2 and 3 are effected, therefore impact on settlement outcome is minor.		
Actions taken to resolve the issue		Completion date	Remedial action status
NSP data corrected, IECD data corrected,		Sept 2017, Sept 2017	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
UML is like address and will take time and site visits to resolve. IECD and NSP have processes in place.		ongoing	

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

As a part of the new connections process, Electra assigns the actual price category code to the ICP at the time an ICP is created.

Audit commentary

Electra's network charges are not based on chargeable capacity.

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 LIS file dated 23 August 2017 was reviewed. GPS coordinates are not populated in the registry.

Audit commentary

This clause is not applicable to Electra because GPS coordinates are not populated in the registry. Compliance was not assessed.

Audit outcome

Not applicable

4.9. Management of "ready" status (Clause 14 Schedule 11.1)

Code reference

Clause 14 Schedule 11.1

Code related audit information

The ICP status of "Ready" must be managed by the distributor and indicates that:

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

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

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

Audit observation

Electra accepts requests for new connections only from traders. It is logical to think that if they ask for an ICP it means that they accept responsibility for the ICP. Electra loads all ICP information, including a single price code, to the registry and the registry assigns the status "Ready"

Audit commentary

As was described in section 3.13, due to difficulties with having to manually create files to upload ICP information to the registry, Electra uses a two-step process. The LIS file does not contain a proposed trader. The same day or following day, a proposed trader is entered using the registry web interface and the registry assigns the status "ready".

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

We examined the LIS file and confirm that Electra does not have ICPs with the status “distributor”

Audit commentary

There are no ICPs with the status of “distributor” representing shared unmetered load or a connection to an embedded network. Electra does not allow the connection of shared unmetered load. There are also no connections to embedded networks.

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

Electra decommissions an ICP upon trader instruction or owner’s instruction. Before the ICP status is changed to “Decommissioned”, first a contractor representing the trader goes on site and physically disconnects the installation, remove meters and removes fuses to make the installation safe.

Electra relies on traders’ arrangements and advice from the registry that the status of the ICP was changed to “De-energised – ready for decommissioning. Once it is done Electra changes the status to “decommissioned”

Audit commentary

Electra's staff is not involved in decommissioning installations. It is arranged and done by contractors working for traders. All contractors, must be authorised to work on the Electra network.

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 Codes table in the registry was examined. There are 31 price category codes assigned to Electra.

Audit commentary

Two new price category codes, "F" and "TF", were populated in the registry on 30 January 2017. New price category codes took effect on 1 April 2017. The description of price category code "F" is fixed price general and for "TF" Fixed Price -Low User Option.

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 Code table held by the registry was reviewed during this audit.

Audit commentary

Electra did not upload any new Loss Category Codes to the registry since the last audit. The last time a new Loss Category Code (MHO1) was uploaded was on 27 April 2011.

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 Factor Code table held by the registry was reviewed during this audit. Loss factors have a single value for a whole year, which cover a range of trading periods. There are no seasonal loss factor codes for summer or winter.

Audit commentary

Electra has not changed loss factors since 2011. Electra considers that what is recorded in the registry is accurate.

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 2 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 2 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

Electra did not create a new or decommissioned any NSP in the last 12 months.

Audit commentary

No new NSP was created or decommissioned since the last audit. There are no plans to create a new NSP in the foreseeable future.

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

Electra has not created a new NSP since the last audit, as described in the previous section, therefore the reconciliation manager was not asked to create a unique NSP identifier.

Audit commentary

This clause is not applicable because Electra has not created a new NSP since the last audit. Compliance was not assessed.

Audit outcome

Not applicable

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

Code reference

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

Code related audit information

If a participant has notified the creation of an NSP on the distributor's network, the distributor must 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

Electra did not create any new NSP in the last 12 months.

Audit commentary

Electra did not create any new NSP and it is unlikely that it ever will. Compliance was not assessed.

Audit outcome

Not applicable

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

Electra did not create any new NSP or transfer an ICP to an NSP that is a point of connection between a network and an embedded network owned by the distributor.

Audit commentary

Electra did not become the owner of embedded network. Compliance was not assessed.

Audit outcome

Not applicable

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

Code reference

Clause 24(2) and (3) Schedule 11.1

Code related audit information

The distributor must 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

Electra has two balancing areas, MHO0331ELECGN and PRM0331ELECGN. There were no changes to it.

Audit commentary

Examination of the NSP mapping table in the registry showed that there were no changes to the balancing areas in the last 12 months.

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

Electra has not transferred any ICP which resulted in an ICP becoming an NSP.

Audit commentary

Electra did not establish any embedded network. Compliance was not assessed.

Audit outcome

Not applicable

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

Code reference

Clause 1 to 4 Schedule 11.2

Code related audit information

If the distributor wishes to transfer an ICP, the distributor must give written notice to the Authority in the prescribed form, no later than 3 business days before the transfer takes effect.

Audit observation

Electra did not transfer any ICPs.

Audit commentary

Electra did not establish any embedded network. There are no such plans for the future. Compliance was not assessed.

Audit outcome

Not applicable

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 1 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

Electra does not have any NSPs that are not connections to the grid for which they are responsible.

Audit commentary

This clause is not applicable to Electra because they do not have responsibility for an NSP that is not a point of connection to the grid. Compliance was not assessed.

Audit outcome

Not applicable

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

Code reference

Clause 10.25(2)

Code related audit information

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

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

Electra does not have any NSPs that are not connections to the grid for which they are responsible.

Audit commentary

This clause is not applicable to Electra because they do not have responsibility for an NSP that is not a point of connection to the grid. Compliance was not assessed.

Audit outcome

Not applicable

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

Code reference

Clause 29 Schedule 11.1

Code related audit information

If a network owner acquires all or part of a network, the network owner must 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 1 month notification is required before the acquisition (Clause 29(2) of Schedule 11.1).

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

Audit observation

In the last 12 months, Electra did not acquire all or part of a new network.

Audit commentary

This clause is not applicable to Electra because the situation did not occur. Compliance was not assessed.

Audit outcome

Not applicable

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

Electra is not responsible for any embedded network.

Audit commentary

This clause does not apply to Electra because they are not the owner of embedded networks. Compliance was not assessed.

Audit outcome

Not applicable

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

Electra did not establish any embedded network in the last 12 months.

Audit commentary

This clause does not apply to Electra because it did not establish an embedded network. Compliance was not assessed.

Audit outcome

Not applicable

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

Electra did not establish any embedded network since the last audit.

Audit commentary

This clause does not apply to Electra because it has not established an embedded network. Compliance was not assessed.

Audit outcome

Not applicable

7. MAINTENANCE OF SHARED UNMETERED LOAD

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

Code reference

Clause 11.14(2) and (4)

Code related audit information

The distributor must 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

We reviewed the LIS file dated 23 August 2017 file to assess if there is any shared unmetered load connected to the network. Electra is no shared unmetered load on its network.

Audit commentary

The company policy is not to allow the installation of shared unmetered load.

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

As describe in the above section, there is no shared unmetered load on Electra's network.

Audit commentary

This clause does not apply to Electra because there is no shared unmetered load on its network and there are no plans to have it. Compliance was not assessed.

Audit outcome

Not applicable

8. CALCULATION OF LOSS FACTORS

8.1. Creation of loss factors (Clause 11.2)

Code reference

Clause 11.2

Code related audit information

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

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

Audit observation

The loss factor is calculated as the difference between the delivered units as reported by Transpower and the units submitted by traders to the reconciliation manager. They are classed as reconciliation losses, they contain both technical and non-technical losses.

Electra can accurately calculate 33 kV and zone transformer losses using WindMil. Previously Electra used Sincal. The new software is more accurate. 11kV technical losses are calculated based on average feeder size and average feeder load. Distribution transformer losses are calculated using manufactured losses data (Fe and Cu) and average load. The methodology to calculate 400 V network losses is similar to 11kV, the assumption is made to have 3 circuits per transformer.

Audit commentary

Electra uses rolling losses calculated over the last 12 months. The loss factor has not been recalculated since the last audit. There were no changes to the network configuration. Electra's network losses are published on their website, which are 6.60%.

Audit outcome

Compliant

CONCLUSION

PARTICIPANT RESPONSE